



**FLORIDA INTERNATIONAL UNIVERSITY**  
**BOARD OF TRUSTEES**  
**HEALTH AFFAIRS COMMITTEE**

Thursday, June 2, 2016

11:30 am *\*approximate start time*

Florida International University

Modesto A. Maidique Campus

The Patricia & Phillip Frost Art Museum, Room 105-107

**Committee Membership:**

Jose J. Armas, *Chair*; Justo L. Pozo, *Vice Chair*; Cesar L. Alvarez; Jorge L. Arrizurieta; Leonard Boord;  
Michael G. Joseph

**AGENDA**

- |   |                   |
|---|-------------------|
| 1. Call to Order and Chair's Remarks  | Jose J. Armas     |
| 2. Approval of Minutes  | Jose J. Armas     |
| 3. Academic Health Center Reports <i>(No Action Required)</i>                   |                   |
| 3.1 General Update  | John A. Rock      |
| 3.2 Integration of FIU Student Health Services with the FIU Health Care Network | Eneida O. Roldan  |
| 3.3 Nicole Wertheim College of Nursing and Health Sciences                      | Ora L. Strickland |
| 4. Information Items <i>(No Action Required)</i>                                |                   |
| 4.1 School of Integrated Science and Humanity                                   | Walter Van Hamme  |
| 4.2 Herbert Wertheim College of Medicine  | John A. Rock      |
| 4.3 Robert Stempel College of Public Health and Social Work                     | Tomás R. Guilarte |
| 4.4 Board of Governors Health Initiatives Committee                             | John A. Rock      |
| 5. New Business <i>(If Any)</i>   | Jose J. Armas     |
| 6. Concluding Remarks and Adjournment   | Jose J. Armas     |

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*Approval of Minutes*

**Health Affairs Committee Meeting**

Date: June 2, 2016

**Subject: Approval of Minutes of Meeting held December 9, 2015**

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**Proposed Committee Action:**

Approval of Minutes of the Health Affairs Committee meeting held on Wednesday, December 9, 2015 at the Modesto A. Madique Campus, Graham Center Ballrooms.

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**Background Information:**

Committee members will review and approve the Minutes of the Health Affairs Committee meeting held on Wednesday, December 9, 2015 at the Modesto A. Madique Campus, Graham Center Ballrooms.

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**FLORIDA INTERNATIONAL UNIVERSITY  
BOARD OF TRUSTEES  
HEALTH AFFAIRS COMMITTEE  
MINUTES  
DECEMBER 9, 2015**

**1. Call to Order and Chair's Remarks**

The Florida International University Board of Trustees' Health Affairs Committee meeting was called to order by Committee Vice Chair Justo L. Pozo at 10:36 am on Wednesday, December 9, 2015, at the Modesto A. Maidique Campus, Graham Center Ballrooms.

The following attendance was recorded:

***Present***

Jose J. Armas, *Chair*  
Justo L. Pozo, *Vice Chair*  
Cesar L. Alvarez  
Jorge L. Arrizurieta  
Claudia Puig

***Excused***

Michael G. Joseph

Trustees Alexis Calatayud, Natasha Lowell and Kathleen L. Wilson, and University President Mark B. Rosenberg were also in attendance.

Committee Vice Chair Pozo noted that Committee Chair Jose J. Armas sent his regrets as he would be joining the meeting late.

Committee Vice Chair Pozo welcomed all Trustees, University faculty and staff to the meeting. He congratulated Dean of the Nicole Wertheim College of Nursing and Health Sciences Ora Strickland on being selected as one of Plaza Health Network's 2016 Women of Distinction.

**2. Approval of Minutes**

Committee Vice Chair Pozo requested that the Minutes be approved at a later time in the meeting. There were no objections.

**3. Academic Health Center (AHC) Reports**

**3.1 AHC Update**

Dean and Senior Vice President for Health Affairs, John A. Rock, provided an update on the AHC noting that the University has made significant progress in establishing the AHC elements. He provided an overview of the various components and how they collaborated with the AHC such as the work with the Governmental Relations office on legislative issues and Advancement on focus

team fundraising. He also discussed the planning of the AHC Learning Center noting that this will serve to provide critical space for clinical skills training.

VP Rock provided an update on telehealth services, noting that telemedicine has the potential to eliminate distance as a barrier to health care and is expected to increase medical access without increasing health costs. VP Rock also recognized and thanked Trustee Claudia Puig for her leadership in Univision Radio and the partnership with the FIU Herbert Wertheim College of Medicine in producing a weekly Spanish-language radio program, *A Tu Salud*, which addresses timely and important health issues within the community.

Committee Chair Jose Armas apologized for his late arrival and thanked Vice Chair Pozo serving as the Committee's Chair for the earlier part of the meeting.

### **3.1 Integration of FIU Student Health Services with the FIU HealthCare Network**

Chief Executive Officer of FIU Health, Encida O. Roldan, provided an update on the integration of FIU Student Health Services (SHS) with the FIU HealthCare Network (HCN). She noted that the realignment and integration process of FIU SHS with the FIU HealthCare Network was completed a month earlier than expected on November 3.

Dr. Roldan stated that FIU SHS delivers services at two sites: Modesto A. Maidique Campus and the Biscayne Bay Campus. She further stated that on July 1, 2015, the clinical portion of FIU SHS was transferred to FIU Health for the purpose of managing full operations, inclusive of Pharmacy services. She also provided an overview of the Due Diligence Plan which was implemented in July 2015 and ended in September 2015. She noted that this plan provided a review of administrative support positions, potential synergies and efficiencies, meetings with all stakeholders: administration, clinical, students, and student representatives, amongst other actions.

Dr. Roldan noted that the goal of the integration is to increase utilization and presented the strategies in place to reach the goal. She provided an overview of the Action Plan which was reviewed in November. She delineated the realignment metrics of the SHS and the table of operations. She further noted that the cost savings, totaling approximately \$1.2M annualized (approximately \$900,000 FY 15-16), from the realignment will be reinvested to enhance various clinical services such as increased gynecology services, increased internal medicine services, and enhanced behavioral services, among others. She concluded that the next steps of the integration included implementing Population Health Management for FIU Students, utilizing electronic Health Records, Data and Dashboards, and obtaining accreditation from AAAHC: Accreditation Association for Ambulatory Health Care.

Committee Chair Armas inquired on how student awareness and understanding impacted utilization. Dr. Roldan noted that once the marketing strategies were implemented complete data regarding utilization would be available.

Dr. Roldan stated that at the next Committee meeting she will provide information responsive to Trustee Armas' question regarding utilization, before and after the integration.

#### 4. Information Items

Committee Chair Armas requested that the reports within the Information Items be accepted as written. There were no objections.

#### 5. New Business

*No new business was raised.*

#### 2. Approval of Minutes

Committee Chair Armas asked that the Committee members approve the Minutes of the meeting held on September 10, 2015. A motion was made and passed to approve the Minutes of the Health Affairs Committee Meeting held on Thursday, September 10, 2015 at the Modesto A. Maidique Campus, Graham Center Ballrooms.

#### 6. Concluding Remarks and Adjournment

Committee Chair Armas requested a joint meeting of the FIU HealthCare Network Board and the Board of Trustees Health Affairs Committee.

Committee Chair Armas requested that Dr. Eneida O. Roldan continue to provide updates on the progress of the integration of FIU Student Health Services with the FIU HealthCare Network.

With no other business, Committee Chair Jose J. Armas adjourned the meeting of the Florida International University Board of Trustees Health Affairs Committee on Wednesday, December 9, 2015 at 11:11 a.m.

<b><i>Trustee Requests</i></b>	<b><i>Follow-up</i></b>	<b><i>Completion Date</i></b>
1. <i>Committee Chair Armas requested that Dr. Eneida O. Roldan continue to provide updates on the progress of the integration of FIU Student Health Services with the FIU Health Care Network.</i>	<i>Chief Executive Officer, FIU Health Associate Dean, Eneida O. Roldan</i>	<i>Ongoing</i>
2. <i>Chairman Armas requested a joint meeting of the FIU HealthCare Network Board and the Board of Trustees Health Affairs Committee</i>	<i>Dean and Senior Vice President for Health Affairs Dr. John A. Rock</i>	<i>Summer 2016</i>

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# Health Affairs Committee

## *FIU Student Health Services*



# Student Health Services UPDATE

## **Clinical Services:**

Completed realignment of SHS operations

Gynecology services one full day per week

Dermatology Services | one full day per week

Approved | 2 FTE

- Behavioral Health Director at SHS
- Behavioral Services at BBC

## **Communication/Stakeholders:**

Meetings with student representatives to discuss marketing strategies

Telehealth proposal vetoed

Monthly town hall meetings with staff

## **Next steps:**

AAAHHC accreditation

Finalize and implement marketing strategies respective for each campus

Baseline assessment of IT system

Student health assessment

Construction update

MOU FY 16-17

Budget FY 16-17

# Students Enrolled & Paying Health Fee

## *Modesto Maidique Campus (MMC)*

	From	To	Enrolled*	Paid Health Fee*	Patients	Allocated Slots	Filled Slots	% Slots Filled
<b>Spring 15</b>	1/5/2015	5/10/2015	51,339	42,933	8,776	44,814	39,069	87.18%
<b>Summer 15</b>	5/11/2015	8/23/2015	34,147	29,399	5,436	36,873	20,465	55.50%
<b>Fall 15</b>	8/24/2015	1/10/2016	54,087	44,648	5,133	39,680	33,956	85.57%
<b>Spring 16**</b>	1/11/2016	5/15/2016	54,087	42,218	5,536	23,545	21,153	89.84%

## *Biscayne Bay Campus (BBC)*

	From	To	Enrolled*	Paid Health Fee*	Patients	Allocated Slots	Filled Slots	% Slots Filled
<b>Spring 15</b>	1/5/2015	5/10/2015	51,339	42,933	1,337	13,519	6,477	47.91%
<b>Summer 15</b>	5/11/2015	8/23/2015	34,147	29,399	718	9,137	3,204	35.07%
<b>Fall 15</b>	8/24/2015	1/10/2016	54,087	44,648	669	11,605	5,093	43.89%
<b>Spring 16**</b>	1/11/2016	5/15/2016	54,087	42,218	1,088	5,034	2,580	51.25%

\* Cannot split total enrollment and students who paid the health fee by site

\*\*Only contains the following month's - January - March 2016 for Patients, Allocated Slots, Filled Slots and % of Slots Filled

Enrollment numbers from FIU Analysis and Information Management Figures.

Health Fee Counts from Panthersoft eligibility data uploaded into PyraMED.

Unique patients are per term, so a student that visits fall and spring would count once on each term.

# Total visits and Pharmacy utilization

July 2015 - March 2016

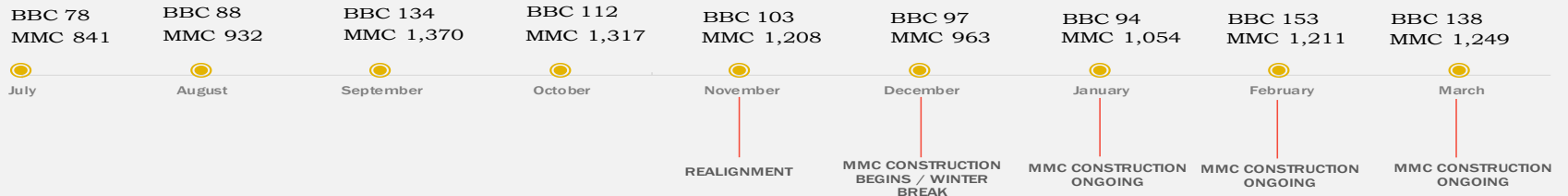
## Student Health Services - Total Patient Visits by Site

FY 2015 - 2016



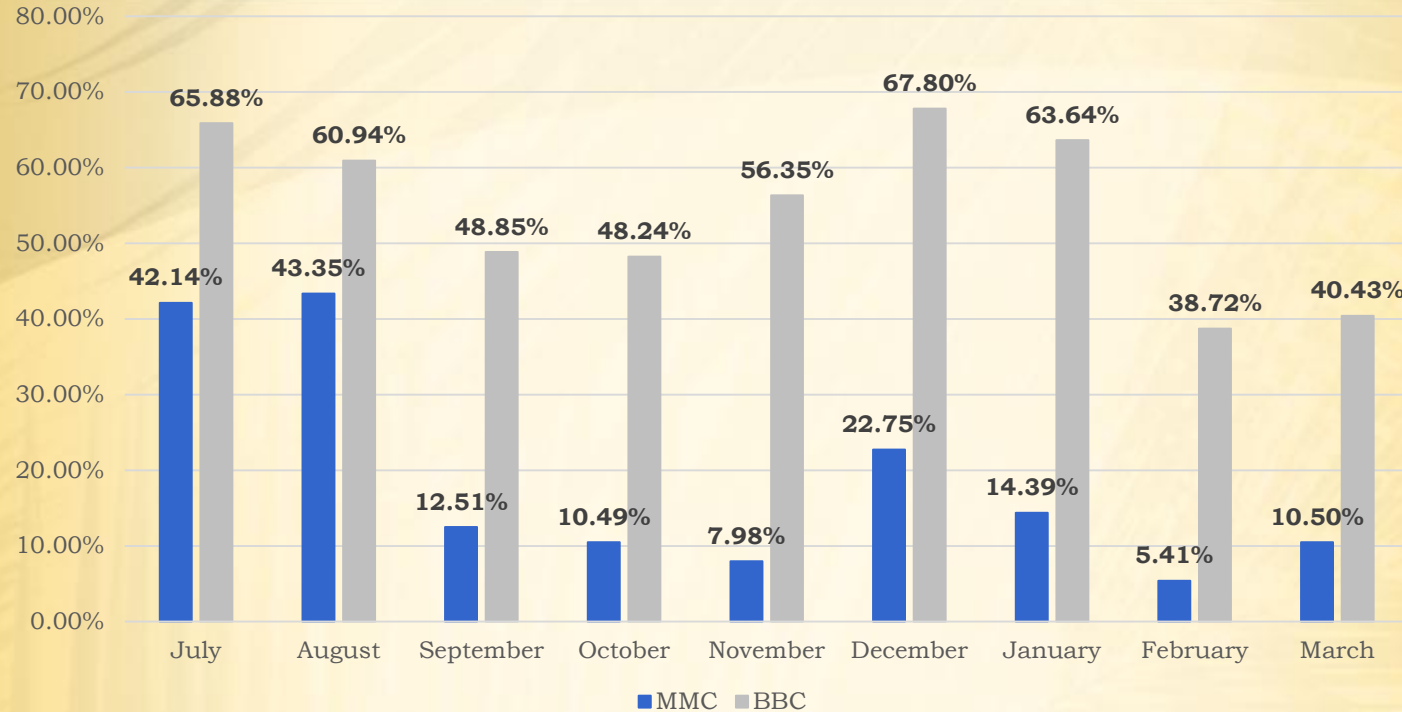
## Student Health Services - Total Pharmacy Prescriptions Filled

FY 2015 - 2016



# Provider Capacity

July 2015 - March 2016



\* Cannot split total enrollment and students who paid the health fee by site.

Enrollment numbers are from FIU Analysis and Information Management Figures.

Health Fee Counts from Panthersoft eligibility data uploaded into PyraMED.

**Please note: Potential Appointments are based on a 30 minute average appointment time period.**



# No Shows and Cancellations

July 2015 - March 2016



Student Health Services

## No Show Rates by Campus

### Biscayne Bay Campus (BBC)

Month	# of Appointments Scheduled	# of No Shows	Total % of No Show
July	227	10	4.41%
August	267	10	3.75%
September	327	12	3.67%
October	337	15	4.45%
November	255	9	3.53%
December	241	10	4.15%
January	187	8	4.28%
February	251	13	5.18%
March	276	18	6.52%

### Modesto Maidique Campus (MMC)

Month	# of Appointments Scheduled	# of No Shows	Total % of No Show
July	2,118	75	3.54%
August	2,062	86	4.17%
September	2,408	124	5.15%
October	2,697	135	5.01%
November	2,059	92	4.47%
December	1,375	68	4.95%
January	1,729	78	4.51%
February	1,878	216	11.50%
March	2,121	236	11.13%

Source of Data: PyraMED as of April 8, 2016  
For FY July 1, 2015 - June 30, 2016



Student Health Services

## Cancellation Rates by Campus

### Biscayne Bay Campus (BBC)

Month	# of Appointments Scheduled	# of Cancelled Appointments	Total % of Cancellation
July	227	20	8.81%
August	267	27	10.11%
September	327	42	12.84%
October	337	34	10.09%
November	255	20	7.84%
December	241	36	14.94%
January	187	19	10.16%
February	251	25	9.96%
March	276	36	13.04%

### Modesto Maidique Campus (MMC)

Month	# of Appointments Scheduled	# of Cancelled Appointments	Total % of Cancellation
July	2,118	207	9.77%
August	2,062	188	9.12%
September	2,408	321	13.33%
October	2,697	281	10.42%
November	2,059	240	11.66%
December	1,375	165	12.00%
January	1,729	149	8.62%
February	1,878	124	6.60%
March	2,121	105	4.95%

Source of Data: PyraMED as of April 8, 2016  
For FY July 1, 2015 - June 30, 2016

## Health Affairs Committee

*Nicole Wertheim College of Nursing and Health Sciences  
Update  
June 2, 2016*



# NWCNHS Strategic Priorities

1. Execute outstanding educational programs
2. Hire, develop, and retain excellent faculty and staff
3. Increase research/scholarship productivity
4. Optimize professional licensure and certification at graduation
5. Enhance CNHS fiscal sustainability
6. Develop faculty practice
7. Enhance faculty, staff, and student community engagement
8. Expand global initiatives
9. Increase CNHS operational efficiency and effectiveness



# Top 2015-2016 Rankings

- FIU ranked #54 by US News and World Report for Graduate Nursing
- FIU ranked #40 in the nation among 400 for Best Online-RN-to-BSN programs by RntoBSN.org



# NWCNHS Program Enrollment

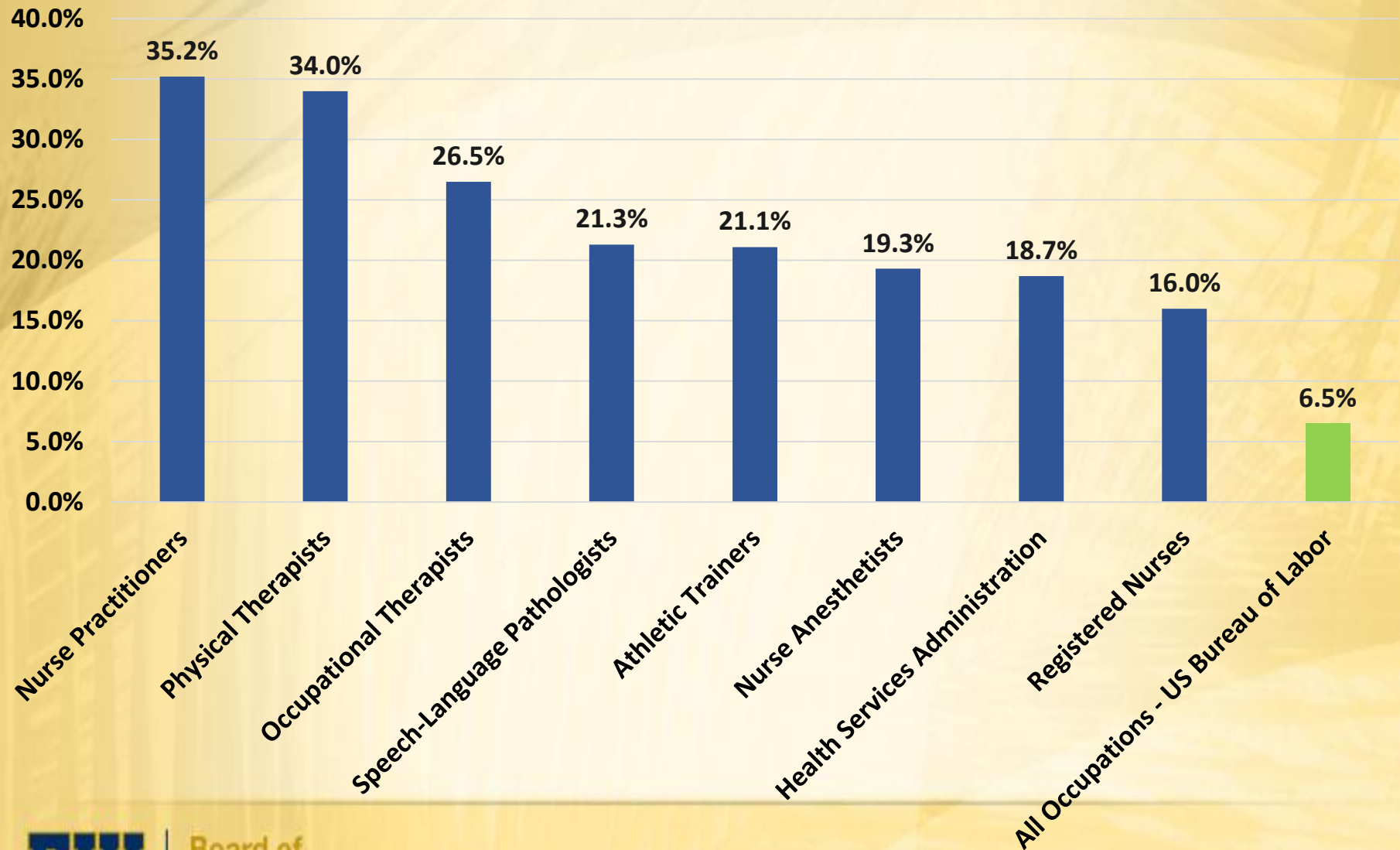
<b>Program</b>	<b># of Students Fall 2015</b>
Athletic Training	49
Health Services Administration	871
Communication Sciences and Disorders	255
Nursing	1,049
Occupational Therapy	158
Physical Therapy	159
<b>Total</b>	<b>2,541</b>

# NWCNHS Academic Program Demand

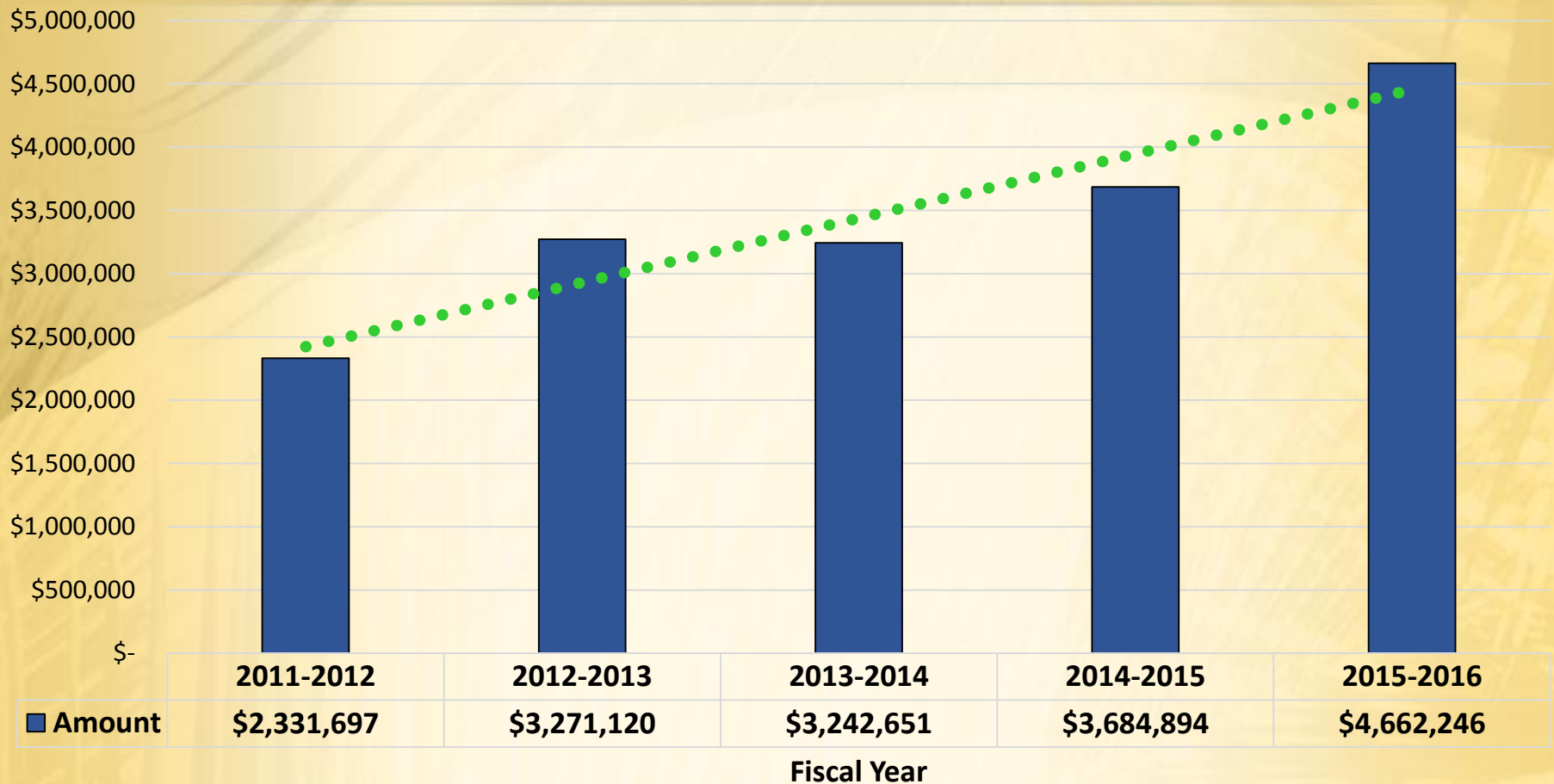
Academic Program	Degree Level	Total Student Applicant Pool	Qualified Student Applicant Pool	Avg. GPA of Qualified Student Applicant Pool	Student Slots Available
Nursing	Undergraduate	774	727	3.32	480
Athletic Training	Graduate	72	48	3.36	25
Nurse Anesthetist & DNP Dual Degree	Graduate	136	118	3.51	45
Nursing Graduate	Graduate	297	281	3.56	165
Occupational Therapy	Graduate	283	109	3.50	50
Physical Therapy	Graduate	896	412	3.42	50
Speech Language Pathology	Graduate	358	250	3.53	45
<b>Totals:</b>		<b>2,816</b>	<b>1,945</b>	<b>3.46</b>	<b>860</b>

*Source: Data provided by NWCNHS academic units for fiscal year 2015-2016.*

# U.S. Bureau of Labor Statistics National Employment Growth NWCNHS Disciplines 2014-2024 (Projected)



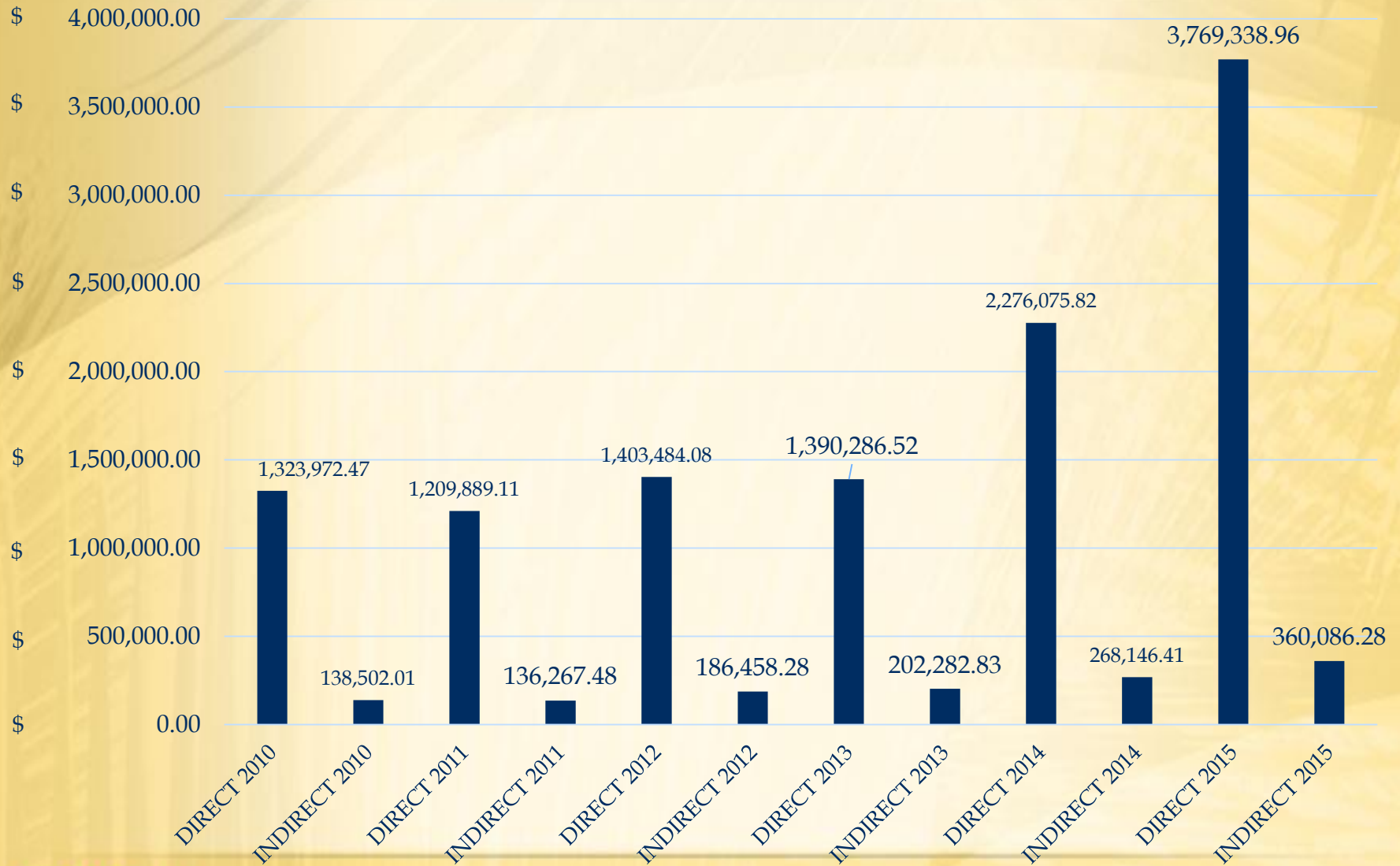
# NWCNHS 5-Year Grant Funding Trend



**\*Spring 2016 HRSA Grant Submissions: \$11,000,000**



# NWCNHS External Funding Expenditures: 2010 - 2015

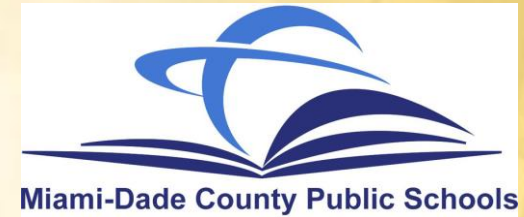


# NWCNHS Academic Health Center Collaborations

- Neighborhood Help: Herbert Wertheim College of Medicine; Robert Stempel College of Public Health and Social Work; College of Law
- Precision Medicine Taskforce: College of Engineering and Computing; College of Arts, Sciences, and Education; Herbert Wertheim College of Medicine
- Planned Collaborative Programs: Joint BSN/BME Degree; Joint DPT/PhD in Biomedical Engineering
- Lumbar Puncture Simulator Development: Biomedical Engineering Students; FIU STAR Center
- Driving Simulation Lab for Research and Clinical Practice Advancement: College of Engineering and Computing; Department of Research

# NWCNHS Primary Clinical Partners

1. The Children's Trust
2. Jessie Trice Community Health Center, Inc.
3. Miami-Dade County Public Schools (M-DCPS)
4. Health Foundation of South Florida
5. Citrus Health Network
6. Broward Health
7. Florida Department of Health (Miami Dade County, Glades County, Okeechobee County, Henry County)
8. Sheridan Anesthesiology
9. Miami Beach Anesthesiology Associates
10. Humana





# Integrating Technology, Education, & Research

- Simulation Teaching and Research Center (STAR)
- Center for Advanced Rehabilitation/Research Education (CARE)
- Driving Simulation
- Anatomage
- InMotion Robot
- EyeTEAM tracking (Nurse Anesthetist)
- OphthoSim: Immersive Ophthalmoscopy Learning

Thank You





**School of Integrated Science and Humanity  
Report to the Board of Trustees Health Affairs Committee  
June 2016**

The School of Integrated Science and Humanity (SISH) in the College of Arts, Sciences & Education provides a multi-disciplinary home for the study of health-themed sciences such as biochemistry, biophysics, neuroscience, and cognitive and behavioral sciences. The following provides an update of recent health-related initiatives of the School.

**BIOMOLECULAR SCIENCES INSTITUTE (BSI)**

**Director: Dr. Yuk-Ching Tse-Dinh**

Biomarkers and novel imaging materials for cancer therapy are being developed by BSI faculty. The level of cancer drug targets and DNA repair activities in each tumor may allow stratification of individual cancer patients for selection of chemotherapeutic agents that will have a higher likelihood of positive response and limit the toxicity. Inhibition of DNA repair activity in cancer cells may also limit tumor progression and development of drug resistance. Miguel Villalona-Calero, M.D., Deputy Director and Chief Scientific Officer of the Miami Cancer Institute at Baptist Hospital, has joined the BSI as an affiliate faculty member. He gave a seminar to BSI faculty members and discussed potential collaborations. BSI faculty members also discussed collaborations with Dr. Keiran Smalley from the Moffitt Cancer Center during his visit to FIU.

**CENTER FOR CHILDREN AND FAMILIES (CCF)**

**Director: Dr. William Pelham**

The Center for Children and Families is a multidisciplinary team of researchers and service providers committed to improving the lives of children with mental health problems and their families. The CCF is the leading provider of evidence-based services for children with ADHD in Miami and has served more than 6,640 families since it was established in 2010. The renowned Summer Treatment Program has served close to 2,500 families since the summer of 2010, with 233 South Florida children participating during the summer of 2015. The CCF Summer Reading Explorers Program, an intervention designed to improve literacy skills in young children, served 1,756 children during the summer of 2015. The CCF has also served an additional 450 children through their clinic since the beginning of fiscal year 2016, suggesting that many more children and families will be reached this year. Since August of 2015, the CCF has hosted talks by 15 nationally recognized mental health experts and continues to provide online training opportunities. Events such as the Speaker Series and free Community Workshops have attracted over 800 attendees. In addition, 2,191 online workshops and keynotes have been accessed via [effectivechildtherapy.fiu.edu](http://effectivechildtherapy.fiu.edu), online evidence-based training website offered by CCF and the Society of Clinical Child and Adolescent Psychology. Since receiving \$23

million in grant awards by the end of the fall semester, CCF faculty have obtained a new Children's Trust award for \$682,168, an Institute of Education Sciences (IES) award with SUNY Buffalo with \$191,119 as the FIU portion, and a foundation grant for \$100,000.

### **COGNITIVE NEUROSCIENCE AND IMAGING CENTER (CNIC)**

#### **Director: Dr. Angela Laird**

The Cognitive Neuroscience and Imaging Center is a multidisciplinary group of faculty focusing on understanding mental processes in the healthy and diseased human brain across the lifespan. The FIU Office of Research and Economic Development (ORED) and CNIC are in the process of acquiring a 3.0 Tesla Siemens MAGNETOM Prisma to support magnetic resonance imaging research at FIU. This MRI will be installed in the renovated health clinic area of PG-5 in July 2016 and operational for research studies by September 2016. It will be used to acquire functional and structural neuroimaging data for the Adolescent Brain Cognitive Development (ABCD) Study (PIs: Raul Gonzalez and Angela Laird) sponsored by the National Institutes of Health at \$12.7M over five years, liver elastography data for the Miami Adult Studies on HIV (MASH) Study (PIs: Marianna Baum), and data for multiple other pilot imaging projects by CNIC members and their collaborators.



**FIU Herbert Wertheim College of Medicine  
Report to the Board of Trustees Health Affairs Committee  
June 2016**

**HWCOC among 20 schools selected to transform physician training**

The Herbert Wertheim College of Medicine (HWCOC) is one of 20 medical schools selected nationwide to join the American Medical Association's [Accelerating Change in Medical Education Consortium](#) – which is working to reshape how future physicians are trained in order to improve health outcomes. Together with a founding group of 11 schools, the new 32-school consortium will support training for an estimated 19,000 medical students who will one day care for 31.4 million patients each year.

**HWCOC Faculty selected for National Board of Medical Examiners (NBME)**

New NBME *Board Member*: Carla Lupi, M.D.

*Test Committee Members* develop and review the test items from which the USMLE (US Licensing Medical Exam) is composed:

Georg A. Petroianu, M.D., Ph.D.	USMLE Pharmacology and Biochemistry
Carla Lupi, M.D.	USMLE Women's Health

*Interdisciplinary Review Committee Members* are responsible for the review and approval of all items to be included in the test item library; they ensure the accuracy and currency of items to be included in the examinations.

Rani S. Gereige, M.D., M.P.H. Step 2 CK IRC

*Executive Chief Proctors* have responsibility for the subject examinations and all administrative tasks for the provision of subject examination services to your school.

Rodolfo Bonnin, Ph.D.

**Florida Department of Health Appointment**

J. Patrick O'Leary, Executive Associate Dean for Clinical Affairs, has been appointed by the Council of Florida Medical School Deans, representing a college of allopathic medicine to the Florida Physician Workforce Advisory Council. The appointment is from November 2015-19. The Physician Workforce Advisory Council serves as coordinating and strategic planning body to assess Florida's physician workforce needs.



### **Florida Academy of Family Physicians Award**

The Florida Academy of Family Physicians (FAFP) selected Dr. Irmanie Eliacin, assistant professor, Department of Medicine, Family Medicine, and Community Health as the 2015 FAFP Young Leader Award. This prestigious award was created to recognize an outstanding service to the FAFP and the specialty of Family Medicine by a young physician. Dr. Eliacin is one of the physicians providing comprehensive health care services at the Green Family Foundation NeighborhoodHELP™ Mobile Health Care Centers.

### **Florida Academy of Physician Assistant (FAPA) Medical Challenge Bowl**

The Florida Academy of Physician Assistant (FAPA) Medical Challenge Bowl is a friendly competition coordinated by the State Society during which teams of three PA students compete by answering medical questions. These questions are asked in the form of game show Jeopardy on a variety of subjects, including physical diagnosis, microbiology, anatomy, OB/GYN, pulmonary, cardiology, primary care, emergency medicine, and surgery. This year, the 10<sup>th</sup> annual FAPA Medical Challenge Bowl, saw 12 Physician Assistant Programs compete; sending 28 three-student teams into the arena. The FIU MPAS Program sent two teams up to compete and in their first competition ever our fighting panthers made it to the semi-finals. Being part of the top nine teams in the competition is a great accomplishment, especially for a group of students who are just finishing their second semester, and competing against senior PA students in those semi-final rounds.



Semi-Final FIU Team



FIU Challenge Bowl Squad



**Robert Stempel College of Public Health and Social Work  
Report to the Board of Trustees Health Affairs Committee  
June 2, 2016**

**Major accomplishments by Stempel faculty**

*Faculty from RSCPHSW has \$26.9 million in active grants (as of 03/31/2016). Marianna Baum received a new multi-million dollar R01 NIH grant to perform "Cohort Studies of HIV/AIDS and Substance Abuse in Miami". Mario De La Rosa is co-PI of a \$9.5 million Endowment grant "FIU Health Disparities Initiative (FIU-HDI)" from the NIMHD. Tomás R. Guilarte successfully renewed one of his multimillion dollar NIH/NIEHS grants to study biomarkers of neurotoxicity and Chair of the School of Social Work, Mary Helen Hayden was awarded "Title IV-E Child Welfare Stipend Program." Stempel faculty are also serving as co-PIs, key-instigators and consultants on numerous major health related-grants awarded to FIU [e.g., Gonzalez's U01 grant, CREST NSF, support provided by the Integrated Biostatistics & Data Management Center (IBDMC)].*

*The College sustained research leadership in South Florida and globally in health disparities and improving health equity, chronic diseases, health economics, healthy aging, and the population health consequences to environmental exposure. Specifically:*

**Dr. Eric Wagner: FIU-BRIDGE Research Institute**

The FIU-Banyan Research Institute on Dissemination, Grants, and Evaluation, better known as "FIU-BRIDGE," is devoted to the design, implementation, and evaluation of community-based prevention and treatment programs targeting health problems among youth and young adults. A particular emphasis of FIU-BRIDGE's work is alleviating health disparities, with a focus on working with Hispanic and Native-American communities. FIU-BRIDGE is a partnership between FIU and Banyan Health Systems; the institute is directed by RSCPHSW Professor Dr. Eric F. Wagner.

FIU-BRIDGE (formerly C-BIRG) has received over \$27 million in outside grant support. On September 30, 2015, and in partnership with the Miami-Dade Public School System, FIU-BRIDGE was awarded a new, five-year, \$1.5 million SAMHSA grant. The goal of the grant is to prevent substance use, HIV, and viral hepatitis among teenagers attending Miami-Dade public schools. In addition, Dr. Wagner, is a member of the "dream team" of FIU investigators that in October won a \$12 million federal grant to longitudinally examine substance use in youths as part of a national landmark study on brain development. In December, Dr. Wagner and colleagues received a \$60K grant from DISC Village to evaluate the impact of DISC Village's family

intervention program. Most recently, in January, FIU-BRIDGE won a two-year \$150K grant from the Ware Foundation to conduct a study on equine-facilitated therapy with teenagers in foster care.

**Mario De La Rosa, PhD: Center for Research on U.S. Latino HIV/AIDS and Drug Abuse (CRUSADA)**

CRUSADA's primary mission is to advance collective knowledge and understanding of the social, cultural, and behavioral factors influencing the spread of HIV and substance abuse in Latino populations. CRUSADA doctoral and postdoctoral research training and mentoring programs include faculty and students from the RSCPHSW, the School of Education, and the Herbert Wertheim College of Medicine (HWCOM). CRUSADA has—over the past 13 years—developed a robust community-based participatory program of research focusing on HIV, substance abuse, and health disparities in Latino populations. CRUSADA has developed the infrastructure necessary to conduct research on Latino health disparities in South Florida.

Since its foundation in 2003, CRUSADA has received over \$31 million in funding from the National Institutes of Health (NIH), partnering successfully with community-based organizations and health provider agencies, leading to the completion of seven NIH-funded studies. Moreover, CRUSADA has provided training in scholarly research on Latino health disparities and grantsmanship to 21 FIU faculty members, 27 doctoral students, five postdoctoral scholars, and five community leaders, which has resulted in the funding of eight Ruth L. Kirschstein NIH pre-doctoral fellowships (F31), three R21 awards, one R01 award, and two competitive administrative supplements. Researchers from CRUSADA have published more than 130 peer-reviewed scientific papers and presented over 300 oral and poster presentations. Finally, CRUSADA has established collaborative relationships with over 20 community-based organizations in South Florida and elsewhere to develop CBPR approaches to reduce HIV and substance abuse in Latino populations in Miami-Dade County.

In the fall of 2015, the NIH awarded a \$12 million U01 award to an FIU team that included CRUSADA researchers as key personnel (De La Rosa, Sanchez, Rojas); the project is titled “FIU-ABCD: Pathways and Mechanisms to Addiction in the Latino Youth of South Florida” (Gonzalez, PI; 1U01DA041156). CRUSADA researchers were awarded two grants: A NIAAA \$55K administrative supplement to expand data collection activities of an ongoing NIAAA R21 study on Latino drinking and driving (Romano, De La Rosa, PIs) and \$150K National Institute of Food and Agriculture/USDA two year pilot study to Prevent Transition from Overweight to Obesity among Young Overweight College Students in Ponce, Puerto Rico. A CRUSADA doctoral student was awarded a pre-doctoral fellowship from NIH (Ravelo-Social Work). Since July of 2015 CRUSADA investigators had 16 papers published or accepted/in press and 9 papers submitted to peer-review journals. CRUSADA resubmitted a \$1.8 million R01 application to continue following the recent immigrant study cohort (De La Rosa, PI) and the application received an excellent score and is awaiting a funding decision by the NIAA. Additionally, in collaboration with researchers from New York University, CRUSADA submitted in February of 2016 for review a \$4 million five-year R01 research grant entitled “Latino Adolescents: Cultural and Psychosocial Predictors of the Use of Inhaled Nicotine Products” to the National Cancer Institute (PI's Brook and De La Rosa).



More recently, CRUSADA received a \$9.5 Million Endowment grant from the National Institute on Minority Health and Health Disparities entitled "FIU Health Disparities Initiative (FIU-HDI)" to establish a pre-eminent program to develop strategies for preventing and treating obesity, diabetes, substance abuse and HIV/AIDS, which are prevalent in South Florida and the Caribbean. The Co-Principal Investigators of the FIU-HDI are Dr. De La Rosa, CRUSADA director and RSCPHSW and HWCOM professor and Dr. Andrés Gil, vice president for FIU Research and Economic Development, and Dean of the University Graduate School. Funds from a new endowment will empower FIU to help vulnerable populations in South Florida and the Caribbean to better deal with chronic conditions like diabetes. The increased capacity afforded by the endowment will also allow the FIU-HDI to establish a health disparities innovation and technology transfer initiative within the Office of Innovation and Economic Development that will focus on the development and commercialization of technologies to help reduce health disparities for populations in South Florida and the Caribbean. It is expected that the establishment of the FIU-HDI will have immediate and direct impact at FIU by building health disparities research capacity, with mid- and long-term impact on vulnerable groups through associated community-based research programs, interventions and solutions that will be developed.

Currently, CRUSADA researchers are working to submit the renewal application of the P20 center of excellence to NIMHD and several R01 applications are being developed based on findings from CRUSADA's ongoing NIAAA R21, and R01 mother/daughter studies.

**Dr. Jessie Devieux, Dr. Consuelo Beck Sague, and Dr. Elena Bastida from Health Promotion and Disease Prevention Department**

NIH-funded research (Measurement-based care for depression in resource-poor settings) introducing antidepressant treatment in Haiti's leading HIV comprehensive care clinic has screened 482 antiretroviral therapy patients for a small randomized trial of this innovative community-health worker-led approach to depression detection, treatment initiation and assessment of response to treatment. Three months after enrollment, patients randomized to the intervention had significantly reduced depression symptoms.

NIH-funded research (Growing up: Intervening with HIV-positive adolescents in resource-poor settings) is preparing to conduct formative studies to inform the refinement and finalization of an intervention to strengthen the capacity of adolescent antiretroviral therapy patients in Port-au-Prince, Haiti to assume responsibility for their own treatment and for prevention of transmission of HIV to their sexual partners.

NIH-funded research (an innovative educational intervention for newborn male medical circumcision) supported the development and pilot testing of a brief video-based educational intervention to promote neonatal male medical circumcision, which showed that the majority of parents who watched the video consented to medical circumcision of their male infants.

The recently completed research (Piloting disclosure of their status to youth living with HIV in Hispaniola), the first NIH-funded binational Haiti-Dominican Republic project, showed that

disclosure of status within the adapted Blasini model to pediatric antiretroviral therapy patients was safe and effective in improving adherence and response to antiretroviral treatment, and mood in participants.

The ongoing project funded by the American Academy of Pediatrics in Liberty City, Miami, in collaboration with the Miami Children's Initiative (Asthma community ties and innovation network [ACTION]) enrolled families of 22 children with asthma for a multi-level intervention to improve asthma symptomatology and quality of life of children and caregivers in the public housing homes in Liberty City using techniques successful in Harlem as a proof of concept.

### **Dr. Mary Jo Trepka, Epidemiology Department**

Perinatal HIV transmission: In response to an apparent increase in the number of cases of mother-to-child HIV transmission, Dr. Trepka led a study of infants exposed to HIV by their mother and identified several problems: 1) mothers becoming infected with HIV during pregnancy, 2) cases of physicians not testing women during their last trimester as required by Florida law leading to undiagnosed and untreated maternal HIV infection, and 3) problem of illegal drug use and women not accessing prenatal care. This information was shared with health care providers in several presentations, and she is working with Florida Department of Health HIV/AIDS Section leadership on how to address these problems including obstetric provider education. This project was unfunded and was conducted in response to a call by the AIDS Institute/Florida Consortium for HIV/AIDS Research to investigate this public health emergency (increase of number of annually infected babies from 3 to 10 from 2011 to 2013 despite a decline in the annual number of perinatally exposed infants from 576 to 493). The study was a collaborative effort with C. Beck-Sague, K. Fennie, D. Sheehan, S. Mukherjee, and Florida Department of Health investigators.

Social Determinants of HIV Mortality, Delayed Diagnosis and non-linkage to HIV care: the NIH R01 Grant to study role of poverty, racial segregation and rural/urban residence on racial/ethnic disparities in HIV survival, late diagnosis and linkage to HIV care renewed. (\$1.8 million total since 2009; \$361,729 for the year). Nine papers have been published this year.

Dr. Trepka is PI of the Research Education and Training Core for CRUSADA. This year another student successfully obtained a F31 dissertation award (Gira Ravelo) and one post doc (Mariano Kanamori) had a score of 20 on his K99. Dr. Trepka coauthored four publications with the trainees this year. One of our community leader mentees, Eduardo Sabillon, was responsible for leading an effort to implement a drug-free curriculum in Honduran schools that was launched by the First Lady of Honduras: <http://www.prweb.com/releases/2015/06/prweb12814708.htm>.

### **Dr. Marianna Baum: Dietetics and Nutrition**

A new multi-million dollar R01 NIH grant to perform "Cohort Studies of HIV/AIDS and Substance Abuse in Miami" (2015-20, \$5.8 million). This research will identify genetic markers, the molecular pathways, and the establishment of HIV reservoirs, and determine the basis for future adjuvant therapies to suppress or delay liver disease. This new grant is a continuation of Dr. Baum's previous work that has already been benefiting multiple investigators at FIU who have been utilizing this cohort, the database, and the specimen repository associated with this study, for

NIH and CDC applications. In addition, PhD students have been using the clinic, the laboratory, and the database to learn how to conduct research, and to produce PhD dissertations and NIH applications that have already resulted in awards and in multiple publications. The findings from Dr. Baum's research have been applied to community-based interventions to improve health and to reduce HIV-related health disparities and inequalities in the US and in developing countries. Dr. Baum's contributions have been her pioneering work on the relationship between nutritional status, disease progression and mortality in HIV infection. She has been the Principal Investigator of more than forty NIH grants totaling more than \$50 million. The findings of her studies were published in high impact journals, including the JAMA.

**Dr. Kathryn Hartlieb and Dr. Catherine Coccia: Junior faculty from Dietetics and Nutrition**

They received the "Preventing Overweight/Obesity in Elementary School Children: Pre-service Classroom Teachers (PCTs) as Agents of Change" grant from the USDA (NIFA-AFRI) in March 2015 (\$150K). The purpose of this grant is to develop and examine an elementary school obesity prevention intervention that leverages pre-service classroom teachers as agents of change to improve children's nutrition and physical activity behaviors and minimize risks for childhood obesity. To date a needs assessment has been conducted with in-service and pre-service teachers in order to assess their current knowledge, beliefs, and self-efficacy for creating an anti-obesogenic school environment. These results suggest a need for further nutrition education and are being used to guide the development of the M.E.N.T.O.R. (Mentoring, Education, and Nutrition Knowledge for Teachers to Reduce Obesity Risk in Children) program. From this research two students have been able to utilize the data as the basis of their masters' projects.

**Dr. Tomas Guilarte: Dean, RSCPHSW and Professor EOH, Cognitive Neuroscience and Imaging**

Four multimillion dollar NIH/NIEHS grants to study biomarkers of neurotoxicity and environmental exposure of lead and other toxic metals. Three grants, "Peripheral BDZ Receptor of Neurotoxicity" (2016-2018 \$0.8 mil), "Presynaptic Mechanisms of Lead Neurotoxicity" (2016-2017 \$0.5 mil), and "PB Grant: NMDA Receptor Function in Lead Neurotoxicity" for which the competitive renewal was recently funded (2016-2020 \$2.97mil), are being transferred to FIU. Dr. Guilarte submitted a competitive renewal to NIEHS on March 5, 2016 for the grant "Molecular and Behavioral Effects of Low Level Manganese Exposure" (2016-2020 \$5.06 mil). Dr. Guilarte's laboratory has recently arrived from Columbia University and he is in the process of hiring additional personnel.

**Dr. Deodutta Roy: Department of Environmental and Occupational Health**

U.S. Department of Veterans Affairs \$85K grant to study "Estrogen-Induced Breast Cancer Pathogenesis." Findings for this VA Merit Research Award showed that reactive oxygen species increase susceptibility to estrogen-induced breast cancer via targeting a redox sensitive transcription factors. The competitive renewal proposal to test a new paradigm that dysregulation of the transcription factors network may predispose women to invasive breast cancer that spreads to brain is in preparation.

**Dr. Marcus Cook: Department of Environmental and Occupational Health**

NIEHS R15 grant to study exposure of environmental stresses on normal cell metabolism that can lead to damage to the cellular components, such as DNA, that has been linked to aging and diseases such as cancer. Dr. Cook also submitted a grant application to the Mary Kay Foundation to study long-term goals of understanding the molecular basis of cisplatin chemoresistance.

**Dr. Wasim Maziak, Department of Epidemiology**

Two R01 grant applications have been submitted to NIH. One (PS 20) which proposes to investigate "Understanding tobacco flavor effects on waterpipe smokers' experiences and exposures" got a very fundable score. The second (PS 39) on "Impact of waterpipe product characteristics on consumer choice" is still under consideration. Dr. Maziak is a world expert on tobacco control research and the evidence based fight against non-cigarette tobacco use gave two key addresses at the FDA in a public hearing workshop on the waterpipe entitled "The Waterpipe: Beginning, Spread, Health Effects, Dependence, and Policy" and "Dependence in Waterpipe Smokers"

**Dr. Purnima Madhivanan: Epidemiology Department**

Dr. Madhivanan directs collaborative studies funded by the NIH to investigate "Predictors of HPV vaccination among parents of rural adolescent girls in India."

**Dr. Timothy Page and Dr. Benjamin Amick: Department of Health Policy and Management**

Several grants and contracts to study health economics and outcomes evaluation including "Development of an Online Certificate in Health Economics".

**Dr. Mary Helen Hayden: Social Work**

Title IV-E Child Welfare Stipend Program

The purpose of this award is to educate well-qualified professional social workers to focus on the much needed area of child abuse and neglect in the State of Florida. The State has made a commitment to improving the state of child welfare by increasing the number of case managers and supervisors who hold a degree in social work and to provide a career ladder for graduating students in social work.

The award provided FIU's School of Social Work with 21 stipends in 2015-16 and 25 stipends in 2016-17 to both undergraduate (BSSW) and graduate (MSW) students, as well as a 12-month clinical instructor who supervises the stipend students and teaches child welfare courses. Students receive \$6,000 per year and in addition to the regular program of study, complete two courses in child welfare and their field internships with DCF of Florida or another approved child welfare agency approved by the School.

**The Integrated Biostatistics and Data Management Center (IBDMC); Dr. Dale Williams**

The IBDMC has actively supported investigators and students within and beyond FIU. For academic year 2015-16, it assisted on 123 projects representing 62 departments/units, 12 colleges/centers and 16 organizations outside FIU. The total dollar amount, for funded and active projects during 2015-16, is more than \$49 million. For 2015-16, the funded projects include two

large projects for the Center for Children and Families, one for the Department of Dietetics and Nutrition and one for the College of Engineering and Computing.

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*Board of Governors*  
*Health Initiatives Committee*  
*Update*

## **The Need for Continued Expansion of Graduate Medical Education in Florida**

**The Council of Florida Medical School Deans (CFMSD) urges the legislature to continue to support enhanced funding for Florida graduate medical education (GME) residency positions. Because most physicians practice within the same geographic area where they complete residency training, GME funding produces one of the highest and most direct returns on investment that Florida can make.**

### **Current Status of GME in Florida:**

- Florida currently ranks 41st of the 50 states in the number of GME positions per 100,000 persons, with approximately 19.0 resident physicians per 100,000 population.
- Florida needs approximately 3350 more allopathic residency positions to meet the average national ratio of medical residents per 100,000 state population according to Association of American Medical Colleges (AAMC).
- The 2014 OPPAGA report on Florida's Graduate Medical Education System found that of graduates from Florida's medical schools who matched to a Florida residency program during the last 13 years, 74% have an active Florida medical license and are practicing medicine in Florida.
- The 2014 Florida Department of Health Physician Workforce Annual Report shows that:
  - Nearly two-thirds of Florida's physicians are age 50 or older.
  - Almost half of Florida's psychiatrists are over age 60.
  - 13% of Florida's physicians have indicated they intend to retire within the next five years.
- The United States is projected to confront a shortage of 91,500 doctors by 2020 according to the AAMC.

### **Background**

- By the year 2020, it is projected that Florida will have approximately 500 more medical school graduates per year than the number of currently available first year graduate medical education positions. Unless the number of Florida GME positions is increased concomitantly, many Florida medical school graduates who want to complete GME training in Florida will be forced to leave the state and statistics show that most of them will never return to Florida to practice.
- Most GME programs in the state are either sponsored by or affiliated with Florida's medical schools. The medical schools serve as a catalyst for the creation of new GME programs.
- Florida's medical schools currently operate graduate medical education programs in traditional hospital settings, as well as providing programs in unique settings such as county health departments, prisons, and through multi-site consortia. Funding eligibility for new and existing programs should include hospitals, medical schools, non-hospital outpatient settings, and other sites at which graduate medical education programs operate.
- Florida currently has nine (9) public and private, allopathic and osteopathic colleges of medicine. These high quality medical schools are doing their part to contribute to Florida's physician workforce at the first stage. Florida's medical schools are well positioned to sponsor new residency programs at hospitals new to GME and to partner with existing hospitals to expand GME, and to expand physician-directed, multidisciplinary, collaborative population-based care using the principles of evidence based medicine.
- Florida is highly successful in retaining physicians who train here. Florida ranks ninth in the US relative to retaining physicians who completed medical school in the state, fourth relative to retaining physicians who completed residency education here and sixth relative to retaining physicians who completed both medical school and residency education here.

*December 18, 2015*



## **Medical Schools Critical to Graduate Medical Education in Florida**

**The Council of Florida Medical School Deans (Council of Deans) urges the Florida Legislature to continue to support enhanced funding for graduate medical education (GME) residency positions. GME funding produces one of the highest and most direct returns on investment that Florida can make to assure an adequate supply of physicians in Florida. State policies regarding GME should recognize the critical roles that both hospitals and medical schools play in meeting the state's health care workforce needs.**

As Florida continues to address its physician workforce needs, it is imperative that medical schools' focal role in GME is recognized. Medical schools incur significant costs developing, maintaining, and coordinating GME programs in affiliation with their hospital partners. However, neither Medicare GME funding nor Medicaid GME funding helps to defray medical school GME costs because Medicare and Medicaid GME funding is paid directly to hospitals. Hospitals are currently supporting many GME positions above the funding cap imposed by the federal government. Financial pressures on hospitals affect their ability to further expand, and often determine what types of residency programs are developed by hospitals, which desire to support or maximize their return on investment (ROI).

There are many nuances on how GME is delivered at each of the medical schools, as well as in hospitals and non-hospital facilities throughout Florida. Any legislative or policy decisions should reflect the heterogeneity of the GME landscape.

There are innovative activities conducted by Florida's medical schools that are currently creating new GME programs where none have existed in the past.

- The Florida Atlantic University (FAU) sponsored consortium of five hospitals in Palm Beach County coming together to create multiple residencies that pool the patient populations and resources of the hospitals and the medical school.
- The use of Federally Qualified Health Centers (FQHCs) for new residencies, such as the psychiatry residency program at Florida International University (FIU).
- Curriculum and teaching innovations to prepare residents for the future delivery system, such as the new residency at Holy Cross Hospital sponsored by the University of Miami (UM).
- Nova Southeastern College of Osteopathic Medicine (NSU) collaborates with the Florida Department of Health and Florida Department of Corrections in the education of osteopathic medical students, residents and fellows.
- The University of Central Florida (UCF) sponsored consortium of HCA and Veterans' Affairs hospitals to include up to 550 GME positions by the year 2020.
- The Florida State University College of Medicine has collaborated with several of its network of community hospitals to develop new residency programs in primary care specialties over the past five years. This includes programs at Tallahassee Memorial Hospital (Tallahassee), Lee Memorial Health Systems (Ft. Myers) and Sarasota Memorial Hospital (Sarasota).

**The Council of Deans applauds the Florida Legislature and Governor's Office for recognizing the importance of GME in Florida. The deans urge policymakers to continue such recognition with policies that consider the heterogeneity of the GME landscape and that include both hospital and medical school providers.**

*January 6, 2016*

## **SUS Deans' Recommended Strategy for Establishment of a Competitive Grant Program**

As noted by the *American Association of Colleges of Nursing (AACN)*, enrollment in nursing programs is limited by budget restraints, impending faculty retirements, and a critical shortage of preceptors and clinical placement sites. Faculty shortages are of particular concern with a national nursing faculty vacancy rate of 6.9%. This vacancy rate translates into 1,236 faculty vacancies across 714 nursing colleges and schools (AACN, 2014). Reasons cited for nursing faculty vacancies are insufficient funds to hire new faculty (61.3%) and a critical shortage of qualified applicants (56.5%). As noted by AACN, 89.6% of faculty vacancies require a doctoral degree and there is a critical shortage of nurses prepared at this level.

To address the critical shortage of nursing faculty in Florida, the State University System (SUS) Deans and Directors recommend short and long-term investments in nursing education. The long term strategy (presented under separate cover) includes direct appropriation to the SUS schools of nursing, approval of a differential tuition rate for graduate nursing programs and approval of fees to support clinical learning.

Several ideas are presented for potential short-term investment to create and sustain a state-wide nursing faculty recruitment and retention. Each program within the SUS has unique needs for faculty members, depending on program offerings and strategic plans. Some programs are focusing on hiring tenure-earning faculty who can contribute to the programs' teaching and research missions while others may focus hiring on clinical faculty to support teaching and clinical practice, such as the practice doctorate. Thus recruitment and retention strategies vary across the SUS programs. Prospective faculty members want to know that they will be supported in their role at the institution. Support includes a variety of strategies.

1. What are best practices in recruiting and retention that would be appropriate for a grant program to support? Provide examples either from within the system or elsewhere?
  - Junior faculty members in research-focused positions need a formal mentoring program to support success. The University of South Florida have instituted a formal program, called *Institute for Nursing Faculty Recruitment, Retention, and Mentoring (INFORM)*. Other SUS programs have instituted similar programs at University and program levels. Programs include formal mentorship and regular faculty development. Formal programs could be developed across the SUS system, modeling and adapting the INFORM model. The goal of INFORM is to recruit, retain and mentor nursing faculty in the areas of teaching, research, and scholarship. INFORM is evidence-based and addresses the following key elements of the faculty role:
    - Academic citizenship to prepare faculty for the university environment and the faculty role including strategies for managing heavy workloads.
    - Academic partnerships for rapidly implementable programs of research.
    - Teaching expertise in both live and online venues including pedagogical knowledge, classroom/online technology, simulation and clinical instruction.
    - Expertise in interprofessional education and the preparation of nurses for collaborative patient-centered care.

- Skills in grantsmanship and writing for publication.
- Competitive “packages” are needed to effectively recruit and retain faculty. SUS programs have reported losing potential hires to programs across the nation that offer a comprehensive package to support their success as a faculty member. The package is often combined with a formal mentoring program. Funding to support competitive packages for recruitment of both junior and senior faculty members include:
  - Competitive salaries (Florida SUS salaries have been below the national average). Some specialties require higher salaries than others.
  - Reduced teaching loads for at least the first 3 years to allow the faculty member time to develop as a researcher and/or clinical scholar. This also requires funding to hire adjunct faculty to support the reduced teaching assignment.
  - “Start up” funding to support research and or clinical scholarship. This funding can support a variety of line items, such as research assistants or graduate student assistants, equipment and supplies, publication costs, and travel to professional meetings to present peer-reviewed papers and projects.
  - Senior faculty, which are the most challenging to recruit, have high expectations for salary and start-up packages.
- Faculty members seek grant funding to support their research and scholarship. Increasingly, funding from federal agencies (the gold standard), has become challenging. The availability of a statewide competitive grant program to support nursing research and scholarship would enhance recruitment and retention and success of junior faculty members. It would also make them more competitive in seeking federal funding as this seed money would facilitate pilot work to support larger, more competitive grant funding. Examples include the following:
  - The state of Florida has the Bankhead Coley and the James and Esther King grant programs that support research related to cancer and tobacco-related diseases. These programs are supported by the Biomedical Research Advisory Council.
  - The state of Texas has grant funding to support competitive proposals for biomedical research.
  - A program to support development of nursing research programs could be modeled after existing Florida programs.
- Incentives and opportunities to support Florida residents to pursue doctoral education and remain in the state upon completion. Examples may include:
  - Forgivable loans for master’s-prepared nursing faculty to attain a doctorate, with an emphasis on PhD education, the greatest need for faculty preparation.
  - Grants to SUS programs for faculty development leaves/sabbaticals to pursue the PhD on a full-time basis and complete within a specified time frame. Upon completion, a term of service at an SUS program would be expected.
  - Tuition waivers for prospective faculty members to pursue the PhD. Upon completion, a term of service at an SUS program would be expected.
- Grants for development of innovative programs for doctoral preparation for state residents could also be an effective strategy. Examples include:
  - Collaborative programs across the SUS programs.
  - Accelerated PhD programs.
  - BSN to PhD options, which some SUS programs already have.

- DNP to PhD accelerated programs. Currently more DNP graduates are being educated nationwide, while most faculty needs support the PhD graduate.
2. Are there specific types of nursing programs (e.g., tracks, concentrations, degrees) that might have a higher priority than others?
    - As a system, the SUS deans believe the greatest need is education, recruitment, and retention of faculty members with PhD preparation.
  3. Do you have specific suggestions for how to structure the grant program to ensure that it's as effective as possible and also meets the states greatest needs?
    - We believe that each SUS program is different and has unique needs, yet faculty recruitment and retention is a commonality across programs. We support funding to all programs to address the specific needs of each institution with the goal of educating, hiring, and retaining PhD-prepared faculty members.
    - Piloting a mentoring program across the SUS-system (such as adapting the USF INFORM program across the SUS programs) may also be an effective strategy. Funding to support development, implementation, and evaluation of such a program would be beneficial.
    - A minimum of 3 to 5 years sustained funding is needed to implement and evaluate programs.



**COUNCIL  
OF FLORIDA  
MEDICAL SCHOOL  
DEANS**

United for Excellence in Medical Education, Research, and Health Care

# Ensuring an Adequate Physician Workforce: The Critical Role of GME

Michael Good, M.D.

Council of Florida Medical School Deans

For the Florida State University System

Board of Governors

February 11, 2016



# COUNCIL OF FLORIDA MEDICAL SCHOOL DEANS

United for Excellence in Medical Education, Research, and Health Care

Dr. Alma Littles, Terry Meek, Dr. John Fogarty, Dr. Tim Flynn, Dr. Lisa Dixon, and the FSU Instructional Design team helped to generate many of the data, graphics and materials presented.

Representatives from each Florida medical school contributed updates on their GME initiatives for inclusion in this presentation.

I have no industry relationships or conflicts of interest to disclose.

# THE PROBLEM

There are **TOO FEW** residency training positions in the state of Florida to ensure an adequate physician workforce.



**RESIDENT  
PHYSICIAN**



**PATIENTS**

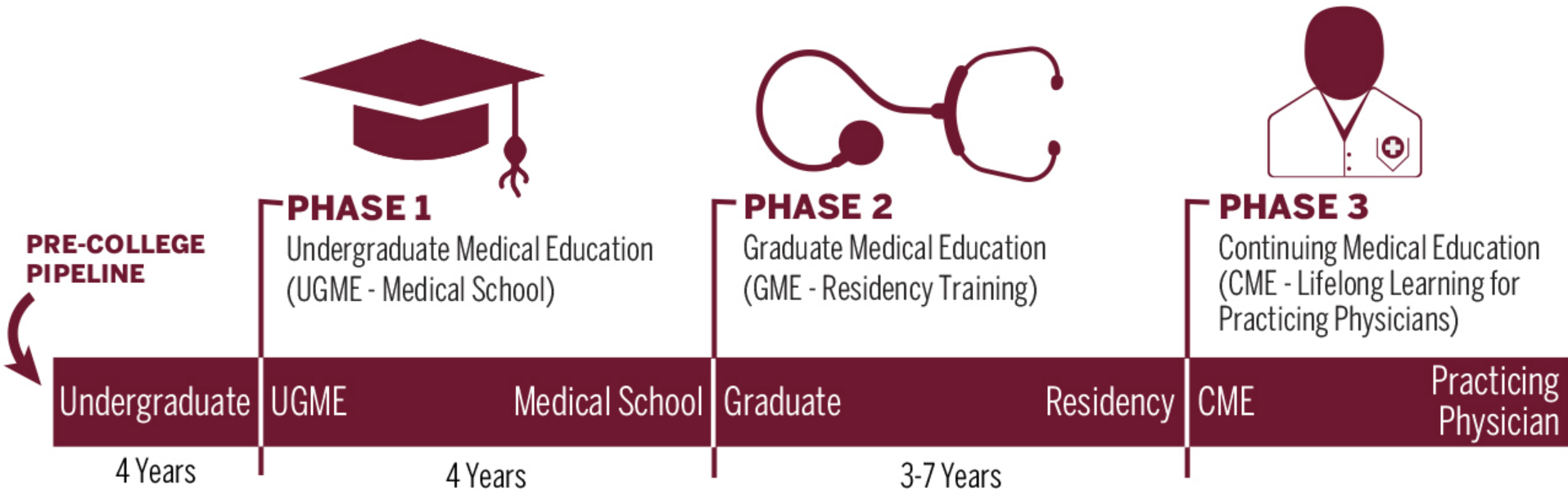




# The Problem

- With the rapid growth of the population in Florida over the past 15 years, the state now has a physician workforce problem in both primary and specialty care areas.
- Florida needs approximately 3350 more residency positions to meet the average national ratio of medical residents per 100,000 state population.
- GME provides a pipeline for both medical students from Florida schools and for bringing additional doctors to the state who are likely to stay and practice in Florida.

# *Continuum of* **MEDICAL EDUCATION**



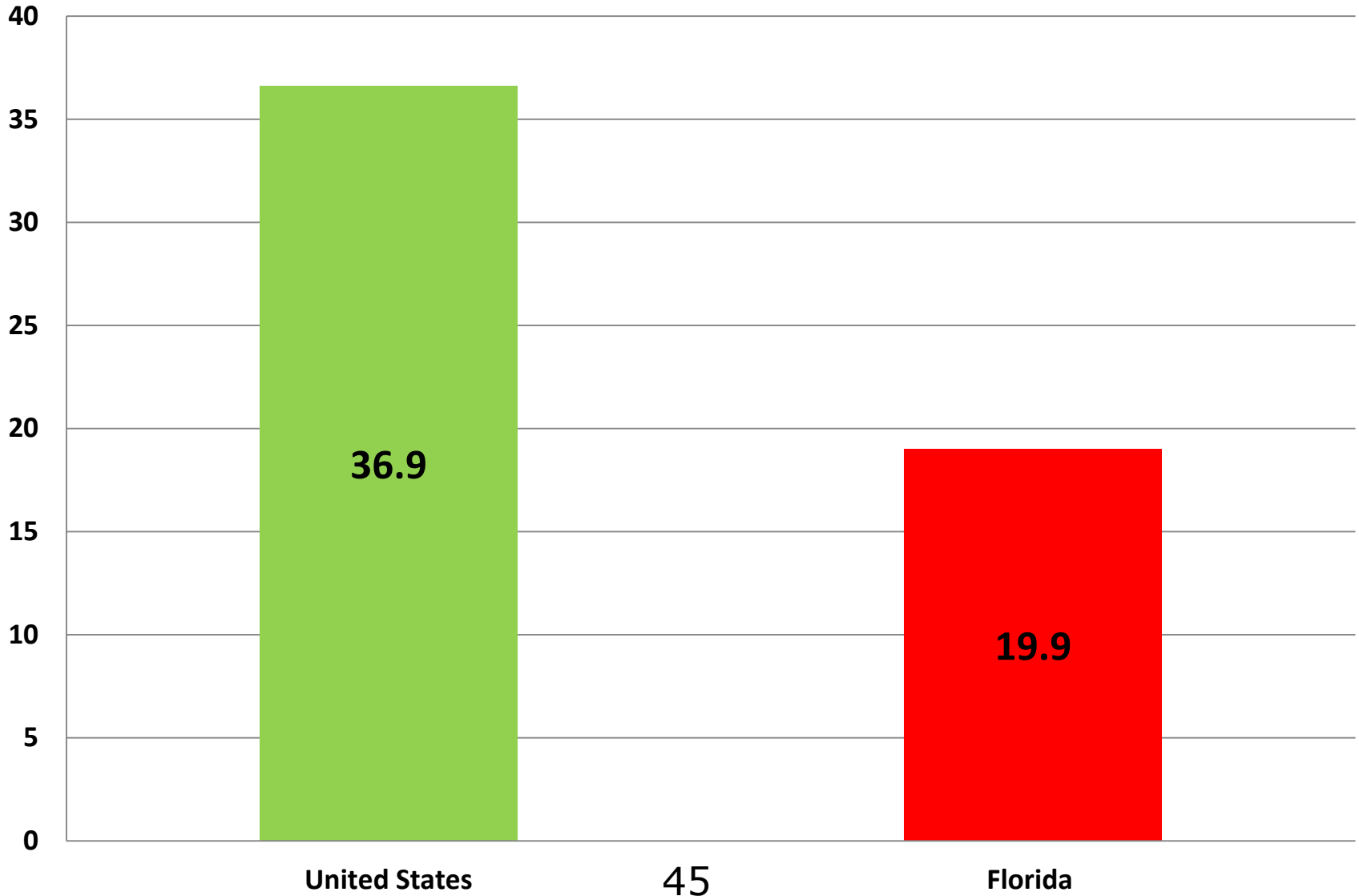
Related terms:

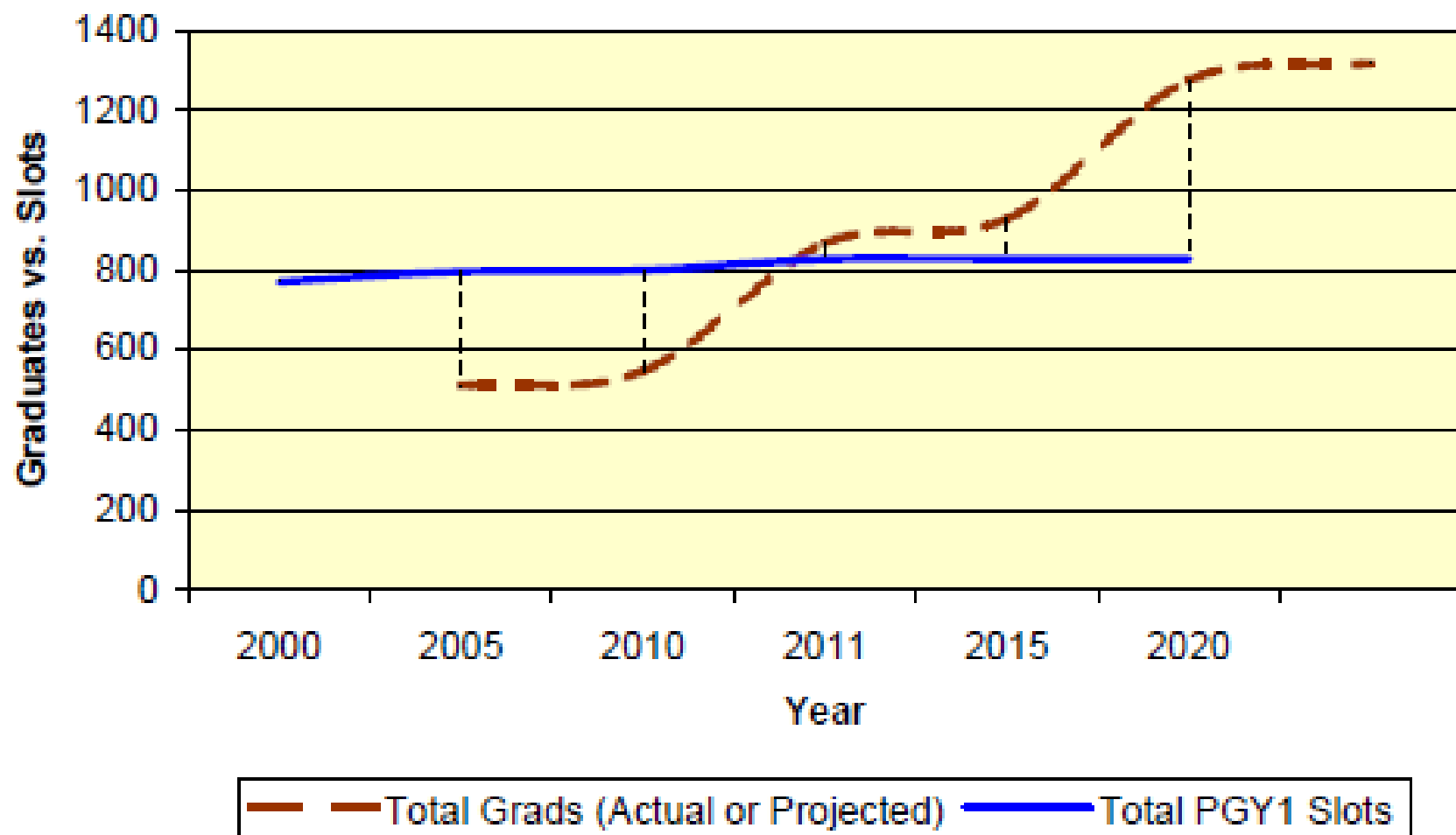
- PGY1 = “post-graduate year 1”

- 44 Intern = first year resident = PGY1

Fellowship – subspecialty training after residency

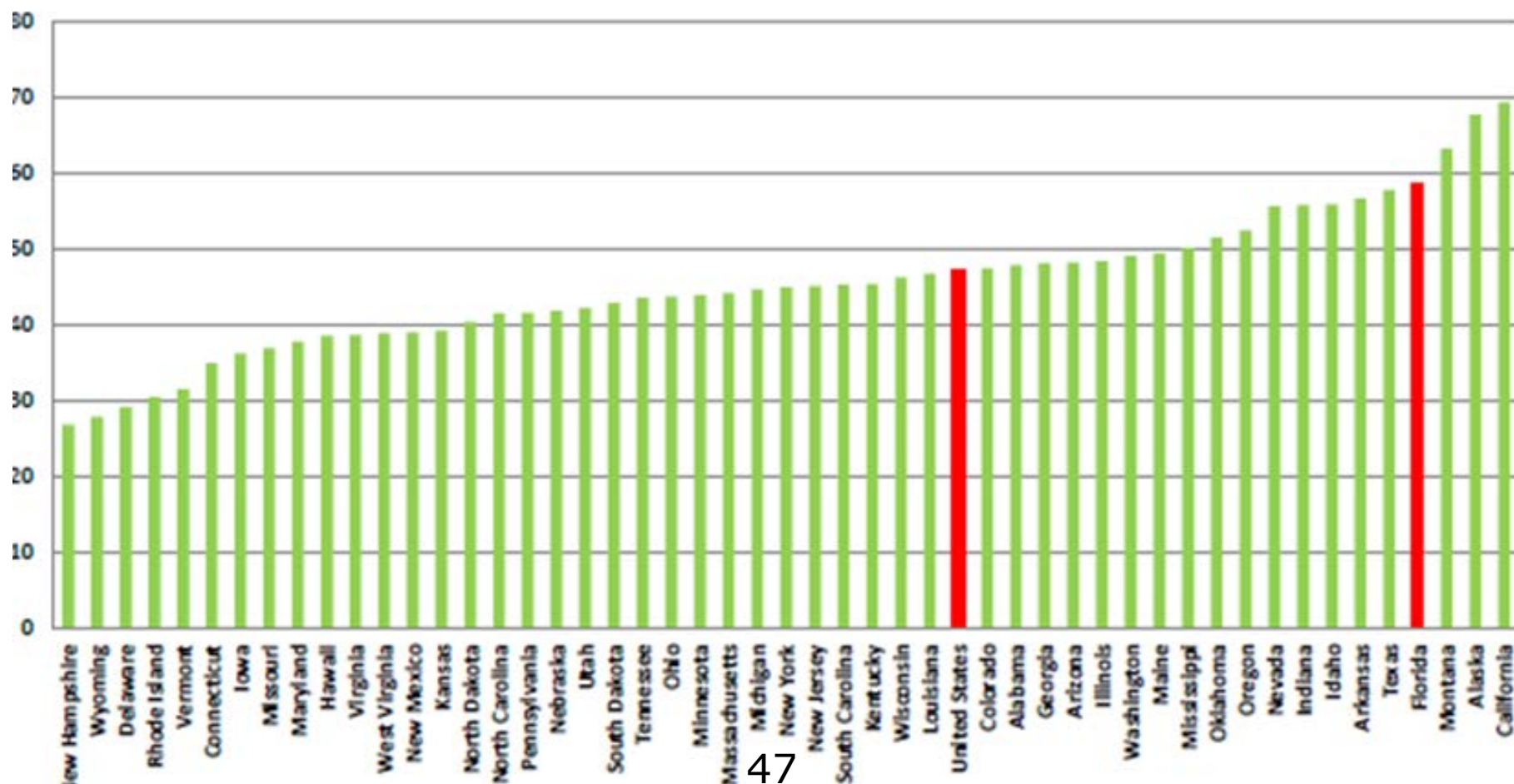
# GME Positions per 100,000 Population





# Retention of GME-Residents

Florida Ranks 4<sup>th</sup> in the US for Physicians Retained from Graduate Medical Education



# Retention of Physicians Trained in Florida

<b>% Retention From:</b>	<b>Florida</b>	<b>US</b>
<b>Medical School</b>	<b>49.5</b>	<b>38.7</b>
<b>Residency</b>	<b>58.6</b>	<b>47.2</b>
<b>Medical School and Residency</b>	<b>78.1</b>	<b>66.8</b>

# THE PROBLEM



There are **TOO FEW** residency training positions in the state of Florida to ensure an adequate physician workforce.



RESIDENT  
PHYSICIAN

PATIENTS



So how do we create more?



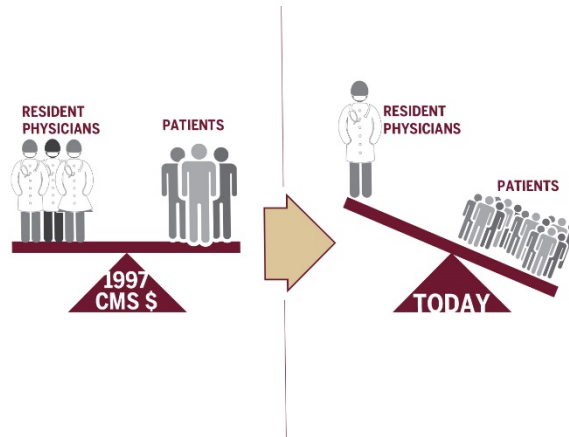
# Traditional Settings for GME

- Teaching Hospitals
- Veterans Affairs Medical Centers
- Medical School Faculty Practices



# Traditional GME Funding Sources

- Most GME Programs funded by Medicare (\$9.8B annually)
  - Number of positions “capped” as result of 1997 Balanced Budget Act



- Medicaid (through enhanced rates to teaching hospitals)
- Veterans Health Administration (VA) – historically 9% of all positions
- Teaching Hospitals
- Faculty Physician Practice Plans
- Private Foundations
- US Department of Health and Human Services
- US Department of Defense
- Industry
- Others

# GME Funding by Medicare

## Direct Medical Education Payment (DME)

- Direct cost of resident training including resident salary (\$50-70k), fringe benefits, teaching physician compensation, etc.
  - Disbursed based on a per resident amount through a complex formula
  - Generally paid directly to the hospital where residency program is housed

## Indirect Medical Education Payments (IME)

- Covers the indirect costs associated with training residents including required teaching spaces, infrastructure needs, sicker patient populations, greater technological needs, enhanced services, and to offset the lack of private insurance's contribution to GME.
  - Paid in the form of enhanced payments for care provided to all Medicare patients admitted to hospitals with residency programs.
- In Florida, some hospitals also received enhanced Medicaid payments for all Medicaid patients admitted.

# Additional Aspects of Medicare Funding for GME

- 1997 Balanced Budget Act
- Rebalancing
  - 2010
  - Florida Received Additional Positions
- Federal Budget Cut Activities
- Strategies for Funding of Certain Programs Within the Balanced Budget Act
  - GME Naïve Hospitals
  - Hospitals that meet certain shortage criteria

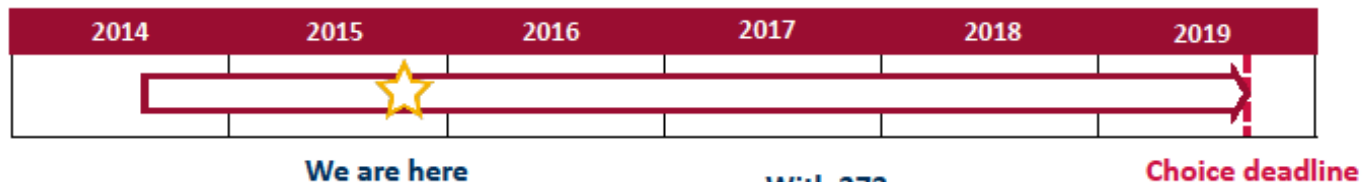
# VA GME Expansion

## Where are we in the VA GME Expansion?



To meet the ambitious goal of 1,500 new VA GME physician resident positions by August 2019, we must work aggressively and efficiently. We have made progress, but there's still work to be done.

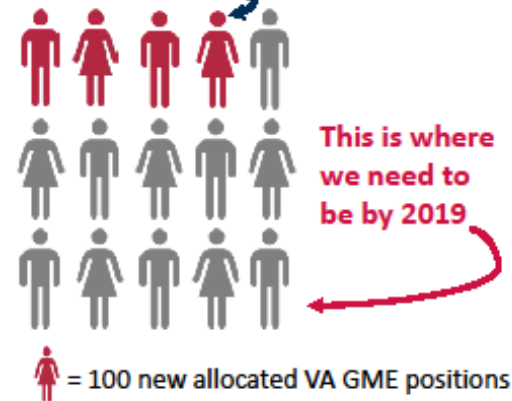
### Choice VA GME expansion timeline



### Year 1 & 2 Milestones

- ✓ During Year 1, OAA allocated over 200 new physician residency positions.
- ✓ Over three-quarters of the filled positions were in either primary care or mental health.
- ✓ Year 2 allocation adds 168 additional permanent positions to start in July 2016.
- ✓ **Years 1 + 2 total = 372 new positions**

With 372 new positions we are almost here:

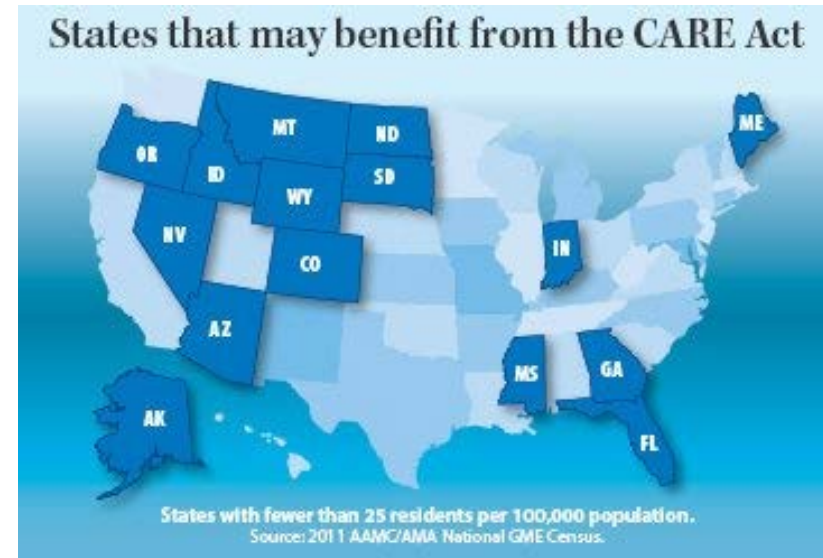


# Pending Federal Legislation Regarding GME

- Resident Physician Shortage Reduction Act of 2015
  - # of new residency spots would gradually increase each year—not all at once
  - Students pursuing a “shortage specialty” like primary care would have an advantage
  - Factors like neighboring medical schools and the # of residency applicants for a particular program will impact how new residency slots are distributed
  - The act calls for additional research on specialty shortages and diversity in GME

# Pending Federal Legislation Regarding GME

- Creating Access to Residency Education Act of 2014 (CARE Act)
  - create a \$25M grant program through the Centers for Medicare & Medicaid Services that would allow certain hospitals to apply for matching funds to support new medical residency training positions
  - Only public or nonprofit teaching hospitals or accredited GME training programs in a state with fewer than 25 medical residents per 100,000 people would be eligible for funding





# Newer Sources of GME Funding in Florida

## State:

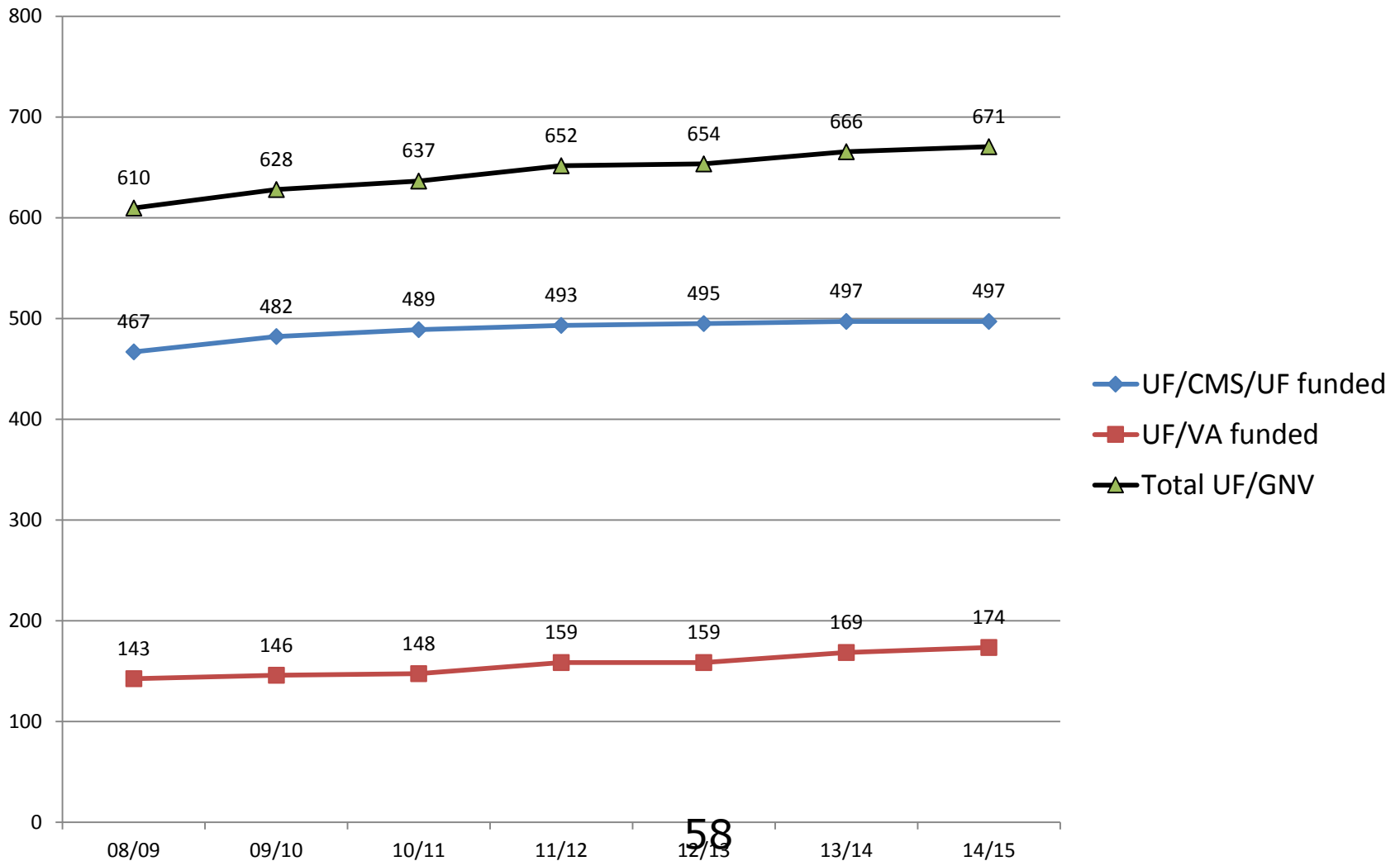
- Payments to Hospitals Only (No Payments to Medical School or Non-hospital Entities)
- Statewide Medicaid Residency Program
  - Formula for hospital payment based on Medicaid patient numbers and number of FTE Residents
  - 2013 - \$80M annually (\$30M state plus \$50M federal)
  - 2016 – Governor's Recommendations for 2016-17 FY: Additional \$26.6M
- \$80M Graduate Medical Education Startup Bonus Program
  - Provides \$100,000 start-up bonus for hospitals that create positions for certain specialties based on a report of physician workforce and GME commissioned by the Safety Net Hospital Alliance of Florida
    - \$100M (\$40M state plus \$60M federal)

## Private:

- Hospitals
- Private Donors



# UF/Gnv GME Growth thru Local and VA funding





**Sponsoring Institution**

Graduate Medical Education Committee (GMEC)

OB/Gyn

General Surgery

Internal Medicine

Family Medicine

Pediatrics

Orthopedic Surgery

Anesthesiology

Psychiatry

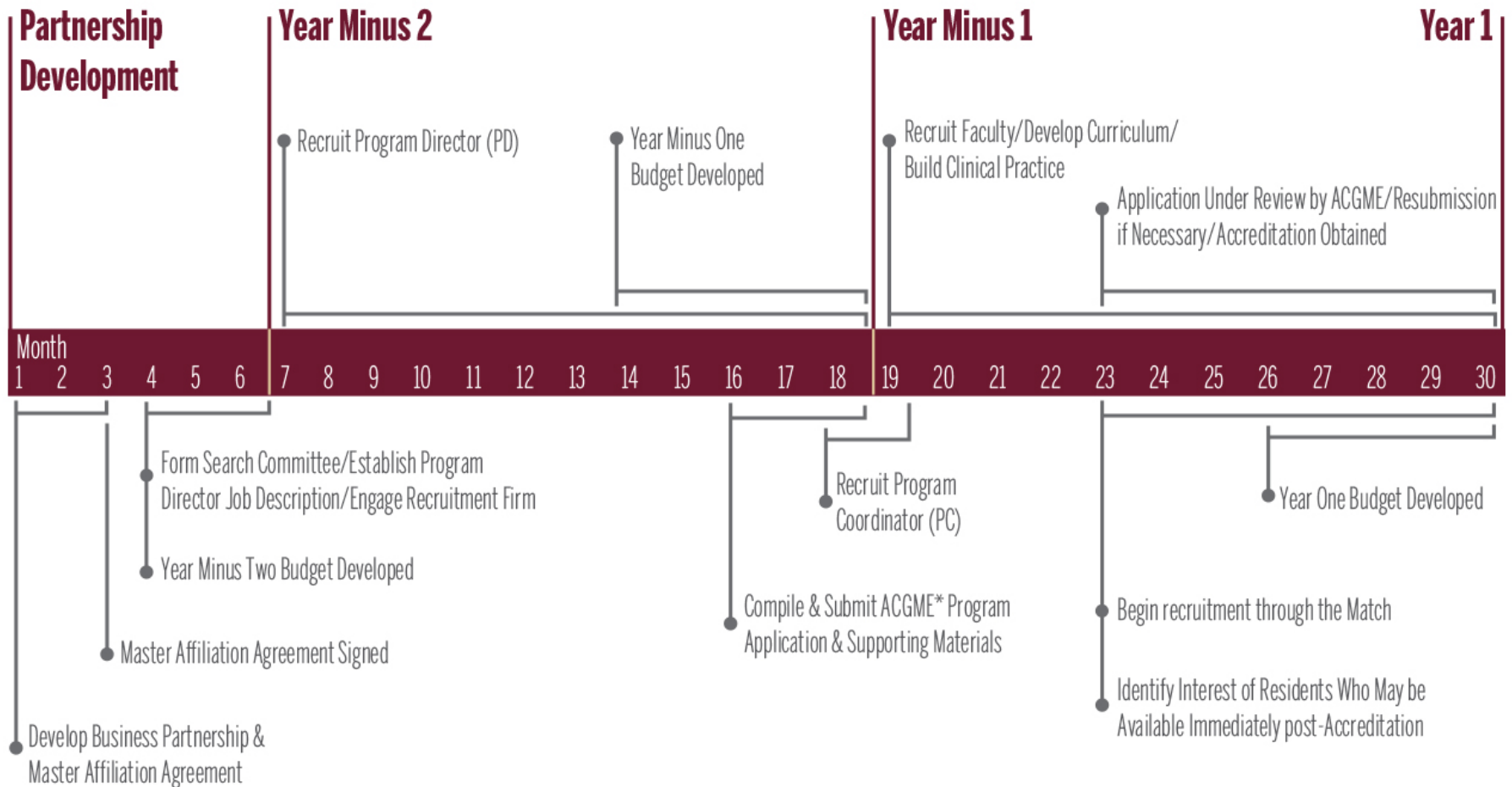
# Current Florida GME Snapshot

- 51 Sponsoring Institutions
- 161 Residency Programs
- 3,726 Residents
  - (1,998/54% with SUS medical school as SI)
- 223 Subspecialty programs
- 820 Fellows

# 51 GME Sponsoring Institutions in Florida

All Children's Hospital	Miami-Dade County Medical Examiner Department
Andrews Research and Education Institute	Mount Sinai Medical Center of Florida, Inc
Aventura Hospital and Medical Center	Naples Community Hospital, Inc
Bayfront Health St Petersburg	Naval Hospital (Jacksonville)
Blake Medical Center	Naval Hospital (Pensacola)
Brandon Regional Hospital	Navy Medicine Operational Training Center
Broward County Medical Examiner's Office	North Florida Regional Medical Center
Broward Health Medical Center	Northside Hospital
Citrus Health Network, Inc.	Oak Hill Hospital
Cleveland Clinic Florida	Ocala Health System
Doctors Hospital	Orange Park Medical Center
Florida Atlantic University Charles E. Schmidt College of	Orlando Health
Florida Department of Health Palm Beach County	Regional Medical Center Bayonet Point
Florida Hospital Medical Center	St Vincent's Medical Center
Florida Orthopedic Institute	St. Petersburg General Hospital
Florida State University College of Medicine	Tallahassee Memorial Healthcare
Halifax Medical Center	The Skin Institute of South Florida
Jackson Memorial Hospital/Jackson Health System	University of Central Florida College of Medicine
Kendall Regional Medical Center	University of Florida College of Medicine
Lakeside Medical Center	University of Florida College of Medicine Jacksonville
Largo Medical Center	University of Miami Hospital and Clinics
Larkin Community Hospital	University of Miami/JFK Medical Center Palm Beach
Manatee Memorial Hospital	University of South Florida Morsani College of Medicine
Memorial Healthcare System, Hollywood, Florida	US Air Force Regional Hospital
Miami Children's Health System/Nicklaus Children's Hospital	West Kendall Baptist Hospital
	Westside Regional Medical Center

# ESTIMATED TIMELINE FOR NEW RESIDENCY DEVELOPMENT PROCESS



# Costs to Consider in Developing a New Residency Program

- Recruiting and Hiring Residency Director
- Application Fee
- Curriculum Development
- Support Staff
- Faculty
- Clinical Staff
- Space
- Resident Recruitment, Salaries/Benefits
- Full Start-up Funding, while applying for CMS funds and building cap
- In the experience of one SUS/CFMSD medical school, and depending on the type, size and location of the program, it could cost as much as \$8M to develop and implement a new residency program for its first three years.



# CFMSD Recommendations

- Consider “innovation grants” through competitive applications to create new GME positions in Florida.
  - Draws on educational ingenuity of Florida’s medical schools and teaching hospital partners
  - Key aspects to include start up process and financial sustainability post grant

# CFMMSD Recommendations for Addressing Physician Workforce Need

- Any statewide GME program should:
  - Be applicable to public or private allopathic or osteopathic medical schools.
  - Ensure that it includes a method to provide an ongoing, independent determination of workforce needs to base distribution of state funding.
- Broad state policy needs might include
  - Geographic areas
  - Physician specialties
  - Service to underserved populations
  - Special populations
  - Current changing health care delivery systems



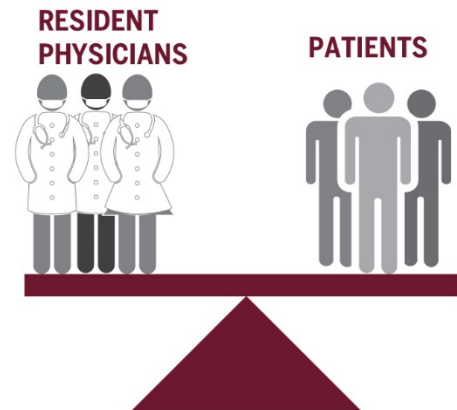
# CFMMSD Recommendations

- There are many nuances on how GME is delivered throughout Florida. Any policy should reflect the heterogeneity of the GME landscape in Florida.
- Any program should include the development of GME in multiple outpatient or non-hospital settings, as well as programs in traditional hospital settings.
- Programs that utilize a consortium to design and utilize significant multiple settings and entities might be given priority or increased incentives.

# CFMMSD Recommendations

Ensure accurate statistics on current and planned residency positions are maintained

- Collaboration with Surgeon General's Physician Workforce Committee



# Determining the Number of GME Positions in Florida

- Factors in Determining GME Numbers
  - Hospital and non-hospital GME
  - ACGME and AOA
  - Funded and non-funded
  - Filled and non-filled
- Several studies – different numbers
  - UF Review of AAMC data – 3,726 residents/820 fellows
  - Statewide Residency Program 2015-16 – 4,373.21 positions
  - OPPAGA Report 2014 – 5,157 approved positions
  - 2015 AAMC DataBook – 3,967 as 12/31/2014

# Some progress ... but inconsistent data

- Governor's Office reports an additional 477 slots and 16 new teaching hospitals in the first two years of the Statewide Medical Residency Program
- The BOG Health Initiatives Report Shows GME Expansion since 2012-13 in all SUS medical schools
- CFMSD shows GME expansion in all non-SUS osteopathic and allopathic medical schools since 2012-13
- 2015 AAMC DataBook shows 1037 increase from 2004-14
- Combined BOG and CFMSD figures indicate that eight of Florida's nine medical schools have plans for additional GME expansion

# Medical Schools as Sponsoring Institutions

- Well-positioned to serve as SI's, as they have the administrative, educational and clinical resources
- Have the infrastructure and are especially helpful to hospitals developing new programs
- Do not typically receive educational funding for GME
- Must rely on clinical partners to provide funding, since they are the ones who receive the direct funding for GME



# COUNCIL OF FLORIDA MEDICAL SCHOOL DEANS

United for Excellence in Medical Education, Research, and Health Care

## Ensuring an Adequate Physician Workforce: The Critical Role of GME

- GME is where you learn to be a physician, and a primary source of physicians to care for our citizens and communities.
- Florida needs several thousand additional GME positions.
- Medical schools should be central organizing and participating members of GME initiatives.
- Competitive GME grants can be used to initiate but not sustain new GME positions.
- Centralized GME data coordination and verification is needed at the state level.



A stylized map of the state of Florida is shown in a light tan color against a dark blue background. Ten yellow five-pointed stars with orange outlines are placed across the map, representing the locations of medical schools. The stars are located in the panhandle, along the west coast, and in the southeast.

# **Spotlight On Florida Medical Schools**

Physician Workforce and GME  
Leadership and Innovation

# Florida Atlantic University

## Charles E. Schmidt COM

### GME Consortium

- FAU COM has partnered with five regional community hospitals in Palm Beach County to create a consortium model, unique to Florida, for the collaborative planning, development, implementation, funding and operational oversight of residency training programs in Palm Beach County and the surrounding region.
- The goal of this collaborative process is to focus the creation of new residency programs on the medical specialties that are most responsive to community and state health care needs.
- The consortium will have nearly 100 new, filled positions in its internal medicine residency program by July 2016 and is planning to launch nine additional residency programs by 2019-2020, aimed to significantly expand access to residency training opportunities in the region and the state.

# Florida International University

## Herbert Wertheim COM

- FIU HWCOM has participated in the development of several new residency programs in South Florida as the academic affiliate (sponsor noted in parentheses):
- Family Medicine (Baptist Health) – ACGME accredited 2012
- Psychiatry (Citrus Health Network) – ACGME accredited 2015, first psychiatry residency sponsored by a Federally Qualified Health Center
- Pediatrics (Broward Health System) – ACGME accredited 2015
- Emergency Medicine (Kendall Regional Hospital) – ACGME accredited 2016
- Also in development are obstetrics and gynecology (Baptist Health) and emergency medicine (Aventura Hospital).
- FIU HWCOM is working with Broward Health System to transition existing programs to the new single accreditation system (including internal medicine, orthopedics, and family medicine), and to develop additional new programs (plans for surgery, psychiatry, emergency medicine).
- HWCOM is the academic affiliate for pediatrics at Nicklaus Children's Hospital and is assisting with plans for a child psychiatry fellowship.

# Florida State University COM

- FSU COM has collaborated with several of its network of community hospitals to develop new residency programs over the past five years. This includes:
  - Internal Medicine and General Surgery Residency Programs at Tallahassee Memorial Hospital (Tallahassee)
  - Family Medicine Residency Program at Lee Memorial Health Systems (Ft. Myers)
  - Application submitted for Internal Medicine Residency Program at Sarasota Memorial Hospital (Sarasota)
  - Sponsorship of Micrographic Surgery and Dermatologic Oncology Fellowship and Categorical Dermatology Program at Dermatology Associates of Tallahassee, focused on care of patients in Rural Areas

# Lake Erie COM

- Residencies, Fellowships and Internships in a number of hospitals in Florida, including:
  - Manatee Memorial Hospital, Bradenton, FL
  - Lakeland Ranch Medical Center, Lakewood Ranch, FL
  - St. Petersburg General Hospital, St. Petersburg, FL
  - Westchester General Hospital, Miami, FL
  - Florida Osteopathic Education Institute (FOEI), New Port Richey, FL
  - Northside Hospital, St. Petersburg, FL
  - Centerstone of Florida, Inc., Bradenton, FL
  - Sacred Heart Health System, Pensacola, FL

# NOVA Southeastern University COM

- Prior to the announcement of the Single Accreditation System (SAS), NSU-COM's focus in GME was to increase the number of funded positions throughout the state of Florida
  - NSU-COM's Consortium of Excellence in Medical Education-OPTI has 21 member institutions with 56 residency programs (not including fellowships) and over 1084 accredited positions, offering a variety of opportunities for osteopathic graduates in primary care (family medicine, internal medicine, OG/GYN, pediatrics) and specialty training programs (psychiatry, emergency medicine, orthopedic surgery, anesthesia, dermatology etc.)
- With the advent of the SAS, efforts have shifted to assisting member programs in attaining ACGME accreditation and hopefully getting Osteopathic Recognition in those programs.
- NSU COM collaborates with the Florida Department of Health and Florida Department of Corrections in the education of osteopathic medical students, residents and fellows.

# University of Central Florida COM

- The Hospital Corporation of America and the University of Central Florida College of Medicine, which established an internal medicine residency with the Orlando VA and Osceola Regional Medical Centers in 2013, are expanding their partnership to create more than 550 residency slots in hospitals across northern Florida. Some of the communities that will see new residents in training include Orlando, Gainesville and Ocala.

# University of Florida COM

- Since 2012, UF has added or expanded programs in:
  - Advanced Heart Failure and Transplant Cardiology
  - General Surgery
  - Geriatric Psychiatry
  - Child Neurology
  - Emergency Medical Services
  - Pediatric Rheumatology
  - Integrated Plastic Surgery
  - Pediatrics
  - Pediatric GI Fellowship



# University of Miami

## Leonard M. Miller COM

- Developed a new internal medicine program with affiliated partner, Holy Cross Hospital in Broward County, and planning a new surgery program at that site.
- Along with Jackson Memorial Hospital, major clinical affiliate, received initial ACCGME accreditation for a new emergency medicine program which begins training its first class of 15 residents in July, 2016.
- Have requested an increase in complement of trainees from the ACGME in Psychiatry and in Otolaryngology.

# University of South Florida

## Morsani College of Medicine

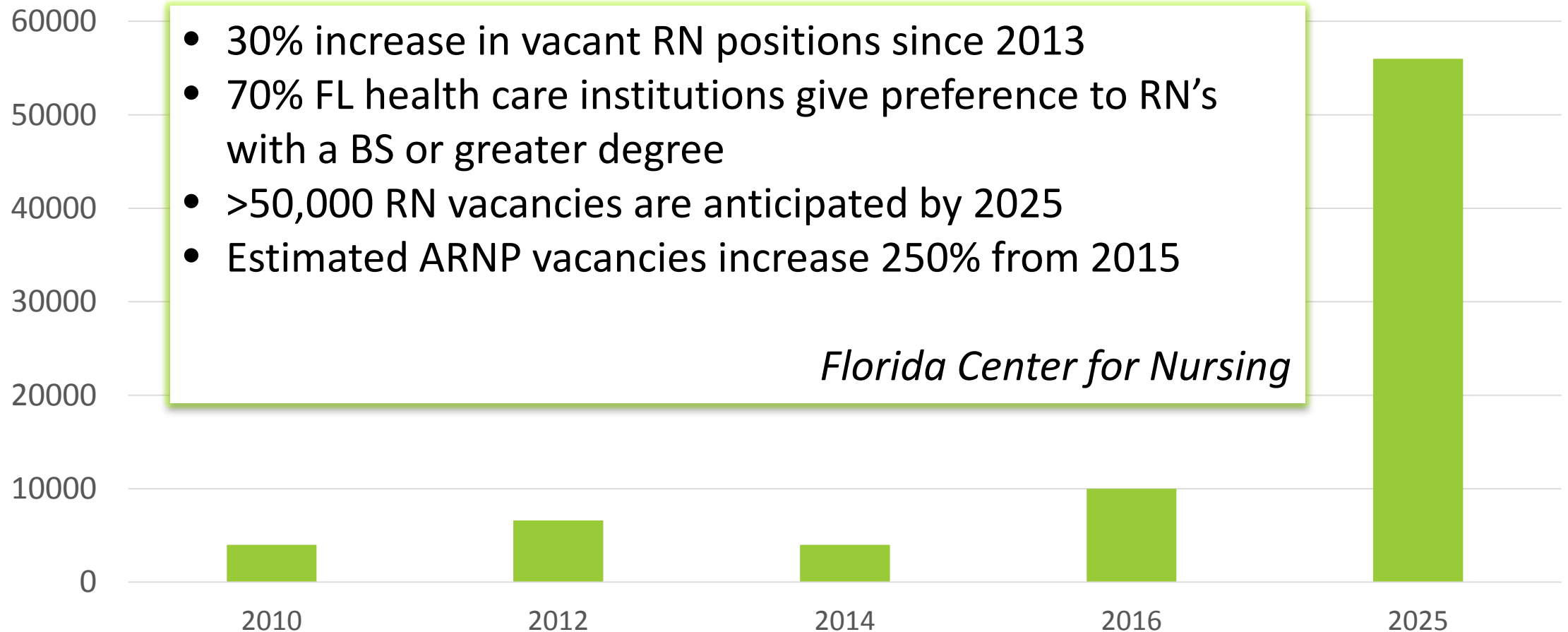
- Investing in future physicians through Regional GME consortium building and growth with:
  - Tampa General Hospital
  - Adventist System Florida Hospital
  - Bayfront Health
  - BayCare
  - Naples Community Hospital
  - HCA Southwest Region
- Simulation aimed at outcome, safety and performance improvement
  - Center for Advanced Medical Care and Simulation (CAMLS)
- New Program Development
  - HRSA Medical Home Grant with Tampa Family Health Center aimed at Interdisciplinary Team Training for culturally diverse communities.
  - Internal Medicine Primary Care Track, James A. Haley VA, Tampa
  - USF, TGH, VA consortium Fellowships in Quality Improvement, Outcomes and Patient Safety

# Nursing Shortage: BIG Challenges require BIG Solutions

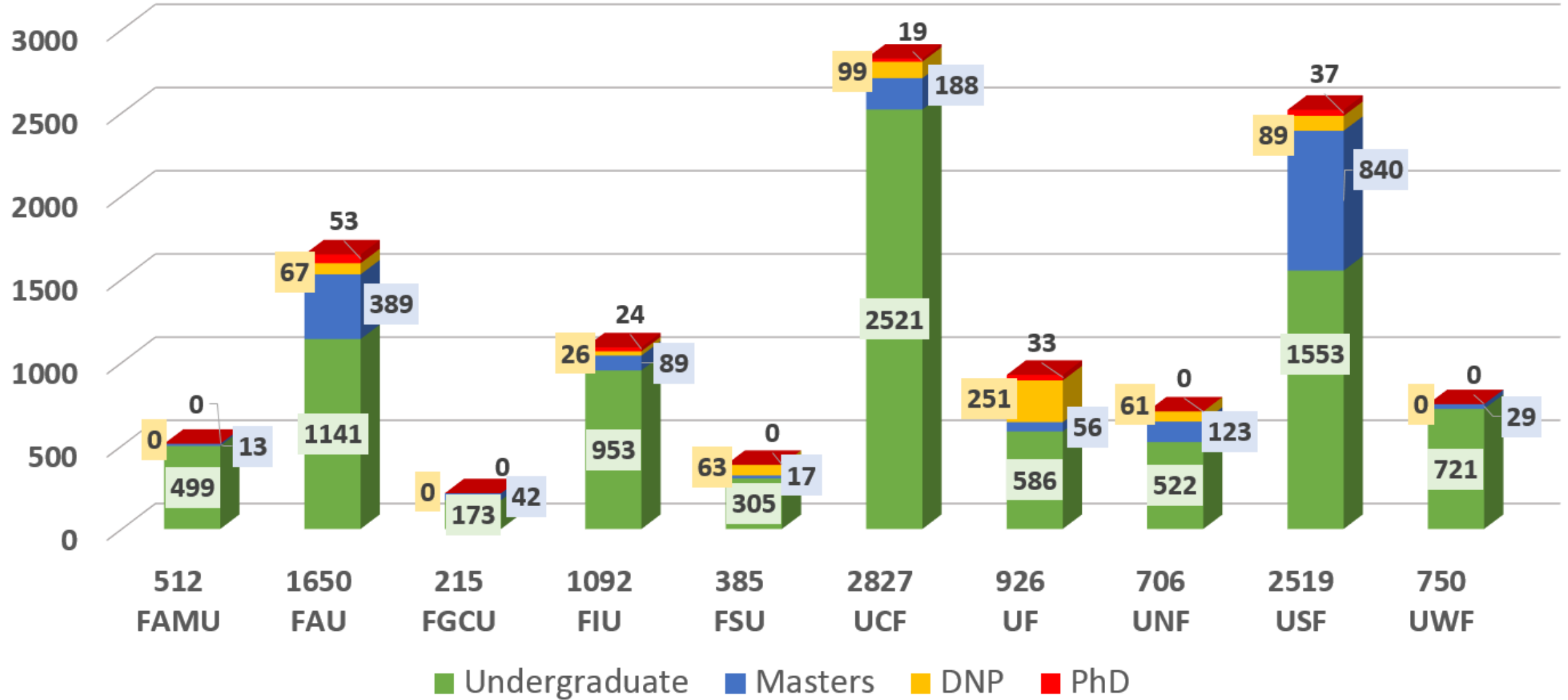
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DIANNE MORRISON-BEEDY, PHD, FAANP, FNAP, FAAN  
DEAN UNIVERSITY OF SOUTH FLORIDA COLLEGE OF NURSING  
SENIOR ASSOCIATE VICE PRESIDENT USF HEALTH

# Florida's Nursing Workforce: Past, Present & Future Vacancies



# SUS College of Nursing Enrollments 2014



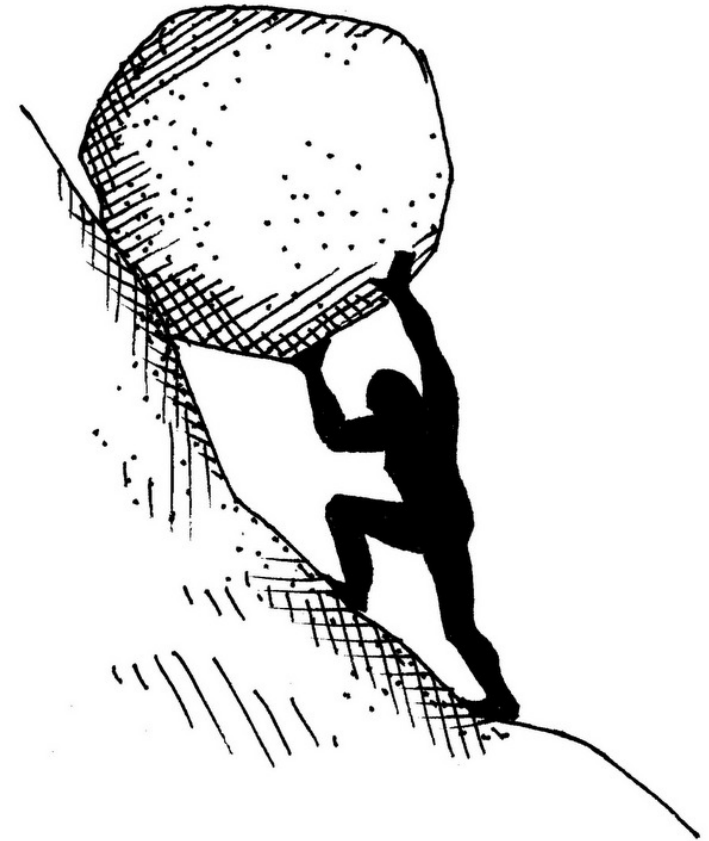
SUS Board of Governors [http://www.flbog.edu/resources/iud/enrollment\\_search.php](http://www.flbog.edu/resources/iud/enrollment_search.php), accessed 11/21/15

# Why a Focus on Faculty

U.S. nursing schools turned away 68,938 qualified applicants from baccalaureate and graduate nursing programs in 2014 due to an insufficient number of faculty

70% of public universities in Florida reported difficulties in hiring faculty as barrier to educating more students

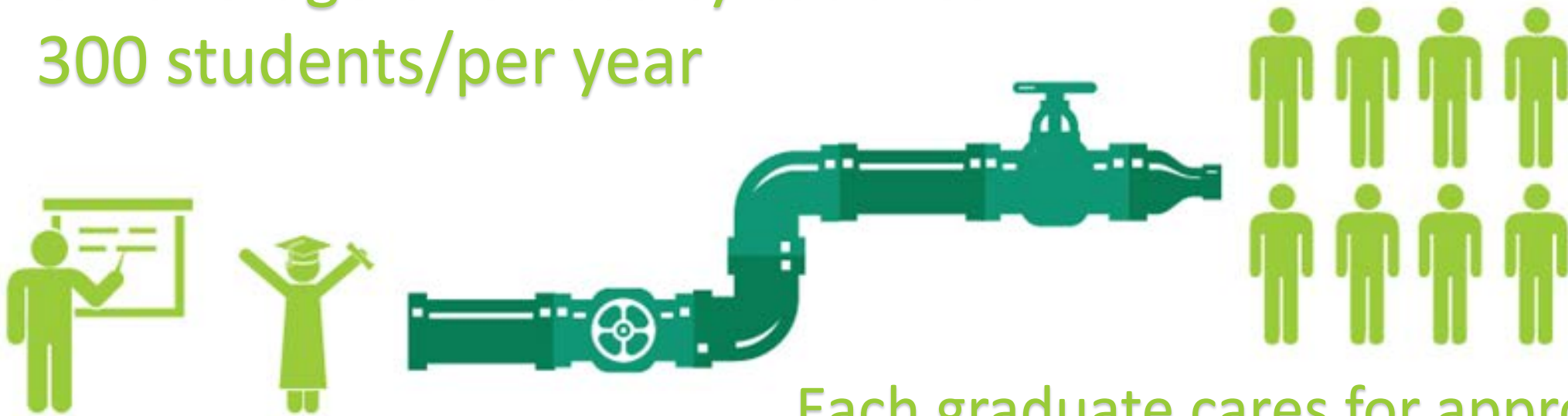
*Behind every nurse who touches a life, there is a nursing educator*



# Pipeline for Nursing: Nursing faculty 1 year impact

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On average one Faculty touches  
300 students/per year



Each graduate cares for approximately  
1920 patients per year

Total patient impact 576,000

# Pipeline for Nursing: Nursing faculty 40 year impact

40 year career = @12,000 nursing  
students over a lifetime



Each graduate cares for approximately  
76800 patients over a lifetime

Total patient impact over 40 years ≈ **23 million**



# Reasons for Faculty Shortage

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Anticipated retirements -  
average age of doctorally-  
prepared nursing  
professors is 62

Higher compensation in  
clinical and private-sector  
settings

Increasing responsibilities  
to maintain license and  
accreditation demands  
creates significantly  
heavier workloads

Current Tuition/Fee Rates  
≠ Cost of Education  
More complex care =  
more complex education

Minimal Financial Support  
For PhD Students and  
Early Career Faculty

NIH Changes to  
Pre/Post-doc Awards  
(current SUS R01s = 8 )

# A Week in the Life of a Nursing Faculty

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Morning		Teach UG class from 9-12 @90 students	Clinical Site Visit in Ocala to evaluate 1 FNP student	Teach UG class from 9-12 @90 students	Teach IPE class from 9-12 @40 students	College Committee meeting  Faculty Council Meeting	Practice – maintain professional certification
Afternoon	Work on Journal Article and grant	Writing group  University Committee Meeting	Office Hours from 2-4  Prepare for classes including test construction	Clinical site visit in Ft. Myers to evaluate 1 FNP student	Simulation lab hours 1-3  Grant work with team	Training session in the computer lab on new online education system	Practice – maintain professional certification
Evening	Grade papers, review lectures	Grade papers	Teach Grad class 7-10	Attend workshop on main campus	Grade papers	Meet with junior faculty mentees	Review emails

# Two-prong approach to nursing faculty shortage

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## Build capacity

Expanding the faculty workforce

## Solidify the Base

Developing, Maintaining &  
Advancing Current Faculty

# A Recommendation for Recruiting and Retention of Nursing Faculty: INFORM

## **USF Institute for Nursing Faculty Recruitment, Retention, and Mentoring (INFORM)**

### Formal mentoring program for faculty

- Develop network of mentors for content (subject matter), research/scholarship, educational process, & professional development

### 4 core components of INFORM

- Open-forum Scientific Discourse
- Evidence-Base for Educational Practice
- Dissemination of Best Practices in Education, Research & Practice
- Academic Citizenship/Professional Role

# INFORM: Open-Forum Scientific Discourse

Opportunities for junior and senior scientists to develop ideas & get feedback on proposed research

- Scientific Inquiry Forums
- Journal Club to review latest research articles

Scientists provide overview of junior scientist's work who solicit specific feedback

Discussants from other disciplines (e.g. College of Engineering, Center for Entrepreneurship/College of Business) are invited

# INFORM: Evidence Base for Educational Practice

Prepare nurse educators recruited from nursing practice or nurse-scientist training programs

Provide expertise in educational practice

Journal Club to review Evidence-Based Teaching/Learning Journal Articles

Examples of seminar topics include:

- *How Learning Works: Seven Research-Based Principles for Smart Teaching*
- 3D model of debriefing
- experiential learning
- interprofessional education
- diversity of learners and learning styles
- evidence based instructional strategies
- supporting veteran students

# INFORM: Dissemination of Best Practices in Education, Research & Practice

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Scholarship and dissemination critical for successful academic careers

Strategy to mentor and engage faculty in scholarly writing, develop necessary skills and work habits, and build confidence

Senior faculty provide direction, goal-setting, input and review of manuscripts in progress

Special Seminars: *Writing Your Journal Article in 12 Weeks*

# INFORM: Academic Citizenship/Professional Roles

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Addresses needs for central knowledge and skills related to faculty role development

Understanding contribution to the mission of home university and FL SUS

Topics for discussion led by senior faculty include:

- academic culture
- balancing responsibilities
- establishing peer network for support across
- setting goals (5-year, 3-year, semester-academic year, monthly weekly, daily)
- presenting yourself and promoting your work
- collaborations with college, university, institutions within the SUS



# Recommendations for Recruiting and Retaining Nursing Faculty: Budgetary implications (1 of 2)

Recommendation	Est. Cost Mid	@Cost Low	@Cost High
"Train the trainers" to implement INFORM across SUS	312,500	275,000	350,000
24 Senior INFORM Champion Faculty\SUS Nursing Dean's meetings (1-4 champions per institution based on capacity)	1,060,000	880,000	1,600,000
25% release time to mentor teams of 2 to 3 junior faculty (1-2 senior faculty per institution)	750,000	500,000	1,000,000
25% release time/mini-INFORM sabbatical for newly tenured faculty to mentor junior faculty (5-10 faculty per institution)	300,000	200,000	400,000
Monies directed towards recruitment initiatives	250,000	100,000	400,000
Jonas award matches (@10 throughout SUS)	300,000	300,000	300,000
FL SUS Institutional Post-docs for all PhD granting institutions (1-3 per institution)	800,000	100,000	1,500,000
FL SUS Institutional Pre-docs for all PhD granting institutions (1-2 per institution)	525,000	350,000	700,000
<b>Sub-Total</b>	<b>\$4,297,500</b>	<b>\$2,705,000</b>	<b>\$5,890,000</b>

# Recommendations for Recruiting and Retaining Nursing Faculty: Budgetary implications (2 of 2)

Recommendation	@Cost Mid	@Cost Low	@Cost High
Pre-tenure partial sabbatical release time (10-20 faculty across SUS institutions)	450,000	300,000	600,000
Recruitment and start-up packages (pilot funding, RA, release time) 1-3 per institution	862,500	575,000	1,150,000
Loan forgiveness for faculty to facilitate recruitment	400,000	300,000	500,000
FL SUS Consortium (distance clinical site evaluation, PhD education, etc.)	150,000	150,000	150,000
<b>Sub-Total</b>	1862500	1,325,000	2,400,000
<b>Total</b>	\$6,160,000	\$4,030,000	\$8,290,000

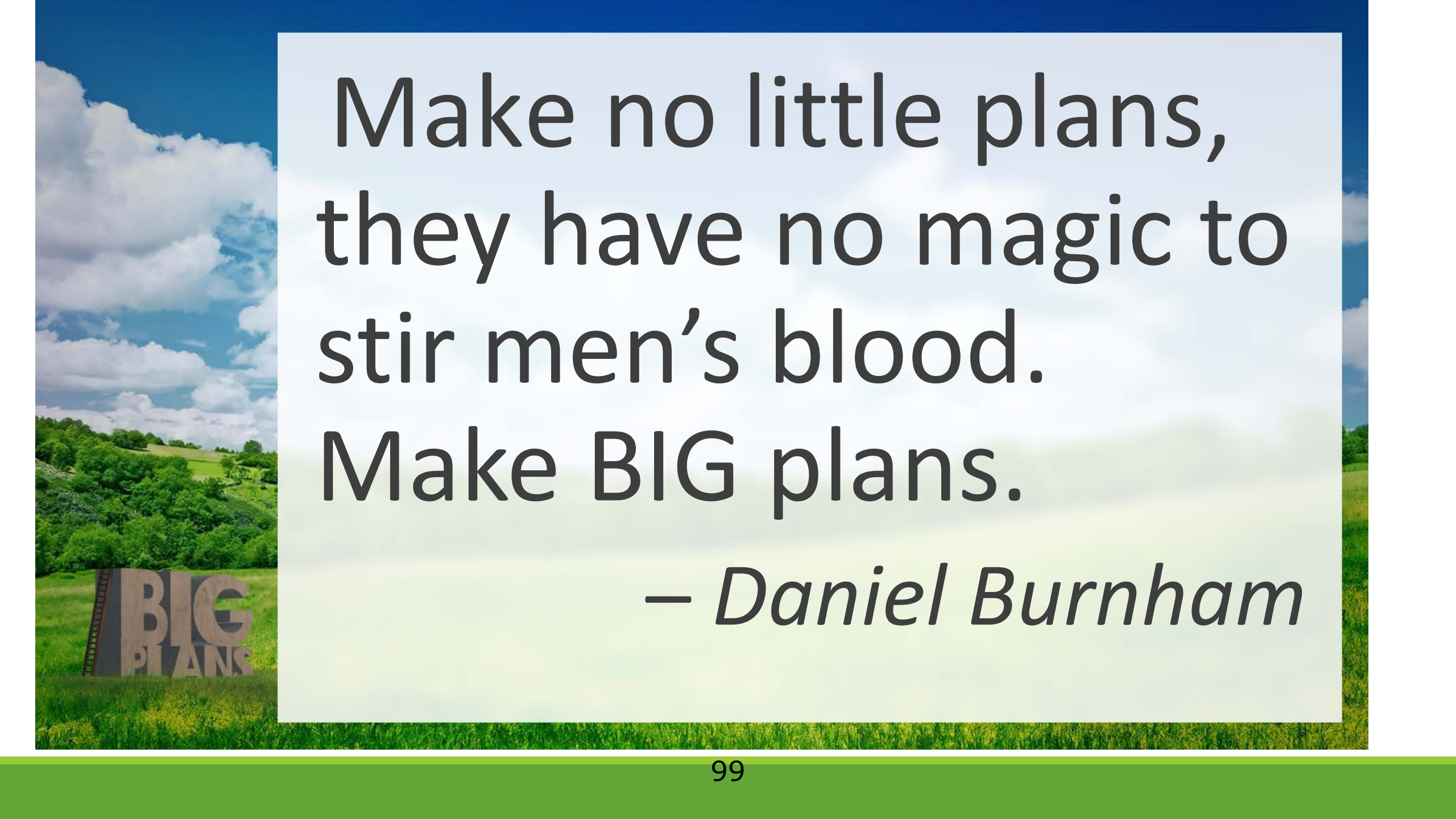
# BIG challenges require BIG solutions

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Be **BOLD** in embracing new initiatives

Be **INTENTIONAL** in providing sufficient support where it can truly make a difference

Be **GENUINE** in your public service by improving the health of Florida residents through high quality nursing education



Make no little plans,  
they have no magic to  
stir men's blood.  
Make BIG plans.

— *Daniel Burnham*

# Creating Incentives for Research Collaboration, Research Commercialization and Technology Transfer

**Establish a matching grant program for university and business research partnerships by building upon the federal SBIR/STTR (Small Business Innovation Research/Small Business Technology Transfer) model.**

Dr. MJ Soileau  
Vice President for Research & Commercialization  
University of Central Florida



# Outline

- SBIR-STTR Overview
- Florida High Tech Corridor Council
- UCF Business Incubator
- Top STTR Institutions
- Enterprise Florida Phase 0
- Other State Programs
  - Ben Franklin – Pennsylvania
- NIH SBIR STTR Funding
- Ideas for Florida
  - Florida SUS Match System
  - Central Florida Health Care

# What is SBIR & STTR?



The Small Business Innovation Research (SBIR) and the Small Business Technology Transfer Research (STTR) are federal programs that enable small businesses to compete for research dollars to ***test, prototype and commercialize*** new solutions for needs identified by participating federal agencies.

# SBIR/STTR Three-Phase Program

## Phase I

- **Feasibility** Study; Proof of Concept
- Up to **\$150K** for **6 Months (SBIR)** or **12 Months (STTR)**

## Phase II

- Full R&D Effort
- May involve **prototype** creation & testing; clinical trials
- Up to **\$1Million** for **24 Months**

## Phase III

- **Commercialization** Stage
- Seek external funding (Private or federal non-SBIR allocated funding)



# Participating Agencies

## SBIR



## STTR



# SBIR/STTR Goals

- Meet **Federal R&D needs**.
- Stimulate technological **innovation**
- Increase private-sector **commercialization** of innovations derived from Federal research and development funding.
- Foster and encourage participation in innovation and entrepreneurship by socially and economically disadvantaged persons.



# Florida High Tech Corridor

## Mission Statement:

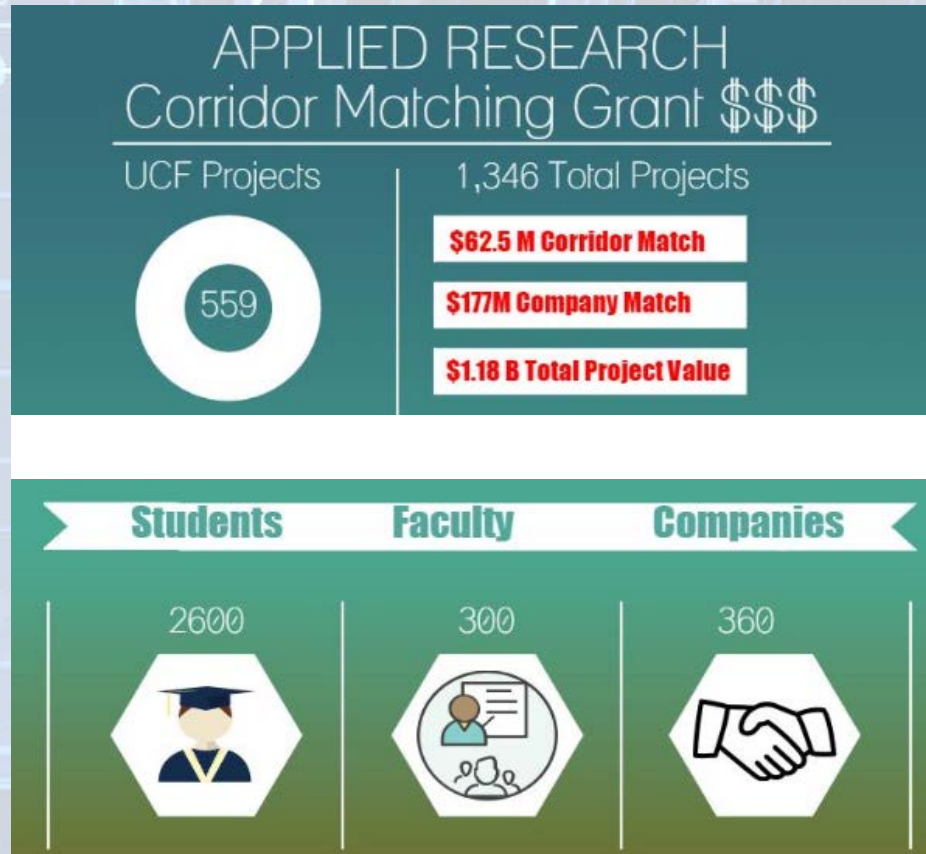
*To grow high tech industry and innovation through partnerships that support research, marketing, workforce and entrepreneurship.*

- 23 counties
- 360 company/institutional partners
- \$2 million annual cash match for each university for work with industry partner
- Grants range from \$10K to \$100K
- More than \$64M in corridor funds – matched by \$180M in company funds and federal grants
- \$1B impact



# MGRP Success

- Matching Grant Research Program - a great resource for small businesses
- SBIR and STTR grants often follow after success of MGRP funding
  - STTR eligibility includes teaming up with a federal lab or a university/college – MGRP takes care of that requirement





# UCF Business Incubation Program Connects Companies with SBIR-STTR

Incubator offers:

- SBIR workshops
- Preparation assistance

UCF benefits by:

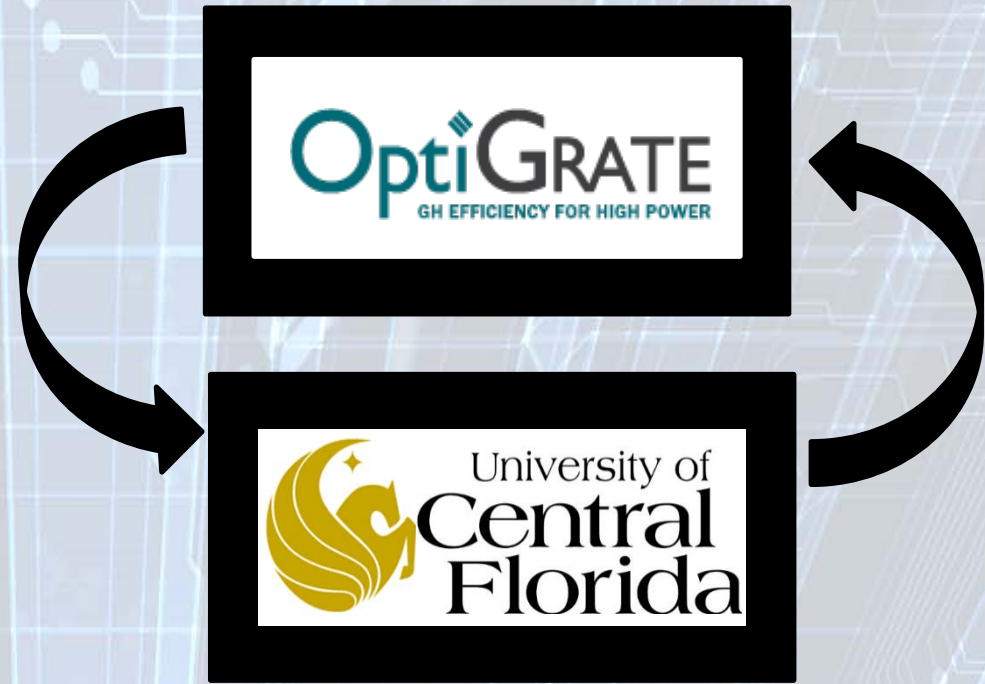
- Royalty payments from licensed technology
- Jobs for students/postdocs
- Subcontracts from company
- Incubator companies have secured 180+ awards for more than \$52M in SBIR/STTR funding



# Early Support Increases Third Party Funding

## OptiGrate

- Founded by UCF Researchers
  - Graduate of UCF Incubator
  - University received \$1.3M in Matching Grant Funds
  - \*Company received \$7.5M in SBIR/STTR
  - Downstream Impact: \$11.8M
- \*Subcontracted to university



*Universities partnering with companies make collaboration stronger and more third party funding!*



# Rini Technologies



- Graduate of UCF Incubator
- University received \$820k in Matching Funds
- Company received 42 SBIR-STTR awards, the fifth most in the state.
- Downstream impact of \$2.4M

## Top Active STTR Research Institutions

Institution	Awards	Total
University of Florida Gainesville, FL	111	\$30.1MM
University of Central Florida Orlando, FL	106	\$25.9MM
Florida State University Tallahassee, FL	33	\$7.36MM
University of South Florida Tampa, FL	22	\$5.54MM
Florida Institute of Technology Melbourne, FL	18	\$3.01MM
University of Miami Miami, FL	17	\$3.16MM
Florida Atlantic University Boca Raton, FL	12	\$3.06MM
Florida International University Miami, FL	12	\$2.34MM
Embry-Riddle Aeronautical University Daytona Beach, FL	8	\$1.51MM
University of Florida-REEF Shalimar, FL	2	\$570K

From  
sbirsource.com  
as of Feb. 5,  
2016 – Does  
not include  
DOD



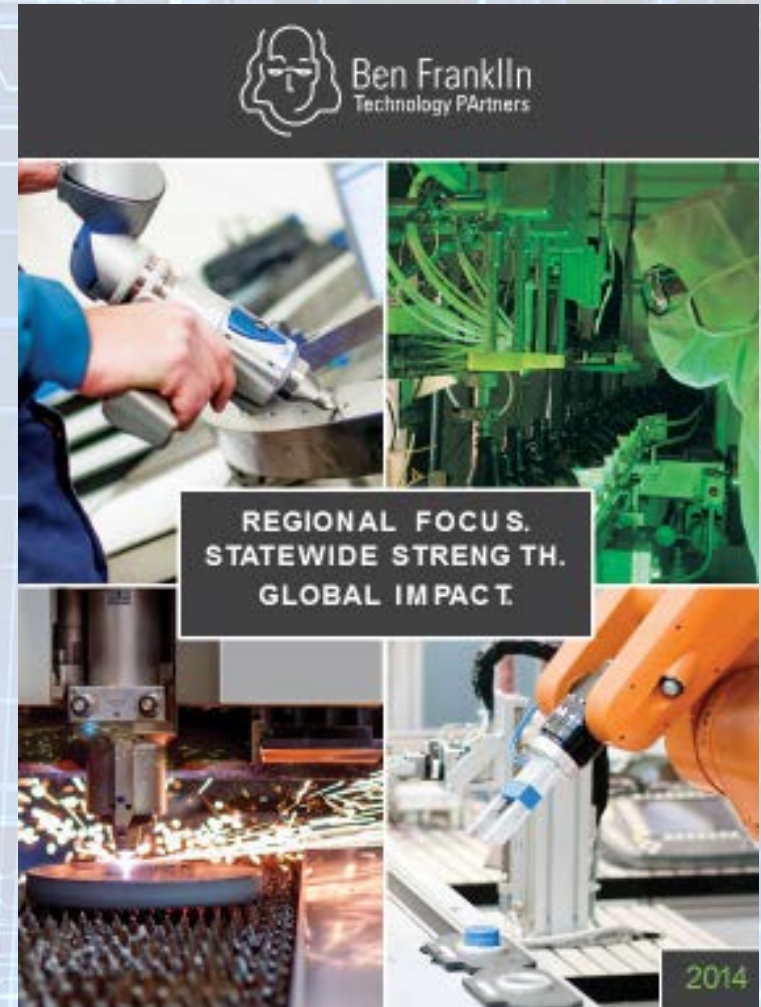
# Other State Programs - Pennsylvania

## Provides:

- Funding
- Business and technical expertise
- Access to a network of innovative, expert resources

## Produces:

- 3.6-to-1 return on state dollar invested



# IMPACT 2014



BEN FRANKLIN  
RIGOROUSLY MEASURES  
AND QUANTIFIES ITS  
IMPACT ANNUALLY.

JOBS CREATED BY CLIENT COMPANIES

1,103

JOBS RETAINED BY CLIENT COMPANIES

1,224

POST-BEN FRANKLIN FINANCING  
SECURED BY CLIENT COMPANIES

\$883,749,020

COMPANIES ASSISTED BY BEN FRANKLIN

1,125

NEW PRODUCTS AND PROCESSES  
LAUNCHED BY CLIENT COMPANIES

311

NEW COMPANIES FORMED

59

PATENTS AND SOFTWARE COPYRIGHTS  
AWARDED TO CLIENT COMPANIES

130

SALES REVENUES GENERATED BY  
CLIENT COMPANIES

\$557,094,071



National Institutes of Health

## NIH 2015 Allocation to SBIR/STTR \$719M Total

■ Funding in Millions

■ Funding in Percentage

Florida

\$17.4

2.4%

Pennsylvania

\$38.1

5.3%

New York

\$39.1

5.4%

■ Funding in Millions

■ Funding in Percentage

New York

\$39.1

5.4%

Pennsylvania

\$38.1

5.3%

Florida

\$17.4

2.4%

114





## Phase 0

- It is intended to help Florida companies increase their chances of submitting a successful SBIR or STTR proposal.
- Up to **\$3K** for eligible expenses
  - Consulting Fees: proposal review, commercialization strategies, market research
  - Professional Fees: Legal, Accounting
  - Writing services, travel, etc.

# Ideas for Florida



- FHTC process and how we may do this statewide
- Level of funding perhaps with a minimum, to optimum amount. \$15M may be the right range.
- 1:1 match for Phase I awards and 3:1 for Phase IIs
- Recommendation for the review panel composition
- Points for projects that promote collaboration among universities



# Additional Ideas

- Training and support for faculty interested in SBIR/STTRs
- Technology fairs for faculty to share technologies with industry
- Gap Funding for promising technologies
- An investment fund to match other investment dollars for startups
- Talk about proposed increase in NIH and other funding overall
- Keep FHTC admin simple
- Partnerships with hospital great example

# Florida SUS Match System



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●●  
(UCF) [RF: Bio Mechanical Modeling of Airway Protection in Head and Neck \*\*CANCER\*\*](#)

A project, the purpose of which is to compare results of the group that receives the EMST (Expiratory muscle strength training) intervention to the SOC (Standard of Care) group.

Award Date: 01/07/2016  
PI: [Olusegun Ilegbusi](#)  
Funding Agency: [UCF Foundation, Inc](#)

●●  
(UCF) [HIV Vaccine Trials Laboratory Services Project - Year 6](#)

A project, the purpose of which is to provide plasma, serum and semen analysis under an HIV vaccine trial.

Award Date: 11/12/2015  
PI: [Alexander Cole](#)  
Funding Agency: [Fred Hutchinson \*\*CANCER\*\* Research Center](#)

●●  
(UCF) [RF: Development of a Cytoskeletal- Disrupting Approach for the Treatment of Metastatic Breast \*\*CANCER\*\*](#)

Surviving breast **CANCER** is linked to whether the **CANCER** cells have spread or metastasized to vital organs like the lungs or brain. **CANCER** cells move by rearranging their internal framework, which is called....

Award Date: 11/05/2015  
PI: [Annette Khaled](#)  
Funding Agency: [Breast \*\*CANCER\*\* Research Foundation](#)

●●  
(UCF) [RF- Development of a Cytoskeletal- Disrupting Approach for the Treatment of Metastatic Breast \*\*CANCER\*\*](#)

RF- Development of a Cytoskeletal- Disrupting Approach for the Treatment of Metastatic Breast **CANCER**



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**UCF**  
**RF: Development of a Cytoskeletal-Disrupting Approach for the Treatment of Metastatic Breast Cancer**  
by: **Annette Khaled / (UCF)**

**Research Description:**

Surviving breast **CANCER** is linked to whether the **CANCER** cells have spread or metastasized to vital organs like the lungs or brain. **CANCER** cells move by rearranging their internal framework, which is called the cytoskeleton. Damaging the cytoskeleton is a good way to kill **CANCER** cells, but the challenge is not harming normal cells in the process. To find better ways to eliminate **CANCER** cells, our lab discovered a small peptide we called CT20p. Upon entering a **CANCER** cell, CT20p attached to a protein called a chaperonin that helps cells form the building blocks of the cytoskeleton. Our idea is that CT 20p inhibits the activity of the chaperonin, preventing metastasizing **CANCER** cells from assembling the filaments that form the cytoskeleton. **CANCER** cells may express more of the chaperonin than normal cells; hence, therapeutically targeting the chaperonin without harming normal cells is possible. The objective of this proposal is to develop a powerful therapeutic designed to kill the most invasive types of breast **CANCER** cells. The aims of our proposal are to: (1) Determine the types of breast **CANCER** cells that are most susceptible to targeting the chaperonin and (2) Discover how CT20p interacts with the chaperonin to develop a therapy that inhibits the interaction. Expected outcomes are a new approach for treating metastatic breast **CANCER** and an appreciation of the population of patients that would most benefit from this treatment, which is in line with the mission of the BCRF to support research that advances a cure for breast **CANCER**.

**Principal Investigator:** **Annette Khaled**  
College: **Burnett School of Biomedical Sciences**  
Department: **School of Biomedical Science - Director Office**  
Email: **annette.khaled@ucf.edu**

**Co-Principal Investigator:** **J. Manuel Perez Figueroa**  
College: **NanoScience Technology Center**  
Department: **NanoScience Technology Center**  
Email: **jmanuel.perez@cshs.org**

**Alicia Copik**  
College: **Burnett School of Biomedical Sciences**  
Department: **School of Biomedical Science - Director Office**  
Email: **Alicia.Copik@ucf.edu**

**Funding Agency:** **Breast Cancer Research Foundation**  
Category: **N/A**

**Start Date:** 11/05/2015

**Award Amount:** \$250,000.00  
**Funded Amount:** \$250,000.00

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# Central Florida Health Care

- Website created to stimulate collaboration and synergistic proposal development between researchers from [Florida Hospital](#) (FH) and UCF.
- Researchers from different organizations can locate others with similar interests and work together to develop necessary preliminary data, funded by the partnered organizations, that will lead to submission of extramural grant funding.

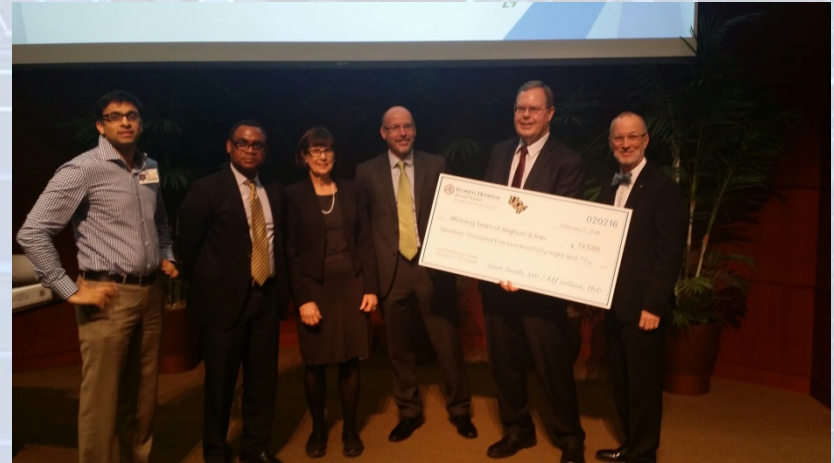


# Awards Intended To:

- Promote collaboration between FH and UCF researchers
- Provide seed funding for proof-of-concept studies
- Provide seed funding to generate preliminary data for submission of future extramural grant applications

# Awards

- First award made in January 2016 for “Biomechanical modeling of airway protection in head and neck cancer.”
- Team: Dr. Olusegun Ilegbusi, CECS; Dr. Bari Ruddy-Hoffman, COHPA, and Dr. Nikhil Rao, radiation oncologist at Florida Hospital





# HHS SBIR/STTR Conference in Orlando Nov. 15-17

- Organized by UCF, this is the first time the conference will cover the full range of HHS agencies.

