FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
HEALTH AFFAIRS COMMITTEE

Wednesday, December 9, 2015
10:00 a.m. **approximate start time*
Florida International University
Modesto A. Maidique Campus
Graham Center Ballrooms

Committee Membership:

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

AGENDA

1.	**Call to Order and Chair's Remarks**	**Jose J. Armas**
2.	**Approval of Minutes**	**Jose J. Armas**
3.	**Academic Health Center (AHC) Reports**	
3.1	Academic Health Center Update	**John A. Rock**
3.2	Integration of FIU Student Health Services with the FIU Health Care Network	**Eneida O. Roldan**
4.	**Information Items** *(No Action Required)*	
4.1	School of Integrated Science and Humanity Update	**Suzanna M. Rose**
4.2	Herbert Wertheim College of Medicine Update	**John A. Rock**
4.3	Nicole Wertheim College of Nursing and Health Sciences Update	**Ora L. Strickland**
4.4	Robert Stempel College of Public Health and Social Work Update	**Mark L. Williams**
4.5	Board of Governors Health Initiatives Committee Workshop	**John A. Rock**
5.	**New Business** *(If Any)*	**Jose J. Armas**
6.	**Concluding Remarks and Adjournment**	**Jose J. Armas**

The next Health Affairs Committee Meeting is scheduled for Thursday, March 10, 2016

Health Affairs Committee Meeting

Date: December 9, 2015

Subject: Approval of Minutes of Meeting held September 10, 2015

Proposed Committee Action:

Approval of Minutes of the Health Affairs Committee meeting held on Thursday, September 10, 2015 at the Modesto A. Madique Campus, Graham Center Ballrooms.

Background Information:

Committee members will review and approve the Minutes of the Health Affairs Committee meeting held on Wednesday, September 10, 2015 at the Modesto A. Madique Campus, Graham Center Ballrooms.

FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
HEALTH AFFAIRS COMMITTEE
MINUTES
SEPTEMBER 10, 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 Chair Jose J. Armas at 11:49 am on Thursday, September 10, 2015, at the Modesto A. Maidique Campus, Graham Center Ballrooms.

The following attendance was recorded:

Present	***Excused***
Jose J. Armas, *Chair*	Cesar L. Alvarez
Justo L. Pozo, *Vice Chair*	
Jorge L. Arrizurieta	
Michael G. Joseph	
Claudia Puig	

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

Committee Chair Jose J. Armas welcomed all Trustees, University faculty and staff to the meeting. He noted that the Herbert Wertheim College of Medicine has been ranked 20th nationwide among the Top Medical Schools for Education Quality, and ranked 4th nationwide for Career Support, in a survey of more than 100 medical schools by GraduatePrograms.com. He added that the Nicole Wertheim College of Nursing and Health Sciences graduate nursing program has been ranked 54th in the *US News & World Report's* 2016 Best Graduate Schools Guidebook.

Committee Chair Armas also noted that Tomás R. Guilarte was appointed as dean for the Robert Stempel College of Public Health & Social Work, effective January 1, 2016.

2. Approval of Minutes

Committee Chair Armas asked that the Committee members approve the Minutes of the meeting held on June 3, 2015. A motion was made and passed to approve the Minutes of the Health Affairs Committee Meeting held on Wednesday, June 3, 2015 at the Patricia & Philip Frost Art Museum, Room 105-107.

3. Academic Health Center (AHC) Reports

3.1 Integration of FIU Student Health Services with the FIU Health Care Network

Interim Chief Executive Officer, FIU Health, Eneida O. Roldan, provided an update on the integration of FIU Student Health Services (SHS) with the FIU Health Care Network. She stated that the integration goals of the SHS and FIU Health are to increase utilization and efficiency, organize the delivery of healthcare services and maximize the impact of the student health fee to a larger share of the student population, and to protect the academic performance of students. She noted that one of the visions for integration included a shift in the clinical portions of student health fees to integration with a four pillar model endorsed by SHS and FIU Health Task Force. Dr. Roldan provided a comprehensive review of the four pillar model for student heath and the implementation strategies for each pillar.

Dr. Roldan mentioned that in June of the current year, FIU Health leadership changed, noting that a comprehensive due diligence has been conducted by the new leadership team of all FIU Health business and operations, strategic partners and integration to include SHS. She added that some of the focuses of the new transition and integration included administrative and clinical leadership, information management, pharmacy, strategic partners, accreditation and communication. She provided a brief overview of each.

3.3 Role of the AHC in Philanthropy

The Role of the AHC in Philanthropy was presented before Agenda Item 3.2, FIU Embrace.

Senior Vice President for University Advancement, President and CEO, FIU Foundation, Inc., Howard R. Lipman, and Assistant Vice President of Development, Susan G. Lane, provided an overview of the role of the philanthropic landscape in terms of the AHC. They noted that the AHC is a major component of the FIU capital campaign adding that transformative gifts have the potential for branding and national global prominence for FIU.

3.2 FIU Embrace

Provost and Executive Vice President Kenneth G. Furton provided an overview of FIU Embrace. He noted that FIU EMBRACE is a comprehensive, and integrated care program developed to promote health, wellness and overall functioning for adults with Autism Spectrum Disorder, intellectual disabilities, and other neurodevelopmental disorders. He added that EMBRACE seeks to help persons with these challenges lead healthy lives and maximize their individual potential across their lifespan.

Provost Furton stated that EMBRACE focused on three areas: (1) Research, (2) Services (3) and Planning. He provided a brief overview of each focus. He also provided an overview of the organizational structure of EMBRACE, defining the roles and scope of the Executive Committee and the Advisory Board.

3.4 Role of the AHC in Research Strategic Initiatives

Vice President for Research, Andres G. Gil, reported on the role of the AHC in Research Strategic Initiatives. He mentioned that there were five research functions of the AHC at FIU and provided an overview of each. He added that the FIU health research portfolio focused on areas of basic sciences, behavioral sciences and engineering.

VP Gil also provided an overview on the financial impact of AHCs on research for universities noting that in universities where mature medical schools exist, AHCs tend to represent 48-65% of the research funding or expenditures of the university.

VP Gil presented an overview of the four-stage functional progression of FIU's AHC, and the *FIUBeyondPossible2020* research expenditure goals.

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.

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 at the spring meetings.

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 Thursday, September 10, 2015 at 12:33 p.m.

Trustee Requests	***Follow-up***	***Completion Date***
1. *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.*	*Chief Executive Officer, FIU Health Associate Dean, Eneida O. Roldan*	*Ongoing*
2. *Chairman Armas requested a joint meeting of the FIU HealthCare Network Board and the Board of Trustees Health Affairs Committee*	*Dean and Senior Vice President for Health Affairs Dr. John A. Rock*	*Spring 2016*

C.S.
10.22.15

FLORIDA INTERNATIONAL UNIVERSITY

Health Affairs Committee

December 9, 2015

FIU | Board of Trustees

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Health Affairs Committee

Integration of FIU Student Health

FIU | Board of Trustees

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Background

- Student Health Services delivers services at two sites: Modesto Maidique Campus (MMC) & Biscayne Bay Campus (BBC)
- On July 1, 2015, the clinical portion of Student Health Services was transferred to FIU Health for the purpose of managing the entire operations. This is inclusive of Pharmacy operations.
  - 56.7 FTE between administrative and clinical staff from both campuses were transferred to FIU Health
  - new leadership team was put in place at FIU Health

Healthy Campus 2020 – University Health

- 10-year national objectives for improving university health aligned with Healthy People 2020
- Student objectives reflect the major public health concerns impacting college students in the United States; chosen based on:
  - Ability to *motivate* action
  - Availability of *data* to measure progress
  - Relevance as broad *public health issues*

STUDENT OBJECTIVES

1. Health Impediments to Academic Performance
2. Health Communication/ Health IT/ECBP (Educational and Community Based Programs)
3. Injury and Violence Prevention
4. Mental Health and Mental Disorders
5. Nutrition and Weight Status
6. Physical Activity and Fitness
7. Sexually Transmitted Diseases and HIV
8. Family Planning
9. Substance Abuse
10. Tobacco Use
11. Immunizations and Infectious Disease

Due Diligence Plan: July-Sept 2015

- Review of administrative support positions; potential synergies and efficiencies
- Review of clinical support services in alignment with trending volumes and with potential to enhance services
- Review of top five diagnosis for visits
- Volume by provider
- Actual visits, cancellations, walk-ins
- Review of workflows; potential efficiencies
- Meetings with all stakeholders: administration, clinical, students, and student representatives

Support Data

Trending volumes of patients per day at MMC and BBC (2013- present)*:

Fiscal Year**	MMC	BBC
FY 13-14	64	15
FY 14-15	90	12
FY 15-16 (thru Aug 31)	87	10

**Patients per day includes all clinical services inclusive of psychiatry.*

***Fiscal year: July-June*

Data provided by SHS administration

Goals of Integration of SHS and FIU Health

- Increase:
  - Utilization
  - Efficiency
- Organize the delivery of healthcare services and maximize the impact of the student health fee to a larger share of student population
- *Protect the academic performance of students*

Goal: Increase utilization

Several items were taken into consideration as an explanation for low utilization such as:

- Economic drivers
- Provider availability
- Requests for new services
- Operational efficiencies
- Student knowledge of student health services
- Covered services

Student Health Services – Communication Plan

TASK	OWNER	SEPT		OCTOBER				NOVEMBER					DECEMBER		
		21-Sep	28-Sep	5-Oct	12-Oct	19-Oct	26-Oct	2-Nov	9-Nov	16-Nov	23-Nov	30-Nov	7-Dec	14-Dec	21-Dec
Initial meeting with ELR/Legal Counsel	Transition Team	21-Sep													
Meeting with External Relations (Sandy G. Levy, Ileana Varela and Terry M.)	Dr. Roldan	25-Sep													
Meeting with Dean Rock	Dr. Roldan			5-Oct											
Meeting with the President	Dr. Roldan			5-Oct											
Meeting with Oscar and Dr. Shwartz	Dr. Roldan/Carlos			6-Oct											
Meeting with Larry Lunsford	Dr. Roldan			6-Oct											
Meeting with Ken Jessell	Dr. Roldan			6-Oct											
Initial meeting with Central HR (Talent Management, EOA and ELR)	Dr. Roldan/Natacha			6-Oct											
Prep Meeting with ELR	Natacha/Yasmira			7-8-9 Oct											
Meeting with the Provost	Dr. Roldan			9-Oct											
Recap Meeting with ELR/Legal Counsel	Transition Team				12-Oct										
Meeting with Dr Cheryl Nowell	Dr. Roldan				12-Oct										
Meeting with Student Board Member MMC & BBC SGA Presidents (Alexis Calatayud, Allhn Mejia) & Dennis Par	Dr. Roldan				13-Oct										
Town Hall meeting with SHS (90 day brief)	Dr. Roldan				14-Oct										
HWCOM meeting to review assessment	Transition Team				14-Oct										
Prepare tentative schedule of meetings	Natacha				17-Oct										
Cross training employees	Carlos						26-Oct								
Follow up meeting with Central HR (Talent Management, EOA and ELR)	Dr. Roldan/Natacha					20-Oct									
HWCOM HR prepares financial impact for Finance department	Natacha/Yasmira					21-Oct									
Board meeting	Dr. Roldan					22-Oct									

Key:
Done

Student Health Services – Communication Plan

TASK	OWNER	SEPT		OCTOBER				NOVEMBER					DECEMBER		
		21-Sep	28-Sep	5-Oct	12-Oct	19-Oct	26-Oct	2-Nov	9-Nov	16-Nov	23-Nov	30-Nov	7-Dec	14-Dec	21-Dec
ELR provides documentation (letters)	Joann						28-Oct								
HWCOM HR reviews documentation and submits for final signature (Dean)	Natacha/Yasmira						28-Oct								
Submit Business Justification	Dr. Roldan						28-Oct								
Submit Memo for Nov 3 (SHS Employees)	Dr. Roldan						28-Oct								
Prepare scripts for meetings (11/2, leadership, 11/3)	Dr. Roldan/Natacha						28-Oct								
Coordinate logistics with HWCOM IT/ HR (Provide list)	Natacha/Yasmira						28-Oct								
Coordinate logistics with Benefits and OEA (provide list)	Natacha						28-Oct								
Prepare summary x employee (payout and vacation amounts) for meetings	Natacha/Yasmira						28-Oct								
Meeting with the President	Dr. Roldan						28-Oct								
Meeting with Oscar (plan details)	Dr. Roldan/ Carlos						28-Oct								
Review Business Justification and Memos with Legal	Natacha						30-Oct								
Meeting with External Relations (Sandy G. Levy, Ileana Varela Terry M. and Jaime)	Dr. Roldan						30-Oct								

Key:
Done

Student Health Services – Communication Plan

TASK	OWNER	SEPT		OCTOBER				NOVEMBER					DECEMBER		
		21-Sep	28-Sep	5-Oct	12-Oct	19-Oct	26-Oct	2-Nov	9-Nov	16-Nov	23-Nov	30-Nov	7-Dec	14-Dec	21-Dec
Individual meetings with employees at BBC	Natacha/Maria/Carlos/Yasmira/Lisa							2-Nov							
Meeting with BBC Team (employees staying)	Dr. Roldan/Carlos/Natacha							2-Nov							
Submit Memo for Students	Dr. Roldan							3-Nov							
Approval of Memo for Students	Genral Counsel, ELR, President's Office, External Relations							3-Nov							
Meeting at MMC with Leadership Team	Dr. Roldan/ Carlos/Natacha							3-Nov							
Individual meetings with employees at MMC	Natacha/Dana/Carlos/Oscar/Yasmira/Lisa/Lisbet							3-Nov							
Meeting with Leadership Team (recap)	Dr. Roldan/ Carlos/Natacha							3-Nov							
Town Hall Meeting at MMC	Dr. Roldan/Carlos/Joann/Isabel/Natacha							4-Nov							
Submission and approval of worked hours (employees that left)	Yasmira							6-Nov							
Define table of organization	Dr. Roldan/Carlos/Oscar								9-Nov						
Recap meeting to review changes in duties and reporting lines	Carlos/Oscar/Natacha/Yasmira								9-Nov						
Reimbursement of parking decals	Yasmira/ELR/Parking & Transportation								12-Nov						
Enter changes in duties and reporting lines in PantherSoft	Yasmira										25-Nov				
Review job descriptions of all employees	Carlos/Oscar										25-Nov				
Individual meetings with employees that changed job duties/reorting lines	Carlos/Oscar/Supervisor/Natacha											4-Dec			
Retreat Admin	Transition Team														TBD
Retreat Staff	Transition Team														TBD

Key:
Done

Strategies

- Centralize administrative support services to improve efficiencies and communication
- Align clinical workforce to actual needs and volume
- Enhance services based on population demand: increase provider access; increase services in Gynecology, Internal Medicine, and Behavioral Health; method of delivery; and include selected specialty care aligned with an adequate utilization plan
- Improve IT health care infrastructure as necessary to implement population health platform
- Improve staff development to train in new healthcare delivery system

Action Plan: November 2-3, 2015

FIU Herbert Wertheim College of Medicine FIU Health

Student Health Services Realignment Metrics

Student Health Services – Realignment Metrics

FINAL POSITION LIST - REGULAR, OPS AND VACANT BY CAMPUS

JOB TITLE	TARGET POSITIONS									
	Regular			OPS/Temp			Vacant			TOTAL
	MMC	BBC	SUBTOTAL	MMC	BBC	SUBTOTAL	MMC	BBC	SUBTOTAL	
Adv. Reg. Nurse Practitioner				2	1	**3**	1		**1**	**4**
Certified Medical Assistant	2		**2**				1		**1**	**3**
CLERICAL				5		**5**				**5**
Director Student Health Svcs		1	**1**							**1**
Health Information Rep I	2		**2**							**2**
Health Information Technician		1	**1**							**1**
Physician	1		**1**		1	**1**				**2**
Program Assistant		1	**1**							**1**
Registered Nurse Specialist							1		**1**	**1**
Sr. Administrative Assistant								1	**1**	**1**
Sr. Registered Nurse	1	1	**2**							**2**
Student Assistant				2	1	**3**				**3**
	6.00	**4.00**	**10.00**	**9.00**	**3.00**	**12.00**	**3.00**	**1.00**	**4.00**	**26.00**

Student Health Services – Realignment Metrics

(*) TOTAL ACTUAL FTE vs HEADCOUNT BY CAMPUS

JOB TITLE	ACTUAL FTE (ADMIN)		HEADCOUNT (ADMIN)	
	MMC	BBC	MMC	BBC
CLERICAL	4.25	0.00	5.00	0.00
Director Student Health Svcs	0.00	1.00	0.00	1.00
Health Information Rep I	2.00	0.00	2.00	0.00
Health Information Technician	0.00	1.00	0.00	1.00
Program Assistant	0.00	1.00	0.00	1.00
Student Assistant	1.00	0.50	2.00	1.00
SUBTOTAL	**7.25**	**3.50**	**9.00**	**4.00**

JOB TITLE	ACTUAL FTE (CLINICAL)		HEADCOUNT (CLINICAL)	
	MMC	BBC	MMC	BBC
Adv. Reg. Nurse Practitioner	1.75	0.13	2.00	1.00
Certified Medical Assistant	2.00	0.00	2.00	0.00
Physician	0.50	0.38	1.00	1.00
Sr. Registered Nurse	0.60	1.00	1.00	1.00
SUBTOTAL	**4.85**	**1.50**	**6.00**	**3.00**

	TOTAL ACTUAL FTE		TOTAL HEADCOUNT	
	MMC	BBC	MMC	BBC
	12.10	5.00	15.00	7.00
TOTAL	**17.10**		**22.00**	

(*) Does not include Vacant positions

Student Health Services – Realignment Metrics

ACTUAL # EMPLOYEES STAYING (ADMIN)

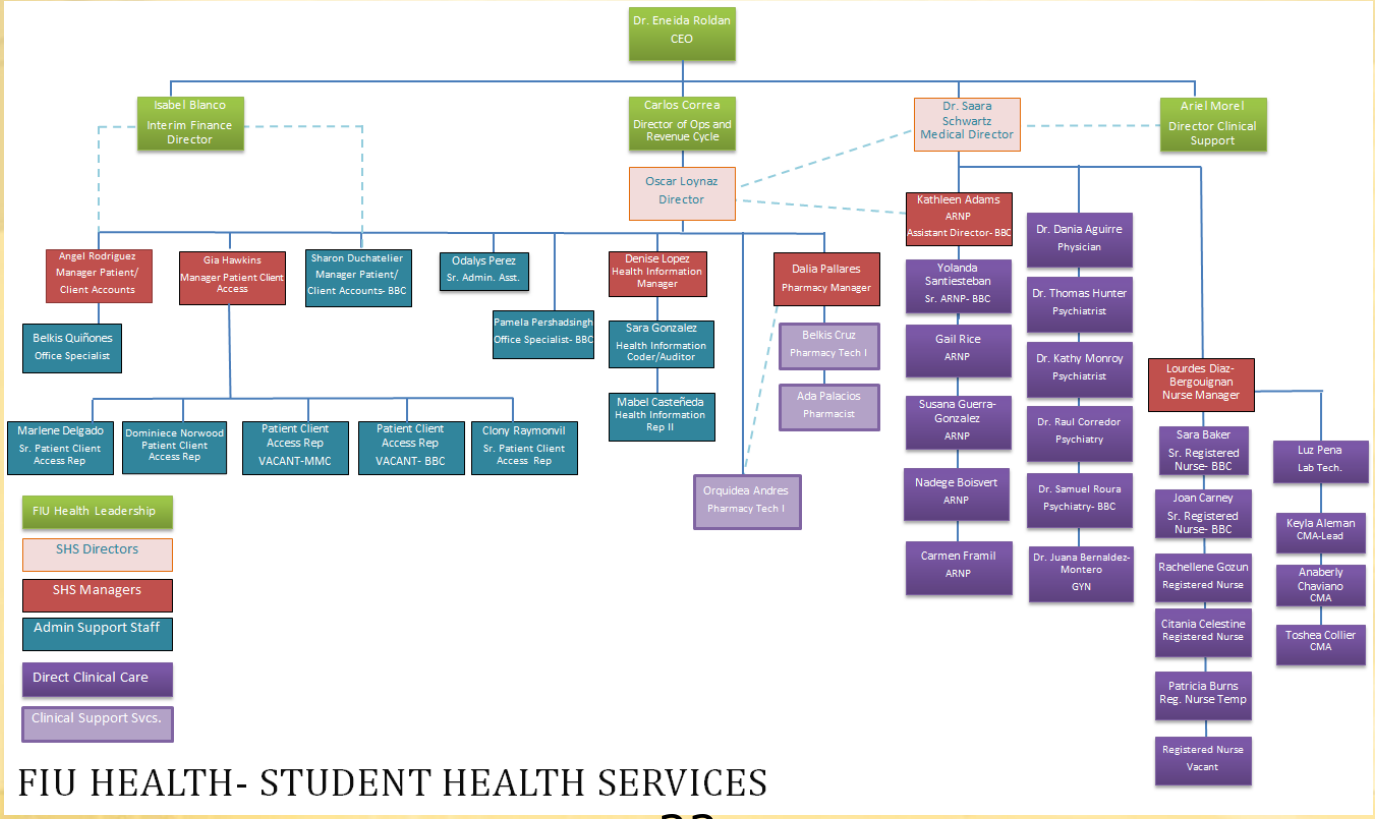
JOB TITLE	MMC	BBC	TOTAL
Manager Administrative Svcs	1.00		1.00
Asst Dir Patient Care Svcs		1.00	1.00
Pharmacy Technician I	2.00		2.00
Health Information Rep II	1.00		1.00
Senior Patient Accounts Rep	1.00		1.00
Mgr Patient Client Access	2.00	1.00	3.00
Health Information Code Audito	1.00		1.00
Health Information Manager	1.00		1.00
Director Student Health Svcs	1.00		1.00
Patient Client Access Rep	1.00		1.00
Professional	1.00		1.00
Pharmacy Manager	1.00		1.00
Sr. Administrative Assistant	1.00		1.00
Office Specialist	1.00	1.00	2.00
Patient Accounts Representativ	1.00		1.00
TOTAL	16.00	3.00	19.00

ACTUAL # EMPLOYEES STAYING (CLINICAL)

JOB TITLE	MMC	BBC	TOTAL
Professional (Psychiatrist)	1.00		1.00
Asst. Professor	3.00		3.00
Physician	1.00		1.00
Cert Medical Asst Spec Lead	1.00		1.00
Sr. Registered Nurse		2.00	2.00
Adv. Reg. Nurse Practitioner	3.00		3.00
Professional	1.00		1.00
Registered Nurse	2.00		2.00
Certified Medical Assistant	1.00		1.00
Nurse Manager	1.00		1.00
Laboratory Technician	1.00		1.00
Sr Certified Medical Assistant	1.00		1.00
Sr Adv Reg Nurse Practitioner		1.00	1.00
Medical Director	1.00		1.00
TOTAL	17.00	3.00	20.00

	MMC	BBC	TOTAL
TOTAL	33.00	6.00	39.00

Student Health Services – Table of Operations



FIU HEALTH- STUDENT HEALTH SERVICES

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Summary

Cost savings totaling approximately 1.2M annualized (Approximately $900,000 FY 15-16) from the realignment will be reinvested on enhancement of the following clinical services*:

- Increase Gynecology services (MMC)
- Increase Internal Medicine services (MMC)
- Add specific specialty care (MMC)
- Increase Registered Nurse coverage (BBC)
- Enhance Behavioral services (MMC)
- Investment dollars for method of delivery: Telehealth

Implementing continuous performance improvement; stakeholder input; and aligning new healthcare delivery system will enable leadership to reinvest dollars supporting strategies appropriate to the population served.

* *Services increased at MMC may be available at BBC upon gathering further data*

Next Steps

Implementing Population Health Management for FIU Students

- Evaluate data:
  - What data is accessible?
  - Interventions that make sense for the targeted population
- Gather more data - health risk assessment
- Necessary resources:
  - Collaborate with wellness and health promotion
  - Utilize expertise from other colleges

Electronic Health Record, Data and Dashboards

- SHS will remain on Pyramed:
  - Leading provider of College Health and Counseling Software
  - Allows a more stringent separation between student FERPA data and FIU Health HIPPA data since the data will remain in their respective electronic silos
  - Clinical operations maintains student web portal for messaging, test results, and appointment scheduling
- Data collection:
  - Long term conditions and their effect on student retention tracked across settings (FIU Health and SHS) using unique identifiers
  - Data will be used in dashboards for management

Student Health Accreditation

- Since March 2013 SHS at both MMC and BBC campuses have been accredited by AAAHC for Patient Centered Medical Home (PCMH)
- Medical Home accreditation is more extensive than ambulatory care accreditation: includes chronic illness management
- Will strive to maintain AAAHC accreditation for ambulatory care: Extension, April 2016
- Joint quality structure with FIU Health

Thank You

FIU | Board of Trustees

Health Affairs Committee

December 9, 2015

FIU | Board of Trustees

School of Integrated Science and Humanity
Report to the Board of Trustees Health Affairs Committee
December 2015

The School of Integrated Science and Humanity (SISH) was established in 2009 by the College of Arts and Sciences to provide a multi-disciplinary home for the study of health-themed sciences such as biochemistry, biophysics, behavioral science, cognitive and neurosciences. The following provides an update of recent health-related initiatives of the School.

BIOMOLECULAR SCIENCES INSTITUTE (BSI)
Director: Dr. Yuk Ching Tse-Dinh
The mission of the Biomolecular Sciences Institute is to promote synergistic interdisciplinary collaborative research among FIU faculty with complementary expertise for advancing basic scientific knowledge and making discoveries that impact human health. A research team headed by BSI faculty member Dr. Fernando Gabriel Noriega, Professor, Department of Biological Sciences has been awarded a five-year research grant by the National Institute of Allergy and Infectious Disease, NIH, for the project titled "Regulation of Juvenile Hormones in Mosquitoes." The research team includes two other BSI faculty members, Dr. Matthew DeGennaro, Assistant Professor, Department of Biological Sciences, and Dr. Francisco Fernandez-Lima, Assistant Professor, Department of Chemistry and Biochemistry. This research led by Dr. Noriega addresses the need for novel solutions to mosquito-borne diseases including Malaria, Chikungunya and Dengue Fever, as well as the wide-spread resistance of mosquitoes to insecticides.

CENTER FOR CHILDREN AND FAMILIES (CCF)
Director: Dr. William Pelham
The Center for Children and Families (CCF) 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 6,640 families since it was established in 2010. The renowned Summer Treatment Program, served 233 South Florida children and close to 2,500 families in summer 2015. The Summer Reading Explorers Program, an intervention designed to improve literacy skills in young children, served 1,756 children. CCF also served an additional 350 children. CCF faculty in the past three months received grant awards totaling close to $23 million,

including $11.5 million U01 award from NIDA, the single largest NIH award received by an FIU faculty, one R01, one K08, one R03, three IES, two NSF grants, and four prestigious grant awards from foundations. Since August, the CCF hosted talks by seven nationally known mental health experts and continues to provide online training opportunities. More than 400 individuals have attended talks and 1,775 online workshops and keynotes have been viewed.

COGNITIVE NEUROSCIENCE AND IMAGING CENTER (CNIC)

Director: Dr. Angela Laird

The proposed 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 CNIC is a partner in FIU's newly awarded $12.7 million project funded by the National Institute of Drug Abuse (NIDA) to study the impact of substance use on adolescent brain development. NIDA's nationwide, multisite project, termed the Adolescent Brain Cognitive Development (ABCD) Study, will follow approximately 10,000 children from ages 9 to 10, before they initiate drug use, through adolescence to determine factors associated with risk for substance use and other mental health disorders. The CNIC is also a partner in two additional new projects funded by the National Science Foundation (NSF) to develop new integrated neuroimaging technologies focusing on key neurological disorders (with the College of Engineering and Computing and the College of Medicine) and to provide scholarships and research training for historically underrepresented undergraduate students majoring in Physics.

FIU | Herbert Wertheim College of Medicine
FLORIDA INTERNATIONAL UNIVERSITY

FIU Herbert Wertheim College of Medicine
Report to the Board of Trustees Health Affairs Committee
December 2015

HWCOM welcomes its newest and largest class
At 123, the Class of 2019 is the HWCOM's largest class to date and thanks to a pipeline program dedicated to recruiting talent from within, it boasts 37 FIU grads; that is the largest number of Panthers to don the white coat in a single class since the HWCOM accepted its first students in 2009.

HWCOM officially welcomes the inaugural class of Physician Assistants
On August 22, 2015, HWCOM held the inaugural White Coat Ceremony for the Master in Physician Assistant Program (PA) Class of 2017. The 45 students were chosen out of nearly 700 applicants. Applications for next year's 45 slots have already surpassed one-thousand and are still coming in. The 27-month old program seeks to help meet the demand for health care practicioners. The program received provisional accreditation from the Accreditation Review Commission on Education for the Physician Assistant, the accrediting body for all PA programs in the United States.

FIU Health New CEO
Eneida O. Roldan, M.D., M.P.H., M.B.A., has been named Chief Executive Officer of the FIU HealthCare Network which manages FIU Health, the clinical practice where FIU clinical faculty provide medical services. Dr. Roldan, who has been serving as interim CEO since June, also serves as Associate Dean for International Affairs and Associate Professor, Department of Pathology; joined HWCOM in 2009 as founding faculty.

New Chair/Department of Human and Molecular Genetics
Jeff Boyd, Ph.D., has been appointed as professor and chair of the Department of Human and Molecular Genetics at HWCOM. Boyd has both a national and international reputation as one of the leading scientists in the study of the molecular genetics of women's cancers. Prior to FIU, Boyd served as professor and senior vice president at the Fox Chase Cancer Center in Philadelphia, PA, an NCI-designated comprehensive cancer center. He also served as the inaugural Executive Director of the Cancer Genome Institute and held the Robert C. Young, M.D., Chair in Cancer Research.

Cheryl Brewster, Ph.D./Office of Diversity
Received a five-year, $2.5 million federal grant to expand its Florida Science Training and Research (STAR) Fellowship program which attracts and retains a talented pool of underrepresented in medicine undergraduate students by supporting and involving them in a unique learning environment with experiences that heighten their sense of purpose and commitment to a medical career, identifying and addressing various barriers to their matriculation in medical school, offering career counseling and mentoring, and preparing them for medical school application and matriculation.

Awards/Recognitions
HWCOM has been selected to join the American Medical Association Accelerating Change in Medical Education Consortium. In it's notice of acceptance letter, the AMA noted: "The Review Committee was thoroughly impressed with your project and the impact it will have on the Consortium and medical education community. We are excited at the prospect of assembling this growing consortium to share ideas, collaborate and innovate together."

Faculty Convocation Awards:
Aileen Marty, M.D.
Professor, Department of Medicine, Family Medicine, and Community Health was awarded the top honor bestowed on FIU faculty, the President's Council *WorldsAhead* Award.

Luther Brewster, Ph.D.
Assistant Professor, Chief of the Division of Policy, Research and Community Development, and Community Director for NeighborhoodHELP™, Department of Medicine, Family Medicine, and Community Health, was awarded the third place President's Council *WorldsAhead* Award.

Madhavan Nair, Ph.D.
Distinguished Professor, Associate Dean for Biomedical Research and Founding Chair of the Department of Immunology is to be honored with the prestigious 2016 *Hind Rattan Award*, one of the highest honors granted Indian notables living abroad. Hind Rattan is a Hindi phrase that translated to English means "Jewel of India". It is awarded annually to 25-30 honorees by the NRI (non-resident Indian) Welfare Society of India, an organization under the umbrella of the Government of India. Nair, an award-winning and internationally recognized expert in the fields of nanomedicine and neuroimmune pharmacology was chosen for his expertise and achievements in science. Nair has also been selected to receive a *Life Time Achievement Award in Biotechnology* from India's Association of Biotechnology and Pharmacy (ABAP).

FIU | Nicole Wertheim College of Nursing & Health Sciences
FLORIDA INTERNATIONAL UNIVERSITY

NICOLE WERTHEIM COLLEGE OF NURSING AND HEALTH SCIENCES
Report to the FIU Board of Trustees Health Affairs Committee
December 2015

NWCNHS' Communitive Science Disorder Department (CSD) Ranked Number 17 by Graduateprograms.com

The Nicole Wertheim College of Nursing and Health Sciences (NWCNHS) CSD program was ranked # 17 by Graduateprograms.com. Graduateprograms.com contacted current and recent graduate students through scholarship entries as well as social media platforms to garner their ratings and reviews. Graduateprograms.com assigns 15 ranking categories to each graduate program at each graduate school. Rankings cover a variety of student topics such as academic competitiveness, career support, financial aid and quality of network. Program rankings, compiled using data gathered between September 1, 2012 and September 30, 2015, encompass reviews posted by more than 75,000 students participating in over 1,600 graduate programs nationwide. Ratings are based on a 10 star system (with 1 being the worst and 10 being the best). NWCNHS CSD program garnered an overall score 8.15 out of 10.

Substance Abuse and Mental Health Services Administration (SAMHSA) Awards NWCNHS Faculty $900,000 to Reduce HIV Infections among Minorities in South Florida

NWCNHS' nursing faculty members Drs. Sandra Jones and Eric Fenkl were awarded another grant with SAMHSA for over $900,000 for three years: 9/30/15-9/29/2018. The purpose of the proposed Florida International University Nursing (FIU Nursing) prevention program is to work collaboratively with a Community Based Organization, Latinos Salud, to decrease substance abuse (SA) and SA-related behaviors that place minority young adults in South Florida (Miami-Dade and Broward Counties) at risk for HIV and Hepatitis C (HCV). The program is a collaborative, multi-level approach to addressing the needs of minority college-age young adults. The target goal will be to reach 1,000 young minority adults a year, through prevention education, interventions, awareness events, social media, or HIV/VH testing, with the project reaching 3,000 minority young adults over the full grant period. The program will have a significant impact on decreasing SA and SA-related behaviors that place minority young adults at risk for HIV/HCV.

NWCNHS Faculty Member's Poster Presentation won 1st Place at the 18th Annual National Association of Nurse Practitioners in Women's Health (NPWH)

NWCNHS nursing faculty member, Dr. Nola Holness, had her poster presentation selected as the best poster at the 18th Annual NPWH conference in Salt Lake City, UT. The National Association of Nurse Practitioners in Women's Health (NPWH) is a dynamic professional membership organization focused on women's health care. As the health care landscape changes and evolves, NPWH continues to advocate for sound public policies that improve women's health and to support the professional development and lifelong learning of nurse practitioners, nurse midwives, and all other clinicians who provide care to women. Clinicians who attended the NPWH 18th Annual Clinical Conference gained the in-depth knowledge and specialized skills needed to provide high quality health care to women of all ages. Dr. Holness contributed to the wealth of knowledge displayed at the conference as she discussed "*The Effects of Resilience and Social Influences on Preventing a Repeat Adolescent Pregnancy in Parenting Adolescent Mothers*" during the poster session.

Dean of NWCNHS Honored as 2015 Woman of Distinction

Dr. Ora Strickland, Dean of NWCNHS, was selected as one of Plaza Health Network's 2016 Woman of Distinction. The Plaza Health Network, is one of South Florida's largest not-for-profit network of rehabilitation and skilled nursing centers in Miami-Dade County where outstanding quality of care is their guiding principle for success. Four of the centers were selected as "2014 Best Nursing Home in America" by *U.S. News & World Report*; these centers received five stars by the Center on Medicare and Medicaid Services. On November 5, 2015, Plaza Health Network hosted its 6th annual luncheon to honor Dr. Strickland for her great accomplishments in nursing.

Robert Stempel College of Public Health & Social Work
Report to the Board of Trustees Health Affairs Committee
December 2015

There has been considerable progress made in the Robert Stempel College of Public Health & Social Work along a number of lines. The College is looking forward to the arrival of Dr. Tomas Guilarte, who will assume the leadership of the College as dean on January 3, 2016. Dr. Guilarte will arrive with a new $2.9 million grant from the National Institute of Environmental Health Sciences to continue his research on the effects of early life lead exposure on behavioral and neuropathological changes. As he assumes the deanship, Dr. Guilarte will find a revitalized research program. For example, Dr. Marianna Baum received a $5.4 million grant in September from the National Association on Drug Abuse to study the progression of liver disease in a cohort of HIV-infected drug users.

The Stempel College is also working on increasing its presence in the community through continuing education and practicum/internship programs. In 2014-2015 the College began to aggressively identify areas of online and face-to-face continuing education where the College could develop programs having market value. During the past year, the College has offered seven continuing education seminars and classes and intends to increase these through 2015-2016.

The Stempel College is extremely pleased that its graduate program in the School of Social Work has been ranked 2nd in the nation among social work programs by graduateprogram.com. This ranking is noteworthy because it was determined by graduate students across 15 ranking categories. Program rankings, compiled using data gathered from September 2012 to September 2015, encompass reviews posted by more than 75,000 students participating in over 1,600 graduate programs nationwide. Ranking categories include academic competitiveness, career support, financial aid, and quality of network, amongst others.

The Stempel College has several active cross-disciplinary research groups focusing on issues of importance to public health, nutrition, and social welfare.

Integrated Biostatistics and Data Management Center (IBDMC)
O. Dale Williams, *Director*
The Integrated Biostatistics Center and Data Management Center was developed in 2012 with the arrival of O. Dale Williams as the chair of the Department of Biostatistics. IBDMC provides support to investigators preparing proposals, study designs, data collection and management plans, statistical analyses, and manuscripts. In 2014-2015 the IBDMC had $1,233,465 in supported research funding. In addition to direct funding, faculty in the IBDMC provided biostatistical and research design support to 90 faculty and other clients from 47 departments in nine colleges/centers across FIU and 14 organizations outside FIU. In total, the IBDMC assisted with 131 projects having a total dollar amount of $22 million. In addition, the value of applications submitted during 2014-2015, for which the funding status is either pending or unknown, is more than $43 million. Recently the Center was notified that three large projects for which it provided key guidance and support were funded. National Institutes of Health (NIH) announced that Dr. Marianna Baum will receive a $6 million award from NIH/NIDA. The IBDMC played a key role in helping develop the research design and the data management and analysis plan. Dr. Raul Gonzalez in the Department of Psychology has been notified that he will receive a grant for more than $12 million. Again, IBDMC provided research design and data management and analysis advice and will play a key role in implementation of the data management and analysis plan. The third grant for which the IBDMC provided significant design and analysis advice and for which it will play a continuing role is a National Science Foundation grant awarded to Dr. Malek Adjouadi, Engineering Professor for $3.5 million.

Center for Research on U.S. Latino HIV/AIDS and Drug Abuse
Mario De La Rosa, *Director*
The primary mission of the Center for Research on U.S. Latino HIV/AIDS and Drug Abuse (CRUSADA) is to advance collective knowledge and understanding of the social 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 FIU Stempel, the College of Education, and the Herbert Wertheim College of Medicine. The Center also has ongoing collaborations the University of Miami Miller Schools of Medicine and Nursing and Health Studies and the Morehouse School of Medicine. Over the past quarter, CRUSADA resubmitted an R01 application to continue following the recent immigrant study cohort (De La Rosa, PI). Investigators submitted an administrative supplement to the National Institute on Alcohol Abuse to expand data collection activities of the NIAA Drinking and Driving Study (Romano and De la Rosa, PIs). With investigators at the University of Texas School of Public Health, CRUSADA investigators submitted a competitive administrative supplement entitled, "YMAP: Young Men's Affiliation Project of HIV Risk and Prevention Venue in Miami Florida." Investigators submitted a R01

application, "FIU-ABCD: Pathways and Mechanisms to Addiction in the Latino Youth of South Florida to the National Institute on Drug Abuse." This application was highly scored and is awaiting a funding decision. Investigators published two papers, five papers are in press, and six papers were submitted to peer-review journals. Investigators are currently working to submit a community based participatory R24 grant to the National Institute on Minority Health and Health Disparities and Endowment application to the National Institute on Minority Health and Health Disparities. One of CRUSADA's doctoral students received funding for a pre-doctoral fellowship award from NIH.

FIU-BRIDGE Group
Eric Wagner, *Director*
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 FIU's Dr. Eric Wagner and Banyan Health Systems' Dr. Juliette Graziano; Associate Directors are Drs. Michelle Hospital and Staci Morris, and the community coordinator is Ms. Eva Wales. FIU-BRIDGE (formerly C-BIRG) has received over $25 million in external grant support. On September 30th, 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 County public schools. In addition, Dr. Wagner, FIU-BRIDGE's Director, is a member of the "dream team" of FIU investigators that just won a $12 million federal grant to longitudinally examine substance use in youths as part of a national landmark study on brain development.

FIU-Collaborative for Health Economics and Strategic Solutions
Benjamin Amick, *Director*
Monica Tremblay, *co-Director*
The mission of FIU-Collaborative for Health Economics and Strategic Solutions (FIU-CHESS) is to assist government, business, and community-based organizations to reach critical health policy and economic strategy goals. Faculty in FIU-CHESS are from the Academic Health Center's three collages, and the Colleges of Business, Arts and Sciences, and Engineering and Computing. FIU-CHESS is also involving leaders in the South Florida business community. The Department of Health Policy and Management is central to the success of FIU-CHESS. FIU's Stempel has just successfully completed a cluster hire, hiring the fourth health economist who will contribute to FIU-CHESS.

Within the year, it is expected that FIU-CHESS will directly garner at least $1 million in research grants and contracts. Faculty associated with FIU-CHESS have made a good beginning in 2014-2015. FIU-CHESS has been able to garner $464,736 in its first year. This was accomplished in one year, with only a third of the full complement of faculty now associated with the center.

Cardiovascular Research Group

Wasim Maziak, *Director*

The Cardiovascular research group has participating faculty from the Department of Epidemiology and Baptist Health South Florida. This collaboration has resulted in more than 40 peer reviewed publications in top-tier journals. The work of those in the Cardiovascular Research Group is laying the groundwork for the Miami Health Study that will provide new insights into risk factors for cardiovascular disease in South Florida's diverse population. In collaboration with Baptist Health, the Department of Epidemiology conducted two workshops on "How to conduct Meta-Analysis" in March of 2015. The workshops were conducted by Dr. Emir Veledar, Baptist Health, and Dr. Purnima Madhivanan, Department of Epidemiology. The workshops were designed to provide students and researchers with hands-on experience on how to plan, conduct and communicate results of a meta-analysis. As part of ongoing collaboration with Baptist Health in cardiovascular research, the Department of Epidemiology will host three Baptist Fellows. The fellows will work with investigators in the Research Group on research projects related to cardiovascular health in Miami and South Florida.

STATE UNIVERSITY SYSTEM OF FLORIDA
BOARD OF GOVERNORS
Health Initiatives Committee
September 2, 2015

SUBJECT: Approval of Minutes of November 5, 2014; January 21, 2015; and May 18, 2015 Committee Meetings

PROPOSED COMMITTEE ACTION

Approval of the minutes of the following three meetings:

- Committee Meeting held on November 5, 2014, at Florida Atlantic University
- Committee Workshop held on January 21, 2015, at the University of North Florida
- Committee Workshop held on May 18, 2015, at the University of Central Florida

AUTHORITY FOR BOARD OF GOVERNORS ACTION

Article IX, Section 7, Florida Constitution

BACKGROUND INFORMATION

Committee members will review and approve the minutes of the meetings held on November 5, 2014; January 21, 2015; and May 18, 2015.

Supporting Documentation Included: Minutes, November 5, 2014
Minutes, January 21, 2015
Minutes, May 18, 2015

Facilitators/Presenters: Governor Ed Morton

MINUTES
STATE UNIVERSITY SYSTEM OF FLORIDA
BOARD OF GOVERNORS
HEALTH INITIATIVES COMMITTEE
FLORIDA ATLANTIC UNIVERSITY
BOCA RATON, FL
NOVEMBER 5, 2014

Video or audio archives of the meetings of the Board of Governors and its Committees are accessible at http://www.flbog.edu

1. Call to Order

Chair Ed Morton convened the meeting at 4:15 p.m. on November 5, 2014, with the following members present and answering roll call: Governor Webster, Governor Beard, Governor Carter, and Governor Robinson. A quorum was established.

2. Meeting Minutes

Governor Carter moved that the Committee approve the minutes of the September 17, 2014 meeting, as presented. Governor Webster seconded the motion and members concurred.

3. Health-Related Research: A Survey of the State University System

Governor Morton provided a brief introduction to a presentation by Associate Vice Chancellor R. E. LeMon, noting the important role of research in the SUS.

Dr. LeMon presented highlights from the first report stemming from an environmental scan conducted in 3 broad areas: health-related research, health education, and healthcare delivery. The report on health-related research identifies common threads and themes for the 12 SUS institutions, as nearly all of the universities are engaged in health-related research of some type.

He described the report as a synthesis of university responses to a survey on health-related research. In the survey, the universities were queried as to the magnitude of their research, their top priority areas of research, their general research challenges, their facility challenges and opportunities, their technology transfer challenges and opportunities, their research compliance challenges and opportunities, their veterinary resources challenges and opportunities, their current collaboration with peer SUS institutions, their opportunities for further collaboration in areas where more research needs to be done, and their contributions to translational research.

Dr. LeMon presented on the magnitude of SUS health-related research, noting that $431 million dollars came into the SUS from the federal Department of Health and Human Services in 2012-2013 and a total of $600 million from all federal sources was dedicated to health-related research that year. Funding at the University of Florida and the University of South Florida represented nearly 80% of the overall SUS health-related research funding.

Dr. LeMon stated that a national comparison of medical science R&D expenditure data in 2011-2012 showed Florida ranked 6th in the nation. Governor Morton asked how those comparisons would break down on a per capita basis, considering Florida's large population.

Several themes from the report were highlighted, including:

- the need to recruit already-funded faculty and the high cost of adequate startup packages
- a range of facility needs, including a teaching hospital, renovated lab space, and some animal facility needs
- the increasingly competitive nature of grants and the need for strategic partnerships
- resource needs for tech transfer and grants for proof-of-concept studies
- existing collaboration between SUS institutions and a desire to partner more to increase competitiveness for research funding
- overlap among the universities in some high-priority research areas, including aging research
- and a role for the Board in creating shared research infrastructure that could benefit the institutions, such as organizing a streamlined IRB process and data-handling and storage capabilities for greater SUS collaboration.

On this last theme, Provost Joe Glover suggested that current data infrastructure investments such as SSERCA could benefit health researchers, but it would require better communication with the Chief Information Officers of the universities. Dr. LeMon concluded by highlighting the institutions' willingness to collaborate on grants in high-priority areas and to work together in gap areas provided that they have the expertise and resources to do so. He noted the Centers of Excellence model as one mechanism for partnership.

Governor Morton asked the Committee for questions or comments. Governor Carter said tracking the magnitude is important for gauging how the System is performing in health-related research. Governor Robinson noted the importance for translational research, going beyond generating new knowledge and putting knowledge we have to work for people in the community. It is important for students to have skills in translational research. Governor Morton agreed and offered an example of the

importance of applied knowledge in nutrition and disease prevention and management.

11. Closing Remarks and Adjournment

Chair Morton thanked members for their participation and adjourned the meeting at 4:40 p.m.

Ed Morton, Chair

Amy Beaven,
Director, STEM and Health Initiatives

MINUTES
STATE UNIVERSITY SYSTEM OF FLORIDA
BOARD OF GOVERNORS
HEALTH INITIATIVES COMMITTEE
UNIVERSITY OF NORTH FLORIDA
JACKSONVILLE, FL
JANUARY 21, 2015

Video or audio archives of the meetings of the Board of Governors and its Committees are accessible at http://www.flbog.edu

1. Call to Order

Chair Ed Morton convened the workshop at 8:45 a.m. on January 21, 2015, with the following members present and answering roll call: Governor Beard, Governor Carter, Governor Doyle, Governor Levine and Governor Robinson. A quorum was established.

Chair Morton introduced the workshop as a joint meeting of the Health Initiatives Committee and the Committee's Advisory Group members, who represent business and clinical perspectives in health care. He noted that the workshop agenda would be divided into three parts, beginning with a presentation from researchers at the Max Planck Institute in Munich, Germany, on medical school admission criteria, training and assessment of future healthcare professionals. The second and third items of the agenda would address supply and demand data on workforce gaps, as well as emerging and evolving trends in healthcare and ways of measuring demand.

2. Holistic Admissions for Medical School Candidates: Assessing IQ, EQ, and CQ

Governor Morton recognized Dr. Jan Woike of the Max Planck Institute for Human Development to present research on medical school and health program admission criteria, communication training, assessment, and life-long learning.

Dr. Woike presented current figures on patient care and outcomes and suggested that an improvement in communication and shared-decision making between providers and patients could improve outcomes. He suggested that educators can improve on the identification and development of these skills for their students, principally by linking program selection, training, practice outcomes, and lifelong learning in a reflective feedback loop.

Some points from his presentation were:

- Currently there is insufficient evidence to support emotional intelligence measurements as part of the admissions criteria.
- Selection should not be the only area of focus as students' attitudes and abilities, including communication skills, change during the course of study.
- There is a need for more training in statistical literacy and risk. Statistical figures are often misunderstood and misrepresented because of poor training but communicating accurately about probability can improve shared decision-making.
- Currently there is overutilization of services based on patient demand and expectations, which can lead to over-diagnosis and overtreatment. Physicians are reluctant to provide less treatment due to a desire to meet patient demand, a fear of litigation, and financial incentives to provide treatment.
- If communication is working, there is a true understanding of risks and benefits, which builds trust between the doctor and patient.
- Communication training and shared decision-making skills should be incorporated into other courses, ongoing and formative, provided incrementally and allowing for feedback, and practiced within a team of healthcare trainees.
- There is a need to improve the process for life-long learning for healthcare providers. One role for universities is the maintenance of alumni networks to support the dissemination of new knowledge in accessible and easy to understand forms.
- There is a need to re-frame physicians as health communicators rather than experts and to capture and communicate how well they are doing by using data in a learning loop.
- Universities can accumulate best practices; look at the selection process as it is and always seek to improve it; focus on training; and continue communicating with practicing physicians and feed this back to the selection process.

Governor Morton asked Dr. Woike if he is seeing changes in Germany's selection process and degree of inter-professional training. Dr. Woike responded that institutions should select medical school candidates based upon their motivation to learn and abilty to benefit the most from the training, rather than selecting candidates based upon the final desired characteristics. Governor Morton also asked if there are changes to medical board certification to address the need for continuing education in Germany. Dr. Woike replied that currently any changes are in the form of initiatives and not any binding regulations that he is aware of.

Members of the Committee and Advisory Group (Dr. Andres Gil, Governor Robinson, Dr. Celeste Philip, Governor Carter, and Dr. John Fogarty) provided additional questions and comments. Governor Morton recognized Dr. Deborah German, Dean of the UCF College of Medicine, for a comment. She noted that educators see a change in the second or third year in a student's ability to communicate, and she suggested that problems actually arise when students are thrown into real-world practice settings. Dr.

Woike confirmed that a shift to much shorter patient visits could lead students to greater disillusionment with real-world practice, but he noted that communication within the confines of practice is still important. Yet, this disillusionment and disconnect with patient care should prompt reflections on the design of practice.

Governor Morton thanked Dr. Woike for his time and travel to speak on the topic.

3. Gap Analysis for Designated Health Occupations

Governor Morton provided an introduction to a presentation by Amy Beaven on the health workforce supply and demand data to be considered as part of the Committee's environmental scan.

Ms. Beaven presented two overarching questions for the Committee's health workforce gap analysis. Which health occupations are currently undersupplied? Where is the workforce supply not meeting the occupational demand in Florida? She then explained the gap analysis methods of the 2012-2013 Board of Governor's Access and Attainment Commission and noted where the health analysis overlapped and differed.

Ms. Beaven provided details on the methodology for assessing demand and supply, calculating the initial gap, and considering contextual factors. She presented several data limitations, as well as additional data sources to consider for context. She provided information on the Classification of Instructional Programs (CIP codes) and the Standard Occupational Classification (SOC codes) and how they are linked through a crosswalk of educational programs to job openings.

Governor Levine asked for clarification on the difference between the size of the demand and the size of the workforce gap. Ms. Beaven answered that the gap would be unmet demand after considering all sources of workforce supply. Governor Carter, Governor Beard, and several Advisory Group members discussed capturing the availability of medical residencies (graduate medical education) and other internships that may influence the availability of supply. Dr. Glen Finney noted that availability of physician residencies and fellowships could each influence the decision of trainees to stay in Florida for practice.

Governor Levine and Advisory Committee member Mary Lou Brunell raised concerns that the use of licensing data could overstate supply (underestimating any gap) unless license-holders who are not working in Florida, or working in a limited capacity in the occupation, were backed out of the supply estimates. Dr. Alma Littles commented that healthcare is seeing transitions that may change the number and type of health professionals that are needed in the workforce. Mary Lou Brunell announced a partnership with CareerSource Florida to convene a Health Leadership Council to identify some of these shifts and their potential impact. Governor Morton agreed that

changes in reimbursement structure will change the mix of services and types of treatment from what is current practice.

The Committee and Advisory Group provided additional suggestions around contextual factors to be considered in the next round of analysis. Of particular interest were in-migration, out-migration, adequate demand estimates with consideration of retirements, and the number of medical residencies in Florida.

4. Emerging and Evolving Health Occupations

Governor Morton introduced the second half of Ms. Beaven's presentation covering emerging and evolving health occupations. He also listed three doctoral proposals in evolving health occupations that would be coming to the Board of Governors for approval in March and on which he wanted to seek comments today from the Advisory Committee members.

Ms. Beaven provided definitions for emerging occupations (few jobs currently but fast growth) and evolving occupations (existing occupation but job skills are changing). She noted the difficulty for measuring the demand for emerging and evolving occupations under the current gap analysis methodology. She suggested several resources to gauge demand for emerging and evolving occupations, including short-term demand estimates and feedback from industry partners.

Governor Morton asked about proteomics and genomics as an emerging area for the training of additional geneticists and genetic counselors. Dr. Glen Finney responded that advances in these fields show most factors are polygenetic and have complicated interactions. Therefore, the workforce may shift to require more lab professionals to do appropriate, rigorous lab studies, but a lot of the counseling will still come back to the physician to interpret the results. The future of personalized medicine requires improved quality, through research, and then increased sophistication in the knowledge of healthcare providers and computer-aided decision and risk tools.

Governor Robinson agreed there is a need to expand clinical training in epigenetics for many professionals. Mary Lou Brunell suggested the Florida Department of Economic Opportunity projections are likely behind in estimating emerging and evolving occupations and supported bringing industry leaders into the discussion.

As specific cases of potentially evolving occupations, the Committee was asked to discuss the demand for three professional practice doctorates to be considered for approval in March. Each of the three proposed professional doctorates was an education level above what was currently required for licensure and practice in the occupation. Therefore, demand estimates using the Bureau of Labor Statistics established typical education level did not necessarily represent the demand for the doctorally-prepared students. The Committee was asked to consider whether there is

evidence of hiring preference, promotion potential, or higher earnings with the advanced degree and if the program would be sustainable given student demand.

Amy Beaven introduced each of three professional doctorates: a Doctorate in Clinical Nutrition at UNF, a Doctor of Nursing Practice at FGCU, and a Doctor of Social Work at FAU. Governor Levine asked if Florida needs doctorally-prepared professionals to train others and fill the need for clinical faculty. He also asked if the professional organizations are driving the higher degree options to drive up pay and noted that for some occupations he is not seeing the demand for providers with this high degree level. He expressed concerns that supply is driving the demand rather than the demand driving the supply. Governor Morton asked how we measure the marginal utility of moving to the higher degree level.

Representatives from each of the three universities noted the design of their programs in response to regional demand and the ability to fill clinical faculty positions in the future. Dr. Celeste Philip noted that advanced dietitian education would be beneficial and appeal to hospitals, health departments, and public health wellness programs. Governor Robinson said a range of degrees are needed in the workforce, but this advanced professional would be able to apply and interpret the latest knowledge into the practice setting in a way that professionals at other degree levels are not trained to do. Governor Cavallaro added that, from a student perspective, the Board and the programs have a responsibility to make sure that students who invest in the program will actually see a return in the marketplace.

Dr. Andres Gil asked to what extent this demand can be filled by existing programs and suggested looking at where graduates, including PhD graduates, are going to see if they currently fill clinical demand. Governor Morton and other Committee members continued to express general concern that increases in degree requirements, once formalized by licensing, would only constrain the supply of healthcare practitioners.

5. Closing Remarks and Adjournment

Chair Morton thanked members for their participation and adjourned the meeting at 12:23 p.m.

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Ed Morton, Chair

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Amy Beaven,
Director, STEM and Health Initiatives

MINUTES
STATE UNIVERSITY SYSTEM OF FLORIDA
BOARD OF GOVERNORS
HEALTH INITIATIVES COMMITTEE WORKSHOP
UNIVERSITY OF CENTRAL FLORIDA
ORLANDO, FL
MAY 18, 2015

Video or audio archives of the meetings of the Board of Governors and its Committees are accessible at http://www.flbog.edu

1. Call to Order

Chair Ed Morton convened the workshop at 1:07 p.m. on May 18, 2015, with the following members present and answering roll call: Governor Beard, Governor Carter, Governor Levine and Governor Robinson. A quorum was established.

2. Gap Analysis for Health Occupations

Governor Morton introduced a presentation by Amy Beaven on an update to the findings of a health-related gap analysis for the state of Florida. The presentation was a summary of a 165 page report covering 23 occupations and their aligned health programs.

Ms. Beaven informed the Committee that feedback on contextual factors at the January 2015 workshop had guided further analysis. The updated results had also been reviewed by the Committee's Advisory Group members in the previous weeks of May 2015 and their suggestions had been incorporated into the latest draft report. The findings of the report could be grouped into four categories of occupations: occupations most likely undersupplied, occupations sufficiently supplied by annual license-holders, occupations sufficiently supplied by new or overlapping sources of supply, and occupations sufficiently supplied by Florida's graduates.

Governor Robinson asked if the new findings accounted for out-migration. Ms. Beaven responded that FETPIP data was included in the report to show the number of graduates found working in the state within one year of graduation or continuing education. Those not found were assumed to be not working or to have moved out of the state. As another source of out-migration data, the status change for license-holders was evaluated for multiple years to assess how many professionals no longer hold a Florida practice address and are assumed to move out of state each year.

Ms. Beaven presented the occupations grouped into each of the four categories. Physicians and nurses (including registered nurses, nurse practitioners, and nurse anesthetists) are most likely undersupplied. Ms. Beaven noted that the supply estimates for nursing were refined with data provided by Mary Lou Brunell from the Florida Center for Nursing and with surveys to the SUS nursing programs. However, questions remain about the accuracy of the nursing demand estimates without the consideration of additional contextual factors. The Florida Center for Nursing will convene healthcare industry leaders over the next year and will produce reports that offer finer detail on the nursing demand.

Governor Morton commented that shifts in healthcare will require additional skills and critical thinking qualifications and demand for the Bachelor of Science in Nursing. Currently the preponderance of nursing graduates comes from colleges and private schools and earn degrees at the associates degree level.

Ms. Beaven referenced information gathered on physician supply and demand and the conclusions of a report by IHS Global on behalf of the Florida Safety Net Hospital Alliance. The Committee discussed these conclusions and the implications for additional graduate medical education (GME). Governor Beard asked how the Board can influence the availability of GME in the state. Dr. Alma Littles provided information on the match rate for this year's medical school graduates, and she noted that Florida's medical schools are key resources and can offer infrastructure assistance to hospitals who have never before offered GME. President Hitt of UCF agreed that UCF's medical school was serving that role by providing structure, administration, and faculty support in efforts to create 200 new residency positions.

Ms. Beaven identified pharmacists, physical therapists, occupational therapists, and veterinarians as the occupations sufficiently supplied by annual license-holders. Currently, the number of licenses issued each year to Florida's graduates as well as to professionals migrating into the state exceeds the projected annual openings for each of those occupations. Slightly less in-migration or increased demand could mean an under-supply in physical therapy or occupational therapy and these occupations should be monitored over the next few years.

The third category includes occupations with sufficient supply due to the establishment of new programs, which significantly increase the number of graduates, such as dentists. Some occupations also draw professionals from overlapping sources of supply, such as therapists and counselors. Eleven occupations fell into the last category and had a sufficient number of program graduates in Florida to meet the projected number of job openings.

Several Committee members commented on the regional distribution of healthcare occupations and the geographic and financial barriers to access of some practitioners,

especially dentists. Dr. Jan Ignash commented that these questions came up during the Access and Attainment Commission's work. Specifically, are we producing enough, not keeping them, or not keeping them where they are needed? The Health Initiatives Committee can consider these questions as part of the second year's work. Are the occupations of interest sufficiently supplied everywhere and what can we do about it? Dr. Ignash also noted that the gap analysis was a large effort to go through but it sets a foundation for good policy. The findings of being sufficiently supplied for many of the health occupations means we may be right-sized in many areas and the SUS has done a good job in meeting demand.

Governor Tripp expressed interest in the inequality of care across the state and looking at program incentivizes to get graduates to fill unmet needs in underserved areas. Governor Morton and Governor Levine suggested that the gap analysis be revisited in the future and incorporate workforce shifts that are due to changes in healthcare delivery.

3. Closing Remarks and Adjournment

Chair Morton thanked members for their participation and adjourned the meeting at 2:20 p.m.

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Ed Morton, Chair

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Amy Beaven,
Director, STEM and Health Initiatives

STATE UNIVERSITY SYSTEM OF FLORIDA
BOARD OF GOVERNORS
Health Initiatives Committee
September 2, 2015

SUBJECT: Key Findings of the Health Initiatives Environmental Scan: Health Care Delivery, Health-related Research, and Health Program Needs

PROPOSED COMMITTEE ACTION

For Information

AUTHORITY FOR BOARD OF GOVERNORS ACTION

Article IX, Section 7, Florida Constitution

BACKGROUND INFORMATION

In August 2013 the Board of Governors Health Initiatives Committee was established to provide leadership for the development of system-level policy regarding health initiatives. The Committee has since concluded the first phase of its work by conducting a year-long environmental scan encompassing three areas: health-related education, health care delivery impacted by the health care academic experience, and health-related research. The Committee's findings from the environmental scan will lead to the development of a strategic plan that will guide the State University System in both the foreseeable future as well as in the long-term when Florida is expected to experience even more stress on its health care delivery system.

The Health Initiatives Committee will meet to consider themes that emerged from university responses to a survey on healthcare delivery, as well as feedback from its Advisory Group on the topic. The SUS themes have been incorporated with a wider context of state and national trends, which were presented to the Committee in September 2014, and make up the Committee's third environmental scan report.

The Committee will hear a presentation on highlights from the report, Board of Governors Health Initiatives Committee Report on Issues in Healthcare Delivery in the State University System, along with the key findings from the Committee's reports on health education and research. A summary of findings from the completed environmental scan are included in a brochure featuring the Health Initiatives Committee's work to date.

Supporting Documentation Included:	1. Board of Governors Health Initiatives Committee Report on Issues in Healthcare Delivery in the State University System 2. Brochure of Key Findings of the Health Initiatives Environmental Scan
Facilitators/Presenters:	Ms. Amy Beaven

Board of Governors Health Initiatives Committee

Report on Issues in Health Care Delivery

in the State University System

September 2, 2015

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Executive Summary

In 2015 the Board of Governors Health Initiatives Committee undertook an Environmental Scan in order to better understand the status of health care as it pertains to the twelve institutions of the State University System (SUS). Prior to initiating the Environmental Scan, the Health Initiatives Committee agreed on a Work Plan that would focus on three health-related areas: health education, health care delivery and health-related research. This report focuses on health care delivery. It documents the results of a review of several reports regarding current and future health care practices, incorporates the advice and counsel of the Health Initiatives Committee Advisory Group, and presents the results of a survey administered to each of the twelve SUS institutions regarding health care delivery.

It should be noted that the majority of the responses to the survey of the SUS institutions came from the six institutions with a medical school, and were focused on activities of the colleges of medicine in those institutions, even when other colleges within the institutions may be providers of health care.

This report attempts to answer six key questions with regard to health care delivery. The questions and the key findings from the body of the report are provided below.

<u>Question One</u>: What are the emerging and evolving trends in health care delivery? How will they affect the State University System?

A review of the literature on emerging and evolving health care, combined with input from the survey results from the SUS institutions and counsel from the Health Initiatives Committee Advisory Group, suggests that there are at least eight key trends: (1) an increase in collaborative models of practice that require a patient-centered, team-based approach; (2) a change in training settings from traditional hospital-based to community settings; (3) a greater employment of physicians in practices owned or managed by hospitals or other organizations; (4) a greater emphasis on values-based care and less on the fee-for-service model of reimbursement; (5) an expanded role for Advanced Registered Nurse Practitioners, physicians' assistants, and other health care delivery personnel other than physicians; (6) an expanded role of technology in the delivery of health care services; (7) the increasing acknowledgement of dental health as a key contributor to the overall health of the community and (8) the emergence of personalized medicine and pharmacogenomics. In addition, payment reform is an underlying theme for each of these health care delivery trends.

Health care in the United States has evolved from the days of the solo physician practice to more collaborative models of practice. Advances in technology, the complexity and prevalence of chronic disease management, and the complicated health care reimbursement process have all led to the need for a more systematic approach to the provision of health care. Almost all of the new models of care require a more values/outcomes-based, patient-centered, team-based approach to health care, using emerging technologies. More and more physicians are employed in practices owned and/or managed by hospitals, managed care organizations, or some other entity.

Areas of change among SUS institutions included greater use of electronic health records, the use of telemedicine, increasing opportunities for inter-professional/interdisciplinary training and care, new faculty practice plan development, and the expansion of primary and specialty care services. Electronic health records, which may be shared among those with a need to know, improve the coordination and delivery of efficient, cost-effective and quality care. SUS institutions identified a wide array of changes or planned changes to their educational programs to better prepare graduates for the changing health care delivery system.

<u>Question Two</u>: What health care delivery is currently provided within the State University System? What factors affect that delivery?

In the 2013-14 fiscal year, universities reported nearly 3,000,000 inpatient and outpatient visits. Approximately 2.6 million were outpatient visits, and nearly 300,000 were inpatient visits. This number is likely to grow as the newer medical schools expand their health care services. Another reason for growth is that the health care delivery model is changing to one based on preventative and preemptive care (i.e., chronic disease management). Half of the institutions reported having a faculty practice plan, which is the entity that serves as the structure for receiving clinical practice revenues generated from services provided by faculty clinicians. Two schools currently with neither faculty practice plans nor medical schools reported that they are having preliminary discussions or are considering starting a faculty practice plan.

Regarding the health care delivery services, SUS institutions tend to provide health care services close to home; extending services beyond the local area is the exception rather than the rule. Health care services are provided in a number of settings in close vicinity to the parent institution, as well as in the towns, cities, and communities immediately surrounding the institution. Some institutions extend services statewide and even out-of-state. Sites of services exhibit a wide variety of settings, including outpatient clinics, federally qualified health centers, county health departments, private physician practices, community hospitals,

correctional facilities, academic health centers, VA hospitals and clinics, nursing homes, rehabilitation centers, and student health centers.

When asked to identify the top five areas of specialized health care delivery they provide, the institutions identified a diverse group of specialized services ranging from those with state, national, or international reputations for excellence; those with the greatest success in generating clinical revenues; and those identified as most urgently needed. When asked to describe the greatest areas of health care needs, access to care was the area most often identified. Other needs identified included preventive and acute health care services to the underserved, mental health care/substance abuse services, primary and specialty care physicians, and population health. In addition, two institutions referenced dental care. The latter is particularly important because of its role as a causative or contributing factor in several health conditions. According to the Florida Department of Health's website,

> Oral health is vitally important to overall health and well-being. Research has shown a link to diabetes, heart and lung disease, stroke, respiratory illnesses and conditions of pregnant women including the delivery of pre-term and low birth weight infants. Dental disease is largely preventable through effective health promotion and dental disease prevention programs. Collaboration with medical partners to provide compelling messaging and preventive care is key to improving the overall health of all Floridians.[1]

The most often identified perceived barriers to patient care delivery were lack of adequate numbers of clinical faculty, increased workload requirements, Graduate Medical Education funding, and the availability of preceptors for health care programs. The most often cited critical areas of health care delivery that are not currently or sufficiently addressed by Florida universities were mental health, access to affordable health care and physician shortages, lack of residency positions, care of the elderly, and access to dental care for the uninsured.

<u>Question Three</u>: How is the delivery of health care emerging and evolving in ways that will have an impact on the preparation of health care workers by Florida universities?

With the passage of the Affordable Care Act, the concepts of Accountable Care Organizations (ACO) and Patient-Centered Medical Homes (PCMH) became much more widespread. The Patient-Centered Medical Home is a model of

[1] Dental Health (n.d.). Retrieved August 13, 2015 from the Florida Dept. of Health, http://www.floridahealth.gov/programs-and-services/community-health/dental-health/index.html

primary care that is patient-centered, comprehensive, team-based, coordinated, accessible, and focused on quality and safety. An Accountable Care Organization is a network of doctors and hospitals that share financial and medical responsibility for providing coordinated care to patients in hopes of limiting unnecessary spending. There has been significant growth in the number of practices that qualify as Patient-Centered Medical Homes as well as the number of Accountable Care Organizations over the past three to four years. Orlando has 17 Accountable Care Organizations. Only two institutions (UF and UCF) indicated that they are currently a Patient-Centered Medical Homes model, and only one (UF) indicated that it is part of an Accountable Care Organization. However, an additional five institutions indicated that they plan to become Patient-Centered Medical Homes models, and three institutions plan to become part of Accountable Care Organizations in the next five years. It is possible that the delayed response of SUS institutions in entering this health care delivery model is because the traditional structure of academic health centers already had some of the elements of Accountable Care Organizations (network of doctors and hospitals that share financial and medical responsibility for providing coordinated care to patients). Six institutions are already using electronic health records and an additional institution plans to begin use in the coming years.

With the increasing focus on prevention and health of the population, Florida's SUS institutions are well-positioned to research and promote the ways to address health disparities and chronic disease prevention. The SUS institutions can potentially benefit from the successes in this area by other entities in the United States, such as the Centers for Disease Control. As noted by Lee and Paxman,

> The three main determinants of health include: behavior and lifestyle, environmental exposure, and health care. It has been noted behavior and lifestyle accounts for 80 percent of premature mortality, environmental exposure for 20 percent and health care for 10 percent.[2]

Another trend that should be noted is the call from several health care organizations to eliminate unnecessary procedures and treatments in the name of "defensive medicine." The American Board of Internal Medicine Foundation's "Choosing Wisely" program is one such initiative. It "aims to promote conversations between clinicians and patients by helping patients choose care that is: (1) Supported by evidence, (2) Not duplicative of other tests or procedures already received, (3) Free from harm and (4) Truly necessary."[3] There is evidence that employing these behaviors reduces cost and reduces morbidity from unnecessary medical interventions; however, the risk and fear of malpractice are barriers to full acceptance of these initiatives.

[2] Lee P. & Paxman D. 1997. Reinventing Public Health. Annual Review of Public Health 18:135.
[3](n.d.). Retrieved August 13, 2015 from http://www.choosingwisely.org/about-us/

<u>Question Four</u>: How, if at all, are accrediting bodies for health care programs altering their standards to align with emerging and evolving changes to health care delivery?

Among the ways in which accrediting bodies are aligning their standards with emerging and evolving changes in health care delivery are the addition of standards requiring inter-professional collaborative training for students, changes in curriculum and pedagogy that affect the way faculty teach, an emphasis on outcomes measures in student evaluation over process, and the provision of faculty development and support for student evaluation.

The Liaison Committee on Medical Education (LCME) now has a standard requiring inter-professional training within the medical education program of accredited medical schools. SUS medical schools referenced several Liaison Committee on Medical Education standards that directly relate to changes being made in the curriculum. These include Standard 7.9 on Inter-professional Collaborative Skills, as well as the standards regarding curriculum content, specific skills, attitudes and behaviors students must demonstrate, types of patients and clinical settings students must encounter, and faculty qualifications. Also mentioned are standards that directly impact faculty members, such as the move to more small group learning, incorporation of quality improvement and safety education into the curriculum, and the increasing use of simulation.

<u>Question Five</u>: Given that health care delivery is changing, should the current mix of didactic versus clinical in health-related curricula be modified?

The quick answer is "yes." The reasons why include changes in curricula and its delivery, the needs of a more diverse student body, and the eventual placement of graduates in a variety of communities and settings that will require understanding of the needs of underserved populations. Curriculum reform is prevalent throughout the country, and Florida schools are part of the trend. Review of the medical school curricula in the state reveals that more education is occurring in small groups, clinical learning centers, simulation centers, and in clinical preceptorships in the community. Therefore, the question is no longer "should," but "how quickly" curricular modification is occurring and what the improved outcomes of the changes will be.

<u>Question Six</u>: What technological changes in health care delivery will require concomitant changes in health care education?

It is well recognized that greater inter-operability of electronic health records is needed to allow increased sharing of medical information with teams of health professionals in order to facilitate data retrieval for quality and billing purposes,

and to help alleviate patient safety concerns. Increased use of telemedicine allows interactive communication between the patient and the physician or practitioner at a distant site. This type of interaction can lead to greater efficiencies, including improved access to care and overall health. Telemedicine represents a change in the health care delivery method, but not necessarily in how physicians practice. The lack of reimbursement has limited the use of telemedicine services in Florida. It is premature at this time to know how much of an emerging or evolving influence telemedicine will have in Florida. Four institutions are already using telemedicine, and three others plan to begin using it in the next five years.

Summary

Health care is provided by SUS faculty members in academic health centers, community hospitals, VA hospitals, outpatient clinics and physician offices, health departments, and community health centers. Each medical school has a faculty practice plan. The structure of these plans differs based on the nature of affiliated partnerships (VA hospitals, private hospitals, public hospitals, and community health centers) and stage of development. The newer medical schools are still developing practice plans, while the older schools have mature plans which contribute significantly to the education of students and residents, as well as to the revenue streams of the medical schools. The practice plans within the SUS face the same challenges as practices in the community. Combining the increased use of teams to provide care, expanding the use of technology (electronic health records, telemedicine), and providing care to more groups and underserved populations will likely shift the types of providers, setting of services, and payment structure for health care in the future.

Florida's particular demographics will, in and of themselves, affect health care delivery in the future. First and foremost, Florida is continuing to grow, and this growth will increase the stress on Florida's health care infrastructure. Florida's demographics are not expected to stabilize or to decrease, as other states project. Instead, all projections show continued increases in population as far out as these projections are made. Further, while the historical trend of retirees moving to Florida is continuing, pre-retirees are now also moving to Florida in greater numbers. Florida is trending toward a population that is bimodal, with large percentages of the population aged 24 and below, and large percentages aged 65 and above. In addition, Florida's health care needs are not evenly distributed throughout the state. Rural areas, in particular, can be under-supplied, even though the state as a whole may have a sufficient supply in any given health care occupation. Florida's health care delivery infrastructure will be challenged by these demographics in the years to come, and it will be imperative that the SUS

institutions best position themselves as part of the solution to the challenges ahead.

Introduction

In 2015 the Board of Governors Health Initiatives Committee undertook an Environmental Scan in order to better understand the status of health care as it pertains to the twelve institutions of the State University System (SUS). Prior to initiating the Environmental Scan, the Health Initiatives Committee agreed on a Work Plan that would focus on three health-related areas: health education, health care delivery, and health-related research. This report focuses on health care delivery.

There are various models for health care delivery within the SUS. While acknowledging that the environment of health care delivery SUS graduates enter will have an impact on their practices, there are some best practices that should be shared among the SUS institutions. As graduates of SUS programs move into the workforce, these practices should follow them.

Purpose of the Report

The purpose of this report is to document the results of a review of several reports regarding current and future health care practices, to incorporate the advice and counsel of the Health Initiatives Committee Advisory Group, and to present the results of a survey administered to each of the twelve SUS institutions regarding health care delivery.

To inform the report and survey as part of the Environmental Scan, the following questions were developed for exploration:

1. What are the emerging and evolving trends in health care delivery? How will they affect the State University System?

2. What health care delivery is currently provided within the State University System? What factors affect that delivery?

3. How is the delivery of health care emerging and evolving in ways that will have an impact on the preparation of health care workers by Florida universities?

4. How, if at all, are accrediting bodies for health care programs altering their standards to align with emerging and evolving changes to health care delivery?

5. Given that health care delivery is changing, should the current mix of didactic versus clinical in health-related curricula be modified?

6. What technological changes in health care delivery will require concomitant changes in health care education?

Description of the Survey

The purpose of the survey was to assist in the Environmental Scan conducted this year to inform the Board of Governors' Health Initiatives Committee about the opportunities and challenges associated with health care delivery in the State University System. For the purpose of the survey, emphasis was placed on health care services provided by faculty and staff of the twelve SUS institutions. This included those services provided within, but not necessarily limited to, academic health centers, community hospitals, faculty practice plans, affiliated physician practices, health departments, community health centers, and surgery centers.

Survey Methods

To gauge the level of health care delivery currently being provided by faculty members in the State University System, a 16 question survey was sent to each of the 12 SUS institutions. Of the 11 schools responding to the survey, five reported none to very limited activity in the area of health care delivery (University of West Florida, New College, Florida Gulf Coast University, University of North Florida, Florida Agricultural and Mechanical University). Florida Polytechnic University did not respond, given its short time of existence.

It should be noted that the majority of the responses to the survey came from the six SUS institutions with a medical school, and were focused on activities of the Colleges of Medicine in those institutions, even when other colleges within the institutions may be providers of health care. Four of the universities reporting have relatively new or very small practice plans, mainly due to the fact that their medical schools have been in existence 15 years or less (Florida Atlantic University, Florida International University, University of Central Florida, Florida State University). Two of the universities have very mature faculty practice plans and reported significant activity (University of South Florida, and the University of Florida – Gainesville and Jacksonville campuses).

Because of the evolving nature of health care delivery in the nation, state, and within the SUS, the survey questions did not flow directly from the questions developed for the Environmental Scan. Summarized results from the survey are included in the information presented below. An appendix including summary

data tables and individual responses from the institutions is included at the end of this report. Although there is overlap between the subject matter in several of the sub-questions, an attempt was made to address each question individually.

<u>Question One</u>: What are the emerging and evolving trends in health care delivery? How will they affect the State University System?

A review of the literature on emerging and evolving health care suggests that there are at least eight key trends:

- An increase in collaborative models of practice that require a patient-centered, team-based approach
- A change in training settings from traditional hospital-based to community settings
- A greater employment of physicians in practices owned or managed by hospitals or other organizations
- A greater emphasis on values-based care and less on the fee-for-service model of reimbursement
- An expanded role for Advanced Registered Nurse Practitioners, physicians' assistants, dentists, physical therapists, occupational therapists, pharmacists, social workers, Certified Nurse Midwives, Certified Registered Nurse Anesthetists, and patient navigators
- An expanded role of technology in the delivery of health care services
- The increasing acknowledgement of dental health as a key contributor to the overall health of the community
- The emergence of personalized medicine and genomics. Table 8 in the SUS Survey Summary shows that two institutions responded that they are currently using personalized medicine and three others are planning to use it in the next five years.

Health care in the United States has evolved from the days of the solo physician practice to more collaborative models of practice. Advances in technology, the complexity and prevalence of chronic disease management, and the complicated health care reimbursement process have all led to the need for a more systematic approach to the provision of health care. Almost all of the new models of care require a more patient-centered, team-based approach to health care, using emerging technologies. Typically, training of physicians and other health care professionals tends to lag behind practice reform, partly because their training is focused in traditional hospital-based settings. In 2001, Green, et al. highlighted the fact that most health care is provided in the community setting. Green's article pointed out that, in a given month, only 8 of 1,000 patients will be hospitalized, and less than one of them will be hospitalized in an academic

health center. The other patients who seek treatment do so in community settings.[4]

Trends show that the practice style of physicians is changing significantly. More and more physicians are employed in practices owned and/or managed by hospitals, managed care organizations, or some other entity. In 2010, Medical Group Management Association found that more than 65 percent of established physicians and 49 percent of physicians coming out of training were placed in hospital-owned practices. Health care delivery has become more and more complex over time. Reasons suggested include the fact that inpatients tend to be much sicker and there is an increased burden of chronic disease.

An emphasis on quality is linked to changes in technology that are (1) giving patients more access to medical information, including their own records as well as vast internet resources, and (2) increasing transparency around care outcomes (via such tools as provider report cards). The quality of one's care can increasingly be gauged by the health outcomes across a population (population health). As a result, the health care industry will continue to see growth in the patient-centered medical home, need for patient navigators to help get them through the system, and the need to measure and report health outcomes. Students need to be prepared to practice in a climate where patients and their families demand access to information, shared decision-making, and transparency. Physicians will be operating in a world of many experts and will need to coordinate and communicate with providers at different levels, as well as patients and their families. As technology improves the ability to compare and contrast outcomes, formalize best practices, and establish more standardization of care, providers will not be able to hide or continue poor practices. Providers will need to better understand population health, to understand and respect the need for communication, and to have the ability to coordinate, advocate, and manage patient care.

Addressing the impact of electronic communications also requires a focus on the pros and cons of such communication. The role of privacy and what it will mean in the future has to be considered. On the "pro" side, platforms like Facebook, Twitter, and Instagram can provide a means of efficient communication with patients. In addition, examples are emerging of the formation of worldwide communities of patients with rare chronic diseases. Examples also exist of patients who are having rare diseases diagnosed on social media simply by posting pictures or listing of symptoms and receiving feedback from others. On the "con" side, the risk and fear of medical malpractice have to be part of the

[4] L.A. Green, G.E. Fryer, Jr., B.P. Yawn, D. Lanier, and S.M. Dovey - The Ecology of Medical Care. NEJM. 344(26):2021NEJM. 2021-5, 2001 Jun 28.

equation with increased use of electronic communication. Also, adherence to the patient's and society's definition of privacy and confidentiality must be maintained.

The expanded roles of Advanced Registered Nurse Practitioners and physician assistants in patient care are much better recognized as key providers in the delivery of patient care. The roles of other health care personnel (physical therapists, occupational therapists, pharmacists, dentists, social workers, patient navigators, Certified Nurse Midwives, and Certified Registered Nurse Anesthetists) are also essential.

In addition to the role of new technologies in communicating with patients and other providers, advanced technologies in the direct treatment of patients will also impact health care delivery in the future. Use of new devices and technology such as robotics is leading to shorter hospital stays, and in some cases (e.g. orthopedic procedures) is moving treatments from inpatient to outpatient settings.

Pharmacogenetics is also part of an emerging trend in the provision of health care called Personalized or Precision Medicine. This technology will allow health care providers to direct diagnostic and therapeutic modalities to the individual patient. With the knowledge of the specific genetic make-up of the patient, it is possible to target diagnostic decisions, devise treatment options and monitor the effects of treatment in a much safer, efficient and cost-effective manner. As Dr. Francis Collins describes in the *Journal of the American Medical Association*, this "moves clinicians away from making patient care decisions based on the experiences of the average patient to more precise decisions based on the individual patient."[5] Early work using pharmacogenomics has focused on cancer diagnosis and treatment. In addition, the costs of genetic testing and the lack of insurance coverage for it put this technology out of reach for most patients in the early stages. However, the price of testing has been steadily declining, and this statement from the Mayo Clinic sums up the current status of pharmacogenomics:

> Although pharmacogenomics has much promise and has made important strides in recent years, it's still in its early stages. Clinical trials are needed not only to identify links between genes and treatment outcomes but also to confirm initial findings, clarify the meaning of these associations and translate them into prescribing guidelines. Nonetheless, progress in this

[5] Collins, FS. View From the National Institutes of Health. JAMA. 2015;313(2):131-132. doi:10.1001/jama.2014.16736.

field points toward a time when pharmacogenomics may be part of routine medical care.[6]

The SUS institutions will need to ensure that they are producing the professionals with the appropriate skill sets to meet the demands of the future health care delivery system.[7] Five institutions responded that the delivery of health care in their facilities had changed in recent years. Areas of change among the five institutions included:

- greater use of electronic health records, including Computerized Physician Orders;
- expanded use of telemedicine;
- increasing opportunities for inter-professional/interdisciplinary training and care;
- expanded and enhanced relationships with community partners;
- new faculty practice plan development;
- expanded clinical training sites, including community health centers;
- expansion of primary and specialty care services;
- increased emphasis on metric-driven continuous improvement in clinical quality and service outcome; and
- increased emphasis on value, i.e., optimal care without unnecessary costs.

Institutions were also asked if they had changed or planned to change any of their educational programs to better prepare graduates for the changing health care delivery system. Responses included:

- more opportunities for inter-professional training and care teams;
- implementation and/or expansion of telemedicine services;
- promotion of values-based, patient-centered care;
- renewed emphasis on quality and safety and including residents in the initiative;
- the need to expand experiences in geriatrics, rehabilitative medicine, and primary care; and
- formal training in the use of the electronic health records and medical informatics;

[6]How does pharmacogenetics work in practice. (n.d.). Retrieved August 13, 2015 from the Mayo Clinic, http://www.mayoclinic.org/healthy-lifestyle/consumer-health/in-depth/personalized-medicine/art-20044300?pg=2

[7] For additional information on gaps in the health care workforce, see "Supply/Demand Workforce Gap Analysis on Health-Related Programs as Part of the Environmental Scan of the Board of Governors Health Initiatives Committee," available at http://www.flbog.edu/about/_doc/health-initiative-committee/Gap-Analysis-Report.pdf

- expanded educational focus in the areas of population health, personalized and precision medicine, and health policy;
- more emphasis on boot camps at the end of third and fourth years to prepare students for their residencies;
- the need to incorporate more content regarding patient safety, epidemiology, and practice of medicine within the educational program;
- more opportunities to practice in a patient-centered medical home environment; and
- for nursing education, the addition of community-based care in the curriculum, partnering for service delivery, consideration of new concentrations in the Master of Science in Nursing program, the purchase of electronic health records for student use, the addition of residencies for Doctorate of Nurse Practitioner students, and more evidence-based practice projects for undergraduates.

Payment reform is of significance in each of these trends. As alternative payment models are deployed, providers of health care, including those in the SUS, must ensure that their practice structure meets the requirements to participate in these new models. These new payment reforms are based on provider performance, particularly in the areas of quality care, patient safety, efficiency and reduction of unnecessary spending. According to the Agency for Health Care Research and Quality, "eighty-six percent of all health care spending in 2010 was for people with one or more chronic medical conditions."[8] Preventive care and early diagnosis will be critical in managing chronic diseases and in managing resources. Advanced practice nurses, physician assistants and other health care professionals will be part of the teams providing this care.

Florida's medical schools play a vital role in caring for patients served by Florida's Medicaid program. Faculty physicians and practitioners provide essential primary and specialty medical care in clinics, teaching hospitals, health departments and other health care facilities, providing annually more than two million office visits and encounters to patients served by the Medicaid program. Florida's medical school physicians and practitioners have received Medicaid supplemental funding since 2004-05. As reflected in the Agency for Health Care Administration's April 20, 2015 Low Income Pool (LIP) Amendment Request,[9]

[8] Gerteis, J.; Izrael, D.; Deitz D.; LeRoy. L.; Ricciardi, R.; Miller, T.; & Basu, J. Multiple Chronic Conditions Chartbook. AHRQ Publications No, Q14-0038. Rockville, MD: Agency for Healthcare Research and Quality. April 2014. Accessed November 18, 2014.

[9] Florida Managed Medical Assistance Program. 1115 Research and Demonstration Waiver Public Notice Document. Low Income Pool Amendment Request. Retrieved August 13, 2015 from the Florida Agency for Healthcare Administration, http://ahca.myflorida.com/medicaid/statewide_mc/pdf/mma/Public_Notice_Document_LIP_Amendment_Req.pdf.

teaching physicians and practitioners employed or under contract with Florida's medical schools were added to the Low Income Pool (LIP) program for the period July 1, 2014 to June 30, 2015. Budget authority for medical school physicians is currently provided in the amount of $204.5 million under the physician supplemental payment program.

Florida's medical schools contribute a substantial amount of medical resources to care for underserved, uninsured, underinsured, rural and inner-city patients. Medical schools further provide significant services for high-risk patients, including high-risk neonates, the elderly, and other persons having complex medical needs. Appropriate Medicaid funding is key to the ability of the medical schools to continue providing care that is needed. Services to the state's Medicaid population by medical schools having well-established faculty practice plans have continued to grow, and medical schools with new and emerging faculty practice plans are building additional programs that can enhance the state's capability to provide access and serve patients in the Medicaid program.

<u>Question Two</u>: What health care delivery is currently provided within the State University System? What factors affect that delivery?

A number of models of health care delivery exist in the SUS. To specify the scope of these models, SUS institutions were asked to (1) describe the nature of their faculty practice plans if they had one; (2) define their health care delivery service area; (3) describe the communities they serve; (4) describe the settings in which they provide health care services; (5) identify the top areas of specialized health care delivery they provide; (6) provide the number of outpatient and inpatient visits to institutions served by the institution's health care providers; (7) describe the greatest health care delivery needs in their service area and statewide; (8) describe their perceived barriers to patient care delivery; (9) state the biggest challenges/opportunities with regard to health care delivery; (10) provide a list of resources they use to track health care delivery needs in their service area, as well as resources they plan to use in the future; and (11) describe critical areas of health care delivery that are not currently or sufficiently addressed by Florida universities or their affiliated partners, and should be. The results of the survey indicated that:

- Half of the institutions reported having a faculty practice plan, which is the entity that serves as the structure for receiving clinical practice revenues generated from services provided by faculty clinicians. These plans are set up as 501C.3 not-for-profit entities per Florida Statutes Section 1004.28, and are under the control of the Boards of Trustees of the universities. Of the six schools with a faculty practice plan, three of them only serve the Colleges of Medicine, while the other three include other

units within the university. All six of the universities with Colleges of Medicine have faculty practice plans. Two of the universities that currently have neither a faculty practice plan nor a medical school reported that they are having preliminary discussions or are considering starting a faculty practice plan. FGCU reports that it has "begun preliminary discussions on establishing a faculty practice plan that would focus in the areas of physical therapy, occupational therapy, and athletic training, and would represent an integrative partnership between the identified Department, College and the University's central administration. No specific timeline has been identified for developing this initiative." FAMU reports that the "Division of Physical Therapy in the School of Allied Sciences is exploring opportunities to establish a faculty practice plan in 2017-18. Initial conversations have begun between the University/Division of Physical Therapy and Bond Community Health Specialty Clinic and Outdoors Disabled Association/Goodwill Industries to offer physical therapy services at their Tallahassee locations."

Regarding health care delivery services, SUS institutions tend to provide health care services very close to home; extending services beyond the local area is the exception rather than the rule. Health care services are provided in a number of settings in close vicinity to the parent institution, as well as in the towns, cities, and communities immediately surrounding the institution. Some institutions extend services statewide and even out-of-state. Sites of services exhibit a wide variety of types of settings, including outpatient clinics, federally qualified health centers (FQHC), county health departments, private physician practices, community hospitals, correctional facilities, academic health centers, VA hospitals and clinics, nursing homes, rehabilitation centers, and student health centers. Table Five in the Appendix indicates the settings and services included in the provision of health care in the universities.

- In describing the communities they serve, the SUS sites of care noted above are located in urban, inner-city, suburban and rural areas of the state. There was little distinction among the institutions in this regard, as each of them reported providing services in multiple geographic areas with diverse populations served. It should be noted, however that FIU's Green Family Foundation NeighborhoodHELP program places students in interdisciplinary, community-based outreach teams, supervised by faculty members, where they participate in home visits and work with families to implement a household-centered approach to clinical care. In addition, FSU faculty and students provide care to patients in community settings with a focus on primary care, underserved and rural populations.

- When asked to identify the top five areas of specialized health care delivery they provide, the institutions identified a diverse group of specialized services ranging from those with state, national, and international reputations for excellence; those with the greatest success in generating clinical revenues; and those identified as most urgently needed. Table Four in the Appendix shows the range of these services as reported by the institutions.

- The universities were asked to provide the number of outpatient and inpatient visits to institutions served by the institution's health care providers. For the 2013-14 fiscal year, universities reported a total of 294,304 inpatient visits with a range of 0 to 213,257 visits, and 2,601,067 total outpatient visits, with a range of 981 visits to 1,915,931 visits. Visits to other sites numbered 29,712. The grand total of all visits was close to three million-- 2,925,083. The majority of this health care provision is associated with the University of Florida and the University of South Florida. In sum, nearly 3,000,000 visits is a formidable number, and one that is likely to grow as the newer medical schools expand their health care services.

- In describing the greatest areas of health care needs, the results were as follows:
    - Six institutions identified access to care.
    - Five institutions identified preventive and acute health care services to underserved and mental health care/substance abuse services.
    - Three institutions identified primary care physicians, specialty care physicians, and population health.
    - Two institutions identified chronic disease management, affordable care, dentists/dental care, and health literacy.
    - Only one institution among the eleven respondents identified nurses, physicians assistants, therapists, health disparities, health care for the elderly, system of care for patients on Medicaid/uninsured, interoperability of health information systems, telemedicine, diabetes, Alzheimer's disease, HIV/AIDS, breast cancer, prostate cancer, musculoskeletal care, and rehabilitative services.

- The most commonly perceived barriers to patient care delivery identified by the institutions or by faculty members were:
    - lack of adequate numbers of clinical faculty (8 institutions),
    - increased workload requirements (6 institutions),
    - Graduate Medical Education funding (6 institutions),

- availability of preceptors for health care programs (6 institutions),
- need for more technologically advanced equipment (5 institutions),
- need for more cultural diversity among faculty (4 institutions),
- increasing numbers of under-insured and uninsured patients (4 institutions), and
- competing needs of clinical faculty (4 institutions).

- With regard to other barriers, the passage of legislation creating a permanent fix to the Sustainable Growth Rate in the Medicare program in 2015 was a welcomed relief to the Colleges of Medicine and to practicing physicians in the state because the lack of that fix had a negative impact on faculty practice plans that rely upon the Medicare program for reimbursement for services to elderly patients in the state. In addition, medical schools in the SUS worked hard to maintain the Supplemental Physician Payment Program, a Florida Medicaid enhanced payment program which began in 2004. The program was jointly funded through federal matching funds in the form of enhanced payments for services provided by faculty physicians to patients in the Medicaid program, in the fee for service model. With the move of the overwhelming majority of Medicaid payments to a managed care system, this program has been placed in jeopardy. While this funding remains intact for the 2015-16 fiscal year, there is no assurance that it will remain beyond that time. The expansion of Medicaid eligibility would result in hundreds of millions of additional dollars for the SUS.

- Institutions were asked to state their biggest challenges/opportunities with regard to health care delivery. Five institutions listed access to care, while two listed telemedicine. All other items were checked by only one institution. Table 10 in the Appendix indicates the entirety of responses by SUS institutions.

- When asked to provide a list of resources to track health care delivery needs in their service area, as well as resources they plan to use in the future, universities listed the following sources:
  - Florida statistics from state agencies,
  - Florida statistics from national agencies,
  - hospital surveys, and
  - independent surveys to institutions.

Regarding university responses to independent surveys, the University of Florida, in particular, provided a detailed listing of key health data resources utilized to track health care delivery, including UF Health internal data to

identify patterns and trends among patients from the community treated at its facilities.

- In response to the question regarding critical areas of health care delivery that are not currently or sufficiently addressed by Florida universities or their affiliated partners, and should be, institutions responded as follows:
    - Four institutions identified mental health, access to affordable health care, and physician shortages.
    - Three institutions identified lack of residency positions, and care of the elderly.
    - Two institutions identified funding for uninsured/indigent patients, public/population health, telemedicine, dental care and primary care.
    - Among the eleven respondents, single institutions identified veteran's health, the Affordable Care Organization model, health care literacy, wellness and disease prevention, chronic disease management, health disparities, supply of nurses, rural medicine, infectious disease, FQHC affiliations, threat to children's medical services funding, home health programs, occupational therapy, physical therapy, and home health programs.

- One area of critical health care delivery that is not currently sufficiently addressed by Florida universities or their affiliated partners bears special mention. Funding for Graduate Medical Education represents a substantial revenue source for SUS institutions, and has been among the top three legislative issues for the Florida Council of Medical School Deans for the past eight years. Growth in Graduate Medical Education programs and funded positions was significantly halted with the passage of the Balanced Budget Act of 1997, which capped Medicare reimbursements for Direct and Indirect Medical Education (DME and IME) at the number of residents in training as of December 31, 1996. Additionally, the amount of Indirect Medical Education funding has decreased since that time. Although there has been some growth in both Graduate Medical Education programs and slots due to several factors, including a small number of redistributed residency slots, a few programs established in new settings that had no previous Graduate Medical Education of any kind, a limited number of VA-funded positions, and some above-the-cap hospital funded-programs, many believe that the increases have not been sufficient to meet the projected physician workforce needs for the country. As part of the survey, institutions were queried regarding past, current, and future plans for Graduate Medical Education programs or positions within existing programs. Results of the survey showed that since 2012-13, only two programs were discontinued,

a Transitional Internal Medicine program and a Geriatrics program. None of the institutions had plans for any further discontinuation of programs. On the other hand, as noted in Table 7 in the Appendix, several new programs have been developed, with some increase in positions in existing programs at certain of the schools. Also, as noted in Table 8 in the Appendix, several institutions, particularly the ones with newer medical schools, have plans to start additional programs in the near future. Notwithstanding these additions, an adequate number of residency slots is apt to remain an issue due to the magnitude of the current shortage.

<u>Question Three</u>: How is the delivery of health care emerging and evolving in ways that will have an impact on the preparation of health care workers by Florida Universities?

In order to better understand the universities' responses that were given to the above survey question, some additional information regarding a major new development, the passage of the Affordable Care Act, and its effect upon health care delivery needs to be provided.

With the passage of the Affordable Care Act, the concepts of Accountable Care Organizations and Patient-Centered Medical Homes became much more widespread. A study in the June 3, 2014 issue of the Annals of Internal Medicine[10] shows that when practices use a Patient-Centered Medical Home model that relies on electronic health records, they achieve a higher quality of care than non-Patient-Centered Medical Home models that use electronic health records or those that use paper health records. The Patient-Centered Medical Home is a model of primary care that is patient-centered, comprehensive, team-based, coordinated, accessible, and focused on quality and safety. An Accountable Care Organization is a network of doctors and hospitals that share financial and medical responsibility for providing coordinated care to patients in hopes of limiting unnecessary spending. Each patient's care is directed by a primary care physician. The Accountable Care Organization is eligible for bonuses when its members deliver care more efficiently and is liable for penalties when they do not.

There has been significant growth in the number of practices that qualify as Patient-Centered Medical Homes as well as the number of Accountable Care

[10] Kern, L.M.; Edwards, A.; & Kaushal, R. (2014, June 3). The Patient-Centered Medical Home, Electronic Health Records, and Quality of Care. *Ann Intern Med*.: 160*(11):* 741-749.

Organizations over the past three to four years. According to Leavitt Partners Center for Accountable Care Intelligence, in July 2012:[11]

- California led all states with 58 Accountable Care Organizations followed by Florida with 55 and Texas with 44.
- Accountable Care Organizations are primarily local organizations, with 538 having facilities in only one state.
- At the Hospital Referral Region level, Accountable Care Organizations now are present throughout much of the United States, though some regions, primarily rural areas in the northern Great Plains and Southeast still have limited Accountable Care Organizations activity.
- Los Angeles (26), Boston (23) and Orlando (17) have the most Accountable Care Organizations.

The Leavitt Partners Center for Accountable Care Intelligence report indicated that 88 more medical groups had been added to the Accountable Care Organizations list all over the nation, including ten groups from Florida. Health care providers in Florida, most of them physicians, totaled nearly 1,300 doctors who earned the Accountable Care Organizations designated title by the federal government. Given the involvement of this many providers throughout the state, it is likely that many more Medicare beneficiaries in Florida will be using this kind of care.

SUS institutions were asked to describe the settings or services included in the provision of care in the organization and their perceived importance now and over the next five years. As described above, the passage of the Affordable Care Act is a major influence upon evolving and emerging trends in settings and services:

- Only two institutions (UF and UCF) indicated that they are currently a Patient-Centered Medical Home model, and only one (UF) indicated that it is part of an Accountable Care Organization. However, an additional five institutions indicated that they plan to become a Patient-Centered Medical Home model, and three institutions plan to become part of Accountable Care Organizations within the next five years.
- Each institution that was or was planning to become a Patient-Centered Medical Home model or part of an Accountable Care Organization placed a high importance on these organizational structures.
- Six institutions are already using electronic health records and an additional institution plans to start using one within the next five years.

[11] Muhlestein, D, (2014, January 29). Leavitt Partners Center for Accountable Care Intelligence. Accountable Care Growth In 2014: A Look Ahead. *Health Affairs Blog*. Available at http://healthaffairs.org/blog/2014/01/29/accountable-care-growth-in-2014-a-look-ahead/

<u>Question Four</u>: How, if at all, are accrediting bodies for health care programs altering their standards to align with emerging and evolving changes to health care delivery?

Among the ways in which accrediting bodies are aligning their standards with emerging and evolving changes in health care delivery are the addition of a standard requiring inter-professional collaborative training for students, changes in curriculum and pedagogy that affect the way faculty teach, an emphasis on outcomes measures over process in student evaluation, and the provision of faculty development and support for student evaluation.

In addition to hands-on clinical care delivery, learners must also be trained in the system of health care delivery. The Liaison Committee on Medical Education (LCME) now has a standard requiring inter-professional training within the medical education program of accredited medical schools. LCME Standard 7.9[12] on inter-professional collaborative skills states that:

> The faculty of a medical school ensure that the core curriculum of the medical education program prepares medical students to function collaboratively on health care teams that include health professionals from other disciplines as they provide coordinated services to patients. These curricular experiences include practitioners and/or students from the other health professions (p. 11).

Similarly, the Commission on Osteopathic College Accreditation's Standard 6.4[13] states that:

> The COM [College of Medicine] must help to prepare students to function on health care teams that include professionals from other disciplines. The experiences should include practitioners and/or students from other health professions and encompass the principles of collaborative practices (p. 21).

[12] Liaison Committee on Medical Education. (2015, April). Functions and Structure of a Medical School. Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree. Retrieved August 13, 2015 from Liaison Committee on Medical Education, http://www.lcme.org/publications.htm#standards-section

[13] Commission on Osteopathic College Accreditation. (2015, July). *Accreditation of Colleges of Osteopathic Medicine: COM Accreditation Standards and Procedures.* Retrieved August 13, 2015 from Commission on Osteopathic College Accreditation, https://www.osteopathic.org/inside-aoa/accreditation/predoctoral%20accreditation/Documents/COM-accreditation-standards-current.pdf

Review of accreditation standards of other health care programs reveals similar language addressing emerging and evolving changes to health care delivery.

When asked about the impact of educational accrediting bodies on the care provided by faculty members, medical schools mentioned several Liaison Committee on Medical Education standards that directly relate to changes being made in the curriculum. These include Standard 7.9 on inter-professional collaborative skills, as well as the standards regarding curriculum content, specific skills, attitudes and behaviors students must demonstrate, types of patients and clinical settings students must encounter, and qualifications of faculty. Also mentioned are standards that directly impact faculty members such as the move to more small group learning, incorporation of quality improvement and safety education into the curriculum, and the increasing use of simulation. They also mentioned Accreditation Council on Graduate Medical Education standards emphasizing outcomes over process measures, and the need for Graduate Medical Education to occur in an atmosphere of continuous quality improvement. In addition, survey respondents noted that there is an opportunity for universities and academic medical centers to play a role in the maintenance of certification process for physicians after residency. One institution mentioned that accrediting bodies had also impacted the care provided by its faculty members by helping the College of Medicine utilize input from faculty members to enhance faculty development, helping to ensure that core faculty understands evaluation processes, and ensuring that residency program directors have protected time and are compensated for their role as program leaders.

Two years ago, through its ACE initiative (Accelerating Change in Medical Education), the American Medical Association provided $1 million to each of 11 schools to focus on reforming the current medical education system to one that would better prepare physicians for future practice. The AMA just announced an additional $1 million dollars to be split among 20 additional schools ($75,000 each) to join the initiative.

In another important accreditation move, as of 2020, all nursing schools in Florida will be required to undergo accreditation by a national body.

<u>Question Five</u>: Given that health care delivery is changing, should the current mix of didactic versus clinical in health-related curricula be modified?

The quick answer is "yes." The reasons why include changes in curricula and its delivery, the needs of a more diverse student body, and the eventual placement

of graduates in a variety of communities and settings that will require understanding of the needs of underserved populations.

Just as accreditation standards regarding the need for inter-professional education have increased over the past few years, it has also been recognized that a more integrated, developmentally-appropriate structure to health care education is needed. Curriculum reform is prevalent throughout the country and Florida schools are part of the trend. Review of the medical school curricula in the state reveals that more education is occurring in small groups, clinical learning centers, simulation centers, and clinical preceptorships in the community. Therefore, the question is no longer "should," but "how quickly" curricular modification is occurring and what the improved outcomes of the changes will be.

In addition, university respondents were asked to describe health care delivery or educational programs, including student recruitment strategies, at their institutions designed to fill gaps in delivery for underserved areas and populations. They described a number of pre-matriculation pipeline programs as well as programs within their current curriculum that are designed specifically to meet the needs of underserved populations. Some institutions also noted plans for new programs specifically to address this issue. Several examples are provided below.

UNF noted that its nursing program specializes in community health care delivery, which focuses on underserved areas and populations. FGCU offers a Nurse Practitioner program that focuses on primary care, particularly in underserved areas. FGCU is also planning on starting a Physician Assistant Studies program that will prepare graduates who will serve in primary care settings as well as contribute to specialty areas in critical need in southwest Florida. FAMU's School of Allied Health and College of Pharmacy have a number of programs focused on filling gaps in delivery of health care services to underserved populations. FAMU also noted that it recruits and graduates significant numbers of under-represented students in pharmacy, with its College of Pharmacy being the number one producer of African-American pharmacists in the nation.

FIU described the Green Family Foundation NeighborhoodHELP program, which is a community classroom for applying ethical, social, and clinical competencies to educate medical students on non-biological factors in the diagnosis, treatment, and care of underserved households. During these home visits, students work with their household members to implement a household-centered approach to clinical care. FAU described a number of programs where its medical students provide services to underserved populations and noted that

its College of Nursing is redesigning clinical practicums for nurse practitioner education to more underserved areas. FSU described its SSTRIDE (Science Students Together Reaching Instructional Diversity and Excellence) program, designed to assist in identifying, nurturing, and recruiting qualified students from backgrounds traditionally under-represented in medical school. FSU also noted several areas in its curriculum where students are exposed to caring for underserved populations, including minority, geriatric populations and individuals from rural areas. USF noted that all courses and clerkships in its curriculum address concepts that pertain to the care of underserved populations. In addition, USF described the SELECT program, which consists of professional development courses that offer conceptual and skills-based instruction on cross-cultural health care. USF also described a number of targeted outreach, pipeline, and development programs already in place and their efforts to expand the number of applicants to these programs of emphasis. UF, likewise, has a number of pre-matriculation pipeline programs, along with a holistic admissions process that values students' diverse backgrounds and personal life experiences, including those who grew up in rural areas or around medically underserved populations. UF also has a number of curricular elements that address population health concepts and emphasize the importance of health care access and delivery across socio-demographic groups as well as early primary care clinical opportunities in settings serving the underserved.

Question Six: What technological changes in health care delivery will require concomitant changes in health care education?

It is well recognized that greater inter-operability of electronic health records is needed to allow increased sharing of medical information with teams of health professionals in order to facilitate data retrieval for quality and billing purposes, and to help alleviate patient safety concerns. The Office of the National Coordinator for Health Information Technology has issued a roadmap for shared nationwide interoperability (http://www.healthit.gov/sites/default/files/nationwide-interoperability-roadmap-draft-version-1.0.pdf).

Increased use of telemedicine allows interactive communication between the patient and the physician or practitioner at a distant site. This type of interaction can lead to greater efficiencies, including improved access to care and overall health. Telemedicine represents a change in the health care delivery method, but not necessarily in how physicians practice. The lack of reimbursement for telemedicine services has limited its use in Florida. Legislation was introduced in the Florida Legislature for the past two years to alleviate this barrier; it failed

to pass in either session. It is premature at this time to predict how much of an emerging or evolving influence telemedicine will have in Florida.

The survey of SUS institutions revealed that four institutions are already using telemedicine and three others plan to begin using it in the next five years. Electronic health records use in the SUS institutions has already been noted. Simulation is also playing a greater role in SUS colleges of medicine.

Conclusion

The results of the survey presented in this report were primarily provided by Colleges of Medicine within the SUS. Future surveys of similar information should specifically request input from other colleges participating in health care delivery.

Health care is provided by SUS faculty members in academic health centers, community hospitals, VA hospitals, outpatient clinics and physician offices, health departments, and community health centers. Each medical school has a faculty practice plan. The structure of these plans differs based on the nature of affiliated partnerships (VA hospitals, private hospitals, public hospitals, and community health centers) and stage of development. The newer medical schools are still developing practice plans, while the older schools have mature plans which contribute significantly to the education of students and residents, as well as to the revenue streams of the medical schools. The practice plans within the SUS face the same challenges as practices in the community. Combining the increased use of teams to provide care, expanding the use of technology (electronic health records, telemedicine), and providing care to more groups and underserved populations will likely shift the types of providers, setting of services, and payment structure for health care in the future.

Health care provision by SUS institutions is only likely to grow, particularly as its newer medical schools expand their services. Top areas of health care delivery are identifiable by institution, and the institutions are cognizant of barriers and opportunities in the provision of quality health care. Changes to accreditation standards have favorably impacted health education and, thus, health care delivery. Curriculum reform is prevalent in the health-related programs in the SUS.

Finally, Florida's particular demographics will, in and of themselves, affect health care delivery in the future. First and foremost, Florida is continuing to grow, and this growth will increase the stress on Florida's health care

infrastructure. Florida's demographics are not expected to stabilize or to decrease, as other states project. Instead, all projections show continued increases in population as far out as these projections are made. Further, while the historical trend of retirees moving to Florida is continuing, pre-retirees are now also moving to Florida in greater numbers. Florida is trending toward a population that tends to be bimodal, with large percentages of the population aged 24 and below, and large percentages aged 65 and above. In addition, Florida's health care needs are not evenly distributed throughout the state. Rural areas, in particular, can be under-supplied, even though the state as a whole may have a sufficient supply in any given health care occupation. Florida's health care delivery infrastructure will be challenged by these demographics in the years to come, and it will be imperative that the SUS institutions best position themselves as part of the solution to the challenges ahead.

Appendix: Board of Governors Health Initiatives Committee Survey on Health Care Delivery

Introduction

The purpose of the survey was to assist in the third component of this year's environmental scan to inform the Health Initiatives Committee as to the opportunities and challenges associated with health care delivery in the State University System.

Health Care Delivery: Description

For the purpose of this survey, we focused on health care services provided by faculty and staff of the twelve SUS institutions. This included those services provided within, but not necessarily limited to, academic health centers, community hospitals, faculty practice plans, affiliated physician practices, health departments, community health centers, and surgery centers.

Methods

To gauge the level of health care delivery currently being provided by faculty members in the State University System, a 16 question survey was sent to each of the SUS institutions. Of the 11 schools responding to the survey, five reported none to very limited activity in the area of health care delivery (University of West Florida, New College, Florida Gulf Coast University, University of North Florida, Florida A & M University). Although Polytechnic University did not respond, given their short time of existence and the focus of their educational programs, we believe they would also fall in this category. Four of the universities reporting have relatively new or very small practice plans, mainly due to the fact that their medical schools have been in existence 15 years or less (Florida Atlantic University, Florida International University, University of Central Florida, Florida State University). Two of the universities have very mature faculty practice plans and reported significant activity (University of South Florida, University of Florida – Gainesville and Jacksonville campuses).

Results

Scope of Health Care Delivery

1. How do you define the health care delivery service area for your institution?

   The institutions that provide health care services do so in a number of settings in close vicinity to the parent institution, as well as in the towns, cities, communities immediately surrounding the institutions and several extend services statewide and even out-of-state. Sites of services include outpatient clinics, federally qualified health centers (FQHC), county health departments, private physician practices, community hospitals, correctional facilities, academic health centers, VA hospitals and clinics, nursing homes, rehabilitation centers and student health centers.

2. How would you describe the communities served by your health care providers, in terms of primary geography (urban, rural, suburban, inner city) and/or specific populations?

   The sites of care noted in question #1 are located in urban, inner-city, suburban and rural areas of the state. There was little distinction among the institutions in this regard, as each of them reported providing services in multiple geographic areas with diverse populations served.

3. Does your institution have a faculty practice plan? Please provide any clarifying details on (1) the ownership structure, (2) the extent of participation of the colleges/schools/programs or (3) anticipated changes in the institution's faculty practice plan.

   Half of the schools reported having a faculty practice plan, the entity that serves as the structure for receiving clinical practice revenues generated from services provided by faculty clinicians. These plans are set up as 501C.3 not-for-profit entities per Florida Statutes Section 1004.28, and are under the control of the Boards of Trustees of the universities. Of the six schools with a faculty practice plan, three of them only serve the Colleges of Medicine, while the other three include other units within the university. Two of the schools currently with neither a faculty practice plan nor a medical school reported that they are having preliminary discussions or are considering starting a faculty practice plan. FGCU reports that they have "begun preliminary discussions on establishing a faculty practice plan that would focus in the areas of physical therapy, occupational therapy, and athletic training, and would represent an

integrative partnership between the identified Department, College and the University's central administration. No specific timeline has been identified for developing this initiative." FAMU reports that the "Division of Physical Therapy in the School of Allied Sciences is exploring opportunities to establish a faculty practice plan in 2017-18. Initial conversations have begun between the University/Division of Physical Therapy and Bond Community Health Specialty Clinic and Outdoors Disabled Association/Goodwill Industries to offer physical therapy services at their Tallahassee locations."

4. What do you perceive to be the greatest health care delivery needs in your service area and statewide?

Table One: Greatest Health Care Delivery Needs	
Area of Greatest Health Care Need	**# of Institutions Listing this Area of Need**
Access to Care	6
Chronic Disease Management	2
Affordable Care	2
Primary Care Physicians	3
Specialty Care Physicians	3
Dentists/Dental Care	2
Nurses	1
Physician's Assistants	1
Therapists	1
Preventive and Acute Health care Services to Underserved	5
Mental Health care/Substance Abuse Services	5
Health Disparities	1
Health Care for the Elderly	1
Population Health	3
Health Literacy	2
System of Care for Patients on Medicaid/Uninsured	1
Interoperability of Health Information Systems	1
Telemedicine	1
Diabetes	1
Alzheimer's Disease	1
HIV/AIDS	1
Breast Cancer	1
Prostate Cancer	1
Musculoskeletal Care	1
Rehabilitative Services	1

5. How do you track health care delivery needs in your service area currently, or plan to do so in the future?

Table Two: Tracking of Health Care Needs		
Resources	**Currently Use**	**Plan to Use**
Florida Statistics from National Agencies	6	3
Florida Statistics from State Agencies	7	2
Hospital Surveys	6	3
Your Institution's Independent Survey(s)	6	3
Other (Please describe)	4	1

Please provide greater detail on the most significant reports and resources on health care needs used by your institution.

6. For fiscal year 2013-14, please fill out the table below "Number of Patient Visits to Institutions Served by your Health care Providers" broken out by inpatient and outpatient visits. Please include additional rows for each of the affiliated institutions or facilities.

Table Three: Number of Patient Visits to Institutions Served by SUS Health Care Providers				
Institution or Facility	**Inpatient Visits**	**Outpatient Visits**	**Other**	**Total # of Visits**
	294,304	2,601,067	29,712	2,925,083
	0 – 213,257	981 – 1,915,931	29,712	

7. In layman's terms, please identify the top areas (up to five) of specialized health care delivery provided by your institution. These may be defined by (a) their state/national/international reputations for excellence, (b) their greatest success in generating clinical revenues, or (c) their status as most urgently needed.

Table Four: Top Areas of Specialized Health Care Delivery							
	UF	**USF**	**FSU**	**FAMU**	**UCF**	**FIU**	**FAU**
Cancer Care	X	X					
Cardiovascular Disease	X	X				X	
Children's Care	X						
Neuromedicine	X	X					
Trauma/Transplantation/Critical Care	X						
Allergy/Immunology/Infectious Disease		X					

Diabetes		X		X			
Preventive Care			X				X
Primary Care			X			X	X
Geriatrics			X				
Care of Underserved Populations			X	X	X		
Rural Health Care			X				
Medication Management				X			
HIV Care				X			
Health Information Technology					X		
Emerging Models of Health Care					X		
Improving Quality					X		
Cost-effective Health Care					X		
Dermatology							
Rheumatology						X	
Pain Management						X	X
Travel Medicine						X	
Dementia Care							X
Mental Health Care							X

Trends in Health Care Delivery

8. Which of the following describe the settings or services included in the provision of care in the organization? What is their perceived importance?

Table Five: SUS Settings and Services								
	UF: G/J	USF	FSU	FAMU	UCF	FIU	FAU	FGCU
Currently								
Patient-Centered Medical Home (PCMH)	X/X				X			
Part of an Accountable Care Organization (ACO)	X/							
Telemedicine	X/X	X				X	X	
Personalized Medicine	X/	X						
Electronic Health Records	X/X	X	X		X	X	X	
Direct Primary Care	/X	X		X	X	X	X	
Chronic Care Management	X/	X	X	X	X	X	X	
Team-based, Interprofessional Care	X/X	X		X	X	X	X	
Graduate Medical Education	X/X	X	X		X	X	X	
Starting in Next 5 Years								
Patient-Centered Medical Home		X	X		X	X	X	

(PCMH)								
Part of an Accountable Care Organization (ACO)	/X	X			X	X		
Telemedicine			X	X	X		X	
Personalized Medicine	/X		X	X	X			
Electronic Health Records					X		X	X
Direct Primary Care	X/		X		X		X	
Chronic Care Management					X		X	X
Team-based, Interprofessional Care	/X		X		X			X
Graduate Medical Education					X			

9. What barriers do you perceive to patient care delivery in your institution or by your faculty members?

Table Six: Perceived Barriers to Health Care Delivery	
Barriers	**# of Indicating Institutions**
Lack of adequate numbers of clinical faculty	8
Increased workload requirements	6
Need for more cultural diversity among faculty	4
Need for more technologically advanced equipment	5
Increasing numbers of under and uninsured patients	4
Competing needs of clinical faculty	4
Availability of preceptors for health care programs	**6**
Graduate Medical Education funding	**6**
Other (Please describe with additional narrative)	**2**

10. Has the delivery of health care changed at your institution in recent years? Five institutions reported changes in the delivery of health care in recent years.

    a. How has it changed?
    Areas of change among the five institutions included:
    - Greater use of EHR's, including CPO (Computerized Physician Orders)
    - Telemedicine
    - Increasing opportunities for interprofessional/interdisciplinary training and care

- Expanded and Enhanced relationships with community partners
- New Faculty Practice Plan development
- Expanded clinical training sites, including community health centers
- Expansion of primary and specialty care services
- Increased emphasis on metric-driven continuous improvement in clinical quality and service outcomes
- Increased emphasis on value

b. What have you changed or plan to change with regards to any of your educational programs to better prepare graduates for the changing health care delivery systems?
Planned changes to better prepare graduates for the changing health care delivery systems included:
    - More opportunities for interprofessional training and care teams
    - Implement and/or expand telemedicine services
    - Values-based, patient-centered care
    - Renewed emphasis on quality and safety and including residents in the initiative
    - Expand experiences in geriatrics, rehabilitative medicine, and primary care
    - Formal training in use of the EHR and medical informatics
    - Expanded educational focus in the areas of population health, personalized and precision medicine; and health policy
    - More emphasis on boot camps at end of third and fourth years to prepare students for their residencies
    - Incorporate more patient safety, epidemiology, and practice of medicine content within the educational program
    - Provide opportunities to practice in a patient-centered medical home environment
    - For nursing education, add community-based care in curriculum, partner for service delivery, consider new concentrations in MSN program, purchase EHR for student use, add residencies for DNP students, and evidence-based practice projects for undergraduates

c. What impact has your educational accrediting bodies had on the care provided by your faculty members?

Medical schools mentioned several LCME standards that directly relate to changes being made in the curriculum. These include Standard 7.9 on Interprofessional Collaborative Skills, as well as the standards regarding curriculum content, specific skills, attitudes and behaviors students must demonstrate, types of patients and clinical settings students encounter and qualifications of faculty. Also mentioned are standards that directly impact faculty members such as the move to more small group learning, incorporation of quality improvement and safety education into the curriculum and the increasing use of simulation. They also mention ACGME standards emphasizing outcomes over process measures, and the need for Graduate Medical Education to occur in an atmosphere of continuous quality improvement. It was also noted that there is an opportunity for universities and academic medical centers to play a role in the Maintenance of Certification process for physicians after residency. One institution mentioned that accrediting bodies had also impacted the care provided by its faculty members by helping the college of medicine utilize input from faculty members, while enhancing faculty development; helping to ensure that core faculty understand evaluation processes; and ensuring that residency program directors have protected time and are compensated for their role as program leaders.

11. How has Graduate Medical Education at your institution changed since 2012-2013 in terms of additional or terminated positions or programs?

Table Seven: Graduate Medical Education Expansion and Closure Since 2012-13

	UF	USF	FSU	UCF	FIU	FAU
Added						
Family Medicine			X		X	
Internal Medicine			X	X		X
Internal Medicine, Hospitalist		X				
Advanced Heart Failure and Transplant Cardiology	X					
General Surgery	X		X			X
Geriatric Psychiatry	X					
Child Neurology	X					
Emergency Medical Services	X					
Pediatric Rheumatology	X					
Integrated Plastic Surgery	X					
Emergency Medicine						X
Procedural Dermatology Fellowship			X			

Pediatrics	X					
Pediatric GI Fellowship	X					
Psychiatry					X	
New Positions	23		55			
Closed						
Internal Medicine, Transitional		X				
Geriatrics		X				

12. Regarding Graduate Medical Education, are there plans in the near future to add or terminate positions or programs under the institution's sponsorship?

Table Eight: Planned Graduate Medical Education Expansion						
	UF	**USF**	**FSU**	**UCF**	**FIU**	**FAU**
Family Medicine	X (expand)	X				X
Internal Medicine			X		X	
Pediatrics					X	X
Obstetrics/Gynecology					X	X
General Surgery					X	X
Psychiatry					X	X
Orthopedic Surgery					X	
Emergency Medicine	X (expand)				X	X
Vascular Surgery						X
Neurology						x
Physical Medicine and Rehabilitation	X					x
Dermatology			X			
Anesthesiology		X				
Clinical Informatics Fellowship		X				
Hospice and Palliative Care	X					
Pediatric Anesthesiology	X					
Preventive Medicine	X					
Unspecified			X	X		

13. Please describe health care delivery or educational programs, including student recruitment strategies, at your institution designed to fill gaps in delivery for underserved areas and populations.

    Institutions described a number of pre-matriculation pipeline programs as well as programs within their current curriculum that are designed

specifically to meet the needs of underserved populations. Some of them also noted plans for new programs specifically to address this issue.

UNF noted that its nursing program specializes in community health care delivery, which focuses on underserved areas and populations. FGCU offers a Nurse Practitioner program that focuses on primary care, particularly in underserved areas. FGCU is also planning on starting a Physician Assistant Studies program that will prepare PA's who will serve in primary care settings as well as contribute to some specialty areas in critical need in southwest Florida. FAMU's School of Allied Health and College of Pharmacy have a number of programs focused on filling gaps in delivery of health care services to underserved populations. They also note that they recruit and graduate significant numbers of underrepresented students in Pharmacy, with COPPS being the #1 producer of African-American Pharmacists in the nation.

FIU described the Green Family Foundation NeighborhoodHELP program, which is a community classroom for applying ethical, social, and clinical competencies to educate medical students on non-biological factors in the diagnosis, treatment, and care of undeserved households. FAU described a number of programs where its medical students provide services to underserved populations, and noted that its College of Nursing is redesigning clinical practicums for NP education to more underserved areas. FSU describes its SSTRIDE (Science Students Together Reaching Instructional Diversity and Excellence) program, designed to assist in identifying, nurturing and recruiting qualified students from backgrounds traditionally underrepresented in medical school. FSU also notes several areas in its curriculum where students are exposed to caring for underserved populations, including minority, geriatric populations and individuals from rural areas. USF notes that all courses and clerkships in its curriculum address concepts that pertain to the care of underserved populations. USF also describes the SELECT program which has professional development courses that offer conceptual and skills-based instruction on cross-cultural health care. USF also described a number of targeted outreach, pipeline, and development programs already in place and their efforts to expand the number of applicants to these programs of emphasis. UF, likewise, has a number of pre-matriculation pipeline programs, along with a holistic admissions process that values students' diverse backgrounds and personal life experiences, including those who grew up in rural areas or around medically underserved populations. UF also has a number of curricular elements that address population health concepts and emphasize the importance of health care access and delivery

across sociodemographic groups, and early primary care clinical opportunities in settings serving the underserved.

14. Please describe any critical areas of health care delivery that are not currently or sufficiently addressed by Florida universities, or their affiliated providers, and should be.

Table Nine: Areas of Health Care Delivery that Need to Be Addressed	
Note: Numbers in parentheses indicate the number of institutions who cited an area.	
Lack of Residency Positions (3)	Funding for Uninsured/Indigent Patients (2)
Mental Health (4)	Veteran's Health (1)
Public/Population Health (2)	Telemedicine (2)
Affordable Care Organization Model (1)	Access to Affordable Care (4)
Physician Shortages (4)	Dental Care (2)
Wellness and Disease Prevention (1)	Care of the Elderly (3)
Health Care Literacy (1)	Chronic Disease Management (1)
Health Disparities (1)	Nurses (1)
Rural Medicine (1)	Physical Therapy (1)
Primary Care (1)	Home Health Programs (1)
Infectious Disease (1)	Occupational Therapy (1)
FQHC Affiliations (1)	Threat to Children's Medical Services Funding (1)

15. What are your biggest challenges/opportunities with regard to health care delivery?

Table Ten: Health Care Delivery Major Challenges and Opportunities								
	UF	USF	FSU	FAMU	UCF	FIU	FAU	FGCU
Access to Care	X	X			X	X	X	
Inadequate Support for Wellness and Disease Prevention	X							
Shortage of Mental Health Services	X							
Balancing Multiple Strategic Challenges	X							
Need for Improved Funding of Medical Education	X							
Need for Stable GME Funding	X							
Physician Shortages	X							
Dental Care					X			
Telemedicine		X	X					
Electronic Health Records								X
Funding for Critical Positions								X
Health Disparities				X				
Difficulty Recruiting Advanced Practice Nurses		X						
Faculty Recruitment for New School							X	
Shortage of Qualified Faculty		X						
Creation of Clinically Integrated Care Teams		X						
Threat to Children's Medical Services Funding		X						
Practice Options for Full-time Faculty without an AHC			X					
Scope of Practice for ARNP's		X						
Lack of Multidisciplinary Simulation Training Center				X				

16. Please provide links to any annual reports relative to health care delivery that are published electronically by your institution. Alternately, please send a hard-copy to the Board of Governors office, care of Amy Beaven, Director for STEM and Health Initiatives, Florida Board of Governors, 325 West Gaines Street, Tallahassee, Florida 32399. Address any questions to Amy Beaven at **Amy.Beaven@flbog.edu** or (850) 245-5113.

The Future of Health Care in Florida: An Environmental Scan

Conducted by
the State University System of Florida
Board of Governors

The Future of Health Care in Florida:

The Problem: Why Does Florida Need to Be Concerned about Its Health Care Future?

The future of health care is changing. This is especially the case in Florida where "baby boomer" in-migration contributes to an increasing number of people with health care needs in the nation's third largest state, with over 19 million persons in an area that covers more than 800 miles from Pensacola to Key West, spanning huge urban areas such as Miami and sparsely populated rural areas such as Liberty County in North Florida.

Unlike many states, Florida's population is projected to continue to grow—to approximately 24 million by the year 2030. But even though Florida's proportion of residents over age 65 is the highest among all 50 states, seniors are not fueling the demand for health care all by themselves. Those over 65 account for less than 10% of new Florida residents arriving in the last several years. In fact, more than half of the new arrivals were between 25 and 64 years old, according to U.S. Census data. Almost 2/5s of them were under age 25, with different — but equally as important — needs for health care. Another recent trend shows that more people about a decade away from retirement are moving to Florida, with health care issues that are just beginning to manifest themselves. Florida's population is also very diverse and health care needs and delivery to these groups can require specialized understanding and education.

Text Box

The health care industry has a huge impact on Florida's economy. In 2014, Florida's health care industry was estimated to account for a little under one million jobs — 881,330 jobs, to be exact, counting ambulatory health care services, hospitals, and nursing and residential care facilities (and excluding health insurance or health equipment manufacturing). Heath care industry occupations are projected to account for 23% of the growth in the state over the next 8 years - with an estimated 200,000 new jobs. In 2014, new wages for Florida's health care industry totaled $50 billion.

How Can Florida's State Universities Help?

To better align higher education's health programs with Florida's changing demographic, geographic, and environmental factors, the Board of Governors of the State University System of Florida created the Health Initiatives Committee. During 2014-2015, the Board of Governors Health Initiatives Committee undertook an environmental scan to assess the status of health care in Florida—and to proactively prepare the 12 state universities to better meet the future needs of Floridians regarding health care. Via the use of hard data, surveys of universities and health care providers, and other national and state data sources, the results of the 2014-15 Environmental Scan identified key take-aways regarding health education, health care delivery and health-related research.

This brochure, which summarizes the results of the environmental scan for health care in Florida, asked these critical questions:

1. Does Florida's current bachelor's and graduate degree production of the health care workforce align with the estimated need through the year 2030 given pending changes in population and practice? (health education)
2. What are the emerging and evolving trends in health care delivery? Will they affect the health care education curriculum? (health care delivery)
3. What are the specialized areas of health care research conducted by Florida's universities? Are there critical areas of research that are not being addressed? (research in health)

If Florida is to effectively respond to the future health care needs of an estimated 24 million persons by 2030, its state universities need to align bachelor's and graduate degree production with the projected needs of the health care workforce given pending changes in population and practice. The universities also have a major role to play regarding critical areas of research and in responding to emerging and evolving trends in health care delivery.

Text Box

Are We Producing Enough of the Health Care Professionals that Florida Will Need in the Future?

To answer this question, the Board of Governors undertook a "gap analysis" of Florida's future workforce needs in health care, which examined "demand" by occupation and "supply" by education program (number of bachelor's and graduate degree completers being produced by Florida postsecondary institutions). This gap analysis used accepted forecast methodology for labor, including adjustment factors by the U.S. Bureau of Labor Statistics that takes into account expected occupational change and retirements, total annual openings that includes new job growth and job replacements due to retirements of separations from the labor force.

Among the 21 occupational groups presented in the report (http://www.flbog.edu/about/_doc/health-initiative-committee/gap-analysis-report.pdf) Florida will definitely face a shortage of nurses and physicians. Regarding physicians, the bottleneck to meeting the demand in Florida is most likely based upon a lack of available residencies, which is a required and critical part of any physician's training.

Physical Therapists, Occupational Therapists, and Dentists are also on a "watch list." Contextual factors indicate that, although these professions are "right-sized" in 2015, a gap could be created if in-migration of the professionals to Florida decreases , or if a high percentage chooses not to work--or to work only part-time–in the field, or if demand increases above the projections or if third party reimbursement policies change.

Occupations most likely under-supplied	1. Nurses (RN, ARNP, Nurse Anesthetists) 2. Physicians (Some specialties & specific regions)
Occupations with a sufficient supply because of new licensees (with in-migration to Florida)	3. Physical Therapists* 4. Occupational Therapists 5. Veterinarians 6. Pharmacists
Occupations with a sufficient supply from new or overlapping sources	7. Dentists 8. Marriage & Family Therapists 9. Rehabilitation Counselors 10. Art & Music Therapists

In several more occupations, such as Marriage and Family Therapists, in-migration of professionals from other states and/or considerable overlap with other professions indicates sufficient supply both now and into the foreseeable future.

**Although the supply of health care professionals in the shaded boxes above appears adequate for the present, constant monitoring of these occupations is advised. Several occupations are on the "watch list" because of changes in current conditions which could result in an under-supply in the near future.*

Research in Health: What Do We Need to Know for Florida's Future?

While State University System's health-related research is a vast enterprise with great strengths, it has the potential to become even stronger. The "Three F's" – Funding, Faculty, and Facilities – present both challenges and opportunities. A survey of the universities revealed the following:

- Funding for research is becoming increasingly competitive.
- The SUS clearly has stellar faculty working in health-related areas. But more must be done to recruit faculty where they are most needed–and to retain the best faculty.
- Although the SUS has some state-of-the-art facilities, universities have pressing needs for new and updated facilities in critical research areas.
- Universities collaborate on health research – and are seeking new ways to do even more.
- Florida's State University System is currently exploring ways to build a shared computing system that allows researchers to easily collaborate, store enormous quantities of data securely and be more competitive for federal grants. This data infrastructure would allow Florida to be a destination for clinical research, comparative effectiveness research, and implementation science.

- Florida's universities are also exploring ways to promote technology transfer of the results of their research. The challenge most often articulated was the absence of seed capital and proof-of-concept funds for prototypes and pre-clinical drug development.

Florida's universities identified over 25 research areas in health which were unaddressed or not adequately addressed, including neuroscience, disease prevention/healthy lifestyles, health disparities among minorities, obesity, geriatrics, early and middle childhood health, mental and behavioral health, autism, and genomic and personalized medicine.

How Is Health Care Delivery Changing?

Providing future health care to Florida's growing population will be both exciting and daunting. New trends, such as telemedicine and genomics, hold the promise of reaching more of the population, no matter where they live, and better attending to their needs. How will health care change over the next decade or two, and how can Florida's universities help?

A review of the literature on emerging and evolving health care and a survey of Florida's state university Colleges of Medicine and Colleges of Health suggests that there are at least five key trends: (1) an increase in collaborative models of practice that require a patient-centered, team-based approach; (2) a change in training settings from traditional hospital-based to community settings; (3) a greater employment of physicians in practices owned or managed by hospitals or other organizations; (4) an expanded role for Advanced Registered Nurse Practitioners, Physicians' Assistants, and other health care delivery personnel other than physicians; and (5) the emergence of personalized medicine and genomics.

Health care in the United States has evolved from the days of the solo physician practice to more collaborative models of practice. Advances in technology, the complexity and prevalence of chronic disease management, and the complicated health care reimbursement process have all led to the need for a more systematic approach to the provision of health care. Almost all of the new models of care require a more patient-centered, team-based approach, using emerging technologies. More and more physicians are employed in practices owned and/or managed by hospitals, managed care organizations, or some other entity. An emerging emphasis on outcome-based reimbursement, on chronic disease management, and on a medical model that focuses on prediction and prevention, rather than "repairing" patients, is becoming evident.

For the universities, these trends manifest themselves in terms of greater use of Electronic Health Records, the use of telemedicine, increasing opportunities for inter-professional/interdisciplinary training and care, new faculty practice plan development, and the expansion of primary and specialty care services. In addition, changes in the way we train doctors, nurses and other health care providers, including new criteria in which "EQ" (emotional quotient) might actually be more important than "IQ", will be necessary to better prepare graduates for the changing health care delivery system.

Universities themselves are big providers of health care. In the 2013-14 fiscal year alone, universities reported nearly 3,000,000 inpatient and outpatient visits. This number is likely to grow. Universities tend to provide health care services close to home; extending services beyond the local area is the exception rather than the rule. Sites of services exhibit a wide variety of settings, including outpatient clinics, federally qualified health centers (FQHC), county health departments, private physician practices, community hospitals, correctional facilities, academic health centers, VA hospitals and clinics, nursing homes, rehabilitation centers, and student health centers.

When asked to describe the greatest areas of health care needs, the #1 area most cited by Florida's universities was *access to care*. Other needs included preventive and acute health care services to the underserved, mental health care/substance abuse services, primary and specialty care physicians, and population health.

Barriers to delivery of health care most frequently cited by Florida's universities include lack of adequate numbers of clinical faculty, increased workload requirements, Graduate Medical Education funding, and the availability of preceptors for health care programs. Critical health care delivery areas that Florida's universities are unable to adequately address include mental health, access to affordable health care and physician shortages, lack of residency positions, and care of the elderly.

What Emerging and Evolving Trends Will Be Important in the Future of Health Care in Florida?

As part of its environmental scan, the Health Initiatives Committee and Advisory Group considered emerging and evolving health occupations that will require new skills and competencies in the health care workforce. These trends include personalized medicine and the need for a workforce with practice-oriented and increasingly complex biomedical knowledge and skills.

Florida will also need graduates prepared for the practice of personalized medicine, in subjects like Genetics, Pharma-cogenetics, and Bioinformatics. In the future, Florida may need more Genetic Counselors and more medical science graduates with practice-oriented skills in personalized medicine.

Pharmacogenetics may also be an emerging area where student and workforce demand will grow as new technologies are developed. Preventive and population health are also clearly important for Florida's future and there will be an increasing need for community-based health workers.

Where Do We Go from Here?

In Health Care Education, the State University System needs to focus on high-demand occupational areas that are clearly demonstrating a future shortage, especially physicians and nurses. One of the best strategies for doing so is for Florida to establish a competitive program for universities to expand or grow new programs in these occupational areas. A competitive program would use an RFP-type process to allow the best programs to win grants, provided through non-recurring funds, to quickly ramp up the production of professionals for high demand health care jobs. After the programs are established, they would become self-supporting.

Regarding Health Care Education, funding is needed for State University System programs to provide cutting edge educators, facilities, and equipment; and to address the longstanding shortage of medical residency programs and slots in Florida.

In **Health-related Research**, the State University System has some stellar faculty, facilities, and research agendas. More needs to be done, however, to provide the infrastructure for the universities to add value by ramping up collaboration amongst themselves and with other research entities. Such collaboration is a key mechanism for the State University System to effectively compete for major federal funding opportunities. Here, a highly effective strategy has been the Centers of Excellence program, a competitive endeavor to create world-class research centers with one-time, non-recurring dollars. Since its inception in the early 1990s, the 11 State University System Centers of Excellence have returned $523M on an initial Florida investment of $78.4M.

An expanded investment in faculty, facilities, and state-of-the-art equipment would enable Florida to keep abreast of advances being made in the U.S. and internationally. The Centers of Excellence model would assist in making decisions about which investments should be prioritized.

In Health Care Delivery, Florida's expanding population will result in the need for state universities to provide even more health care to patients—beyond the 3 million patient visits they already are providing. More faculty are needed, along with new and improved facilities, and state-of-the-art equipment. Community-based programs, preventive medicine, telemedicine, pharmacogenomics and other emerging trends in health care delivery can help Florida better address the unique health care needs of underserved and rural segments of its diverse population.

Florida is a dynamic, growing state. Its health care delivery infrastructure will be challenged by its demographics in the years to come. It is imperative that the state universities are enabled to provide solutions to the challenges ahead so that all Floridians have the health care that they need and deserve.

BOARD of GOVERNORS
State University System of Florida

Key Findings of the Health Initiatives Environmental Scan: Health Care Delivery, Health-related Research and Health Program Needs

Amy Beaven, Director for STEM/Health Initiatives
September 2, 2015
www.flbog.edu

Background and Purpose

To summarize the findings of the Health Initiatives Committee's completed three-pronged Environmental Scan:

1. Health Care Delivery

2. Health-related Research

3. Health Program Needs

Health Care Delivery Report

Literature Review on emerging and evolving health care trends

Survey of SUS Colleges of Medicine and Colleges of Health

Emerging and Evolving in Health Care

8 Key Trends:

1. Patient-centered and team-based models of practice
2. Change in training settings from hospital-based to the community
3. Greater employment of physicians by hospitals and other organizations
4. Reimbursement for value-based care and less fee-for-service

Emerging and Evolving in Health Care

5. Expanded role of health care personnel other than physicians
6. Expanded role of technology
7. Greater recognition of dental health as a contributor to overall health
8. Growth in personalized medicine and pharmacogenomics

Survey of SUS Health Care Delivery

A 16-question survey was administered to the universities in May 2015 with emphasis on health care delivered by university-affiliated faculty and staff.

Questions addressed included:

- service areas, sites, and patient visits
- faculty practice plans
- specialized care
- changes in care delivery and training
- Graduate Medical Education (GME)
- unaddressed health care needs

Survey Results: Health Care Services

Most universities provide care close to home.

University-affiliated faculty and staff provide care in a wide variety of settings.

Universities reported nearly 3,000,000 inpatient and outpatient visits in 2013-2014.

Half of the schools reported having a faculty practice plan; two others reported preliminary consideration of starting a practice plan

Top 5 Areas of Specialized Care

	UF	USF	FSU	FAMU	UCF	FIU	FAU
Cancer Care	X	X					
Cardiovascular Disease	X	X				X	
Children's Care	X						
Neuromedicine	X	X					
Trauma/Transplant/Critical Care	X						
Allergy/Immunology/Infectious Disease		X					
Diabetes		X		X			
Preventive Care			X				X
Primary Care			X			X	X
Geriatrics			X				
Care of Underserved Populations			X	X	X		

Top 5 Areas of Specialized Care (cont.)

	UF	USF	FSU	FAMU	UCF	FIU	FAU
Rural Health Care			X				
Medication Management				X			
HIV Care				X			
Health Information Technology					X		
Emerging Models of Health Care					X		
Improving Quality					X		
Cost-effective Health Care					X		
Rheumatology						X	
Pain Management						X	X
Travel Medicine						X	
Dementia Care							X
Mental Health Care							X

Trends in SUS Care Delivery

The expansion of faculty practice plans will lead to more patient care for the SUS overall.

The eight universities providing the most care note changes to delivery or training similar to national trends.

All six medical schools have added GME positions or programs under their sponsorship since 2012-2013; all plan for more.

Unmet Needs around the State

When asked about the greatest health care delivery needs, the #1 most cited by Florida's universities was *access to care*.

Multiple universities also noted the need for:

- Preventive and acute care to the underserved
- Mental health care/ substance abuse services
- Additional primary and specialty care physicians
- Population health
- Chronic disease management and elderly care

Barriers to Health Care Delivery

Most frequently cited barriers were:

- Lack of adequate numbers of clinical faculty (8)
- Graduate Medical Education funding (6)
- Increased workload requirements (6)
- Availability of preceptors for health programs (6)
- Need for more technologically advanced equipment (5)

Key Findings for Health-related Research

There are challenges and opportunities around the 3 F's – funding, faculty, and facilities.

Universities are collaborating on health research and are seeking new ways to do more.

The universities identified over 25 health research areas which were unaddressed or not adequately addressed in the state.

Key Findings of Program Needs

Occupations most likely under-supplied	1. Nurses (RN, ARNP, Nurse Anesthetists) 2. Physicians (Some specialties & specific regions)
Occupations with a sufficient supply because of new licensees (with in-migration to Florida)	1. Physical Therapists 2. Occupational Therapists 3. Veterinarians 4. Pharmacists
Occupations with a sufficient supply from new or overlapping sources	1. Dentists 2. Marriage & Family Therapists 3. Rehabilitation Counselors 4. Art & Music Therapists

Where do we go from here?

From 2014-15 Environmental Scan

- in health care education
- in health-related research
- in health care delivery

To 2016 SUS Strategic Plan for Health