FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
HEALTH AFFAIRS COMMITTEE

Thursday, September 10, 2015

11:30am *approximate start time*
Florida International University
Modesto A. Maidique Campus
Graham Center Ballrooms

<u>**Committee Membership:**</u>

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 Integration of FIU Student Health Services with the FIU Health Care Network	**Eneida O. Roldan**
	3.2 FIU Embrace	**Kenneth G. Furton**
	3.3 Role of the AHC in Philanthropy	**Susan G. Lane** **Howard Lipman**
	3.4 Role of the AHC in Research Strategic Initiatives	**Kenneth G. Furton** **John A. Rock** **Andres G. Gil**
4.	**Information Items** *(No Action Required)*	
	4.1 School of Integrated Science and Humanity Update	**Suzanna Rose**
	4.2 Herbert Wertheim College of Medicine Update	**John A. Rock**
	4.3 Nicole Wertheim College of Nursing and Health Sciences Update	**Ora Strickland**
	4.4 Robert Stempel College of Public Health and Social Work Update	**Mark L. Williams**
	4.5 FIU Health	Student Health Services Update	**Eneida O. Roldan**
	4.6 Board of Governors Health Initiatives Committee Workshop	**John A. Rock**

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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 Wednesday, December 9, 2015

Approval of Minutes

Health Affairs Committee Meeting

Date: September 10, 2015

Subject: Approval of Minutes of Meeting held June 3, 2015

Proposed Committee Action:

Approval of Minutes of the Health Affairs Committee meeting held on Wednesday, June 3, 2015 at the FIU, Modesto A. Maidique Patricia & Phillip Frost Art Museum, room 105-107.

Background Information:

Committee members will review and approve the Minutes of the Health Affairs Committee meeting held on Wednesday, June 3, 2015 at the FIU, Modesto A. Maidique Campus, Patricia & Phillip Frost Art Museum, room 105-107.

FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
HEALTH AFFAIRS COMMITTEE
MINUTES
JUNE 3, 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 11:30 am on Wednesday, June 3, 2015, at the Modesto A. Maidique Campus, Patricia & Phillip Frost Art Museum, Room 105-107.

The following attendance was recorded:

Present	*Excused*
Jose J. Armas, *Chair*	Jorge L. Arrizurieta
Sukrit Agrawal	Claudia Puig
Cesar L. Alvarez	

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

Health Affairs Committee Chair Jose J. Armas welcomed all Trustees, University faculty and staff to the meeting.

2. Approval of Minutes

Committee Chair Armas asked that the members approve the Minutes of the meeting held on January 14, 2015. A motion was made and passed to approve the Minutes of the Health Affairs Committee Meeting held on Wednesday, January 14, 2015 at the Modesto A. Madique Campus, Graham Center Ballrooms.

3. Academic Health Center (AHC) Report
Integration of FIU Student Health Services with the FIU Health Care Network

Associate Dean for Graduate Medical Education and Chief Executive Officer of FIU Health Dr. Yolangel Hernandez-Suarez 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 the health fee allows the University to provide high quality affordable (free or at a lower cost) clinical, preventative care, and mental health

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services at convenient on-campus locations by various departments including Counseling and Psychological Services (CAPS), Victim Empowerment Program (VEP), and the Disability Resource Center (DRC).

Dr. Hernandez-Suarez provided a comprehensive overview of the Four Pillar Model for student heath and the implementation strategies for each pillar.

Trustees inquired as to how to measure the success of the SHS and FIU Health integration, suggesting a benchmarking method. Dr. Hernandez-Suarez explained that the Robert Stempel College of Public Health and Social Work has developed a program evaluation tool that will capture student access to FIU healthcare and agreed to include a benchmarking component.

In response to Trustee inquiry regarding the fee comparison of services offered, Dr. Hernandez-Suarez explained that there were broader services associated with higher fees across other institutions.

Trustees also inquired as to the comparability of FIU health fees in relation to other intuitions. Dr. Hernandez-Suarez explained that a national benchmark would be difficult given the changing market, however, she suggested a comparison snapshot across the State University System.

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
Senior Vice President of Medical Affairs and founding Dean of the Herbert Wertheim College of Medicine, Dr. John A. Rock provided an update on various partnerships and collaborations, such as Jackson Hospital, Nicklaus Children's Hospital, telemedicine and the new Physician's Assistant Program. Dr. Rock reported that the new Ambulatory Care Center has recently opened on campus noting that they anticipate performing about 50 procedures per day. He also mentioned that the clinical side of the Ambulatory Care Center was an integral part of the educational programs at FIU, specifically for the family medicine clerkships as well as psychiatric behavior and health.

Dr. Rock explained that FIU maintains a presence at Jackson Main since the shutdown of Jackson North, noting that they have been working closely with Jackson's leadership on ways to expand educational opportunities with the hospital.

Dr. Rock provided an update on Telemedicine noting that they have been meeting with leadership at Nicklaus Children's Hospital to investigate the cost around healthcare pods and the possible application on campus. He noted that this would address the concern of increasing healthcare access to the student population.

Master in Physician Assistant Studies Associate Dean and Founding Chair, Pete A. Gutierrez provided an overview of the new Physician's Assistant program that was approved by the Board of

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Trustees in March and is expected to begin in August. He noted that out of the 700 applicants, 45 were accepted for the first class.

Provost and Executive Vice President Kenneth G. Furton provided an update on the search for a new dean for the Robert Stempel College of Public Health and Social Work, noting that the applicant pool had 45 highly qualified individuals which was then narrowed down to four. Provost Furton noted that after meeting with all four candidates, the search and screen committee as well as President Rosenberg, the candidate pool has been narrowed down to three finalist.

Committee Chair Armas suggested scheduling a joint meeting of the Health Care Network Board and the Health Affairs Committee in the Fall.

6. Concluding Remarks and Adjournment
With no other business, Committee Chair Jose J. Armas adjourned the meeting of the Florida International University Board of Trustees Health Affairs Committee on Wednesday, June 3, 2015 at 12:09 p.m.

Trustee Requests	*Follow-up*	*Completion Date*
1. *Committee Chair Armas requested that Dr. Hernandez-Suarez continue to provide updates on the progress of the integration of FIU Student Health Services with the FIU Health Care Network.*	*Associate Dean for Graduate Medical Education and Chief Executive Officer of FIU Health Dr. Yolangel Hernandez-Suarez*	*Ongoing*
2. *Committee Chair Armas requested that Student Health remain a standing item on the Health Affairs Committee Agenda.*	*Dean and Senior Vice President for Health Affairs Dr. John A. Rock*	*Ongoing*
3. *Chairman Armas suggested scheduling a joint meeting of the Health Care Network Board and the Health Affairs Committee in the Fall.*	*Dean and Senior Vice President for Health Affairs Dr. John A. Rock*	*Fall 2015*

C.S.
07.10.15

FLORIDA INTERNATIONAL UNIVERSITY

Health Affairs Committee

September 10, 2015

FIU | **Board of Trustees**

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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*

3

The Integrated Vision

- Shift clinical portions of student health fee to integration with a four pillar model endorsed by SHS and FIU Health Task Force

- Victim Empowerment Program, Behavioral Health, and Student Learning will remain under OSA

- Wellness will remain under OSA with close collaboration with FIU Health clinical services

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FIU Student Health Pillar One – Core Services

- Services are covered by the health fee with some out of pocket costs for minor procedures
- Overview of services:
  - Acute or Minor Illnesses and Injuries*
  - Sexual Health
  - Women's Health
  - 1st time behavioral health visits presenting with physical chief complaints
  - Vaccinations
  - Physicals for school (Athletics/Study Abroad/ ROTC/ Health Science Programs/Scuba)

Acute conditions in the student population, with the highest impact on academic performance that can be treated effectively in a 30 day period.

FIU Student Health Pillar Two

- Referral system for chronic or specialty care services

  For this care, options for service will be presented to students; may include FIU or community providers based on student insurability

- Evaluation plan will include monitoring of whether the options are meeting the student healthcare needs
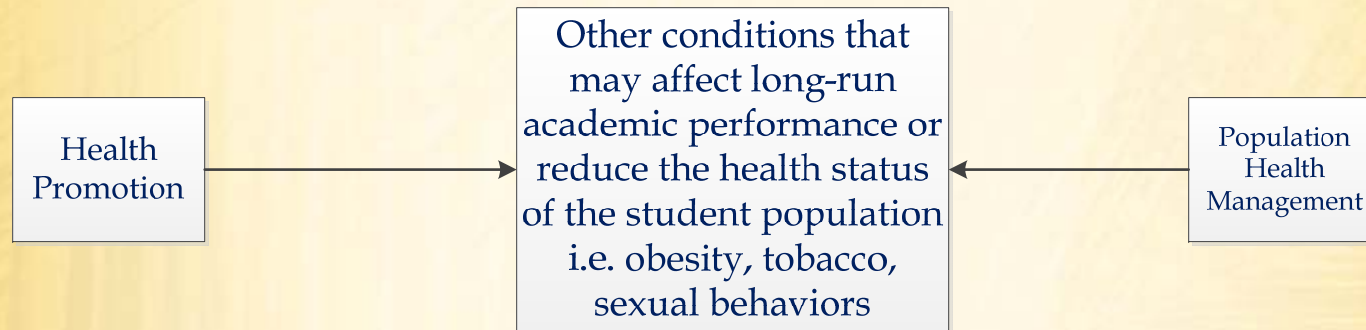
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FIU Health Student Health Pillar Three

- Promote and increase insurance coverage

- Improve the students' knowledge (educational platform) of health insurance options in light of the Affordable Care Act

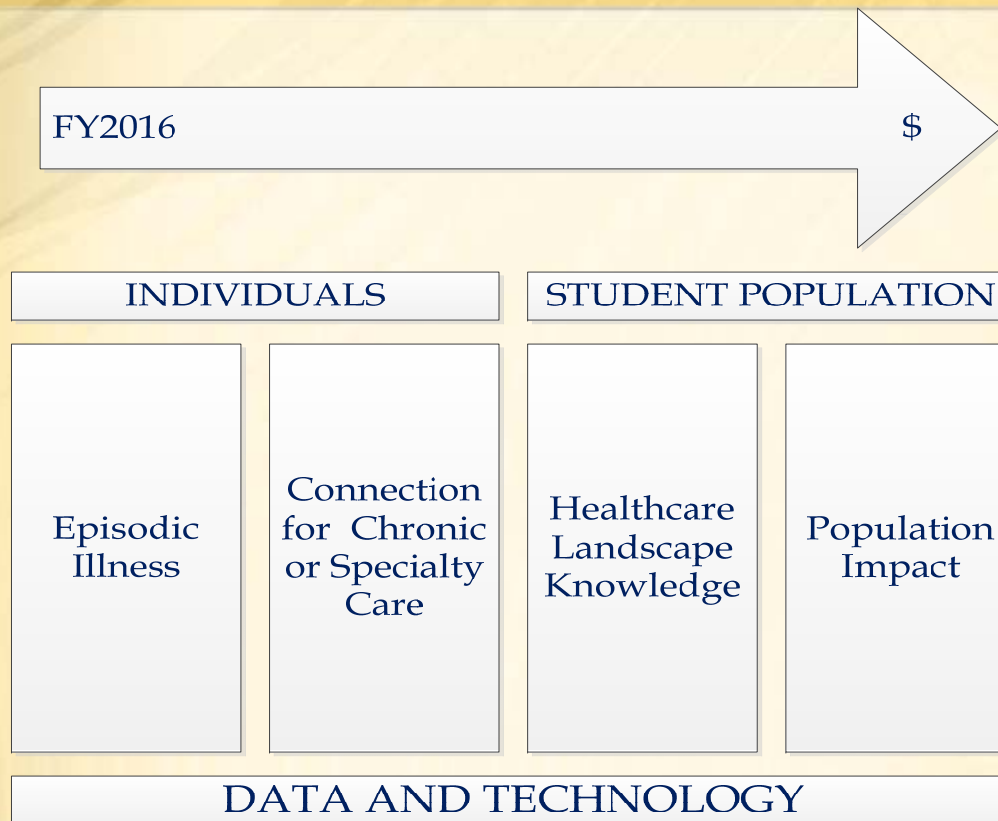- Set explicit targets for insurance coverage

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FIU Student Health Pillar Four

Pillar 4 expands the provision of health services beyond individual clinical care to *population* care

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The Overarching Goal of Student Health: Access

FY2016 → $

INDIVIDUALS		STUDENT POPULATION	
Episodic Illness	Connection for Chronic or Specialty Care	Healthcare Landscape Knowledge	Population Impact

DATA AND TECHNOLOGY

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Transition-FIU Health

- On June 26, FIU Health leadership changed

- A comprehensive due diligence has been conducted by the new leadership team of all FIU Health business/operations, strategic partners and integration to include SHS

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Transition and integration

- Leadership: Administration and Clinical

- Information management

- Pharmacy

- Strategic partners

- Accreditation: AAAHC and PCMH

- Communication

Leadership

- Staff assessment aligned with the proposed healthcare delivery model to optimize outcome

- Participation of new FIU Health leadership and SHS Administration and clinical leadership

- Develop new reporting lines

- Transition of staff from FIU Central to HWCOM HR

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Information Systems

- Meetings have been conducted to evaluate baseline IT resources

- Evaluation underway to determine best practices to implement

- System to be operationally effective for data gathering as a foundation for population health (Pillar four)

14

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Pharmacy

- Evaluation of:
  - Current services
  - Utilization
  - Streamline processes
  - Potential

Strategic Partners

- Development of specialty network

- Use of current navigators as best practices to create economies of scale

- Working with MCH on the telehealth model

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Accreditation-AAAHC and PCMH

- Working closely with SHS administrative staff to evaluate potential of continuous accreditation

- Evaluating potential for future grants and pilot programs

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Communication

- Participation of new FIU Health leadership in town hall meetings with SHS Leadership and clinical staff: *On going*

- Participation of new FIU Health leadership team in SHS Team meetings: *On going*

- Dissemination of information to FIU campus: *In progress*

Communication

- Student leadership meetings with new FIU Health leadership: *In progress*

- One-on-one meetings with SHS Administration and clinical staff: *On going*

- One-on-one meetings with FIU Leadership: *On going*

- Meetings with OSA wellness team*: On going*

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Teamwork

"Alone we can do so little; together we can do so much"
Helen Keller

"The strength of the team is each individual member. The strength of each member is the team."
 Phil Jackson

School of Integrated Science and Humanity
Report to the Board of Trustees Health Affairs Committee
September 10, 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

Research at the Biomolecular Sciences Institute strives to achieve translational impact on human health from new molecular discoveries. Two undergraduate students in Dr. Fenfei Leng's research group, Nicole Alonso and Roboan Guillen, invented a novel method to identify anticancer drugs in a high throughput format. This research is a collaborative effort between Dr. Leng's lab in the Department of Chemistry and Biochemistry and Dr. Jeremy Chambers' lab in the Department of Cell Biology and Pharmacology at the Herbert Wertheim College of Medicine. A patent that describes this new method has been filed by FIU Technology Management and Commercialization.

The research team of Dr. Yuk-Ching Tse-Dinh and two BSI collaborators, Dr. Jeremy Chambers and Dr. Yuan Liu, received a gift of $75,000 from Mr. Alan Potamkin and Dr. Brigitt Rok-Potamkin for research directed towards identification of predictive biomarkers for the progression and personalized treatment of glioblastoma.

CENTER FOR CHILDREN AND FAMILIES (CCF)
Director: Dr. William Pelham

The Center for Children and Families is a multidisciplinary team of researchers and service providers committed to improving the lives of children suffering from mental health problems and their families. The CCF is the leading provider of evidence-based services for children with Attention-deficit/hyperactivity disorder (ADHD) in Miami and has served 6640 families since it was established in 2010. The Center's various summer programs, including the renowned Summer Treatment Program (STP), served

233 South Florida children in the summer of 2015 and close to 2500 families in 2014 alone.

Awarded grants since August 2014 include a National Institute of Mental Health (NIMH) funded R01 examining the effectiveness of the STAND (Teens and Academic Success) intervention for adolescents with ADHD, an National Science Foundation (NSF) award researching the roles of prenatal experience in the emergence and development of neonatal behavior, and a Florida Department of Children and Families grant for an overall total of $5,176,929. Five additional awards (one from the national Institute of Child Health and Human Development (NICHD), three from the Institute of Education Sciences (IES), and one from the Children's Trust) amount to additional funding of $2,894,200 and will begin by the end of September 2015.

COGNITIVE NEUROSCIENCE AND IMAGING CENTER (CNIC)
Director: Dr. Angela Laird

The proposed Cognitive Neuroscience and Imaging Center (CNIC) is a multidisciplinary group of faculty focusing on mental processes in the healthy and diseased human brain across the lifespan. In 2014, CNIC was awarded the first Provost's Research Excellence Award, and Dr. Angela Laird was honored to be an invited attendee at the 2014 White House BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Conference in Washington, D.C. In 2015, FIU was named a partner institution in the new NIH U01 award, "Operation, Support, and Strategic Enhancement of the Neuroscience Information Framework (NIF)." The NIF, based at University of California - San Diego, is the largest source of neuroscience resources on the web. Under Dr. Laird's direction, this award will develop new analytic tools to enable enhanced data discovery in neuroscience.

FIU Herbert Wertheim College of Medicine
Report to the Board of Trustees Health Affairs Committee
September 10, 2015

HWCOM gets top scores in national survey of medical schools

The Herbert Wertheim College of Medicine (HWCOM) has been ranked 20th
nationwide among the Top Medical Schools for Education Quality, and number 4 for
Top Medical Schools for Career Support in a survey of more than 100 medical schools
nationwide. GraduatePrograms.com, the popular online resource for prospective
graduate students that bills itself as "The Graduate School Guide for students, created
by students," announced the Spring 2015 program rankings which define education
quality as: "access to relevant, interesting, challenging courses by qualified professors."
The list of top medical schools for education quality includes the oldest (1765) and most
respected medical schools in the United States. Founded in 2006, the FIU HWCOM is
the newest medical school cited in the top 25.

Ambulatory Care Center (ACC) opens

The ACC opened in May at 800 SW 108 Avenue (next to PG5) and now houses the new
medical offices of the FIU Health Faculty Group Practice on the first floor and the
Nicklaus Children's Hospital Ambulatory Surgery Center on the second floor.

HWCOM launches Master in Physician Assistant Studies (MPAS)

On August 3, 2015, HWCOM welcomed its inaugural MPAS class of 45 students chosen
out of nearly 700 applicants. The 27-month long program seeks to help meet the
demand for health care practitioners. 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.

Psychiatry Residency Program launches at Citrus Health

On July 1, 2015 the Psychiatry Residency Program at Citrus Health Network was
launched. As the academic affiliate, we are proud to be involved in this historical
moment. The program is the only Psychiatry Residency Program in the US sponsored
by a Federally Qualified Health Center. We are fortunate to have four outstanding
doctors in the inaugural residency class.

Green Family Foundation NeighborhoodHELP™ launches program in South Miami
This is a joint venture between Baptist Health South Florida and HWCOM. An initial
100 families in the South Miami community will work with either a health outreach
worker or a medical student team to assess their health and chart a course of action to
set goals to improve their overall health. The program includes access to care through
our mobile health care centers.

HWCOM Behavioral Health Clinical Services at Camillus House
We signed a contract to offer behavioral health clinical services, management and
training at Camillus House and Camillus Health Concern in July 2015. Camillus Health
is the only free-standing, comprehensive Healthcare for the Homeless funded provider
in Miami-Dade County. Camillus will soon serve as a new site for our medical student
clerkship rotations.

FIU Health New Interim CEO
On June 29, Eneida O. Roldan, M.D., M.B.A., M.P.H. was named interim CEO of the FIU
HealthCare Network that manages FIU Health. Dr. Roldan also serves as associate dean
for international affairs, associate professor in the Department of Pathology, and is the
course director for the professionalism strand for the M.D. curriculum.

Student Success
Our graduates have been successfully matching (96%) into some of the most
competitive residencies and specialties in the United States including Emergency
Medicine at Johns Hopkins Hospital, Radiology at Vanderbilt, and Psychiatry at
Harvard. More than half (53%) of our latest grads opted to go into much needed fields
of primary care, and we are happy to report that nearly a third of the class (29%) is
doing its residency training in Florida which is a good sign that these young doctors
will set up practice here.

Our students also continue to exceed national averages on the Unite States Medical
Licensing Examination (USMLE) Steps 1 and 2. This year our USMLE Step 1 average of
237 was eight points above the national average of 229, and our pass rate was a perfect
100%.

Faculty Awards/Recognitions
Aileen Marty, M.D.
Professor, Department of Medicine, Family Medicine, and Community Health has been
nominated and made the "final cut" for U.S. Department of Health and Human Services
"*Presidential Advisory Council on Combating Antibiotic Resistant Bacteria.*" Although the

council members have not been officially announced, Dr. Marty has been asked to travel to Washington D.C. on September 28-29 to "start working."

Gagani Athauda, M.D.
Assistant Professor, Department of Cellular Biology and Pharmacology has been chosen to receive the 2015 FIU *Faculty Award for Excellence in Teaching.*

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 has been selected to receive the 2015 FIU *Faculty Award for Excellence in Engagement.*

Marin Gillis, Ph.D.
Director, Integrated Ethics and Humanities, Department of Medicine, Family Medicine, and Community Health was appointed to the Board of Directors of the Global Bioethics Initiative (GBI), a United Nations Department of Public Information-associated Non-Governmental Organization (DPI-NGO) whose focus issues include human organ transplantation and trafficking, and ethical issues surrounding End-of-Life and Assisted Reproductive Technologies (ART).

Chad Perlyn, M.D.
Chief of the Herbert Wertheim College of Medicine's Division of Plastic Surgery, was elected President of the Greater Miami Society of Plastic and Reconstructive Surgeons (MSPS), one of Florida's largest and most established professional organizations representing plastic surgeons.

Cheryl Brewster, Ed.D.
Assistant dean for diversity at HWCOM has been elected as the Southern Region Representative for the Group on Diversity and Inclusion of the Association of American Medical Colleges (AAMC).

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
September 10, 2015

FIU Jumps to No. 54 in U.S. News & World Report's Best Graduate Nursing Programs
The Graduate Nursing program at FIU's Nicole Wertheim College of Nursing and Health Sciences (NWCNHS) has been ranked No. 54 by the U.S. News & World Report 2016 Best Graduate Schools Guidebook. This marks the highest-ever ranking for the 23-year-old master's program, and a dramatic rise from its previous ranking in 2011 of 265.

A total of 503 accredited institutions were eligible to be included in the rankings of master's nursing programs; however, 246 were included in the final rankings based on a weighted average of 13 indicators of program success. The magazine evaluated a number of criteria for the rankings, including peer assessments, acceptance rates, average GPAs, student/faculty ratio, degrees awarded, National Institute of Health (NIH) and federally funded research and teaching grants, and enrollment.

The $10 million naming gift from Dr. Herbert and Nicole Wertheim was significant to NWCNHS as it led to the establishment of endowed faculty chairs, student scholarships, and incentive programs for faculty recruitment, enhancement and teaching innovation. These are vital to NWCNHS' mission and to strengthening its standing as a top national academic institution.

FIU NWCNHS Receives $1.45 Million to Launch School-Based Clinic at Miami Northwestern Senior High School in Liberty City
NWCNHS has received a $1.45 million grant from the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA) to fund a nurse-managed, school-based, primary healthcare clinic at Miami Northwestern Senior High School (MNW) in Liberty City. The clinic will serve as a healthcare "hub" for children and families in Liberty City, an area affected by high rates of acute and chronic health conditions, including obesity, diabetes, HIV/AIDS, teen pregnancy and infant mortality.

MNW once had a fully operational clinic, the John H. Peavy Health Center, but it has been underutilized for years due to budget cuts. Since 2011, University officials with the NWCNHS and The Education Effect partnership have been working with the leadership at MNW to revitalize the clinic. NWCNHS will provide a team of certified

nurse practitioners who will offer comprehensive health services to children and their families, including preventive care, vaccines, flu shots and health screenings, as well as physical therapy, occupational therapy and speech therapy. The clinic will be operated in collaboration with the Jessie Trice Community Health Center in Liberty City. Services will be offered to students and families from MNW, as well as its feeder elementary and middle schools and the entire Liberty City community.

Gertrude E. Skelly Charitable Foundation Commits $20,000 to FIU for Nursing Scholarships for Graduate Students
The Gertrude E. Skelly Charitable Foundation recently committed $20,000 for nursing graduate scholarships for students enrolled in the NWCNHS. Applicants must be considered as high achieving, enrolled full-time in the Fall 2015 semester, and demonstrate a commitment to remain and practice in the South Florida community post-graduation. The group of students enrolling in the graduate programs has significant financial need for scholarship support in order to remain within the program and ensure their overall success. The scholarships provided through the Foundation will relieve some of the financial burdens of students within the graduate programs, as well as aide the NWCNHS in attaining its strategic goal of increasing student grant support by 25% in an effort to financially support students who aspire to change lives through caring at the bedside, leading in the classroom and the community, and by discovering healthcare solutions through research.

FIU Nicole Wertheim College of Nursing Introduces Virtual Dissection Technology
FIU's STAR Center added two "virtual" dissection tables to the center's clinical skills lab in May. Made by the company Anatomage, the tables display the human anatomy in life-size scale and lifelike 3-D. The virtual bodies can be rotated, cut, and peeled down to see each layer of the human body — skin, muscles, bones, organs and veins. The tables, which will be incorporated into the college's curriculum beginning in the fall, can display male or female bodies, along with different body parts and fetal anatomy on a table more than seven feet long. The Anatomage tables are an example of the promise of high tech to expand and streamline education. They also can be used to review X-rays, MRI's and CT scans or rolled into auditoriums to project images on screens for larger anatomy classes, or presentation seminars.

NWCNHS receives over $700,000 in Student Scholarship Grant Awards from the Health Resources Administration
NWCNHS has received a total of $700,000 in Federal student scholarship support from the U.S. Department of Health and Human Services, Health Resources and Services Administration. Dr. Helen Cornely, Associate Dean of Administrative Services, received a grant for $600,000 for Scholarships for Disadvantaged Students studying toward the Doctor of Physical Therapy Degree. Dr. Elaine Ramos received a $150,000 traineeship

grant. Finally, Dr. Juan Gonzalez received notification of funding for $36,780 for his recently submitted Nurse Anesthetist Traineeship Grant proposal.

**Robert Stempel College of Public Health and Social Work
Report to the Board of Trustees Health Affairs Committee
September 10, 2015**

The Robert Stempel College of Public Health and Social Work (RSCPHSW) has several active cross-disciplinary research groups focusing on public health and social welfare. The following narrative expands on the earlier reports.

Integrated Biostatistics and Data Management Center (IBDMC)
O. Dale Williams, *Director*
The Integrated Biostatistics Data Management Center (IBDMC) 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. During the past quarter, the IBDMC has consulted with over 20 FIU faculty, staff, and doctoral students, 17 departments, and seven colleges and centers. The IBDMC also consulted with and participated in research with AvMed of Florida, Baptist Health, Nicklaus Children's Hospital, and other outside groups and organizations. The IBDMC assisted with the implementation of 14 funded projects for a total awarded amount of $22,673,621 and assisted with the submission of five additional projects with a total requested amount of $5,646,664. The total dollar volume for active or submitted grants during the period was $28,320,285.

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 RSCPHSW, the College of Education, and the HWCOM. The Center also has ongoing collaborations with faculty from the University of Miami Miller School 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 NIAA 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," under 1R01MH100021 (Fujimoto, Williams, PIs). Investigators submitted an R01 application, "FIU-ABCD: Pathways and Mechanisms to Addiction in the Latino Youth of South Florida to NIDA" (Gonzalez, PI). 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. In addition, investigators are currently working to submit a community based participatory R24 grant to NIMHD and Endowment application to NIMHD. One of CRUSADA's doctoral students received funding for a pre-doctoral fellowship award from NIH.

FIU-BRIDGE Group
Eric Wagner, *Director*
FIU-BRIDGE recently received three new extramural grants in support of their research. The first project, entitled "Miami-Dade Partnership for Preventing Health Risks among Young Adults," is a 3-year, $900,000 federal (SAMHSA) grant. The goal of the project is to prevent substance abuse, HIV/AIDS, and hepatitis C among Hispanic young adults at FIU and in Miami-Dade. Partners in this project include Dieste, Inc., the largest Hispanic advertising firm in the U.S., Mixto Music, a Miami-based Hispanic market media producer, Union Positiva, a Miami-based CBO specializing in HIV testing among Hispanics, and Banyan Health Care Systems. The second project, entitled "Yoga as a complement to standard care for adolescents with eating and substance use disorders," is a 2-year, $120,000 grant from the Ware Foundation. The goal of the project is to evaluate yoga as an ancillary intervention for teenagers experiencing problems with eating disorders or substance use. FIU-BRIDGE received additional Ware Foundation funding to expand "Enhancing Resilience among At-Risk Minority Youth through Music Education: An Evaluation of El Sistema Miami (Project TREBLE)." Total funding for this two-year project is now $140,000. FIU-BRIDGE partnered with the Miami-Dade County Public School system to apply for a $1,500,000 SAMHSA grant entitled, "Miami-Dade Partnership for Preventing Health Risks among Youth (age 13-18 years)." The outcome of this application should be known by October. In addition, FIU-BRIDGE's Director, Dr. Eric Wagner, is a co-investigator on a $3,500,000 NIDA grant application, "ABCD FIU Collaborative Data Site." The application was scored well, but a funding decision is pending.

FIU-CHESS
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 associated with FIU-CHESS conduct health services research, provide data resources for government and business, develop program and strategic designs, and provide applied training for post-doctoral and graduate students. 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. In the past quarter, two additional health

economists have joined the RSCPHSW faculty and FIU-CHESS. This gives FIU-CHESS the capacity to actively pursue numerous opportunities with business, private organizations, and the state.

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.

Virtual Center for Community Health
Pedro Greer and O. Dale Williams, *Directors*
The Virtual Center is a cooperative effort between faculty in the RSCPHSW, the HWCOM, and the College of Law. The Virtual Center promotes community health through innovative research, training, and service. It provides a setting for communication and collaboration across the AHC colleges and programs, and brings interdisciplinary expertise and resources together to address the health and healthcare needs in South Florida. The goal of the Virtual Center in the coming year is to build its data collection and management capacity.

FIU Health | Student Health Services
Report to the Board of Trustees Health Affairs Committee
September 10, 2015

The goals of the integration of Student Health Services (SHS) and FIU Health focus on increasing access and utilization of health care services by the student body with increased efficiency. This would be accomplished through an efficient healthcare delivery system to maximize positive health outcomes. A presentation by the previous FIU Health senior leadership provided a platform to support the accomplishment of these goals.

A four-pillar model endorsed by Student Health Services (SHS) and FIU Health Task Force serves as the foundation to reach the goals of increasing access and maximizing positive health outcomes. The model was presented to the Board of Trustees, Health Affairs committee in June. At the core of the model is the transition from individual care to population health. The implementation of robust information systems and telehealth were discussed as resources to accomplish the goals of access, utilization and population health. In addition, a programmatic assessment model was presented.

On July 1, 2015, clinical services under SHS were transferred to FIU Health. The current presentation serves as a progress report to date following a comprehensive due diligence of all FIU Health business/operations, strategic partners and integration to include SHS by the new leadership of FIU Health. The information provided will focus on leadership, information management, Pharmacy, strategic partners, and communication. The areas presented are important for the successful integration of SHS services in addition to the accomplishment of the stated goals. Due to the continuous nature of the integration, more current information may be provided on the day of the meeting by the new FIU Health senior leadership.

AGENDA
Health Initiatives Advisory Group Meeting
Board of Governors Office
325 West Gaines Street
Conference Room 1605
Turlington Building
Tallahassee, FL
August 4, 2015
11:30 a.m. – 3:00 p.m.

Dial-In: (888) 670-3525
Participant Passcode: 5383301708 then #

Purpose of the Meeting: The Advisory Committee will provide feedback on a draft of the report "Issues in Healthcare Delivery in the State University System." This report is the third component of the Board of Governors Health Initiatives Committee's environmental scan of emerging and evolving program needs and assessment of existing programs. The results of this year's environmental scan will assist the Health Initiatives Committee to develop a strategic plan for advancing the quality and coordination of health programs and initiatives across the State University System.

1. Call to Order and Opening Remarks   Governor Ed Morton

2. Review and Discussion of Healthcare Delivery Report   Governor Morton

Dr. Alma Littles,
Senior Associate Dean,
Florida State University
College of Medicine

3. Concluding Remarks and Adjournment   Governor Morton

Board of Governors Health Initiatives Committee

Report on Issues in Healthcare Delivery

in the State University System

DRAFT

August 4, 2015

Table of Contents

Executive Summary

In 2015 the Board of Governors Health Initiatives Committee undertook an Environmental Scan in order to better understand the status of healthcare 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, healthcare delivery and health-related research. This report focuses on healthcare delivery. It documents the results of a review of several reports regarding current and future healthcare practices, incorporates the advice and counsel of the Health Initiatives Committee Advisory Group, and presents the results of a survey sent to each of the twelve SUS institutions regarding healthcare delivery.

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

Question One: What are the emerging and evolving trends in healthcare delivery? How will they affect the State University System?

A review of the literature on emerging and evolving healthcare suggests that there are at least six 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 healthcare delivery personnel other than physicians; and (6) the emergence of personalized medicine and pharmacogenomics.

Healthcare 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 healthcare reimbursement process have all led to the need for a more systematic approach to the provision of healthcare. Almost all of the new models of care require a more values/outcomes-based, patient-centered, team-based approach to healthcare, 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 amongst 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 healthcare delivery system.

Question Two: What healthcare 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 2.6M were outpatient visits, and nearly 300,000 were inpatient visits. This number is likely to grow as the newer medical schools expand their healthcare services. Another reason for growth is that the healthcare 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 of the 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 healthcare delivery services, SUS institutions tend to provide healthcare services close to home, while extending services beyond the local area is the exception rather than the rule. Healthcare 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, 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 healthcare 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 healthcare needs, access to care was the area most often identified. Other needs identified included preventive and acute healthcare services to the underserved, mental healthcare/substance abuse services, primary and specialty

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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 healthcare programs. The most often cited critical areas of healthcare delivery that are not currently or sufficiently addressed by Florida universities were mental health, access to affordable healthcare and physician shortages, lack of residency positions, care of the elderly, and access to dental care for the uninsured.

Question Three: How is the delivery of healthcare 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 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, 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

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[1] http://www.floridahealth.gov/programs-and-services/community-health/dental-health/index.html

part of Accountable Care Organizations in the next five years. Six institutions are already using electronic health records and an additional institution plans to begin use in the coming years.

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

Among the ways in which accrediting bodies are aligning their standards with emerging and evolving changes in healthcare 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.

Question Five: Given that healthcare 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.

Question Six: What technological changes in healthcare delivery will require concomitant changes in healthcare 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 healthcare 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

Healthcare 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 healthcare in the future.

Florida's particular demographics will, in and of themselves, affect healthcare delivery in the future. First and foremost, Florida is continuing to grow, and this growth will increase the stress on Florida's healthcare 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 essential bimodal: with large percentages of the population aged 24 and below, and large percentages aged 65 and above. In addition, Florida's healthcare needs are not evenly distributed throughout the state. Rural areas, in particular, can be under-supplied, even though the state as a whole has sufficient supply in any given

healthcare occupation. Florida's healthcare 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 healthcare 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, healthcare delivery, and health-related research. This report focuses on healthcare delivery.

There are various models for healthcare delivery within the SUS. While acknowledging that the environment of healthcare 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 healthcare practices, to incorporate the advice and counsel of the Health Initiatives Committee Advisory Group, and to present the results of a survey sent to each of the twelve SUS institutions regarding healthcare 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 healthcare delivery? How will they affect the State University System?

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

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

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

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

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

Description of the Survey

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 healthcare delivery in the State University System, addressing the changing nature of healthcare delivery and its impacts on SUS educational programs. For the purpose of the survey, emphasis was placed on healthcare 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 healthcare 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 healthcare delivery (University of West Florida, New College, Florida Gulf Coast University, University of North Florida, Florida Agricultural and Mechanical University). Although Florida Polytechnic University did not respond, given its short time of existence and the focus of its educational programs, the assumption is that this institution would also fall into 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, and the University of Florida – Gainesville and Jacksonville campuses).

Because of the evolving nature of healthcare 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.

Question One: What are the emerging and evolving trends in healthcare delivery? How will they affect the State University System?

A review of the literature on emerging and evolving healthcare suggests that there are at least six 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
- 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. It seems clear that these areas are on the cutting-edge of healthcare delivery and will only grow.

Healthcare 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 healthcare reimbursement process have all led to the need for a more systematic approach to the provision of healthcare. Almost all of the new models of care require a more patient-centered, team-based approach to healthcare, using emerging technologies. Typically, training of physicians and other healthcare professionals tends to lag behind practice reform, partly because their training is focused in traditional hospital-based settings, whereas, in 2001, Green, et al. highlighted the fact that most healthcare 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.[2]

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[2] 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.

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 (MGMA) found that more than 65 percent of established physicians and 49 percent of physicians coming out of training were placed in hospital-owned practices. Healthcare 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.

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 healthcare personnel (Physical Therapists, Occupational Therapists, Pharmacists, Dentists, Social Workers, Patient Navigators, Certified Nurse Midwives, and Certified Registered Nurse Anesthetists) are also essential.

Pharmacogenetics is part of an emerging trend in the provision of healthcare called Personalized or Precision Medicine. This technology will allow healthcare 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".[3] 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 reach of 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 field points toward a time when pharmacogenomics may be part of routine medical care."[4]

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

[4] http://www.mayoclinic.org/healthy-lifestyle/consumer-health/in-depth/personalized-medicine/art-20044300?pg=2

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 healthcare delivery system. The Health Initiatives Committee's report on Health Education outlines the current production of healthcare personnel and identifies obvious gaps.

Five institutions responded that the delivery of healthcare 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 outcomes
- 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 healthcare 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
- Formal training in the use of the electronic health records 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 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

- 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

Question Two: What healthcare delivery is currently provided within the State University System? What factors affect that delivery?

A number of models of healthcare 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 healthcare delivery service area; (3) describe the communities they serve; (4) describe the settings in which they provide healthcare services; (5) identify the top areas of specialized healthcare delivery they provide; (6) provide the number of outpatient and inpatient visits to institutions served by the institution's healthcare providers; (7) describe the greatest healthcare 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 healthcare delivery; (10) provide a list of resources they use to track healthcare delivery needs in their service area, as well as resources they plan to use in the future; and (11) describe critical areas of healthcare 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 organizations 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 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

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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 the healthcare delivery services, SUS institutions tend to provide healthcare services very close to home, while extending services beyond the local area is the exception rather than the rule. Healthcare 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 healthcare in the organizations.

- 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 healthcare 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 healthcare providers. For the 2013-14 fiscal year, universities reported 294,304 inpatient visits with a range of 0 – 213,257, and 2,601,067 outpatient visits with a range of 981-1,915,931. Visits to other sites were 29,712 for a total of 2,925,083. The majority of this healthcare 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 healthcare services.

- In describing the greatest areas of healthcare needs, the results were as follows:
  - Six institutions identified access to care.
  - Five institutions identified preventive and acute healthcare 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, healthcare 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 common 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 healthcare 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)
  - 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, since 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 Ten in this report's Appendix indicates the entirety of responses by SUS institutions.

- When asked to provide a list of resources to track healthcare delivery needs in their service area, as well as resources they plan to use in the future, universities listed the following sources:
    o Florida statistics from state agencies
    o Florida statistics from national agencies
    o Hospital surveys
    o Institution's independent survey(s) – the University of Florida, in particular, provided a detailed listing of key health data resources utilized to track healthcare 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 healthcare delivery that are not currently or sufficiently addressed by Florida universities or their affiliated partners, and should be, institutions responded as follows:
    o Four institutions identified mental health, access to affordable healthcare, and physician shortages
    o Three institutions identified lack of residency positions, and care of the elderly
    o Two institutions identified funding for uninsured/indigent patients, public/population health, telemedicine, dental care and primary care

- o Among the eleven respondents, one institution identified veteran's health, Affordable Care Organization model, health care literacy, Wellness and disease prevention, chronic disease management, health disparities, 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 healthcare 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 GME 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 IME funding has decreased since that time. Although there has been some growth in both GME 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 GME 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 Seven in this report's 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 Eight in this report's 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.

Question Three: How is the delivery of healthcare emerging and evolving in ways that will have an impact on the preparation of healthcare 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 healthcare 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[5] 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 Organizations over the past three to four years. According to Leavitt Partners Center for Accountable Care Intelligence, in July 2012[6]:

- 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.

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[5] Lisa M. Kern, MD, MPH; Alison Edwards, MStat; and Rainu Kaushal, MD, MPH. The Patient-Centered Medical Home, Electronic Health Records, and Quality of Care. Ann Intern Med. 2014;160:741-749.
[6] David Muhlestein, Leavitt Partners Center for Accountable Care Intelligence.   Accountable Care Growth In 2014: A Look Ahead. Health Affairs Blog. 2014 Jan 29.

- 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. Healthcare 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 5 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 2 institutions (UF, UCF) indicated that they are currently a Patient-Centered Medical Home model, and only 1 (UF) indicated that it is part of an Accountable Care Organization. However, an additional 5 institutions indicated that they plan to become a Patient-Centered Medical Home model, and 3 institutions plan to become part of Accountable Care Organizations in the next 5 years.
- Each institution that was or was planning to become 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 in the next 5 years.

Question Four: How, if at all, are accrediting bodies for healthcare programs altering their standards to align with emerging and evolving changes to healthcare delivery?

Among the ways in which accrediting bodies are aligning their standards with emerging and evolving changes in healthcare 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 in student evaluation over process, and providing faculty development and support for student evaluation.

In addition to hands-on clinical care delivery, learners must also be trained in the

system of healthcare 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 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 healthcare 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."

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

> "The COM [College of Medicine] must help to prepare students to function on healthcare 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."

Review of accreditation standards of other healthcare programs reveals similar language addressing emerging and evolving changes to healthcare 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 understand evaluation processes, and ensuring that residency program directors have protected time and are compensated for their role as program leaders.

Question Five: **Given that healthcare 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 healthcare 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 are the improved outcomes of the changes.

In addition, university respondents were asked to describe healthcare 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 healthcare 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 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 healthcare 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 #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 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 emphasizes the importance of healthcare access and delivery across socio-demographic groups; and early primary care clinical opportunities in settings serving the underserved.

Question Six: What technological changes in healthcare delivery will require concomitant changes in healthcare 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 healthcare 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 know 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

Healthcare 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 healthcare in the future.

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

delivery. Curriculum reform is prevalent in the health-related programs in the SUS.

Finally, Florida's particular demographics will, in and of themselves, affect healthcare delivery in the future. First and foremost, Florida is continuing to grow, and this growth will increase the stress on Florida's healthcare 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 essential bimodal: with large percentages of the population aged 24 and below, and large percentages aged 65 and above. In addition, Florida's healthcare needs are not evenly distributed throughout the state. Rural areas, in particular, can be under-supplied, even though the state as a whole has sufficient supply in any given healthcare occupation. Florida's healthcare 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 Healthcare 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 healthcare delivery in the State University System.

Healthcare Delivery: Description
For the purpose of this survey, we focused on healthcare 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 healthcare 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 healthcare 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 Healthcare Delivery

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

   The institutions that provide healthcare 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 healthcare 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 organizations 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

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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 healthcare delivery needs in your service area and statewide?

Table One: Greatest Healthcare Delivery Needs	
Area of Greatest Healthcare 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 Healthcare Services to Underserved	5
Mental Healthcare/Substance Abuse Services	5
Health Disparities	1
Healthcare 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 healthcare delivery needs in your service area currently, or plan to do so in the future?

Table Two: Tracking of Healthcare 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 healthcare 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 Healthcare 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 Healthcare 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 healthcare 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 Healthcare 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					

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Diabetes		X		X				
Preventive Care			X					X
Primary Care			X				X	X
Geriatrics			X					
Care of Underserved Populations			X	X	X			
Rural Healthcare			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 Healthcare 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 Healthcare 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 healthcare programs	**6**
Graduate medical education funding	**6**
Other (Please describe with additional narrative)	**2**

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

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- 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 healthcare delivery systems?
   Planned changes to better prepare graduates for the changing healthcare 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 GME 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 (MOC) 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			

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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

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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 healthcare 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 SW Florida. FAMU's School of Allied Health and College of Pharmacy have a number of programs focused on filling gaps in delivery of healthcare 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 note 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. They also describe 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 healthcare delivery that are not currently or sufficiently addressed by Florida universities, or their affiliated providers, and should be.

Table Nine: Unaddressed Healthcare Delivery							
	UF	USF	FSU	FAMU	UCF	FIU	FAU
Lack of Residency Positions	X	X					X
Funding for Uninsured/Indigent Patients			X				X
Mental Health	X	X	X				X
Veteran's Health							X
Public/Population Health	X						X
Telemedicine				X		X	
Affordable Care Organization Model						X	
Access to Affordable Care		X		X	X	X	
Physician Shortages	X	X			X	X	
Dental Care					X	X	
Health Care Literacy				X			
Wellness and Disease Prevention	X						
Care of the Elderly	X	X	X				
Chronic Disease Management			X				
Health Disparities			X				
Nurses		X					
Rural Medicine		X					
Primary Care		X			X		
Infectious Disease		X					
FQHC Affiliations		X					
Threat to Children's Medical Services Funding		X					
Home Health Programs		X					
Occupational Therapy		X					
Physical Therapy		X					
Home Health Programs		X					

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

Table Ten: Major Healthcare 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 Record								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 FT 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 healthcare 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.