



**Regional Medical Campus at
FAU:
A Better Way**

**Presentation
to the
Florida Board of Governors**
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Expansion to a Four-Year Regional Medical Campus of the University of Miami Miller School of Medicine at Florida Atlantic University in Collaboration with Boca Raton Community Hospital

The University of Miami Miller School of Medicine (UMMSM) and Florida Atlantic University (FAU), in partnership with Boca Raton Community Hospital (BRCH), propose to establish a four year regional medical school campus at Florida Atlantic University.

The University of Miami Regional Medical School Campus at Florida Atlantic University (UMMSM@FAU) will have a much more immediate impact on our state's ability to avoid the impending physician shortage than the creation of new four year medical schools. The specific advantages of the University of Miami Regional Medical School Campus at Florida Atlantic University (UMMSM@FAU) model are:

1. it builds on the existing collaboration between UMMSM and FAU that already provides the first two years of medical school at FAU;
2. it enables the state to avoid the high costs required to create a new medical school;
3. it partners with a community hospital eligible for critical Medicare residency program funding to provide clinical training, maximizing the probability that graduates will remain in Florida for residency training and subsequent practice; and
4. it maximizes opportunities for the regional campus to generate research funding by drawing on the resources of two entities with a demonstrated track record of excellence in research - the FAU Department of Biomedical Sciences' and Scripps Florida.

History of the Current Program:

The University of Miami Miller School of Medicine (UMMSM) and Florida Atlantic University (FAU) have a multi-year history of working together to identify and develop an innovative and cost effective approach to ensure that Florida has an adequate physician workforce.

- 1998 - UMMSM and FAU receive BOR and legislative authorization to pursue the "Partnership for Quality Medical Education," which enables students admitted to UMMSM to complete their first 2 Years of medical school at FAU.

FAU receives a \$15 million gift from the Schmidt Family Foundation, \$10 million of which was matched by the state to build the \$20 million Charles E. Schmidt Biomedical Science Center and \$5 million of which was matched to create a \$10 million endowment for equipment to support medical education.

1999 - Legislature appropriates \$500,000 to FAU for Partnership for Quality Medical Education planning.

2000 - Legislature appropriates \$1 million for the Partnership for Quality Medical Education

UMMSM begins the Medical Scholars Program (MSP) to increase the number of FAU baccalaureate degree holders entering UMMSM. The Medical Scholars Program is a 7-8 year combined BS/MD program. To be admitted to the MSP program students must have a 3.7 GPA at the end of their freshman year and a minimum SAT score of 1270. Completion of the MSP program assures FAU students a place in the UMMSC freshman class after satisfactory completing their third year of undergraduate study.

2002 –Final Memorandum of Understanding between UMMSM and FAU signed.

Board of Regents approves FAU's request to establish a regional medical campus of UMMSM at FAU

Charles E. Schmidt Biomedical Science Center completed

2003 –Accreditation site visit by Liaison Committee for Medical Education (LCME) to certify FAU as a regional campus of UMMSM

2004 –Legislature appropriates \$2.3 million to FAU for the Partnership for Quality Medical Education

LCME approves operation of regional campus of UMMSM at FAU

First class of 16 UMMSM medical students begin studies at FAU regional campus

2005 –FAU requests \$200,000 for the Partnership for Quality Medical Education in FY 2005-06 SUS LBR.

The Adequacy of the Florida Physician Workforce:

Multiple factors, some specific to the physician workforce and others specific to the state's population and practice environment, must be taken into consideration in evaluating the adequacy of Florida's physician workforce.

Factors typically considered relating to the physician workforce include: (a) total number of physicians per 100,000 population; (b) age distribution; (c) racial/ethnic composition; (d) medical specialty practiced; (e) geographic distribution of practice location; and (f) intensity of practice (full-time vs. part-time).

Factors typically considered relating to the state's population include: (a) age distribution; (b) racial/ethnic composition; and (c) economic status/ability to purchase health care.

Several studies have been completed over the past several years to assess the adequacy of the state's physician workforce within the context of assessing the need for additional Florida medical schools. These studies include the feasibility studies commissioned by FSU relating to its then-proposed medical school and by FIU relating to its proposed medical school and most recently, the November, 2004 CEPRI *Medical Education Needs Analysis* conducted at the request of the Florida Board of Governors.

These studies have consistently concluded that Florida's relatively high national rankings in terms of total physicians (4th) and physicians per 100,000 population (16th) mask inadequacies in the state's physician workforce when these factors are considered in combination with other characteristics of the physician workforce and state population, including the following:

- Florida's population increased 222% between 1960 and 2000, making it one of the fastest growing states in the nation. Projections indicate that Florida's population will continue to increase by approximately 9.5 million (60%) between 2000 and 2030;
- Although between 1975 and 2002, Florida's ratio of physicians per 100,000 population steadily increased, Florida's national ranking in terms of physicians per 100,000 population dropped from 11th to 16th, indicating that Florida's physician supply has not kept pace with its explosive population growth;
- Florida has one of the oldest populations in the nation, with 18% of the population over the age of 65, compared to 12% nationally. The percent of Floridians over the age of 65 will grow more rapidly than any other age group, with a 3.5 million (124%) increase in the number of Floridians age 65 and older projected to occur between 2000 and 2030. The implications of this distinguishing feature of Florida's population are obvious-demand and need for health care increases with age.

- Florida's physician workforce is also significantly older than the Nation's, with 26% of Florida's physicians age 65 or older, as contrasted to 16% nationally. At the other end of the age spectrum, only 9% of Florida's physicians are under 35, as contrasted to 16% nationally. Unless Florida can create mechanisms to retain and attract more young physicians, we will experience a steady attrition in our physician workforce at the same time that our aging population creates increasing demand for health care
- Florida "imports" most of the physicians who practice here.

Only 20% of allopathic physicians practicing in Florida graduated from a Florida medical school. Nationally, 32% of the physicians practicing in a given state graduated from medical school in that same state.

Only 32% of allopathic physicians practicing in Florida completed a Florida residency program. Nationally, 45% of the physicians practicing in a given state completed residency training in that same state.

34% of Florida physicians graduated from international medical schools (IMGs), placing Florida 3rd nationally in the number of physicians who graduated from international medical schools. An even higher 43% of physicians practicing in Southeast Florida are IMGs. Nationally, 24% of the US physician workforce graduated from an international medical school.

This heavy dependence in physicians educated and trained outside of Florida renders the state particularly vulnerable to considerations that adversely impact the perceived attractiveness of practice in Florida, such as the state's relatively high cost of professional liability insurance and the recently passed "Three Strikes and You're Out" Constitutional amendment. Additionally, Florida's dependence on international medical school graduates may be adversely affected by any tightening of federal immigration policies that restrict the ability of foreign trained physicians to remain in the U.S. to practice.

The National Perspective on the Adequacy of the U.S. Physician Workforce:

National organizations, including the Council on Graduate Medical Education (COGME), the federally-funded Center for Health Workforce Studies and the Association of American Medical Colleges (AAMC) are beginning to warn of a predicted shortage of physicians in the U.S. and are recommending that U.S. medical schools begin to immediately increase their enrollment in order to avert a serious under-supply of physicians. In a significant reversal of a position statement released in 1997 that the nation had a surplus of physicians, the Association of American Medical Colleges (AAMC) released a statement on Feb 22, 2005 expressing the association's concern that U.S. demand for physicians may outstrip supply in the near future. To avoid a physician shortage, the AAMC recommends

that U.S. medical school enrollment be increased by 15% by 2015, which would result in an annual increase of approximately 2,500 medical school graduates per year. Acknowledging the 7-10 year time lapse that occurs from the time a student is admitted to medical school until the time that residency training is completed and the typical physician enters practice, the AAMC recommends that medical school enrollments begin to increase as soon as possible. In calling for the expansion in enrollment, the AAMC recommends that increases be targeted to areas of the country that experienced a rapid growth in population over the past several decades and that are expected to continue to grow in the future.

Recognizing that residency training program capacity must increase concurrently with medical school enrollment growth to ensure that all U.S. medical school graduates have an adequate number of residency program positions available to enable them to complete the training required to practice, both the AAMC and COGME recommend the removal of the current restrictions on the number of residency and fellowship positions funded by Medicare

The Adequacy of Florida's Current Medical School Capacity:

Florida currently ranks 37th among the 46 states with allopathic medical schools in enrollment per 100,000 state population. Florida would need to increase its allopathic medical school enrollment by approximately 2,700 students just to meet the national ratio of allopathic medical students per 100,000 population. For Florida to increase its current total allopathic medical school enrollment by 15%, as recommended by the AAMC, an additional 250 medical students would need to be enrolled.

Possible Strategies to Address a Florida Physician Shortage:

Several strategies are available to ensure that Florida has an adequate number of physicians for its current and future health care needs. These strategies include:

- (1) Expanding enrollment at the main campuses of existing medical schools;
- (2) Creating new regional campuses of existing medical schools;
- (3) Building new four year medical schools and/or
- (4) Expanding opportunities for residency and fellowship training.

Each of the strategies has advantages and disadvantages that are outlined below. One of the strategies- expanding residencies and fellowships- is critical to the success of the others.

Advantages of Expanding Enrollment at Existing Medical Schools:

Expanding enrollment at existing allopathic medical schools has two advantages. First the University of Florida, University of South Florida and University of Miami medical schools have established strong reputations over time that enabled them to attract excellent students. Although Florida State University, the newest medical school in the U.S., is already successfully competing for well qualified students, it will take some time for it, and any new medical school, to build as strong a state and national reputation as Florida's more we-established colleges of medicine.

Another critical advantage of expanding enrollment at existing medical schools is that this strategy is significantly less expensive than building new medical schools, for two reasons: (a) major capital construction costs can usually be avoided; (b) the incremental operating costs per student to expand enrollment at an existing medical school is lower than the per-student operating costs at a new medical school, particularly if the mature schools have significant clinical practice plan revenues.

The Cost of Expanding Existing Medical School Enrollment:

In the spring of 2004, the Florida Board of Governors asked the University of Florida (UF), University of South Florida (USF), Florida State University (FSU) and University of Miami (UM) medical schools to assess their ability to expand their enrollments and to identify operating and facilities costs required to this support enrollment growth. USF, UF and UM reported that they could expand their entering class enrollment of 390 (2003-04 academic year) by a total of 162 students by FY 2010-11. FSU reported that it could not expand its enrollment beyond the 120 entering students per year it ultimately plans to admit. Increasing enrollment by 162 students per year would constitute only 6% of the 2,700 additional medical students that Florida needs to meet the national ratio of medical students per 100,000 state population. The total cost to expand enrollment at UF, USF and UM medical schools by 162 students per year is \$92.1 million

STATE FUNDING REQUIRED TO EXPAND ENROLLMENT ON THE MAIN CAMPUSES OF EXISTING ALLOPATHIC MEDICAL SCHOOLS

	UF	USF	UM	TOTAL *
# Additional Medical Students	60	80	22	162
State Operating Funds Required to Expand Enrollment @ \$30,000 per Student	\$7.82 M	\$11.97M	\$2.64M	\$22.43M
Facilities Construction & Renovation Costs	\$32.28M	\$24.92M	\$12.43M	\$69.63M
TOTAL:	\$40.10M	\$36.89M	\$15.07M	\$92.06M

* Cumulative totals FY 2004-05 through FY 2010-11

The Cost of Establishing New Medical Schools:

Because it is the first new allopathic medical school to be established in the U.S. in the past 30 years, the Florida State University College of Medicine provides an excellent basis to compare the cost of establishing a new medical school with the cost of expanding enrollment at an existing medical school. The FSU medical school admitted its first class of 30 students in 2001. For FY 2004-05, the state cost to support FSU's current enrollment of 166 students is approximately \$168,600 per student FSU plans to reach its full enrollment of 480 by 2008-09. The state cost to support the FSU College of is ultimately expected to be approximately \$35 million annually, or approximately \$80,000 per student. The FSU medical school has also received approximately \$65 million in facilities funding from the state. Because FSU medical school does not plan to have a faculty practice plan, which at most medical schools, including UF, USF and UM, constitutes a major source of operating funds, state appropriated funding will continue to support over 75% of FSU medical school's operating costs. By contrast, state funding constitutes only 6% of UF medical school's revenue, only 15% of USF medical school's revenue and less than 0.5% of UM medical school's revenue.

The Florida International University proposal for a new allopathic medical school dated June 30, 2004, indicates that \$32.9 million in state appropriations, or approximately \$82,000 per student will required to support a projected 2010-11 enrollment of 223. Facilities costs for the FIU medical school are estimated to be approximately \$120 million.

COSTS TO STATE OF EXPANDING ENROLLMENT AT THE MAIN CAMPUSES OF EXISTING MEDICAL SCHOOLS vs. CREATING NEW MEDICAL SCHOOLS

	UF, USF & UM Expansion	FSU	FIU
# Additional Students	166	480	223
State Cost Per Student	\$30,000	\$80,000	\$82,000
Total State Operating Funds	\$22.43M	\$35M	\$32.9M
Total Facilities Costs	\$69.1M	\$65M	\$120M

Expansion of the Current University of Miami Miller School of Medicine (UMMSM) /Florida Atlantic University (FAU) Partnership for Quality Medical Education into a Four Year Regional Medical School Campus at FAU

The University of Miami Miller School of Medicine (UMMSM) and Florida Atlantic University plan to expand their current, highly successful Partnership for Quality Medical Education, originally designed to enable 32 students accepted annually to UMMSM to complete the first two years of medical school at FAU, to ultimately enable a total of 256 students to complete all four years of medical school at FAU.

Currently, the UMMSM/FAU Partnership for Quality Medical Education offers up to 32 UMMSM medical students per year the opportunity to complete the first two years of medical school on the Boca Raton campus of FAU. The program began in 2004 with a charter class of 16 students. Students wishing to attend the first two years of medical school on the FAU campus apply for admission to UMMSM through the regular admissions process, indicating their preference for attendance at FAU. Students enrolled at UMMSM@FAU are University of Miami medical students with the same privileges and responsibilities as all other UM medical students, regardless of their campus affiliation. The UMMSM@FAU curriculum is identical to the year 1 and 2 curriculum taught at the UMMSM Miami campus in terms of learning objectives, small group discussion topics and clinical experiences. UMMSM@FAU students have the same opportunities as UMMSM Miami campus students to participate in community service and outreach activities in Boca Raton, the Florida Keys, Little Haiti, Little Havana, Florida City and a number of international medical experiences. Testing, evaluation, grading and promotion practices are identical at the FAU and Miami campuses. UMMSM@FAU students are fully integrated members of UM medical school academic societies and regular interaction between UMMSM@FAU and UM Miami campus students is scheduled on a regular basis. UMMSM@FAU students travel to the Miami campus and Miami campus students will travel to FAU for a variety of classroom sessions, clinical experiences and social activities. Year 1 and 2 basic science courses are delivered by more than 25 FAU basic science faculty. Although the emphasis at UMMSM/FAU is on “live” instruction, computer-aided distance learning is used when appropriate, to enable students on each campus to have full access to the educational opportunities and resources on both campuses. UMMSM@FAU students have access to UMMSM MD/PhD and MD/MPH programs as well as to FAU PhD programs. An MD/MBA program at FAU is also under development. Accreditation of the UMMSM@FAU program is through UMMSM. The principal academic officer of UMMSM@FAU reports to the UMMSM dean. Students attending the UMMSM@FAU program pay University of Miami medical school tuition and receive the M.D. degree from UMMSM upon graduation.

The Advantages of Expanding Medical School Enrollment Through the Regional Campus Model:

Expanding the current UMMSM/FAU Partnership for Quality Medical Education is a highly efficient and cost effective and mechanism to create the equivalent of a public four year allopathic medical school in Southeast Florida at a cost that is significantly below the expense that the state would incur to create a new medical school at any other state university. The cost savings that will result from expanding the UMMSM/FAU Partnership from a 2 year to a 4 year medical school program are particularly significant because FAU has already completed construction of the Schmidt Biomedical Science Center, a new, state-of-the-art facility in which the 4 year medical school program will be housed.

Because the first two years of the medical school curriculum are already being offered at the FAU regional campus of UMMSM, expansion of the FAU regional campus to include years 3 and 4 of the medical school curriculum will produce an increased number of medical school graduates more quickly than beginning a new four year medical school from inception.

The four year UMMSM@FAU regional campus model also has unique educational program and research advantages that could not be realized through expansion of the UF, USF and UM medical schools' main campuses. These include the following:

- **A Smaller, More Personalized Learning Environment** - Regional campuses offer smaller learning environments, which allow for more individualized interaction between medical students and faculty and between and among the medical students. Because the clinical experiences that regional campus students receive is typically in community hospitals with a limited number of residency /fellowship programs, rather than large teaching hospitals where medical students must compete with numerous residents and fellows for access to patients, regional campuses provide students with more opportunities to interact with attending physicians and patients. Regional campus students typically describe their education as very "hands on" and note that they get to do more procedures and are allowed to have more active patient involvement on the hospital wards and in ambulatory settings than their counterparts on the main medical school campus.
- **Incubators for Educational Innovation** - Regional campus faculty and staff typically note that regional campuses can focus on developing, piloting and implementing innovative models and practices in medical student education in a way that their larger, more traditional and more hierarchical and bureaucratic main campuses may not be able to.

Over the past several years, UMMSM and FAU faculty have begun to discuss some of the kinds of innovations components and characteristics that could be incorporated into the UMMSM@FAU education and research programs. These innovations are designed

to ensure that graduates to have the skills and attitudes required for effective delivery of health care in an environment where physicians' roles and responsibilities are changing rapidly. Although these discussions are still in the exploratory stages, some of the components and initiatives under consideration that are particularly promising are summarized below. It should be stressed, however, that the structure and characteristics of the 3rd and 4th year medical school curriculum will be developed with the close collaboration of the UMMSM, which will have final authority to approve the 3rd and 4th year curriculum.

(a) More attention to the skills and behaviors that physicians need now to practice effective medicine that have not been adequately addressed in the traditional medical school curriculum, including chronic disease management, professionalism, systems-based care, evidenced-based practice, medical informatics and information system, cost conscious practice, team care coordination, continuous quality improvement, individual/population ethics, effective communication skills effective physician leadership through professionalism, ,geriatrics, patient safety

(b) Continuity of Care - Upon admission students will be assigned cohorts of patients including 10 well elderly, 10 well adults and 10 well adolescents. These patients will be followed by the students for their entire medical school experience. As the student acquires a greater knowledge base and clinical skills, more involvement with the medical care of these patients will take place. Students will meet with a preceptor at least twice monthly to discuss the status of his patient base and at least monthly with researchers learning what new ideas are being developed that may have application to the care (present or future) of their patient panel (the "translational education" component). Students would also begin attending a continuity clinic (where possible involving their cohort of patients) and also begin participating in carefully designed inpatient experiences upon starting at the regional campus.

(c) The Curriculum Map - the traditional medical school curriculum sequence of years 1 and 2 being primarily classroom instruction, followed by years 3 and 4, which are primarily clinical may not be optimal and can be changed. Year one could start in a manner similar to that at the main campus, a 21 week core principles program delivered by the FAU basic science faculty. Following the core principles the organ based modules would start and continue through year two. The lecture component of these segments would be limited to 2-3 hours per day and afternoons would consist of case based and or problem based sessions correlated with the organ based modules. Significant clinical experiences can be included in afternoon activities. Clinical experiences in years one and two can be much more robust than one afternoon in a community preceptor's

office. Students would also have the opportunity to bring their patients to these sessions as appropriate to the objective for that session.

(d) Third Year Continuity Clerkships - Year three could be a continuity experience as opposed to the traditional block model currently used. Students would be expected to be paired with a primary care preceptor and meet regularly to discuss and review their experiences. Discipline coordinators would be expected to meet once or twice monthly to review all student experiences. Students would be expected to continue to attend their continuity clinics and “translational education” sessions throughout their entire 4 year experience. The goals and objectives of each clerkship would be used by the reviewers (individual mentor and discipline coordinator) to ensure that students were attaining the competencies necessary for graduation. Students would also be expected to take the same shelf exams as the main campus students. The timing of these exams would need to be adjusted. Students would also take quarterly miniboard exams and McMaster triple jump exams to monitor their performance throughout the year. The regional campus would have to develop both a simulation center and standardized patients so that all competencies could be assessed comparably to that of the main campus.

(e) Dual Degrees – A dual degree, especially a one-year degree such as an MPH or an MPHA, could be built into the curriculum. Summer breaks could be used for work towards a dual degree, or research, or required population or international experience. Students completing a designated number of courses prior to completion of year 4 could be awarded a certificate, such as “Graduate with Research Distinction” if they graduate in 4years, and a second degree if they graduated in 5 years.

(f) Role of a Clinical Skills and Simulation Center in Competency-based Learning and Evaluation - A clinical skills and simulation center for training and evaluation is a fundamental component of a modern medical education program, especially one that uses competency-based learning and evaluation. Such a center could be one of the centerpieces of a new, state of the art medical education facility and program.

(g) Required scholarly project for graduation –All physicians should have the opportunity to participate in research. A thesis project could be included in the requirements for graduation. This scholarly project can be integrated into other course work. Projects may be basic science bench work, clinical investigations or population-based studies. Work can be presented at an annual research forum. Awards and academic recognition could be awarded, e.g. graduate with research distinction.

(h) Pathways of Emphasis - Programs can be created that offer students an opportunity to immerse themselves in an area of study, somewhat analogous to a “minor” in college. These pathways would offer experiences in organized course work with specific elective courses created and coordinated. Research opportunities in the area of emphasis would be available and required. Faculty mentors would be arranged through the pathway. Attendance and participation in scientific and professional meetings would be offered. Some examples of Pathways of Emphasis include; genetic medicine, population medicine, primary care, women’s health, molecular pharmacology, children’s health, cardiovascular diseases, etc.

- Ability to Focus On Specific Areas of Research – Because of their smaller size, regional campuses can enable students and faculty to focus on specific areas of research. Some of the research foci under consideration for UMMSM@FAU include patient safety, evidence-based medicine population studies involving the aging population of Palm Beach County and “translational education”, in which students will have regular interaction with basic science faculty throughout the four year curriculum in order to bring cutting-edge research to patient care. This format would also foster student participation in demographic as well as basic research.
- Fostering of Community Ties - Students at regional campuses are more likely to be exposed to clinical care in smaller community hospitals and outpatient ambulatory clinics and are more likely to develop relationships with community physicians in private practice than are students at large academic medical centers, where most physicians are full-time medical school faculty and most clinical experiences are in large teaching hospitals. For this reason, graduates of regional medical campuses are more likely to remain in their immediate communities to practice than are students who complete medical school and residency training in large academic medical centers.

The use of one or more community hospitals as the primary teaching sites for inpatient clinical experiences is a central element of for UMMSM@ FAU proposal. Boca Raton Community Hospital has already agreed to provide access to medical students for their clinical rotations and has agreed to pursue approval to establish one or more new residency programs. Preliminary discussions with other community hospitals in Palm Beach County are also underway.

The Importance of Expanding Residency Training:

The availability of high quality internship and residency programs in the range of medical specialties necessary to meet Florida’s unique socio-economic and demographic needs directly impacts the quality and adequacy of Florida’s physician

workforce because interns and residents typically establish their practices within close geographic proximity to the teaching hospitals where they complete their residency training. Approximately 55%-65% of physicians who complete a residency program in Florida remain in Florida to practice, placing Florida fourth nationally in retaining physicians in state practice after completion of residency training. Florida retains an even a higher 75% of physicians in primary care practice after completion of a Florida primary care residency program. Florida retention rate for primary care residency program completers significantly exceeds the national retention rate of 57%.

Despite the critical link between an adequate access to residency and fellowship training and an adequate supply of physicians, Florida ranks 46th nationally in total (M.D. and D.O.) residency positions per 100,000 state population. Florida needs to add a total of approximately 2,600 new M.D. residency positions to meet the national average ratio of residency positions per 100,000 state population. Because of the shortage of Florida residency program opportunities, most physicians practicing in Florida received their residency training outside of the state. Only approximately 35% of the physicians practicing in Florida completed a Florida residency programs. Nationally, approximately 45% of the physicians practicing in a given state completed residencies in that state. This difference is partially due to the lack of residencies within the state.

Despite the pronounced need for more Florida residency training programs, few new programs have been created in Florida or nationally because of a cap placed Medicare funding for residency training in the federal Balanced Budget Act of 1997 (BBA). The Medicare program is the largest explicit source of funding for residency and fellowship training. The 1997 cap effectively freezes the number of residents that are eligible for Medicare direct and indirect graduate medical education funding to the numbers in residency programs as of December 31, 1996. As a result of the 1997 Medicare funding caps, the growth in the capacity of Florida's residency programs has been very modest between 1997 and 2004 and the approximately 236 new residency positions created constitute only 9% of the additional 2,600 allopathic residency program slots the state needs to add to meet the national ratio of residency training positions per 100,000 population. Only 24 of the new residency positions created since 1997 are in Southeast Florida.

The Medicare funding caps do not apply to hospitals that have never had a residency program, such as Boca Raton Community Hospital. The fact that Boca Raton Community Hospital has not had residency programs in the past and would, therefore, be eligible for Medicare funding for any new residency programs it creates and receives approval for is critical because of the high cost of residency training, which average approximately \$90,000 annually, per resident in direct costs and approximately \$190,000 annually, per resident in full costs.

It is imperative that additional residency programs capacity be created in Southeast Florida at the same time that additional medical school capacity is created in order to ensure that UMMSM@FAU graduates have an opportunity to remain in the area

to complete residency training. Because of the strong link between where physicians complete residency training and where they subsequently establish practice, it is highly likely that a majority of the UMMSM@FAU medical school graduates who complete residency programs in Southeast Florida will remain in Southeast Florida to practice.

Research Potential: The proposed affiliation between UMMSM, FAU and Boca Raton Community Hospital will create a new kind of academic medical center which will serve as the catalyst for unique areas research and research collaborations, including:

- New opportunities for NIH funded basic biomedical research in Southeast Florida;
- Demographic and population based research;
- Translational research;
- Collaborative research with Scripps, Florida; and
- Collaborative research with other Florida biotech industries,

Budget in Brief

The accompanying budget for the proposed four year UMMSM@FAU regional campus reaches \$10 million annually by FY 2008-09. The budget assumes that the class of UMMSM medical students matriculating at the FAU regional campus will be increased from the 32 students per year originally planned for years 1 and 2 to approximately 64 students per year for a total enrollment of approximately 256 students by FY 2010-11. It is also understood that this state support will be supplemented by income derived from the clinical practice of the full time clinical faculty to be recruited as well as through research funding generated by the basic science faculty.

Because UMMSM@FAU will require no additional facilities funding from the state and because it is anticipated that significant clinical income and contract and grant funding will be generated by the faculty, the amount of state operating funds required to create a four year regional campus of UMMSM at FAU is significantly less expensive than the state support per student being provided to FSU or the state support per student being requested by FIU.

COSTS TO STATE OF VARIOUS SCENARIOS FOR EXPANDING MEDICAL SCHOOL ENROLLMENT

	UF, USF & UM Expansion	FSU	FIU	UMMSM@FAU
# Additional Students	166	480	223	256
State Cost Per Student	\$30,000	\$80,000	\$82,000	\$57,031
Total State Operating Funds	\$22.43M	\$35M	\$32.9M	\$14.6M
Total Facilities Costs	\$69.1M	\$65M	\$120M	0

1. This expansion and increased teaching responsibility will require the addition of 10-15 basic science faculty. It is expected that these faculty will engage in research and generate funds in a manner similar to that which is currently occurring in the Department of Biomedical Science.
2. The development of years three and four will require the recruitment of a cadre of full time clinical scientist faculty over the proposed four-year expansion period. Based on the numbers of students in the program 30-40 individuals will need to be added to the faculty over the four-year development phase. It is expected that these individuals will work with their counterparts at UMMSM to develop the curricular model to be used, teach medical students in clinical settings (ambulatory and inpatient), provide the necessary academic infrastructure needed for undergraduate and graduate medical education, develop clinical practices in collaboration with physicians already in practice in the community, and participate in expansion of basic and clinical research in the area (in conjunction with the existing research activities as well as the development of new programs with appropriate collaborators). These individuals may be recruited from physicians within the community as well as through outside recruitment efforts.
3. The educational experiences necessary for the expanded regional campus will also require the participation of the community-based practicing physicians. In this era of decreasing compensation and increasing time demands for these individuals, the need to provide compensation has become commonplace. It is projected that 50-75 community based faculty will play an active role in the education of medical students.
4. Staff support, including clerical, administrative and technical expertise, for the faculty and students is essential for the effective delivery of educational experience.

5. Equipment, materials and supplies including computer hardware, software, communications, and usual office needs are included in this category. The development of a clinical education program also requires the acquisition of education simulators unique to health science education as well as the recruitment and training of standardized patients for the assessment of student competence. Distance education and library support are also important elements of the program requiring support.

Development Plan in Brief

FY 2005-2006:

FY 2006-2007:

Critical recruitment of both basic science and clinical faculty will take place in the first year. The five clinicians to be hired will have the initial responsibility of developing the clinical educational experience for the third-year and fourth-year medical students. They will work closely and interface with the UMMSM faculty, FAU clinical faculty (full-time, part-time and community-based), and FAU basic science faculty to address issues such as the class size expansion (in years 1 and 2) and accreditation requirements set by the Liaison Committee for Medical Education (LCME) for geographically separate campuses. (Note that the current pre-clinical program for years 1 and 2 underwent the same rigorous LCME review prior to enrolling its inaugural class.)

The areas of specialty for both groups of new faculty will reflect the educational and research directions of the regional campus, e.g., geriatrics, long term care, etc. Future clinical faculty recruitments will be directed to address educational, research, and community service needs. The pro forma budget will show numbers and generic categories but more specificity will occur over time as the program evolves.

FY2007-2008:

The entering classes will increase from the current target of 32 to 64. Additional basic science faculty will be recruited to continue to address the expanded class size in years 1 and 2 and to continue to develop the basic research focus of the regional medical campus. It is also anticipated that these faculty will begin interacting with clinical counterparts to make translational research a reality on the regional campus.

The additional clinical faculty will be selected by specialty to address educational needs and clinical service needs in the community. These faculty will also begin the planning of residency and fellowship training programs located primarily at BRCH. It is anticipated that pilot clinical rotations of third and fourth-year medical students will

begin so that these full-time and part-time clinical faculty will begin actual supervision of these clinical rotations. They will also collaborate in the rotations of second year students in both the hospitals and ambulatory clinical education settings as directed by the curriculum for the first two years in the current UMMSM@FAU program.

The evaluation of student performance also requires the development of standardized patients. Standardized patients may be either real patients trained to interact with medical students and residents or normal individuals trained to mimic the symptoms and signs of specific patient problems. They are also trained to evaluate the professionalism of the student or resident that examines them. These individuals require training and ongoing utilization by both students and residents. They are used to evaluate performance of trainees as well as to prepare them to take the US Medical Licensing Exam Pt IIB (demonstration of communication and clinical skills).

FY 2008-2009:

The continued admission of 64 additional students will take place so that we will now have 128 students enrolled in years 1 & 2.

Continuing growth of the program and the planned rotations of the first small cohort of third-year students will take place this year. This year will also begin the resident training experience and the geriatric fellowship. Clinical and basic science faculty recruitment as well as additional part-time faculty is needed to address this larger group of medical students in the clinical setting and graduate medical education program development. Curricular development will continue to evolve, requiring the presence of additional support staff and increased numbers of standardized patients.

FY 2009-2010:

The program will achieve its numerical goals of 64 students per year at the first three class levels, for a total enrollment of 192 students. The faculty needs will be achieved by this year as well. It is anticipated that there will be full complements of students, residents and fellows engaged in the active teaching learning process. Collaborative service needs will have been met and collaborative research with a large translational (both to education and patient care) will be well established. The cumulative incremental budget base for these activities is \$10 million in addition to the current funding base for the existing UMMSM@FAU program of \$4.6M which accommodates 64 students (32 in year 1 and 32 in year 2). It is anticipated that some of the students admitted to the current year 1 & 2 program might desire to stay at the FAU campus evolves so that as many as 32 physicians could be graduated prior to the full enrolment figures being reached.

FY 2010-11:

The program will achieve its numerical goals at all four class years for a total enrollment of 256 students. Sixty-four students will graduate annually from the expanded program.

PROJECTED ENROLLMENT AND BUDGET

Year:	04-05	05-06	06-07	07-08	08-09	09-10	10-11
# Entering Class	16	32	32	64	64	64	64
Cumulative Total Enrollment	16	48	64	96	128	192	256
# Graduates from FAU Campus				0	0	0	64
# Graduates from UM Campus				16	32	32	0
Current Budget:							
Additional Funds Requested:		\$2.0M	\$2.1M	\$ 2.6M	\$ 3.3M	Funding Complete	Funding Complete
TOTAL BUDGET:	\$4.6M	\$6.6M	\$8.7M	\$11.3M	\$14.6M	\$14.6M	\$14.6M

SOURCES:

1. State Health Workforce Profiles, National Center for Health Workforce Information and Analysis, Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services, Spring 2001.
2. Florida Statistical Abstract, 2003
3. Physician Characteristics and Distribution in the U.S., American Medical Association, 2004.
4. State Health Workforce Profiles, National Center for Health Workforce information and Analysis, Spring 2001.
5. Annual Report on Graduate Medical Education in Florida, Florida Department of Health, January, 2004.
6. State Health Workforce Profiles, National Center for Health Workforce Information and Analysis, Spring 2001.
7. Council on Graduate Medical Education (COGME) Minutes of 7/28/04 Meeting.
8. Council for Education Policy, Research and Improvement (CEPRI) Medical Education Needs Analysis, November 2004.
9. William T. Mallon, Mandy Liu, Robert F. Jones, Michael Whitcomb. Mini-Med: The Role of Regional Campuses in U.S. Medical Education, Association of American Medical Colleges, 2003.
10. Richard A. Cooper, Thomas E. Getzen, Heather J. McKee and Prakash Laud. Physician Workforce, Health Affairs ,21:140-154, 2002 .
11. Victoria Stagg Elliott, amednews.com, Physician Shortage Predicted to Spread., AMNews Staff. Jan. 5, 2004.
12. Dennis Cauchon, USATODAY.com Medical miscalculation creates doctor shortage. March 3, 2005.

Letters of Endorsement



March 2, 2005

Frank Brogan
President
Florida Atlantic University
777 Glades Road
Boca Raton, Florida 33431

Dear President Brogan:

I am writing to offer my support of the expansion of the current regional medical program to include years three and four at Florida Atlantic University which will be a joint venture between the University of Miami Miller School of Medicine and Florida Atlantic University.

I have followed closely the already emerging medical program in Boca Raton and am pleased to identify JFK Medical Center's support for this program. Currently, our professional and medical staff are participating in the clinical experience for medical students in the early years of their education. As the medical school matures into a four-year campus, we look forward to working with the facility from the university of Miami Miller School of Medicine at Florida Atlantic University in providing additional clinical experience for the medical students.

The evolution of an academic medical center with a four-year medical program will, I believe, contribute to the improved medical and health care of all the citizens in the Palm Beach County region. It will serve as an impetus to improve the quality of healthcare and be an incubator in training many of the physicians who will work in all our hospitals and care for our citizens.

Sincerely,

A handwritten signature in cursive script, reading "Gina Melby".

Gina Melby
Chief Executive Officer

GM:pk

HCA East Florida Division

JFK Medical Center

Key Indicator Trending 2003 - 2004

Statistics	2003	2004
Admissions	24,968	25,018
Adjusted Admissions	34,106	34,192
Patient Days	124,258	127,086
Average Length of Stay	4.98	5.08
Average Daily Census	340	347
Equivilant Average Daily Census	465	475
OP Census Factor	36.60%	36.67%
IP Surgeries (including pain and endoscopy cases)	9,550	9,912
IP Surgeries (including pain, endoscopy, and Lithotripsy cases)	8,573	8,619
Outpatient Visits	78,396	72,323
ER Visits	54,205	58,560
Observation Visits	3,862	5,989
Medicare Casemix	1.71	1.79



Bethesda
Memorial Hospital

March 1, 2005

Frank T. Brogan
President
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431

Dear President Brogan:

I have been asked to write in support of the expansion of the current regional medical program to include years three and four at Florida Atlantic University that will be a joint venture between the University of Miami Miller School of Medicine and Florida Atlantic University.

I have followed closely the already emerging medical program at Florida Atlantic University, and I am pleased to extend Bethesda Memorial Hospital's support for this program. Our professional and medical staffs are already participating in the clinical experience for medical students in the early years of their education. As the medical school matures into a four-year campus, we look forward to working with the faculty from the University of Miami Miller School of Medicine at Florida Atlantic University in providing additional clinical experience for the medical students.

The evolution of an academic medical center with a four-year medical program will, I believe, contribute to the improved health and healthcare of all the citizens in the Palm Beach County region. It will serve as an impetus to improve the quality of healthcare and be an incubator in training many of the physicians who will work in all our hospitals and care for our citizens.

Sincerely,

Robert B. Hill
President/CEO

R/FAU-BROGAN

2815 South Seacrest Boulevard • Boynton Beach, Florida 33435 • (561) 737-7733

BETHESDA MEMORIAL HOSPITAL, INC.
STATISTICAL SUMMARY
 FOR THE 12 MONTH ENDING SEPTEMBER 30, 2004

<u>Category</u>	<u>ACTUAL</u>
<u>Medical-Surgical</u>	
Number of Admissions	14,404
<u>Obstetrical</u>	
Number of Admissions	3,267
<u>Pediatrics</u>	
Number of Admissions	406
<u>CCU-MICU-SICU</u>	
Number of Admissions*	2,952
<u>Neonatal Intensive Care</u>	
Number of Admissions**	290
<u>Hospice and Palliative Unit</u>	
Number of Admissions	701
<u>Total</u>	
Number of Admissions	19,392
Average Length of Stay	4.7
Patient Days	91,879
<u>Other</u>	
Average Daily Census	251
Emergency Department Visits	53,346
Ambulatory (Outpatient) Visits	124,468
Ambulatory Surgery Visits	4,421
Surgical Procedures (excluding	
Ambulatory Surgery Visits)	4,186
Deliveries	2,959

* CCU/MICU/SICU admissions and discharges include transfers. These transfers are not included as part of the total hospital admissions and discharges.

** Neonatal admissions include transfers.



BOCA RATON COMMUNITY HOSPITAL

March 3, 2005

President Frank T. Brogan
President
Florida Atlantic University
Office of the President
777 Glades Road
Boca Raton, FL 33431

Dear President Brogan;

Boca Raton Community Hospital takes immense pride in its commitment to Florida Atlantic University as our institutional neighbor and partner plans to extend the current two-year medical school to a four-year MD degree-granting program as part of the University of Miami Miller School of Medicine at Florida Atlantic University

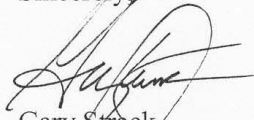
Based on our partnership intent and agreement, Boca Raton Community Hospital is currently planning to rebuild its hospital on the campus of Florida Atlantic University and create a teaching hospital that will be the major substrate for the clinical training of all students who enroll in the University of Miami Medical School already on your campus.

Boca Raton Community Hospital intends to sponsor residency programs that in time will make it eligible to become a member of the Association of American Colleges sponsored Council of Teaching Hospitals. At a minimum this will require four accredited residency programs, two of which must be in the fields of medicine, surgery, pediatric, family practice or psychiatry. These are minimum residency standards for membership in the Council of Teaching Hospital, which is recognized as the gold standard for teaching hospitals. This is our goal for excellence.

800 Meadows Road • Boca Raton, Florida 33486 • 561-395-7100 • www.brch.com
A VOLUNTARY NON-PROFIT COMMUNITY HOSPITAL WITH NO TAX SUPPORT

All the constituencies of Boca Raton Community Hospital, its boards, the senior management and our attending physicians are excited by our partnership plans to transform our respected institutions into the beginnings of a major academic health center in Palm Beach County. Our students, our patients, our physicians, our employees, the economy of South Florida and the entire state of Florida will benefit.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Strack", with a stylized flourish extending to the right.

Gary Strack
President and CEO



**Association of
American Medical Colleges**
2450 N Street, N.W., Washington, D.C. 20037-1127
T 202 828 0400 F 202 828 1125
www.aamc.org

Michael L. Friedland, M.D.
Senior Associate Dean, Biomedical Programs
Florida Atlantic University
Biomedical Science
BC71 Room 145
Boca Raton, FL 33431

Dear Mike:

I enjoyed my visit last week very much. I am very impressed with the progress that you and your colleagues, both at Florida Atlantic University and the University of Miami, have made in planning for the development of a four-year undergraduate medical education program that will be based at FAU. I am particularly excited by the commitment of the leadership at both institutions, and also at the Boca Raton Community Hospital, to design an innovative program that will emphasize the contemporary challenges facing American Medicine, particularly the challenge of providing high quality medical care to patients afflicted with one or more chronic diseases.


I also want to commend the leadership of the partnering institutions on their willingness to work together in responding to what many now believe is one of the most critical issues facing this country – that is, the need to increase significantly the supply of physicians. As you know, the Association of American Medical Colleges has recently endorsed the recommendation of the federal Council on Graduate Medical Education (COGME) that enrollment in U.S. medical schools should increase by at least 15% over the next few years. In thinking about how this might be accomplished, there is a general belief that those states that are experiencing significant population growth – Florida certainly being one of those – should make a special effort to contribute to the needed expansion of medical school capacity.

Given the adoption of the new policy position, the AAMC has spent considerable time thinking about how medical schools might increase class size. While medical schools will approach this issue in different ways, we are quite aware that the educational infrastructure in existence at many schools will limit their ability to expand class size. As a result, we have taken a particular interest in the development of regional campuses, and believe that that approach has advantages for several important reasons. Given this, we are very interested in tracking the progress of the program development at FAU and are willing to be helpful in any way that we can be as you proceed.

I think the medical education community will learn a great deal from the University of Miami-FAU-BRCH experience, which will help other medical schools decide on the best way they can expand class size to help meet the country's need for more physicians. In addition to being one of the leaders in the country in developing a four-year regional campus, I think the nature of the educational program will make the University of Miami Miller School of Medicine and its partners a national leader in medical education.

Let me know how I can be helpful.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mike", is written over the printed name.

Michael E. Whitcomb, M.D.
Senior Vice President for Medical Education &
Director, Institute for Improving Medical Education

Letter of Intent
between
University of Miami,
Florida Atlantic University
and
Boca Raton Community Hospital

Based on review of the previously agreed to and performed feasibility studies undertaken by the above mentioned parties, this Letter of Intent represents the next step in moving forward to provide, through joint efforts, an enhanced level of medical education, patient care, scientific research and service to the greater Boca Raton area.

To achieve this goal the University of Miami, Florida Atlantic University and Boca Raton Community Hospital hereby agree to the following proposals.

For University of Miami:

1. University of Miami School of Medicine in collaboration with Florida Atlantic University and Boca Raton Community Hospital will recruit appropriate members of faculty required by the education programs and provide clinical services in concert with the practicing physicians already in the community

Letter of Intent (Continued)
between
University of Miami,
Florida Atlantic University
and
Boca Raton Community Hospital

2. Designate the Florida Atlantic University campus as its regional four year medical education campus in Palm Beach County
3. Designate Boca Raton Community Hospital as the primary community university affiliated teaching hospital for this regional campus.

For Florida Atlantic University:

1. Work with University of Miami to establish a four-year regional medical education campus of the University of Miami School of Medicine on the Boca Raton Campus of Florida Atlantic University. This will be done in collaboration with the University of Miami School of Medicine and Boca Raton Community Hospital. Florida Atlantic University will provide an appropriate environment for the four years of undergraduate medical education, biomedical research and with Boca Raton Community Hospital and University of Miami postgraduate medical education.
2. Provide a portion of the resources necessary for faculty recruitment and development.

Letter of Intent (Continued)
between
University of Miami,
Florida Atlantic University
and
Boca Raton Community Hospital

For Boca Raton Community Hospital:

1. Provide adequate facilities to meet the obligations and responsibilities of a primary community teaching hospital.
2. Collaborate with University of Miami School of Medicine / Florida Atlantic University to develop full-time and voluntary faculty to support undergraduate and postgraduate medical education, clinical and research activities.

This Letter of Intent authorizes representatives of the participating institutions to pursue affiliation and other agreements and liability concerns of all parties within the next 180 days necessary to achieve those elements listed above and develop a definitive affiliation agreement and a plan of action.

Letter of Intent
between
University of Miami,
Florida Atlantic University
And
Boca Raton Community Hospital

Signatures

University of Miami

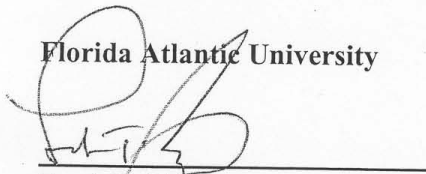


Donna E. Shalala
President of University of Miami

2/1/05

Date

Florida Atlantic University



Frank T. Brogan
President of Florida Atlantic University

3/2/05

Date

Boca Raton Community Hospital



Gray Stack
President of Boca Raton Community Hospital

1/31/05

Date