

New and Developing Medical Schools

Motivating Factors, Major Challenges, Planning Strategies

Part 2

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July 2013

Students learning from a peer about the development of atherosclerotic plaques, including the differences between stable and unstable plaques for the Problem Based Structure project, a component of the Structure curriculum at Hofstra North Shore–LIJ School of Medicine at Hofstra University

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FOREWORD

This is the second report on New and Developing Medical Schools written by Michael Whitcomb and commissioned by the Macy Foundation. It updates the stories of the eight new schools that had been approved at the time of the 2009 report, and it describes the motivating factors, challenges, and early plans for the seven additional schools that have been approved since that report.

This expansion of medical schools comes at a critical time in health care in the U.S. The Affordable Care Act will make it possible for up to 30 million additional citizens to have health insurance. At the same time, there is a growing realization that healthcare system redesign is necessary to make the care for all more coordinated, more affordable, and of more uniform high quality. All of this calls for changes in the way we prepare the next generation of physicians. The new schools have the opportunity to be "laboratories" for innovations in admissions, curriculum, pedagogy, faculty development, and community engagement. They also will be called upon to address important institutional and regional aspirations that led to their creation.

Dr. Whitcomb has performed a very valuable service in telling the "creation stories" of these 15 new schools. His report highlights the differences in the motivating factors, challenges, and strategies at each of the new schools, but it also identifies important common

themes. This will be of use to other institutions that are contemplating starting a new school. It also will be of great use in studying and understanding the outcomes of these schools in the future.

This year the first four new schools will be graduating their first classes, and it will be five years before all will have graduated at least one class. It is too soon to tell whether the new schools collectively will be influential as models of innovation, and it is too soon to tell whether each individually will have the anticipated institutional, community, and regional impact. The Macy Foundation has been supporting a consortium of the new schools to foster the spirit of innovation among them and to enable them to share their experiences and help one another. We are optimistic that these "natural experiments" will have many positive benefits for the communities in which they are situated, for medical education in general, and most importantly for the patients cared for by their graduates. But that is a story to write in the future. In the meantime, we are very grateful to Dr. Whitcomb for documenting this part of the story in his usual thorough and scholarly way.

Hunn E. Fridander IM

George E. Thibault, MD President, Josiah Macy Jr. Foundation

PROLOGUE

In the years following the end of World War II, policymakers in the United States reached the conclusion that the country was going to experience a major shortage of physicians in the coming years unless steps were taken to increase physician supply. In 1949 and 1951, Congress passed legislation that provided grants and scholarships that could be used to increase enrollment in existing medical schools. And during the 1950s six new medical schools were established in the country. Thus, by 1960, there were 87 allopathic medical schools in the country graduating approximately 7,500 students each year.

However, a federal report issued in 1959 concluded that in order to meet the growing need for physicians in the country, the federal government needed to take additional steps that would lead to a substantial increase in medical school enrollment. Given that situation, policymakers reached the conclusion that the impending physician shortage could only be avoided by having the federal government take steps to increase directly the number of medical schools in the country. In 1963, Congress passed legislation to support that effort.

The Health Professions Educational Assistance Act of 1963 was the first in a series of bills passed by Congress during the 1960s and 1970s that provided federal funding to assist in the development of new schools and to promote increased enrollment in existing medical schools. During the same period, many state governments,

recognizing the need for additional physicians in their states, also began to invest state funds in the development of new schools. As a result of these efforts, 40 new medical schools were established in the United States during the 1960s and 1970s, while enrollment in existing schools also substantially increased. Thus, by 1980, the number of medical schools in the country had increased to 127, thereby more than doubling the number of medical school graduates from approximately 7,500 per year to over 16,000 per year.

However, in 1980 the Graduate Medical Education National Advisory Committee (GMENAC), a federal advisory body established by Congress in 1976 to provide an analysis of the state of the country's physician workforce, issued its final report. In the report, GMENAC concluded that the country was going to experience a major oversupply of physicians by the turn of the century. As a result of those findings, federal support for the development of new schools and the expansion of enrollment in existing schools ended. As a result, no new medical schools were established in the country during the 1980s and 1990s. Indeed, two of the country's medical schools closed. Thus, by the end of the century, there were 125 allopathic medical schools in existence in the United States, and no new schools were being developed.

However, the results of workforce studies conducted during the 1990s suggested strongly that the country was actually going to begin to experience a serious shortage of physicians in the coming decade. And in 2000, largely due to concerns that existed at the time about the adequacy of physician supply in the state of Florida, the governor of the state signed legislation authorizing Florida State University to establish a new medical school. Since no new allopathic medical schools had been established in the country during the previous two decades, the decision to establish the school was highly significant. In 2006, the Association of American Medical Colleges (AAMC), in response to a growing body of evidence that the country was already experiencing physician shortages in some specialties and in some regions of the country, issued a policy statement that called for a 30% increase in medical school enrollment. The AAMC acknowledged in the statement that to increase enrollment to that degree would not only require existing schools to increase the size of their student bodies, but would also require the establishment of new schools. The AAMC statement provided the rationale that allowed institutional leaders who were interested in starting a new medical school to obtain approval from their governing bodies and state governments, thereby leading to a second period of medical school expansion in the country.

This is the second report commissioned by the Josiah Macy Jr. Foundation to provide an overview of the challenges that institutions had to overcome in order to establish a new medical school, and how they were able to accomplish that. The first report, which was published in 2009, described the circumstances that led to the development of the eight schools that were in the process of being established at the time the report was published. This report provides updates on those schools and describes in some detail the circumstances that led to the development of seven additional new schools that have been established since 2009. The report only provides information about the ongoing development of the 15 schools that were established following the release of the AAMC policy statement in 2006. The report does not include an update on the medical school established by Florida State University in 2000, since the school graduated its charter class prior to the release of the AAMC policy statement.

INTRODUCTION

Fifteen new allopathic medical schools have been established in this country since the AAMC policy statement was issued in 2006. As a result, there are now 141 allopathic medical schools in the country. Based on projected enrollment figures, it would appear that by the end of the decade, the new schools will be graduating approximately 1,800 students each year, thereby contributing about one-third of the additional graduates called for by the AAMC in its policy statement.

Since the AAMC statement was issued, 10 of the 15 schools established have already enrolled their charter classes, four more will do so later this year (2013), and one is scheduled to do so in 2014. Indeed, four of the schools will graduate their charter classes this year. Since the schools are at different stages in their development, it is premature to analyze to any degree the strategic approaches the schools as a group have employed to develop and implement their education and research programs. Thus, this report does not provide an overview of the specifics of the schools' academic programs, but focuses instead on the forces that contributed to the development of the schools.

It should be noted that 11 new osteopathic medical schools have been established since 2002, and efforts are well under way to establish at least three additional schools within the next few years. Based on the experience to date, it is very clear that there

are fundamental differences in the challenges that must be met to establish allopathic and osteopathic medical schools, due primarily to the ways allopathic and osteopathic schools are organized and function. In general, allopathic medical schools exist as academic units (schools or colleges) within comprehensive universities, and they partner with major teaching hospitals in conducting their education, research, and clinical care missions (academic medical centers). In contrast, the majority of osteopathic medical schools exist within free standing health sciences universities or as academic units within relatively small liberal arts colleges, and they are not partners within the framework of a traditional academic medical center. The osteopathic schools tend to have student bodies that are much larger than those of allopathic schools, their students tend to be widely distributed to a number of clinical care sites for clinical education experiences, and they tend not to serve as sponsors for a significant number of graduate medical education programs. Because the differences in the ways the schools are organized and function are quite profound, the circumstances that led to the development of the new osteopathic schools are not discussed in this report.

The first section of the report outlines the planning process that institutions had to undertake to determine if they were able to establish a new medical school. The report then describes the state of development of the 15 new schools that have been established since the AAMC report was issued. Following that, the report describes a set of critical issues that institutions had to address in order to establish a new school, and how the institutions that were successful in starting a new school addressed those issues. Those observations provide valuable insight into approaches that may help other institutions considering the possibility of starting a new school.

ESTABLISHING A NEW SCHOOL: THE PLANNING PROCESS

Establishing a new medical school requires a planning process that will help institutions determine the likelihood that they can be successful. The nature of the process is such that it requires a considerable commitment of time, effort, and financial resources. Before discussing the specifics of the planning process, it is worth noting the key factors that motivated the leaders of the institutions to embark on an effort to start a new medical school. First and foremost was the highly favorable institutional impact that a medical school would have not only for the universities that initiated the new schools, but also for the hospitals and health systems that were critically important in their establishment. There is no question that the existence of a medical school enhances the reputation and academic standing of a university, while at the same time enhancing the reputation of hospitals and health systems as providers of care for highly complex medical conditions, thus attracting patients to seek care at the institutions.

The second factor that influenced institutional leaders to consider establishing a new medical school was the impact that the school would likely have on the community in which it would be located. Concerns about the adequacy of the physician workforce in the region where the school would be located, particularly the availability of an adequate number of primary care practitioners, drove the decision to start a new school in some cases. In those circumstances, the hope was that the school's graduates would establish practices in the community and attract graduates of other schools to the area.

Finally, it should be noted that the majority of the institutions interested in starting a new school determined that the school would have a favorable economic impact on the community where the school would be located, based on analytic studies conducted by consultants engaged by the institutions. Although the results of the economic impact studies were not the primary motivating factor for establishing a new school, they did provide an incentive for community support for the establishment of the school.

To gain a perspective on the nature of the commitment that those wishing to start a new medical school had to make in planning for the school, it is useful to divide the planning process into two distinct but somewhat related phases. The first phase of the process involves the conduct of a feasibility analysis to determine if it is realistic for the institution to consider developing a new school. The second phase of the process requires the institution to complete the work required for the new school to be granted preliminary accreditation by the Liaison Committee on Medical Education (LCME), the body that accredits the medical education programs conducted by allopathic medical schools.

Feasibility Analysis

As a general rule, the conduct of a feasibility analysis requires institutions to spend many months, and in some cases even years, to obtain the information needed to make an informed decision about how to proceed. There are three major challenges that an institution must address in order to decide whether to go forward with the development of a new school. Most important is to determine the ability of the institution to ensure that it has access to the financial resources needed to cover the costs involved in planning for the development of the school, as well as those involved in operating the school once it has been established. Addressing this issue presented a major challenge to many of the new schools.

Second, the institution must demonstrate that it will be able to provide the space needed to meet the proposed medical school's administrative and instructional space needs. Given the changes that have occurred in the design and conduct of the medical education program in recent years, this is a significant challenge because it requires a substantial amount of space specifically designed for certain kinds of educational experiences. As a result, it has proven difficult for institutions to provide the space by renovating classroom or laboratory space in existing buildings.

And third, the institution must be able to provide quality clinical education experiences for students. In order to meet that responsibility, institutions must enter into formal affiliation agreements with various healthcare providers – hospitals, clinics, and practicing physicians – that are willing to provide opportunities for students to engage in the kind of clinical experiences designated by the medical school. Changes occurring in the healthcare delivery environment are making it particularly challenging for medical schools to provide quality clinical education experiences for their students.

Following the completion of the feasibility analysis, most institutions interested in proceeding with the establishment of a new medical school will have to obtain the approval of its governing body – and in the case of most state institutions, the approval of the state government – to proceed to the next stage of the planning process.

In general, approval is granted if the institution is able to demonstrate that it has the ability to meet the three critical challenges described above. Once an institution has gained the necessary approvals, it then enters the second phase in the planning process.

It should be noted that a number of institutions that engaged in the conduct of a feasibility analysis ultimately decided not to proceed with the development of a new school. The reasons why institutions decided not to proceed are quite variable and reflect to some degree circumstances specific to the institution. It is fair to say, however, that concerns about how the institution would finance the operating costs of a new medical school and secure the clinical affiliations required were most often responsible for the decision not to proceed.

Accreditation Process

Regardless of the specific strategies they decide to employ to meet the challenges involved, institutions interested in establishing a new medical school are ultimately required to demonstrate to the satisfaction of the LCME that they are capable of providing a quality educational program for their students. In order to accomplish that, schools must submit to the LCME a database that provides detailed, written explanations of how they plan to meet the various accreditation standards established by the LCME. If the LCME judges the database to be adequate, it then arranges for a survey team to conduct a site visit to determine the accuracy of the information provided and to explore with the school's leadership any issues of concern.

While the LCME pays careful attention to how a developing medical school has arranged to meet all of the accreditation standards established by the accrediting body, it is clear that there are several areas of special concern to the LCME. Because these issues receive

special attention during the initial stage of the accreditation process, they present certain challenges to the institutions seeking preliminary accreditation. Since all of the new schools described in this report have been granted preliminary accreditation, it is possible to make some observations about how the process has affected the development of a new school by some institutions. It is important to recognize that the schools have used different approaches for meeting certain of the accreditation standards established by the LCME.

The primary focus of the LCME's accreditation process is to determine that a new school is able to develop and conduct an educational program that will provide its students a quality education. The school must demonstrate to the LCME that it has recruited a leadership team capable of designing and overseeing the conduct of the educational program, that the program that has been designed meets the accreditation standards, that it has recruited a faculty capable of providing the program to students, and that it has the facilities required to conduct the program.

One of the LCME's areas of great concern relates to the institution's ability to adequately finance the educational program. Not surprisingly, the LCME wants to make certain that institutions interested in starting a new medical school have the financial resources to fund the school's operating costs in a sustainable way over a number of years. To meet this objective, the institution must be able to demonstrate that it has access to multiple revenue sources that can be used to fund the school's operations, and that the revenue is sustainable over time. An institution without sustainable funding could cover the start up costs, but would place enrolled students at risk if the inability to support operating costs necessitated eliminating critical elements of its educational program or even closing. The LCME does not view favorably institutions that are solely, or largely, dependent on tuition to fund their operating costs.

Although preliminary accreditation is concerned primarily with the first two years of the curriculum, the LCME requires schools seeking preliminary accreditation to demonstrate that they would be able to provide acceptable clinical clerkship experiences in the latter two years of the curriculum. Indeed, this issue seems to have taken on greater importance in recent years. Applying schools needed to have affiliation agreements that made clear the medical school's responsibility for the conduct of the clinical education experiences provided by hospitals, clinics, or practicing physicians and to document that students would be able to interact with resident physicians during their clinical education. There is no question that issues related to the students' clinical education experiences assumed greater importance as the LCME gained experience in making accreditation decisions.

It is important to note that there are substantial differences in the nature of the clinical experiences provided by different medical schools. Since the accreditation process examines the ability of a new medical school to provide quality clinical experiences for their students, it is clear that the LCME is willing to accept very fundamental differences in how the clerkship experiences are organized as long as they are educationally sound. This is not a new position for the LCME. Indeed, there are substantial variations in the design of individual clerkship experiences provided by existing medical schools, as well as differences in the clinical environments in which the clerkships are provided.

The granting of preliminary accreditation is not automatic. Two institutions involved in establishing new medical schools were denied preliminary accreditation largely because the explanations provided regarding how they would address certain standards were deemed to be inadequate. One of those schools was granted preliminary accreditation after going through the process a second time. The sponsoring institution for the other school decided not to reapply, so the proposed school did not become a reality.

NEW MEDICAL SCHOOLS

For the purpose of this report, a medical school is considered to have been established when it is granted preliminary accreditation by the LCME, since receiving preliminary accreditation allows a new school to recruit and admit students. However, it is important to understand that being granted preliminary accreditation is only one step in a five-step process with which a developing medical school must ultimately comply in order for its medical education program to become fully accredited. It is also important to understand that in order for the educational program to be accredited, the institution that is responsible for the medical school (a university or a private corporation) must first have been recognized by an appropriate accrediting body or state agency as an institution that can offer a medical education program.

The first three steps in the LCME accreditation process must be completed satisfactorily before a school will be granted preliminary accreditation, thus allowing them to begin to recruit and admit students. The first step in the process requires the institution planning to develop a new medical school to meet the basic eligibility requirements established by the LCME and to remit an application fee to the accrediting body. Developing programs that complete this requirement are designated as having achieved Applicant School status. In order to be granted Applicant School status, an institution does not need to demonstrate that it is capable of meeting any of the LCME accreditation standards, and in granting a school Applicant Status, the LCME makes no judgment as to whether the institution will ultimately be able to meet the requirements for preliminary accreditation.

The second step in the process requires the developing school to submit a modified Medical Education Database and a Self Study document to the LCME for review. Since the school is not operational when the documents are submitted, they largely set forth how the school plans to meet the standards that must be met to receive preliminary accreditation. If the documents are favorably reviewed by the LCME, the developing school is designated as having achieved Candidate School status. Institutions that achieve Candidate School status are then eligible to undergo a site visit by an LCME survey team.

The third step in the process is completed when the LCME votes to grant the developing school preliminary accreditation based on a review of a survey team report that documents how well the school has met the standards set forth for preliminary accreditation. As noted above, institutions that are in the process of developing a new medical education program may not advertise or directly recruit students to enroll in the program until the program has been granted preliminary accreditation.

There are two additional steps in the accreditation process that lead to a school being fully accredited. Those steps do not occur until a new school has enrolled students. The fourth step in the process occurs when the LCME votes to grant the educational program provisional accreditation. That decision is based on a review of a survey team report that documents to the satisfaction of the LCME that the program meets the requirements set forth for provisional accreditation. The survey team visit for provisional accreditation is conducted when a school's first class is at the midpoint of the second year of the program.

The final step in the accreditation process is completed when the LCME votes to grant the educational program full accreditation based on a review of a report submitted by an LCME survey team after conducting a site visit during the school's fourth year of operation, which documents to the LCME's satisfaction that the program meets the requirements set forth for full accreditation. Once a program has been granted full accreditation its status as a fully accredited program persists for the balance of an eight-year term that began when the program was granted preliminary accreditation. To date, three of the new schools have been granted full accreditation.

The commentaries that follow provide information about the circumstances that led to the establishment of each of the new schools. There is a table in the appendix which summarizes each school, when the school was accredited, governance structure, charter class size, and projected class size. The schools are presented in order according to the year in which they enrolled, or are scheduled to enroll, their charter class. Because the Macy report published in 2009 provided detailed information about the first eight schools, that information is not repeated in the commentaries that follow. Refer to "New and Developing Medical Schools" available on the Macy Foundation website for this information. However, some of those institutions have undergone a great deal of change in the intervening years. The changes that have occurred have not only had an effect on the institutions themselves, but also have generated lessons that might benefit other institutions interested in starting a new medical school in the future. Thus, the commentaries relevant to the original eight institutions highlight major changes of general interest.

University of Central Florida College of Medicine (2009)

The University of Central Florida is a major research university located in Orlando, Florida. The university has an enrollment in excess of 59,000 students. In 2003, the University Trustees approved a plan to establish a new medical school. The university submitted an application to the state in 2005, and the state legislature approved the establishment of the school in 2006. When the legislature authorized the university to establish the school, Orlando was one of the largest metropolitan areas in the country that did not have a medical school.

The College of Medicine was granted preliminary accreditation by the LCME in 2008 and enrolled a charter class of 41 students in 2009. The college increased the entering class by approximately 20 students each year, thus reaching its projected class size of 100 students in 2012. The school's charter class will graduate this year (2013).

In planning for the development of the school, the university leadership made a critical decision to locate the school at the site of a major development (Lake Nona) in suburban Orlando, approximately 15 miles from the university's main campus. When the decision was made to locate the school at Lake Nona, the parcel of land available for commercial development was barren. The establishment of the College of Medicine at Lake Nona has led to the development of a major health sciences center, known as Lake Nona Medical City.

At this time, the site contains a new building that houses the medical school; a new research building that houses the Burnett School of Biomedical Sciences, which is a component of the medical school; a new Veterans Affairs hospital that will open in 2014; a new Nemours Children's Hospital; the Sanford-Burnham Medical Research Institute; a University of Florida research facility; and the M.D. Anderson Cancer Center – Orlando Cancer Research Institute. There are also plans to relocate the university's nursing college from the main campus to the site.

The development of the Medical City has had a major impact on the greater Orlando region and serves as a remarkable example of how the establishment of a medical school in a community, under the right set of circumstances, can not only affect the general healthcare environment, but also have a substantial impact on the local economy.

Florida International University Herbert Wertheim College of Medicine (2009)

Florida International University is a large research university located in a western suburb of Miami, Florida. The university has an enrollment in excess of 50,000 students. The university has been planning the eventual development of a medical school since the early 1990s. In 2005, the university submitted to the state a formal application to establish a new medical school. The legislature approved the application in 2006.

The College of Medicine was granted preliminary accreditation by the LCME in 2008 and enrolled a charter class of 43 students in 2009. The school increased the entering class to approximately 80 students in 2011 and reached its projected maximum enrollment of 120 students in 2012. The college will graduate its charter class this year (2013).

The medical school initially occupied a limited amount of vacant space in a Health Sciences Building located on the university's main campus. The school was able to expand into renovated space within the building as the School of Nursing and the School of Public Health moved to other locations. Unlike most of the new schools, which have organized their basic science faculty as a single basic science department, the school has organized its basic science faculty into four distinct departments. The departments are located primarily in the space the college occupies on campus.

The school has established clinical departments in most of the major clinical disciplines, but family medicine is organized as a division within the Department of Humanities, Health, and Society. Most of the departments are composed of faculty who are located at several different hospitals. The chairs for the clinical departments are located in various hospitals.

The school has established affiliation agreements with a number of hospitals in the greater Miami area, including three major teaching hospitals: Miami Children's Hospital, Jackson Memorial Hospital, and Mt. Sinai Hospital. Third- and fourth-year students are able to participate in required or elective clinical experiences in each of those hospitals, as well as a number of community hospitals in the region. The school has established a multi-specialty ambulatory care facility on the campus.

Texas Tech University Health Sciences Center – Paul L. Foster School of Medicine (2009)

The original Texas Tech University School of Medicine was established on the university's main campus in Lubbock, Texas, in the early 1970s. Shortly thereafter, a regional clinical campus was established in El Paso in order to provide clinical clerkship experiences for students during their third and fourth years of medical school. In the late 1970s, an education building was constructed next to the local county hospital in El Paso, and the site was designated as a Regional Academic Health Center. Although El Paso was established as a regional clinical campus of the Texas Tech University School of Medicine in Lubbock almost 40 years ago, the development of El Paso as a more comprehensive academic medical center did not begin to take place until the late 1990s when the university's Regents approved a proposal to consider expanding the regional campus to a full four-year medical school. That decision followed a change in the organization of the university that occurred in the mid-1990s.

In 1996 the university's health sciences programs, including the medical school in Lubbock, were incorporated into the newly established Texas Tech University Health Sciences Center (TTUHSC). Once TTUHSC was established as a separate university within the Texas Tech University System, the university leadership began almost immediately to plan for the development of a second medical school within the university. In 2003, the Texas legislature approved the establishment of a new medical school in El Paso. During the next two legislative sessions, funds were appropriated to build a new research building and a new medical education building on land adjacent to the University Medical Center, the county hospital that served as the main teaching site for medical students and resident physicians.

The Paul L. Foster School of Medicine was granted preliminary accreditation by the LCME in 2008 and enrolled a charter class of 40 students in 2009. The school increased the size of its entering class by 20 students in each of the next two years, thus reaching the current class size of 80 students in 2011. The school will graduate its first class this year (2013).

The presence of the new school ultimately led to further development at the site with the construction of the El Paso Children's Hospital and an expansion of the medical center's women's hospital. There are plans in place to construct a building to house a school of nursing that currently operates in leased space in downtown El Paso. The move of the nursing school will allow the school to greatly increase its enrollment. Thus, the past decade has seen the evolution of a major university health sciences center in El Paso, largely as a result of the decision to expand the regional clinical campus in El Paso to a full four-year medical school.

In May 2012, the University System Board of Regents agreed to initiate a process for transitioning the health sciences center in El Paso into a separate health sciences university within the Texas Tech University System. The new health sciences university will include the Paul L. Foster School of Medicine and the Gayle Greve Hunt School of Nursing, along with other health sciences programs that are being developed as part of the medical center in El Paso. If approved, the Texas Tech University System will include Texas Tech University, the system's original comprehensive university based in Lubbock, and two separate health sciences universities.

The development of the academic health sciences center in El Paso is an important accomplishment, since the city, which has a population of over 700,000 persons, is designated by the federal government as a medically underserved area. The medical school is committed to developing a range of education and research programs that will serve the needs of the population living in the Rio Grande border region.

The Commonwealth Medical College of Pennsylvania (2009)

In 2002, a consortium of community leaders in Scranton, Pennsylvania, began discussions about establishing a medical school in the city. After considering a number of options for how the school might be established, the consortium decided to establish the Commonwealth Medical Education Corporation, a 501(c)(3) non-profit entity, to serve as the corporate home for the development of a new freestanding medical school in the city. The medical school, which was ultimately named The Commonwealth Medical College (TCMC), was granted preliminary accreditation by the LCME in 2008 and enrolled a charter class of 65 students in 2009. The school increased the size of its entering class to 100 students in 2012. The school will graduate its charter class this year (2013).

When the school admitted its first class, it was located in facilities owned by Lackawanna College, a private institution in Scranton. At that time plans were in place to relocate the school to a new facility that was being constructed with funds provided by the Commonwealth of Pennsylvania. The school planned to increase enrollment to 120 students when the new medical school facility became available in 2011.

However, early in 2011, an LCME survey team conducted a site visit as part of the process to determine a new medical school's eligibility for receiving provisional accreditation. This step in the accreditation process was required before students in the charter class could enter the third year of a school's curriculum. The survey team identified several major concerns about the school's ability to provide a quality education for the enrolled students. The team was particularly concerned about the school's financial status and the plans that were in place for providing clinical education experiences for students who would be entering the third year of the curriculum in several months. As a result of the survey team's findings, the LCME informed the school's leadership that the school could not increase enrollment as originally planned, and the school was placed on probation when the LCME met the following June.

The school's financial status was of great concern to the LCME largely because the school did not have a long-term source of external funds that would supplement tuition revenue to the degree required to cover the school's operating costs. When the survey team conducted its visit, the school depended on funds being provided by Blue Cross of Northeastern Pennsylvania to cover regular operating costs. However, since Blue Cross did not intend to provide funds on an indefinite basis, the school needed to identify other revenue sources that could be used to replace or supplement those funds. Since there was no plan in place, the LCME clearly questioned whether the school would be able to maintain financial viability in the long run and decided that the school should not be allowed to increase enrollment until its financial situation was corrected.

The situation faced by the school was largely related to the fact that the school was established as a private corporate entity rather than as a component of a comprehensive university or in partnership with a major hospital or health system. Thus, following the LCME's decision to place the school on probation, it faced the challenge of establishing a relationship with an entity that could provide financial support. Accordingly, the school's leadership entered into negotiations with the University of Scranton, a private university, to explore whether an affiliation of some kind might be of benefit to both organizations. Those negotiations were not successful. Given no other ongoing discussions with potential affiliates or partners, Blue Cross of Northeastern Pennsylvania agreed to serve as a source of financial support for a limited number of years while the school attempted to correct its financial situation. During that period, the school moved into its new building in Scranton and continued to address the concerns expressed by the LCME about the school's plans for the conduct of the clinical education experiences to be provided in the third and fourth years of the curriculum.

The LCME conducted a repeat site visit in January 2012, and based on the finding of the survey team and information provided by the school after the visit, the LCME decided at its June 2012 meeting to remove the school's probationary status and to grant the school provisional accreditation. The LCME also allowed the school to increase its 2013 entering class enrollment to 100 students. During the period that the school was engaged with the LCME to resolve the issues of concern, the school experienced a major leadership change. The TCMC President/Dean resigned in February 2011, and an interim president was appointed shortly after that. A new President/Dean was appointed following the LCME's June decision and began to serve in that capacity in September 2012.

Virginia Tech Carilion School of Medicine (2010)

Virginia Tech Carilion School of Medicine was established as the result of a public-private partnership between Virginia Tech University, located in Blacksburg, Virginia, and the Carilion Clinic, located approximately 40 miles away in Roanoke, Virginia. The school is incorporated as a free-standing 501(c)(3) non-profit entity.

The school was granted preliminary accreditation by the LCME in 2009 and enrolled a charter class of 42 students in 2010. The school will graduate its charter class in the spring of 2014. The school has maintained an entering class size of 42 students and has no plans to increase enrollment over time.

The school is located in a new research building that was constructed on the campus of the Carilion Clinic's main hospital in Roanoke using funds provided by the Commonwealth of Virginia. The Virginia Tech Carilion Research Institute, a component of Virginia Tech University, is the principal occupant of the building. Since the School of Medicine is a private corporate entity, it rents the space which it occupies in the building.

Oakland University William Beaumont School of Medicine (2011)

Oakland University, which is classified as a doctoral/research university, is located in Rochester, Michigan, north of Detroit. The university has an enrollment of approximately 20,000 students. In 2006, the university leadership began to explore the possibility of establishing a new medical school and entered into discussions with the leadership of William Beaumont Health System about partnering in the effort. William Beaumont is one of the largest health systems in the country. In 2007, the leadership of the two institutions announced their plans to proceed with the development of the school.

Oakland University William Beaumont School of Medicine was granted preliminary accreditation by the LCME in 2010 and enrolled its charter class of 50 students in 2011. The school increased the size of its entering class to 75 students in 2012 and anticipates increasing the entering class size to 100 students in 2013. The school will graduate its first class in 2015. The school currently occupies renovated space in several buildings on the Oakland University campus. While there are plans to build a new medical school building in the future, the timeframe for construction of the facility has not yet been determined.

During the past year, the health system embarked on a major effort to recruit a number of new clinical department chairs who would possess the kind of academic qualifications associated with department chairs of medical schools. Although not directly related to the development of the medical school, the Beaumont system recently entered into a partnership arrangement with the Henry Ford Hospital system, thereby greatly expanding the Beaumont presence in the greater Detroit area.

Hofstra North Shore–LIJ School of Medicine at Hofstra University (2011)

The Hofstra North Shore–LIJ School of Medicine was established as a result of a partnership agreement reached between Hofstra University, a private university located in Hempstead, New York, and the North Shore–LIJ Health System, one of the largest health systems in the country. The university, which is classified as a doctoral/research university, has an enrollment of approximately 10,000 students. The leadership of the two institutions announced their intent to establish the medical school in 2007.

The school was granted preliminary accreditation by the LCME in 2010. The school enrolled a charter class of 40 students in 2011 and increased the entering class size to 60 students in 2012. The school will graduate its first class in 2015. The school anticipates reaching its projected maximum class enrollment of 100 students in the next few years.

The school is located near the university's main campus, approximately 13 miles from the main North Shore–LIJ hospital, which serves as the school's primary site for the clinical education of its students. The school currently occupies renovated space in a facility that previously served as a training facility for the New York Jets professional football team. Plans exist for a major expansion of the facility in the coming years.

Charles E. Schmidt College of Medicine of Florida Atlantic University (2011)

Florida Atlantic University (FAU) is a public institution whose main campus is located in Boca Raton, Florida. The state legislature authorized the university in 1955, thereby making it the first public university established in southeast Florida. Although the university enrolled its first students in 1964, it was only authorized to admit upper-level undergraduate and graduate students in 1984. During the 1990s, the university experienced considerable growth and established six additional campuses in the region. At present, the university offers more than 170 undergraduate and graduate level programs and has an enrollment exceeding 30,000 students.

In the late 1990s, FAU and the University of Miami (UM), a private institution, agreed to establish a medical education program that would offer the first two years of the University of Miami School of Medicine curriculum on the Boca Raton campus. The original intent of the program was to provide a way for UM to increase the size of its student body. Because of funding constraints that existed at the time, the original group of 20 students was not enrolled until 2004. Shortly thereafter, FAU and UM, responding to growing concerns about the inadequate supply of physicians for the state, requested that the program be expanded to a full four-year medical education program. In 2005, the state's Board of Governors and the legislature approved the request, establishing the University of Miami Miller School of Medicine (UMMSM) at Florida Atlantic University. A charter class of 32 students entered the four-year program in 2007, and a second class of 48 students entered the program the following year.

In 2008, FAU and UM faced several major problems related to the continued development of the program. Of particular importance, the Boca Raton Community Hospital (BRCH), which had been a third party in the original agreement that defined certain aspects of the relationship to be developed between FAU and UM, withdrew from the agreement because of evolving financial problems. The hospital had been included as a partner in the original agreement because of its commitment to building a hospital on the FAU campus, which would have served as the major teaching hospital for the program and would have led to the development of a full-fledged

academic medical center in the region. When BRCH withdrew from the partnership agreement, FAU and UM were faced with the need to negotiate a new affiliation agreement at a time when the two institutions were already experiencing difficulties in their relationship.

The difficulties the two institutions faced related largely to how each would contribute to the funding of the educational program and to how administrative oversight of the program would be structured. To a great extent, because one is a private institution and the other is a public institution, their governance structures operated with very different policies and procedures, creating tension over how to address those issues. While both institutions contributed to the financing of the program, the majority of the funds supporting the program was appropriated by the legislature to FAU, and the educational program was conducted largely in or around Boca Raton, some 40 miles north of Miami.

Because of the difficulties in satisfactorily resolving the issues of concern, FAU decided to explore the possibility of establishing a separately accredited medical school. Since the university was providing the space and most of the financial support required for the conduct of the four-year UMMSM program, university officials argued that they could manage a new medical school without requiring the state to commit additional resources. In the summer of 2010, the state legislature and the governor approved the university's request, and eight months later (February 2011) the LCME granted the new school preliminary accreditation. Anticipating approval by the LCME, FAU had developed an aggressive plan for recruiting students into its charter class. As a result, it was able to enroll a charter class of 43 students in the summer of 2011. The school increased the size of its entering class to 63 students in 2012 and plans to limit its class size to 63 students for the foreseeable future, in large part because of the limited size of the building it occupies on campus and the limited availability of clinical teaching sites in the community.

It is worth noting that the school has made a major effort to increase graduate medical education (GME) in the region by working with five community hospitals to establish a GME consortium. The school has also created an opportunity for future students to engage in substantive research experiences by partnering with The Scripps Research Institute satellite campus that was established on the Jupiter campus of Florida Atlantic University.

Cooper Medical School of Rowan University (2012)

The Cooper Medical School of Rowan University was established in Camden, New Jersey, as a result of a partnership between Rowan University, a public university located in Glassboro, New Jersey, and The Cooper University Hospital, a major teaching hospital located approximately 20 miles northwest of Glassboro in Camden.

The university was originally established as a teachers' college in the 1930s (New Jersey State Teachers College at Glassboro), but expanded its curriculum in the 1950s to become the Glassboro State College. In 1992, the institution was renamed the Rowan College of New Jersey in honor of a major donor, and in 1997 it achieved university status and changed its name to Rowan University. The university currently has an enrollment of approximately 11,000 students and offers approximately 80 undergraduate majors, 55 master degree programs, and a single doctoral program in educational leadership.

The Cooper University Hospital was established in Camden as the Cooper Hospital prior to the beginning of the 20th century. Over the years the hospital grew into a tertiary care center with more than 500 beds. The hospital ultimately established a number of ambulatory care sites throughout southern New Jersey, leading to the development of the Cooper Health System in 1996. Beginning in 1981, the hospital served as a regional clinical campus for the Robert Wood Johnson School of Medicine. At present, the hospital offers graduate medical education programs in 12 different specialties and fellowships in 17 subspecialties.

The circumstances that led to the development of the medical school in Camden are the result of a series of events that transpired over a number of years, beginning in the mid-1950s. In 1954, Seton Hall University, a private university, established the Seton Hall College of Medicine and Dentistry, the first medical education and dental education programs in New Jersey. In 1962, Rutgers University, a public university, established a medical education program that provided the first two years of medical school. In 1965, the State of New Jersey acquired the Seton Hall College of Medicine and Dentistry, renamed it the New Jersey College of Medicine and Dentistry, and relocated the medical school to Newark. And in 1970, the state created the College of Medicine and Dentistry of New Jersey (CMDNJ) by merging the two medical schools into a separate institution governed by a separate board of trustees.

In 1975, the South Jersey Medical Education Act directed the university to establish allopathic and osteopathic medical education programs in southern New Jersey. The law led to the establishment of the School of Osteopathic Medicine in Stratford and the establishment of the Cooper Hospital in Camden as a clinical campus for the Rutgers Medical School. In 1981, CMDNJ was converted to the University of Medicine and Dentistry of New Jersey (UMDNJ), the largest freestanding public university of the health sciences in existence in the country at that time. In 1986, the Rutgers Medical School located in New Brunswick and Piscataway was renamed the Robert Wood Johnson (RWJ) Medical School. The designation of Cooper as a major clinical affiliate for the RWJ Medical School in 1981 led to Cooper becoming the major teaching hospital in southern New Jersey.

During the years that followed the establishment of UMDNJ, there continued to be interest on the part of politicians and community leaders in the development of a separate allopathic medical school in southern New Jersey. In June 2009, the governor of the state issued an executive order calling for the implementation of a reorganization plan that transferred "certain specified functions, powers, and duties of the University of Medicine and Dentistry of New Jersey as are necessary to establish, operate, and maintain a four-year, allopathic medical school in Camden, New Jersey, to Rowan University" for the specific purpose of establishing a medical school in southern New Jersey. The plan not only granted Rowan the authority to establish and operate a new allopathic medical school, it also transferred to Rowan certain state funds that had been allocated to UMDNJ to support the clinical education program conducted by RWJ in Camden, including funds for the ongoing construction of a medical school building in Camden. As part of the reorganization directive, UMDNJ, Rowan University, and Cooper University Hospital were required to execute a Memorandum of Understanding that set forth the terms for the transfer of the UMDNJ Regional Clinical Campus based at the Cooper University Hospital to Rowan University, thereby ensuring that Cooper would be the primary clinical affiliate for the new Rowan medical school.

Given the history of the development of the new medical school in Camden, it is interesting to note that in 2011 the current governor of the state established an advisory committee to examine the organization of higher education in the state with a particular focus on the status of UMDNJ. After lengthy discussions of the committee's findings and recommendations, the governor signed legislation that transferred all of the colleges and schools of UMDNJ except the osteopathic medical school to Rutgers University, transferred the osteopathic medical school to Rowan University, and established Rowan University as a research university. Thus, in a relatively short period of time, Rowan University emerged from being primarily a relatively small college to being a research university, and only the second university in the country that is home to both an allopathic and an osteopathic medical school.

Because the development of the allopathic medical school was accomplished in part by transferring the RWJ Clinical Campus in Camden to Rowan, the school acquired a large number of experienced faculty and administrators in the process. In addition, planning was well underway for the construction of new medical education building on the Cooper campus. As a result, the university was able to move quickly to establish the new medical school. The school was granted preliminary accreditation by the LCME in 2011 and enrolled its charter class of 50 students in 2012. The school will graduate its first class in 2016.

University of South Carolina School of Medicine, Greenville (2012)

The University of South Carolina is the state's primary research university. The university's flagship campus is located in Columbia, South Carolina, but other four-year campuses are located in Aiken, Beaufort, and the Greenville-Spartanburg area. The university also has two-year campuses in Lancaster, Sumter, Salkehatchie, and Union. The university has an enrollment of more than 44,000 students and contains 14 degree-granting colleges and schools that offer more than 325 degree-granting programs.

In the mid-1970s, the university established a medical school in Columbia. In contrast to the situation faced by institutions today, federal government programs existed in the 1960s and 1970s that provided grants to institutions to offset some of the costs incurred in starting a new medical school. One of those programs was established by the Veterans Administration Medical School Assistance and Health Training Act of 1972. The program provided funds to support the development of new medical schools on the campuses of Veterans Administration (VA) hospitals. In 1973, the legislature authorized the University of South Carolina to apply for a grant to establish a new medical school in the state. A decision had been made to locate the school in Columbia, since it was the site of both the university's main campus and a VA hospital. The grant was approved in 1974, and the school's charter class enrolled in the fall of 1977.

In 1983, the school began offering opportunities for fourth-year students to take elective rotations at Greenville Hospital, which was located in Greenville, South Carolina, approximately 90 miles from Columbia. In 1991, the school entered into an agreement with the hospital to create a regional clinical campus in Greenville. With the development of the new medical school in Greenville, the hospital will no longer serve as a regional clinical campus for the school in Columbia.

Greenville Hospital was established as a public hospital in 1912 and has now evolved into a large, integrated health system with five campuses and almost 600 employed physicians (Greenville Hospital System – GHS). The hospital began offering internships in the 1920s and developed residency programs in the 1950s and 1960s. GHS now sponsors 11 residency and fellowship programs that provide training for over 175 residents. The system sponsors a large number of clinical trials and is committed to developing efforts focused on improving health care. To that end, GHS, in collaboration with the University of South Carolina and Clemson University, established the Institute for the Advancement of Health Care several years ago.

In 2008, university and health system officials signed a networking agreement that committed the institutions to work together in creating programs that would enable the institutions to evolve into a model

academic health system. In 2009, officials from the two institutions authorized a feasibility study to explore the possibility of establishing a four-year medical education program in Greenville. Based on the findings of the study, the Boards of the two institutions instructed key staff to develop a plan for the establishment of a school of medicine in Greenville. In August of 2010, the Boards approved the creation of the University of South Carolina School of Medicine–Greenville. The new medical school in Greenville, which was established primarily as a result of efforts undertaken by the Greenville Hospital System, is the second medical school established within the university.

The new medical school is located on the main campus of the GHS. An empty building that had been built on the campus approximately seven years ago to house a research program that was never funded was renovated to meet the administrative and instructional space needs of the medical school. The school's financial needs are being met by a combination of tuition, endowment earnings provided by GHS, philanthropy, and a dean's tax on the clinical earnings of the physician practice group. The state provides no direct funding to support the school's operating costs. The GHS has had a basic science research relationship with Clemson University for over two decades. There are approximately 60,000 square feet of research laboratory space on the campus at the present time. The medical school is in the process of recruiting basic science faculty to Greenville to help meet the teaching and research needs of the school.

The school was granted preliminary accreditation by the LCME in 2011 and enrolled its charter class of 53 students in 2012. The school plans to increase the size of its entering class to 75 students in 2014. The University of South Carolina is now one of a small number of comprehensive universities that have two separate allopathic medical schools. The school will graduate its first class in 2016.

University of California, Riverside, College of Medicine (2013)

The University of California, Riverside (UC Riverside) is a research university that has an enrollment of approximately 20,000 students. The university has been involved in the education of medical students since 1974 when the first group of students enrolled in a seven year B.S.–M.D. Biomedical Sciences Program conducted jointly by UC Riverside and the University of California, Los Angeles School of Medicine. The original design of the program required students to enroll as undergraduates at UC Riverside in order to be considered for admission to the medical education program after completing the third year of the undergraduate course of study. Students accepted to the program then completed the first two years of the medical school curriculum at UC Riverside before transferring to Los Angeles for completion of the clinical years of the curriculum.

In 2002, the university began planning for the possible development of an independent medical school. Given that, it is not surprising that the university sought approval from the University of California Regents to establish a new medical school when a university advisory council issued a 2007 report recommending that medical school enrollments be increased by more than 30%. The report indicated that enrollment should be increased primarily by expanding enrollments of existing schools. However, the council also recommended that at least one new school be established. In 2008, UC Riverside received permission from university officials to establish a new medical school.

However, because of the economic downturn's impact on funding for higher education in California, the Regents placed significant constraints on how UC Riverside could fund the development of the school. Most important, the university would not receive additional funding to finance the costs involved in establishing the school. Nevertheless, UC Riverside anticipated that it would be able to acquire support from a variety of sources and, based on that assumption, projected that it would be able to enroll its charter class in 2012.

However, the financial plan developed by the UC Riverside officials failed to meet the LCME's requirement for granting preliminary accreditation. As a result, the school was denied preliminary accreditation when it formally applied in 2011. Following that, UC Riverside officials successfully obtained funding commitments from the county and various healthcare entities to allow the school to meet the LCME's financing requirement. The school then reapplied for accreditation and was granted preliminary accreditation by the LCME at its June 2012 meeting. The school anticipates enrolling a charter class of 50 students in 2013 and plans to graduate its first class in 2017.

University of Arizona College of Medicine – Phoenix (2013)

The University of Arizona (UA), the state's leading research institution, has an enrollment of approximately 40,000 students. The university is located in Tucson, the state's second largest city approximately 120 miles south of Phoenix, one of the country's largest and fastest growing metropolitan areas. In 1961, the state decided to establish a medical school on the university campus in Tucson despite the fact that many thought at the time that the school should be established in Phoenix.

The school enrolled its first class of 32 students in 1967. As the size of entering classes increased, the school began in the 1970s to send some of its third- and fourth-year students to Phoenix for clinical rotations since the hospitals in Tucson were unable to meet

the school's needs. Throughout this period, many of the community leaders in Phoenix continued to express their unhappiness over the fact that the medical school had been established in Tucson. Indeed, since it was perceived that the UA medical school did not have an adequate presence in the city, there were several attempts to start a second medical school in Phoenix.

In 1991, the LCME cited the medical school for its failure to provide adequate management and oversight of the clinical experiences being conducted in Phoenix and essentially mandated that the school establish an administrative office in Phoenix to serve that purpose. The following year the school did establish a Phoenix office, not only to be in compliance with the LCME mandate, but also to create a more visible presence for the school in the city. Nevertheless, there continued to be unhappiness over the fact that the school was not located in Phoenix. In an attempt to address that situation, the local county hospital partnered with Arizona State University (ASU) in the mid-1990s in an effort to establish a separate medical school in the city. The effort was not successful since the governing body that oversees Arizona's three state universities did not approve the proposal.

In 2002, the governor of Arizona established the Arizona Bioinitiative Task Force to lead an effort to develop a biomedical research center in downtown Phoenix, and the mayor of the city agreed to provide land that could be used for its development. As part of the initiative, there was general agreement that the effort would be enhanced by the presence of a medical school at the same location. As a result, the dean of the UA Medical School began to explore how the school should respond to the interest in having a more structured branch campus located at the site. In 2004, the Arizona Board of Regents adopted a plan for UA and ASU to partner in establishing a four-year medical education program at the downtown site. After a great deal of discussion and negotiation involving the two university partners and several of the Phoenix hospitals, the campus was established. In 2007, the Phoenix campus enrolled its first class of 24 students. The size of the entering class was increased to 48 students in 2008. In 2010, ASU withdrew from the partnership in order to enter into a relationship with the Mayo Clinic in Scottsdale. In 2011, a decision was made by the leadership of UA to allow the Phoenix campus to become a separately accredited medical school within the university. That same year, the size of the entering class was increased to 80 students.

In 2012, the Phoenix campus medical school was granted preliminary accreditation by the LCME, thus allowing it to become the second medical school within the University of Arizona. That same year, a new health professions education building was opened on the site of the school's campus. The building provides space to meet the medical school's current administrative and instructional needs and will provide space to serve the school's future research needs. The building also provides space for other health professions schools based in the state's three major universities. The medical school will enroll its first class of 80 students in 2013 and plans to graduate its first class in 2017.

Central Michigan University School of Medicine (2013)

Central Michigan University (CMU) is a doctoral/research university located in Mt. Pleasant, Michigan, a small community in the north central part of the state. The university offers approximately 200 academic programs at the undergraduate, graduate, and doctoral levels. There are more than 21,000 students enrolled at the university's Mt. Pleasant campus and an additional 7,000 enrolled online.

In 2007, the university was approached by a group of community leaders in Saginaw, Michigan, a community approximately 50 miles

east of Mt. Pleasant, who were interested in exploring whether CMU would be interested in partnering in the development of a medical school in Saginaw. At the time, Saginaw was the site of a regional clinical campus for the Michigan State University College of Human Medicine and had served in that role since the college was established in the 1960s. However, in recent years, community leaders in Saginaw had became increasingly concerned about the regional campus' relationship with the college of medicine and therefore decided to explore other options for maintaining an undergraduate medical education program in the community. They first approached Saginaw Valley University, a local university, about the possibility of the university starting a medical school. When the university decided, based on an assessment of its resources, that it could not start a medical school, a decision was made to approach CMU.

From the outset, the Saginaw community was clear that if CMU would agree to establish a medical school, the school should be located in Saginaw in order to provide onsite support for the undergraduate and graduate medical education programs that already existed in the community. At that time, several of the large community hospitals served as the sites for five graduate medical education programs that provided training in core specialties for approximately 100 resident physicians. The programs were administratively managed by a separate corporate entity, Synergy Medical Education Alliance, which also served as the programs' institutional sponsor. Community leaders also saw the possibility that the presence of a medical school could enhance the state of medical practice in the community and make Saginaw a more attractive location for physicians to establish their practices.

The leadership of the university found the possibility of establishing a medical school attractive and agreed to explore the possibility of doing so. It is important to recognize that this initiative began at a time when the economy of the state was in disarray, and therefore state support for its institutions of higher education was declining. Nevertheless, the university's leadership, supported by its Board of Trustees, embarked on an analysis to determine the possibility of starting a new medical school under the existing conditions. Although the university president, who had provided strong leadership for the development of the school, left the university during the early stages of the planning process to become president at another university, the university Board and its new leadership agreed to continue the effort.

Given the clear need to develop a meaningful presence in the Saginaw community, the university faced an important challenge in determining how to relate to the teaching hospitals in Saginaw and, importantly, to the Synergy Medical Education Alliance. In late 2010, the CMU Board of Trustees approved the establishment of a relationship with the institutions by agreeing that the university should join the Synergy Medical Education Alliance, which would be renamed the CMU Medical Education Partners. The Board also approved the establishment of a 501(c)(3) non-profit corporation that would serve as the university's participant in clinical practice and medical education activities in Saginaw. In addition to the development of formal relationships with the Saginaw participants, the college has agreed to establish a physical presence in the community by occupying space provided by the teaching hospitals in the community.

Perhaps the most important challenge the university faced in establishing the school was how to finance the costs associated with the development of the school, as well as the school's ongoing costs once in operation, given the lack of additional support from the state. This issue became particularly challenging when the university's Academic Senate voted in November 2011 that the university should cease all work on behalf of the school of medicine until a number of issues of concern to the university faculty had been addressed to the satisfaction of the Senate. This vote occurred at a time when the LCME was actively engaged in determining whether the college should be granted preliminary accreditation.

In fact, the LCME granted the School of Medicine preliminary accreditation at its February 2012 meeting. Although its overall action was favorable, the LCME cited areas in which the School of Medicine was not yet in full compliance with accreditation standards, and thus required the School of Medicine to submit three follow up progress reports during the following year. The School of Medicine has met the requirements set forth by the LCME and will enroll its first class of 60 students in 2013. The size of the entering class is planned to increase to 100 students in 2014. The school will graduate its first class in 2017.

Frank H. Netter MD School of Medicine at Quinnipiac University (2013)

Quinnipiac University is a private institution located in Hamden, Connecticut, approximately six miles north of New Haven. The university, which has an enrollment of approximately 5,700 full-time undergraduate and 2,000 graduate students, offers more than 50 undergraduate programs, approximately 20 graduate programs, and several professional degree-granting programs (nursing and law). The university was a small college until it began to expand its academic programs around 1990. In 1995, the University of Bridgeport Law School became a part of Quinnipiac, and in 2000 the college changed its name to Quinnipiac University. Of note, the university has had a long standing commitment to health professions education. At present, the School of Health Sciences offers a wide array of health professions programs including highly respected programs in physical therapy and occupational therapy. In 2011, the nursing program was converted to a separate School of Nursing.

In 2010, the university announced its intent to open a new medical school, following the completion of a comprehensive feasibility study

conducted on campus with the assistance of outside consultants. The medical school and associated research laboratories will be housed in two buildings located on the university's North Haven campus, a four-building complex the university purchased in 2007. The campus, which is located approximately two and one-half miles from the main campus, opened in 2009. The School of Health Sciences, School of Nursing, and School of Law have been relocated to two of the buildings on the new campus.

Because of its location in a community that does not have a major teaching hospital, the medical school has faced a major challenge in identifying hospitals that would be willing to provide opportunities for the school to develop clinical experiences for its students. After visiting a large number of hospitals to explain the medical school's plans for developing required clinical experiences, five hospitals agreed to further discussions and ultimately submitted plans for how they would be able to work with the school. As a result of the review process, St. Vincent's Medical Center located in Bridgeport, Connecticut, approximately 25 miles from North Haven, was selected to be the school's primary clinical affiliate. St. Vincent's is a teaching hospital that currently sponsors several graduate medical education programs. Under the terms of the affiliation agreement, the clinical service chiefs at St. Vincent's will serve as the medical school's chairs of clinical departments. Several other hospitals will be selected to participate with the medical school in offering clinical education experiences for students.

The medical school was granted preliminary accreditation by the LCME in 2012 and will enroll a charter class of 60 students in 2013. The school plans to increase the size of its entering class to 90 students in 2014 and to a maximum of 125 students in 2015. The school will graduate its first class in 2017.

Western Michigan University School of Medicine (2014)

Western Michigan University (WMU) is a research university located in Kalamazoo, Michigan. The university, which offers 140 bachelor, 69 master, and 29 doctoral programs, has an enrollment of approximately 25,000 students. In October 2007, the university president announced that WMU was planning to begin internal discussions about the possibility of starting a medical school, and in December of that year, a Medical School Feasibility Committee held its first meeting. The university subsequently engaged several different consulting groups to provide advice on the feasibility of establishing the school. The Kalamazoo Community Foundation provided funds to support an indepth study by one of the groups. The report was released in February 2009, and after due consideration the university Board of Trustees approved going forward in November 2009. The university president submitted a letter of application to the LCME in February 2010.

From the beginning of the planning process, WMU was in discussions with the two major health systems based in Kalamazoo—Borgess Health and Bronson Healthcare Group—about the possibility that they would partner with the university in the development of the school. At the time, both health systems were members of the Michigan State University (MSU) Kalamazoo Center for Medical Studies, an entity that managed clinical rotations for third- and fourth-year MSU medical students and provided administrative support for the graduate medical education programs conducted by the community's two teaching hospitals, as well as continuing medical education programs for practicing physicians. In February 2012, it was announced that the MSU Center had become a component of the WMU Medical School.

One of the major challenges WMU faced as it began to plan for the opening of the school was how to finance the school's operating costs

once it was established. To a great extent, the challenge reflected the fact that the state was unable to provide additional support to the university for that purpose because of the impact that the economic downturn had on state revenue. Because of the university's financial situation, the leadership indicated throughout the initial planning process that the school would have to be supported by private funding sources, rather than through the transfer of existing university resources. In keeping with that commitment, the university, in partnership with Borgess Health and Bronson Healthcare, established the medical school as a 501(c)(3) non-profit corporate entity with a separate board of trustees. As a result, the medical school is not an academic unit within WMU.

The school has been the recipient of several major gifts, thus illustrating the community support for the development of the medical school. In March 2011, the university president announced that a donor had contributed \$100 million to support the school, and in December 2011, the president announced that a 330,000 square-foot building in downtown Kalamazoo had been donated to the university to house the new school. Because the building had been a research facility for The Upjohn Company, the new medical school location in downtown Kalamazoo is to be named the W.E. Upjohn Campus. The building will be renovated to meet the administrative and instructional space needs of the school.

The medical school was granted preliminary accreditation by the LCME in October 2012 and plans to enroll a charter class of 50 students in 2014. The size of the entering class will increase to 80 students over the next five years. The school will graduate its first class in 2018.

MEETING CRITICAL CHALLENGES

As noted previously, institutions interested in establishing a new medical school must successfully address a set of critical challenges, and the planning process that they must follow to do so requires a considerable commitment of time, effort, and financial resources. While the challenges are fundamentally the same for each institution, the institutions have employed different strategies to resolve them. The various approaches that were employed in establishing the new medical schools discussed in this report provide important lessons for institutions that might be interested in starting a new medical school in the future.

It is important to be clear that the strategies discussed below relate specifically to the challenges that must be met simply to establish a new medical school. Once established, a new school faces additional challenges that relate primarily to the implementation and conduct of its academic programs, primarily the educational program leading to the M.D. degree. It is premature to try to provide an overview of how the new schools responded to those challenges, since the institutions are at different stages in their development. While four of the schools will graduate their first class this year (2013), another four will only be enrolling their first class later in the year, and another will not enroll its first class until 2014. As a result, it is not feasible at this time to gain insights from the group as a whole as to how they met the challenges related to the conduct of their education and research programs.

The strategies employed by the 15 new schools discussed in this report to address the three major challenges to starting a new school are discussed below. As noted previously, the major challenges faced by institutions interested in starting a new medical school are: (1) financing the school's development and operating costs, (2) acquiring the facilities required to meet the schools' space needs, and (3) developing clinical affiliations that will allow the school to provide clinical education experiences for students.

Financial Arrangements

Needless to say, establishing an approach for financing the costs involved in the development and implementation of a new medical school is the greatest challenge that institutions interested in starting a new medical school had to address. Unlike the situation that existed in the 1960s and 1970s, a period when a large number of new medical schools were established in this country, no federal programs were in place to provide financial support that would cover some of the initial costs involved. Moreover, the economic situation that has existed in the country in recent years meant that many state governments were not as well positioned as in the past to provide state support for the development of new medical schools. Thus, institutions interested in starting a new medical school faced a much greater challenge in financing the school than did those that started new schools during the last century. There is no question that concerns about the financial stability of the institutions were a key factor leading the LCME to make adverse decisions in three cases.

Twelve of the fifteen new schools that were established in recent years had an important relationship with a state university. State universities

generally have been responsible for covering the costs incurred in operating a medical school as an academic unit within the university, but the nature of the financial relationships that existed between the new medical schools and their parent universities were quite variable. Six of the parent universities (Central Florida, Florida International, Florida Atlantic, Texas Tech–El Paso, Arizona, Rowan) received new funding from their state governments to support the development and ongoing operation of their new medical schools, but six did not (Central Michigan, Oakland, Western Michigan, South Carolina, UC Riverside, Virginia Tech). Four of the six new schools whose universities did not receive additional funding to start the school are partially funded by major health systems as the result of partnership agreements between the universities and the health systems (Oakland William Beaumont, South Carolina–Greenville, Western Michigan, Virginia Tech Carilion). It is important to note that in two of those cases (Western Michigan and Virginia Tech Carilion), the new school was established as a private 501(c)(3) non-profit corporate entity. The other two state universities that did not receive additional state funds to support the new medical school (Central Michigan and UC Riverside) were able to reallocate funds from within the university or to obtain commitments for financial support from a variety of non-university sources.

Two of the new schools were established as academic units within private universities (Quinnipiac and Hofstra North Shore–LIJ). One of those schools (Hofstra North Shore–LIJ) is partially funded through a partnership agreement between the university and a major health system. The remaining school (TCMC) was established as an independent 501(c)(3) non-profit corporate entity by a private community-based organization.

As noted above, four of the new medical schools (Hofstra North Shore–LIJ, Oakland William Beaumont, Virginia Tech Carilion, University of South Carolina–Greenville) were able to be established as a result of a partnership agreement between a university and a major health system in which the health system provided substantial financial support to cover the schools' operating costs. The contractual arrangements that exist between the partnering institutions vary, but both partners provided resources in ways that made it possible to establish the schools. Absent the contributions of each partner, it is unlikely that the schools could have been established. It is noteworthy that each of the healthcare institutions that participated in the development of the new schools was already heavily involved in medical education by sponsoring graduate medical education programs and providing clinical education experiences for medical students from nearby medical schools. It seems clear, therefore, that the institutions perceived that they would benefit in certain ways by being more clearly identified to the public as a major teaching institution.

It is interesting to note that the names of the healthcare institutions that supported the development of the schools are included as part of each school's official name (South Carolina-Greenville, Hofstra North Shore-LIJ, Virginia Tech Carilion, Oakland William Beaumont). This model contrasts with past experience. The majority of medical schools developed in this country during the past century were established as academic units of comprehensive universities, or universities that conducted programs limited to the health sciences (e.g., Robert Wood Johnson School of Medicine as a component of the UMDNJ). While some schools established in the past were originally developed as a result of a relationship between a hospital or a healthcare system and a university, there was generally little actual involvement of a university in the overall operation of the school. As a result, the university's name was not included in the name of the medical school (e.g., Mt. Sinai School of Medicine, Rush Medical College, and the Mayo Medical School).

Facilities

Providing space to meet a new school's administrative and educational space needs is another major challenge that institutions interested in starting a new medical school must address. The requirement to provide for the school's educational space needs has become a growing issue in recent years as the design and conduct of medical schools' educational programs have undergone significant changes. The introduction of small group learning experiences, simulation exercises, and standardized patient encounters has had a major impact on the kind of space required for the educational program. At the same time, schools have less need for large anatomy laboratories for cadaveric dissection and standard wet laboratories to support basic science courses. In addition, the evolution of online reference materials has made it less important than in the past for schools to maintain a standard medical library. Instead, space must be available to provide students access to computers and to allow them to engage in independent or small group study. Finally, schools must provide space that allows students to simply relax or engage in recreational activities with others.

Because of the special educational program needs and the somewhat unique character of the medical school environment, it is generally believed that all of the space requirements noted above should be available in a dedicated building. Given that, most of the institutions interested in establishing a new medical school found themselves in a situation in which they had to construct a new facility to house the school or to undertake a major renovation of an existing building. Needless to say, the opportunity to meet the space needs of the medical school by renovating an existing building requires that such a building be available. Most institutions are not in a position that will allow them to simply vacate a building by moving existing occupants to other sites. Thus, most institutions interested in establishing a new medical school face the challenge of how they will be able to identify existing space for renovation or obtain the funding required for construction of a new building. Needless to say, the 15 new medical schools that have been granted preliminary accreditation have been able to demonstrate to the LCME's satisfaction their ability to meet their space needs. The circumstances that have allowed each of the schools to accomplish this requirement have been quite variable.

Six of the institutions have already constructed, or are in the process of constructing, a new building to house the medical school (Central Florida, Texas Tech–El Paso, Virginia Tech Carilion, TCMC, Arizona– Phoenix, Cooper Rowan). In each case, the state government contributed funds to support fully or in part the construction of the new facility. It is noteworthy that two of the institutions that received state funding are associated with medical schools that are organized as 501(c)(3) non-profit private corporations.

Four of the institutions have acquired existing buildings that they have been able to renovate, or will renovate in the near future, to house the medical school (Hofstra North Shore–LIJ, Quinnipiac, Western Michigan, South Carolina–Greenville). In two cases (Hofstra North Shore–LIJ and Western Michigan), the building was a gift to the institution to support the development of the new school. In a third case (South Carolina–Greenville), the building existed as a shelled facility on the campus of the school's major clinical affiliate. In the remaining case (Quinnipiac), the building was one of four buildings acquired by the institution to develop a satellite campus at a site distant from the main campus.

The remaining five institutions were able to occupy space in existing buildings on campus. In two cases, the space became available as other colleges vacated the space to move into new buildings. In two other cases (Florida Atlantic and Arizona–Phoenix), the space was, in a sense, already occupied by the medical school, because it was space that was made available to house a four-year branch campus that converted at a later time to an independent medical school. It is likely that several of the schools will occupy new buildings in the foreseeable future.

Clinical Affiliations

Since the new schools had to establish affiliation agreements that guaranteed that their students would be able to obtain the clinical education experiences required, none of the new schools could have been established without the support of one or more local healthcare institutions. It is important to note, however, that some of the new schools were challenged to identify healthcare institutions that could serve as adequate sites for the clinical education of their students. The main challenges that several of the schools faced were identifying institutions that were able to provide adequate experiences for students in at least several of the core disciplines that the LCME requires schools to provide for accreditation purposes. And even more challenging for certain schools was providing the experiences in institutions where students would have the opportunity, as expected by the LCME, to interact with resident physicians. Indeed, several of the schools (Florida Atlantic and Quinnipiac) have found it necessary to rotate students through a number of healthcare institutions, most of which are not sponsors of graduate medical education programs and do not have residents in training within the institution.

As noted previously, four of the new schools were established as a result of the development of formal partnership arrangements between a university and one or more major health systems. In each case, the health systems agreed to contribute not only to the development of the school, but also to its continuing success. In one case the partnership led to the establishment of the medical school as a 501(c)(3) non-profit corporate entity in which representatives of each of the partnering organizations served as members of the corporation's board. In each case, the health systems had served for years as sites for the clinical education of medical students and resident physicians. In two of the cases, the health system's main hospital had served as a regional clinical campus for a medical school. Thus, the partnerships ensured that the new medical schools would be able to provide quality clinical education experiences for their students.

Six of the remaining new schools were established in communities where teaching hospitals that had extensive experience in medical student and resident physician education were located. In four of those cases (Cooper Rowan, Western Michigan, Central Michigan, Texas Tech–El Paso), the hospitals had served as regional clinical campuses for existing medical schools. In those cases, the hospitals simply phased out their relationships with those institutions in order to provide clinical education opportunities for students from the new schools. In the other two cases (Arizona-Phoenix, Central Florida), the new schools arranged to have students rotate through several of the teaching hospitals in the community.

Five of the new schools (Quinnipiac, Florida International, Florida Atlantic, TCMC, UC Riverside) faced a real challenge in establishing clinical affiliation agreements with hospitals that had extensive experience in providing clinical education experiences for medical students and resident physicians. While most of the hospitals with whom the schools affiliated had experience in providing elective experiences for students from existing medical schools, none had previously served as a major affiliate of a medical school. Only a few of the hospitals with whom the schools affiliated sponsored graduate medical education programs, and those that did sponsored a small number of programs. Thus, the new schools faced a major challenge in creating clinical education experiences similar to those experienced by the great majority of medical students enrolled in allopathic medical schools in this country.

In addition to the challenge of developing quality educational experiences in hospitals that had very little or no experience in medical student or resident education, the new schools also faced the challenge of having to distribute their students to multiple hospitals that were often some distance from the school and from other participating hospitals. As a result, students rotating through a particular clinical clerkship might be in different hospitals located many miles from each other. This set of circumstances made the organization and oversight of clerkship experiences in the various clinical disciplines that schools are required to provide for accreditation purposes extremely challenging.

DEVELOPING SCHOOLS

It seems clear that there will be more new schools established in the coming years. At present, there are initiatives underway within the state of Texas to establish two new schools within the University of Texas System. Because the initiatives have been approved conceptually by the state legislature, it seems almost certain that the schools will be established in the near future. One of the schools will be established as a component of the University of Texas, Austin, and one will be established as part of a new university being established by the University of Texas System in the lower Rio Grande Valley.

At the same time, it is important to recognize that nine of the new schools in this report were established in settings in which an existing medical school had established a formal branch campus. Six of the branch campuses provided the third and fourth years of the parent school's curriculum, one provided the first two years of the curriculum (UC Riverside), and two offered the entire four-year curriculum (Florida Atlantic and Arizona–Phoenix). It is clear, therefore, that branch campuses played an important role in the development of the new schools presented in this report. Given that, it is important to be aware of the current status of branch campuses since it is likely that some of them will likely serve as the foundation for the development of other new medical schools in the future.

Finally, it should be noted that in addition to the planning activities underway in Texas, there are three institutions that have been actively involved for several years in planning for the development of new schools. The schools have notified the LCME of their intent to seek preliminary accreditation and have been classified by the LCME as Applicant Schools. The three schools are the Palm Beach Medical College, the King School of Medicine and Health Sciences Center, and the California Northstate University College of Medicine. It is noteworthy that two of the proposed schools (Palm Beach Medical College and California Northstate University College of Medicine) are for-profit institutions. At this time it appears highly unlikely that any of the institutions will be successful in their efforts to establish a new school.

University of Texas

It appears that the development of the new medical schools within the UT System will diverge from the arrangement that characterizes the organization of the medical schools that are currently part of the UT System. At present, there are four medical schools within the UT System—the University of Texas Southwestern Medical School at Dallas, the University of Texas Medical School at Galveston, the University of Texas Medical School at Houston, and the University of Texas Medical School at San Antonio. Each of the schools is a freestanding entity within the UT System. It appears that both of the new schools established within the UT System will be established as components of one of the system's comprehensive universities.

One of the schools will be established as a component of the University of Texas at Austin. It should be noted that the University of Texas Medical Branch at Galveston (UTMB) had for decades sponsored clinical rotations for medical students at a major teaching hospital in the Austin area and had served as the sponsor for residency programs conducted in the hospital. As a result of the hurricane damage that UTMB suffered several years ago, the institution was forced to withdraw its presence in Austin. At the same time, the institution's leadership began to examine whether the medical school would be able to remain in Galveston, or whether it might be advisable to simply relocate the school to Austin. Indeed, many interpreted the UTMB dean's call in 2008 for the establishment of a four-year medical school program in Austin as a prelude to a movement of the medical school to the area.

However, at the same time, the Regents of the UT System had requested UT Southwestern to conduct a feasibility study exploring the establishment of a UT Southwestern presence in Austin. In 2008, the school's leadership announced that it was assuming responsibility for the GME programs being conducted in Austin, and in 2009, the leaders of the UT System, UT Southwestern, and the Seton Hospital System established a partnership designed to increase the number of residency positions in the community and to develop an academic medical center in Austin.

However, as state politics became involved in the process, pressure mounted for a new medical school to be established as a part of the University of Texas at Austin. By 2011, the Regents had indicated their intent to establish the new school as a part of the university and had set forth a plan for acquiring the funds to accomplish that goal. In support of that effort, the Seton Hospital System committed to the construction of a new teaching hospital and the allocation of funds to assist in the development of a new medical school. Also of note, a private donor contributed a gift of \$50 million to support the development of the school. At present, it is expected that the new school will be established by 2015.

The other new medical school to be established within the UT System will be a component of a new UT System university that is being established in the Lower Rio Grande Valley. Planning for a new medical school in the Lower Rio Grande Valley has been underway for a number of years. Indeed, in 2009, the state legislature committed to the development of a new school in the region by 2015. In 2012, the Regents of the UT System indicated their intent to establish a new university within the UT System to be located in the Lower Rio Grande Valley. The university is to be established by combining the University of Texas-Brownsville; the University of Texas-Pan American; and the Regional Academic Health Center in Harlingen, which is a component of the University of Texas Health Science Center at San Antonio, into a single university that contains a medical school. The Regents have indicated various conditions that will have to be met for the establishment of the medical school to proceed as planned.

Branch Campuses

The development of regional branch campuses by existing medical schools began in the 1970s during the time when a number of new medical schools were being established in the country. Existing schools began to develop branch campuses at that time in order to be able to increase enrollment, thereby contributing to the effort to increase physician supply in the country. The campuses were generally based at hospitals that were able and willing to provide a group of students the opportunity to complete the clinical experiences required during the third and fourth years of their school's curriculum. However, in some cases, the regional campuses were established at local colleges or universities that were able to provide the courses that were offered during the first two years of the curriculum.

During the 1980s and 1990s, a number of medical schools developed new branch campuses even though there was no longer an apparent need to do so to increase physician supply. Thus, by the beginning of the 21st century, there were a large number of branch campuses across the country. None of the branch campuses that existed at that time provided the entire four years of the sponsoring school's curriculum. But during the past decade, medical schools began to establish branch campuses that did provide the entire curriculum for a group of their students, and additional schools are now adopting that model.

The Cleveland Clinic Lerner College of Medicine of Case Western University, the University of Miami Miller School of Medicine at Florida Atlantic University, and the Phoenix campus of the University of Arizona College of Medicine in Tucson were the three original four-year branch campuses. Each of the campuses was established as if they were distinct schools of medicine. Students applying to the parent medical school could indicate their preference for attending the main campus or the school's four-year branch campus, at each institution the design of the curriculum offered at the main and branch campuses differed to some degree, and the sites for the required clinical education experiences offered in years three and four were also different. It follows, therefore, that the presence of a branch campus that offers the entire four years of a medical school curriculum provides an opportunity to convert the site to an independent medical school without investing a great deal of resources in the planning and implementation of the school.

Indeed, two of the branch campuses have become independently accredited medical schools. The Charles E. Schmidt College of Medicine of Florida Atlantic University was granted preliminary accreditation in 2011 and enrolled its charter class later that year, and the University of Arizona College of Medicine–Phoenix was granted preliminary accreditation in 2012 and will enroll its charter class in 2013. There is no question that these schools' experience functioning as four-year branch campuses, combined with the fact that they already had faculty and staff onsite, facilitated their transition to becoming independently accredited schools. Indeed, because the sites had experience in conducting the entire four years of a medical school curriculum, they were in a better position when seeking accreditation from the LCME than were schools that were still in the early planning stage for implementing their educational programs.

Not surprisingly, other medical schools are in the process of establishing four-year branch campuses in partnership with other universities or regional health systems. For example, the Medical College of Georgia, which is located in Augusta, has established a four-year branch campus in Athens in partnership with the University of Georgia; the Mercer University College of Medicine, which is located in Macon, has established a four-year branch campus in Savannah in partnership with Memorial Health-University Medical Center; the Temple University School of Medicine in Philadelphia has announced plans to establish a four-year branch campus in Pittsburgh in partnership with the West Penn Allegheny Health System; the Mayo Clinic will open a four-year branch campus in Scottsdale, Arizona, in 2014; and finally, the University of Oklahoma School of Community Medicine, which currently provides the last two years of the school's curriculum in Tulsa, Oklahoma, will become a four-year branch campus in Tulsa within the next few years. Interestingly, the new branch campus in Tulsa will be jointly operated by the University of Oklahoma-Tulsa and the University of Tulsa.

It is reasonable to assume that some of those four-year campuses will become independently accredited schools at some time in the future. When considering whether to convert to an independent school, a major challenge that both those campuses and other four-year branch campuses under development will face is whether they have the resources needed to scale the operation in a way that will allow the site to accommodate a larger number of students.

While the conversion of a four-year branch campus to an independently accredited medical school is of special interest, it is also important to note that the existence of regional clinical campuses that provided only the third and fourth years of the curriculum also served to facilitate the development of some of the new medical schools, since they provided sites that the schools could employ as the main site for conducting their clinical education experiences. For example, the Texas Tech University College of Medicine in Lubbock, Texas, operated a clinical campus in El Paso for almost 40 years. That site became the primary clinical affiliate for the new Paul L. Foster School of Medicine established in El Paso in 2008. During the same period, the Michigan State University College of Human Medicine operated a regional clinical campus in Saginaw, Michigan. That site now serves as the primary clinical campus for the new Central Michigan University College of Medicine. And the University of South Carolina School of Medicine regional clinical campus located in Greenville, South Carolina, now serves as the primary clinical affiliate for the new University of South Carolina College of Medicine-Greenville. Once again, the development of the new schools was facilitated by their ability to take advantage of the presence of faculty and staff at the regional clinical campus site who were experienced in providing clinical education for medical students.

CONCLUSION

This report provides a fairly comprehensive overview of the circumstances that led to the development over a relatively short period of time of a number of new medical schools in this country, including how the institutions that established the new schools were able to meet the challenges they faced in doing so. But as noted previously, it is not yet possible to determine to what degree the schools will be successful in: (1) developing innovative educational programs that will contribute to national efforts to improve the education of medical students, (2) increasing the size of the country's GME enterprise, or (3) developing robust research programs within their parent university or in partnership with neighboring research institutes.

The experience of the current period of expansion provides some important lessons for those institutions that might become interested in establishing a new medical school at sometime in the future. It is clearly important that they recognize and take seriously the nature of the challenges that they will have to overcome to be successful. In that regard, they would benefit from seeking to understand why several institutions that sought to obtain preliminary accreditation from the LCME were initially unsuccessful, and what influenced several institutions that embarked on an effort to establish a new school to ultimately decide that they would not be able to be successful. At the same time, they should recognize that there are several circumstances that have the potential to contribute to a successful outcome. First, given the dynamics involved in the ongoing evolution of the country's healthcare system, it seems inevitable that major hospitals/healthcare systems will continue to play a major role in the development of new medical schools. Accordingly, those interested in starting a new school should focus their initial efforts on identifying a clinical affiliate that is willing and able to be a major partner in the development of the school. The search for a major clinical partner should be focused on those hospitals/health systems that already sponsor GME programs and are also already involved in the education of medical students by providing clinical clerkship experiences for students. The opportunity for such hospitals/health systems to become a core component of a nationally recognized academic medical center was an important factor affecting the development of a number of the new schools discussed in this report.

Second, the continued evolution of regional branch campus programs by medical schools is another trend now underway that will likely play an important role in the development of new medical schools in the future. A number of the new schools discussed in this report represent the conversion of a branch campus to an independently accredited medical school. Of particular importance was the conversion of two of the existing four-year branch campuses to independent schools. The transition was an easy process, since the branch campuses already had in place virtually all of the resources required to be a separately accredited school. Thus, the continued development of a number of new branch campuses, and particularly those with four-year programs, provides an opportunity for establishing new medical schools in the future.

In that regard, it is important to recognize a trend that is now underway in the development of branch campuses. In the last few years, several medical schools have established new branch campuses that are located a significant distance from their main campus. For example, the Creighton University College of Medicine, which is located in Omaha, Nebraska, has a clinical campus in Phoenix, Arizona, and the University of South Florida, which is located in Tampa, Florida, has a regional campus program in Allentown, Pennsylvania. Given the distances between the branch campus sites and the parent medical schools, it would not be surprising that the sites would begin to think about becoming an independent medical school, perhaps as a second medical school within the parent university of the existing school, as occurred with the development of the University of Arizona College of Medicine–Phoenix and the University of South Carolina, Greenville.

Needless to say, there is no way to predict when the country will again face a set of circumstances that will lead to another period of robust development of new medical schools, such as occurred during the two decades of the 1960s and 1970s and during the past decade. When it occurs again, it will be interesting to see how the lessons learned from the current expansion will contribute to the development of new medical schools in the future.

BIBLIOGRAPHY

Bane, F. Physicians for a growing America: Report of the Surgeon General's consultant group on medical education. Washington (DC): US Government Printing Office; 1959.

Carnegie Commission on Higher Education. Higher education and the Nation's health; policies for medical and dental education. A special report and recommendations. New York (NY): McGraw Hill Book Company; 1970.

Lippard VW, Purcell EF (Eds). *Case histories of ten new medical schools*. New York (NY): Josiah Macy, Jr. Foundation; 1972.

Leroy L, Lee PR (Eds). *Deliberations and compromise: The health professions educational assistance act of 1976.* Cambridge (MA): Ballinger Publishing Company; 1977.

Hunt AD, Weeks LE (Eds). *Medical education since 1960: Marching to a different drummer*. East Lansing (MI): Michigan State University Foundation; 1978.

Bowers JZ, Purcell EF (Eds). New medical schools at home and abroad: Report of a Macy conference. New York (NY): Josiah Macy, Jr. Foundation; 1978. Odegard CE. Area health education centers: the pioneering years, 1972-1978: A technical report for the Carnegie Council on Policy Studies in Higher Education. Berkley (CA): The Council; 1979.

Graduate Medical Education National Advisory Committee. Summary report of the Graduate Medical Education National Advisory Committee to the Secretary, Department of Health and Human Services. Hyattsville (MD): U.S. Dept. of Health and Human Services, Public Health Service, Health Resources Administration, Office of Graduate Medical Education; Washington, D.C.; 1980.

Schoefield JR. New and expanded medical schools, mid-century to the 1980s. San Francisco (CA): Jossey-Bass Publishers; 1984.

Harvey AM, Abrams SL. For the welfare of mankind: The Commonwealth Fund and American medicine. Baltimore (MD): The Johns Hopkins University Press; 1986.

Council on Graduate Medical Education. *Third Report. Improving* access to health care through physician workforce reform: Directions for the 21st century. Rockville (MD): U.S. Department of Health and Human Services. Public Health Service. Health Resources and Services Administration; 1992.

Pew Health Professions Commission. *Critical challenges: Revitalizing the health professions for the twenty-first century, the third report of the Pew Health Professions Commission*. San Francisco (CA): Center for the Health Professions. University of California, San Francisco; 1995.

Mallon WT, Liu M, Jones RF, Whitcomb ME. *Regional medical* campuses: Bridging communities, enhancing mission, expanding medical education. Washington (DC): Association of American Medical Colleges; 2006.

Bunton SA, Sabalis RF, Sabaharwal RK, Candler C, Mallon WT. *Medical school expansion: Challenges and strategies*. Washington (DC): Association of American Medical Colleges; 2008.

Hager M, Russell S (Eds). Revisiting the medical school educational mission at a time of expansion: Proceedings of a conference sponsored by the Josiah Macy, Jr. Foundation. New York (NY): Josiah Macy, Jr. Foundation; 2009.

Whitcomb ME. New and developing medical schools: Motivating factors, major challenges, planning strategies. New York (NY): Josiah Macy, Jr. Foundation; 2009.

NEW AND DEVELOPING MEDICAL SCHOOLS, 2013

Medical School	Parent Institution	Year Approved to Establish SOM	Location	Previous Branch Campus Experience	
University of Central Florida College of Medicine	University of Central Florida	2006	Orlando, FL	No	
Florida International University Herbert Wertheim College of Medicine	Florida International University	2006	Miami, FL	No	
Texas Tech University Health Sciences Center–Paul L. Foster School of Medicine	Texas Tech University	2003	El Paso, TX	Yes	
The Commonwealth Medical College	Commonwealth Medical Education Corporation	2007	Scranton, PA	No	
Virginia Tech Carilion School of Medicine	Virginia Tech University and Carilion Clinic	2006	Roanoke, VA	Yes	

SOM Governance	Preliminary Accreditation	Charter Class Enrolled	Charter Class Size	Projected Class Size
Public University	2008	2009	41	100
Public University	2008	2009	43	120
Public University	2008	2009	40	80
501(c)(3) Non-profit corporation	2008	2009	65	100
501(c)(3) Non-profit corporation	2009	2010	42	42

Medical School	Parent Institution	Year Approved to Establish SOM	Location	Previous Branch Campus Experience
Oakland University William Beaumont School of Medicine	Oakland University and William Beaumont Health System	2007	Rochester, MI	No
Hofstra North Shore–LIJ School of Medicine at Hofstra University	Hofstra University and North Shore–LIJ Health System	2007	Hempstead, NY	No
Charles E. Schmidt College of Medicine of Florida Atlantic University	Florida Atlantic University	2010	Boca Raton, FL	Yes
Cooper Medical School of Rowan University	Rowan University	2009	Camden, NJ	Yes
University of South Carolina School of Medicine, Greenville	University of South Carolina and Greenville Health System	2010	Greenville, SC	Yes
University of California, Riverside, College of Medicine	University of California, Riverside	2008	Riverside, CA	Yes

SOM vernance	Preliminary Accreditation	Charter Class Enrolled	Charter Class Size	Projected Class Size
Public niversity	2010	2011	50	125
Private niversity	2010	2011	40	100
Public niversity	2011	2011	43	63
Public niversity	2011	2012	50	100
Public niversity	2011	2012	53	100
Public niversity	2012	2013	50	80

Medical School	Parent Institution	Year Approved to Establish SOM	Location	Previous Branch Campus Experience	
University of Arizona College of Medicine, Phoenix	University of Arizona	2011	Phoenix, AZ	Yes	
Central Michigan University School of Medicine	Central Michigan University	2010	Mount Pleasant, Ml	Yes	
Frank H. Netter MD School of Medicine at Quinnipiac University	Quinnipiac University	2010	North Haven, CT	No	
Western Michigan University School of Medicine	Western Michigan University, Borgess Health, and Bronson Healthcare Group	2010	Kalamazoo, Ml	Yes	

	OM ernance	Preliminary Accreditation	Charter Class Enrolled	Charter Class Size	Projected Class Size
	ublic versity	2012	2013	80	120
	ublic versity	2012	2013	60	100
	ivate versity	2012	2013	60	125
Nor	1(c)(3) n-profit oration	2012	2014	50	80

ACKNOWLEDGMENTS

I want to express my appreciation to all of the individuals who were willing to share information with me during the course of the project, as well as those I had the opportunity to interact with prior to embarking on the project. During both phases of my work on new and developing medical schools, I was fortunate in being able to interview, either in person or by phone, members of the senior administrative leadership of each of the universities involved in establishing a new medical school, sometimes on more than one occasion. I also was able to interview each of the founding deans, usually on more than one occasion, as well as individuals holding key administrative positions in several of the healthcare organizations involved in establishing a new school. I am also indebted to those individuals who provided various planning documents for my review, including those in administrative positions in state government. Finally, I would like to thank George Thibault, MD, President of the Josiah Macy Jr. Foundation, for giving me the opportunity to conduct the project.

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ABOUT THE MACY FOUNDATION

Since 1930, the Josiah Macy Jr. Foundation has worked to improve health care in the United States. Founded by Kate Macy Ladd in memory of her father, prominent philanthropist Josiah Macy Jr., the Foundation supports projects that broaden and improve health professional education. It is now the only national foundation solely dedicated to this mission.



Copy Editor: Jesse Y. Jou Production Editor: Yasmine R. Legendre Designed by: Vixjo Design, Inc. Cover photo: Courtesy of Hofstra North Shore–LIJ School of Medicine at Hofstra University

ISBN# 978-0-914362-59-3

Printed in U.S.A. with soy-based inks on paper containing post-consumer recycled content and produced using 100% wind-generated power

Josiah Macy Jr. Foundation 44 East 64th Street, New York, NY 10065 www.macyfoundation.org





ISBN# 978-0-914362-59-3