

# CHAPTER 9

## THE ACADEMIC MEDICAL CENTER

Cleveland is one of the only major metropolitan areas in the nation wherein a single university has forged long-term teaching and research agreements with every primary health provider in its region. These ongoing partnerships place Case faculty and students in clinical settings with patients throughout Northeast Ohio and the U.S., as well as internationally. The partnerships described below are intended to provide a continuing catalyst for transformation through excellence in teaching and research in the health care arena. The academic medical center will play a key role in Case's achievement of its new vision.

Case is in an exciting period of growth with renewal of its affiliation with University Hospitals of Cleveland, a new affiliation with the Cleveland Clinic, a major revision of the curriculum in medicine, the exploration of an improved structure for faculty practice plans, and the development of a major biomedical research enterprise on the new "West Quad." The following sections provide highlights of activities at the Case School of Medicine and each of the affiliated health systems that partner with the school.

### THE CASE SCHOOL OF MEDICINE

The centerpiece of the academic medical center is Case's School of Medicine, which has a rich and prolific history. Several recent Nobel Prize winners in medicine are graduates of the school, as is the former Surgeon General and the current director for the Centers for Disease Control and Prevention. The ground-breaking curriculum of the medical school that was implemented

in the 1950s – emphasizing a humanistic approach to medical education, early clinical exposure to patients, and the interdisciplinary organ system method of teaching – revolutionized medical education in the United States and around the world.

In 2002, the school was reviewed for accreditation by the LCME (Liaison Committee on Medical Education). As a testament to the strength and quality of its programs, the school was awarded accreditation with no areas of concern reported. This is only the third time in the history of American medicine that this result was achieved.

The medical school reports a number of major developments and initiatives. One involves a recent change in state policy. Prior to 2003, the school was required to enroll sixty percent of its admitted students from the state of Ohio as a condition for receiving state funds. With the dean's leadership, key members of the school's faculty met with the Ohio Board of Regents to argue that the school's contributions to the state were highly significant and that recruitment of students from a truly national pool would strengthen the school's academic standing. The Board of Regents agreed, allowing Case to continue to receive the state line-item of funding without the restriction of a recruitment quota. This change now presents the school with both the opportunity and the challenge to recruit from a national pool of applicants. Preliminary data from the entering class of 2004, which was recruited from a wider national pool, show a higher quality medical school class as evidenced by a substantial increase in MCAT scores.

Another major development is the recent award of a \$10 million grant from the Mt. Sinai Foundation to develop a state-of-the-art simulation center. This will be a center for teaching and learning medical procedures and surgical techniques as well as for learning interviewing, communication, and physical examination skills.

The school is also undertaking a highly ambitious project on what is now known as the “West Quad,” the site of the former Mt. Sinai Medical Center that closed and was purchased by the university. The project envisions an affiliation between medicine and industry, with the development of up to 2 million square feet of research space devoted to a unique approach for research at all levels, from the health services through nanotechnology. Given the school’s affiliation with every major health care system in the area, it is conceivable to envision a comprehensive data bank which includes patient information and biological samples that would provide the ability to analyze data from public health, basic science, and genetic viewpoints encompassing all racial and ethnic groups.

With regard to initiatives for students, the school adopted a “Society Dean” system for the entering class of 2003. Incoming students are assigned at random to one of four societies named after distinguished members or graduates of the university community. These are: Dr. Emily Blackwell, the second woman to practice medicine in the United States; Dr. Frederick Robbins, former dean and Nobel prize winner; Dr. David Satcher, graduate and former U.S. Surgeon General; and Dr. Joseph Wearn, Flexner Award winner, former dean, and one of the primary architects of the revolutionary Western Reserve curriculum. Students meet with their Society Deans on a regular basis throughout the first two years, and the Society Deans help them with advice on the curriculum, identifying research opportunities, or counseling for academic difficulties. Students will be followed in their Societies throughout the four years, and the Society Deans will write the deans’ letters of recommendation for students applying for scholarships, fellowships, and residencies. The Society Deans are also expected to play a role in performance evaluation of the students.

A major curriculum reform initiated by the dean is also underway. This involves implementing a curriculum that entails a close and seamless integration between medicine and public health. There are four pillars of the dean’s curriculum revision:

- *Civic professionalism* calls for extending the physician’s duty and accountability to the individual patient to the broader context of duty and accountability to the public. This broadened commitment involves professional competence, honesty with patients, and improving the quality of care.
- *Clinical mastery* obligates the medical school to set the highest standards for all skills required in patient care. These skills need to be defined, taught, and assessed to ensure that all Case medical students have achieved agreed-upon standards prior to graduation.
- *Scholarship*, as a core principle for the School of Medicine, relates to the mastery of established knowledge as well as that of inquiry and discovery. Each student will have an in-depth scholarly research experience in addition to opportunities for study of the broad content of medicine.
- *Leadership*, a component of the new Foundations of Clinical Medicine course, is taught by faculty from the Weatherhead School of Management.

An exciting part of the curriculum is the joint teaching of students at the university program and the Lerner College of Medicine program.

#### UNIVERSITY HOSPITALS HEALTH SYSTEM

The hub of University Hospitals Health System (UHHS) is University Hospitals of Cleveland (UHC). Founded in 1866, UHC is a 947-bed academic medical center serving northern Ohio and the nation through patient care, research, and teaching, with a historic commitment to the health care needs of the community. UHC’s main campus includes the Alfred and Norma Lerner Tower, Samuel Mather Pavilion, and Lakeside Hospital for adult

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medical/surgical care; the nationally renowned Rainbow Babies & Children's Hospital; University MacDonal Women's Hospital, Ohio's only women's hospital; University Ireland Cancer Center, a partnership with the university designated by the National Cancer Institute as a comprehensive cancer center; University Psychiatric Center (Hanna Pavilion); and skilled nursing and rehabilitation services.

As Case's primary affiliate, UHC combines with the university to form the largest biomedical research center in Ohio. UHC enjoys some of the most prestigious centers of excellence in the country and the world. These include not only those most familiar to the public – cancer, pediatrics, and women's health – but also areas such as orthopedics and spine, radiology and radiation oncology, neurosurgery and neuroscience, organ transplantation, infectious diseases, cardiology and cardiothoracic surgery, ophthalmology, dermatology, behavioral health, and the fast-emerging field of human genetics and genomics. UHC, along with its partner hospitals in UHHS, serves patients and families at more than 150 locations in northern Ohio. The system constitutes the region's broadest network of physicians, outpatient centers, and hospitals; wellness programs, occupational health, behavioral health, skilled nursing, elder health, assisted living, rehabilitation services, and home and managed care.

In December 2002, the boards of UHHS and Case approved a new fifty-year partnership to establish a unique and primary affiliation between the School of Medicine and UHC. The goal of the partnership is to promote innovative biomedical education, research, and clinical care as the nucleus around which to bring together available resources to develop one of the top academic medical centers in the world. The agreement significantly strengthens the historical relationship between the entities by developing a joint strategic plan for all research initiatives.<sup>1</sup>

An ad hoc committee of Case medical faculty based at UHC aided negotiation of this partnership<sup>2</sup> agreement. The committee made recommendations to university administration regarding finances, research, education, governance, and the role of faculty in the partnership.

1. For details on the partnership agreement between Case School of Medicine and University Hospitals of Cleveland, please refer to the press release archived at <http://www.case.edu/pubaff/univcomm/2002/12-02/uh.htm>.

Principal features of the agreement include:

- A joint research enterprise called Case Research Institute (CRI) brings together the strategic planning, operational aspects, and financial support for all research initiatives of the clinical departments of UHC. The CRI director is the dean of the Case School of Medicine; CRI's Board is composed of equal representation from UHC and the university, along with two outside directors from leading research enterprises. The 320,000-square-foot facility, owned by the university, is home for up to 700 research personnel.
- Joint strategic and operational planning to maximize the impact of research support by reducing administrative costs and focusing a larger share of resources on the research itself.
- Recruitment of about seventy new faculty has been jointly funded and managed, with the aim of enhancing both the clinical and academic missions of the partners.
- The partners have created a national model for education focused on life-long learning and continuous competency at all levels, including medical students and residents, graduate students and postdoctoral fellows, and faculty and practitioners.
- The partners continue to develop a nationally renowned academic medical center in Cleveland and will jointly seek federal, state, and philanthropic investments to achieve the vision.

The affiliation between UHHS and the School of Medicine was a critical step for both institutions. University Hospitals is the major teaching site for medical student education for all the major clerkships (and MetroHealth and the Cleveland Clinic Foundation provide additional sites). Also, the great majority of NIH funding that is awarded to the medical school and university comes through faculty members who are affiliated with UHC. The academic departments based at UHC accounted for approximately forty-five percent of the medical school's external research funding in fiscal

2. For the full final committee report, see [www.case.edu/menu/partnership/1/finalreport.htm](http://www.case.edu/menu/partnership/1/finalreport.htm).

year 2003-04. Many of the departments are in the top twenty in NIH funding in the country, and several are in the top ten. In an area where there is an increasing emphasis on translational research, this affiliation is absolutely critical for the university. Virtually all faculty attracted to academic positions, which include research, teaching, and patient care, desire a professorial appointment at an outstanding school of medicine as well as access to excellent clinical facilities to practice their profession.

#### THE CLEVELAND CLINIC FOUNDATION – THE CLEVELAND CLINIC LERNER COLLEGE OF MEDICINE OF CASE WESTERN RESERVE UNIVERSITY

The Cleveland Clinic Foundation (CCF) includes the 12-story, state-of-the-art Crile Building, a 934 staffed-bed hospital (including a children's hospital), the Cleveland Clinic Educational Foundation, and the Lerner Research Institute. In 2001, the Clinic recorded more than 2.25 million outpatient visits and 52,000 hospital admissions. Among them were patients from all fifty states and eighty foreign countries. More than 1,100 full-time physicians and scientists and 700 house staff/fellows provide patient care in 100 specialties and subspecialties. The Clinic provides health care for Cleveland-area communities through an extensive network of family health centers and medical offices.

A 2002 affiliation between Case and the CCF and a \$100 million gift from philanthropist Alfred Lerner spurred the establishment of the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University (the College Program). In July 2004, thirty-two students from fourteen states were welcomed as the inaugural class. The small student body ensures maximum interaction between students and faculty. In place of grades, all students have a learning portfolio that provides ongoing documentation of their progress in nine competency areas. These areas include depth of clinical reasoning, understanding of basic sciences, and development of research skills, as well as communication skills and professionalism.

The College Program is designed to train graduates who will have a solid combination of clinical and research skills and a passion for scientific inquiry. Graduates will earn a medical degree (M.D.) with special qualification in biomedical research from the Case School of Medicine. The student-centered learning experience will enable students to tailor their studies according to their research interests and strengths as physician-investigators.

Rather than learning in the traditional lecture-hall setting, students enrolled in the College Program engage in problem-based learning that emphasizes critical thinking, self-directed learning, teamwork and individual knowledge, interactive seminars, labs, and problem sets with basic science principles learned in the context of clinical relevance. Instruction for students accepted into the new college takes place at both the Clinic and Case, as appropriate for the mission of the college. Clinic-based faculty serve on relevant committees and in other advisory roles at the Case School of Medicine. Case will award degrees, which will note students' completion of the college's physician-investigator program. CCF teaching physicians also receive Case faculty appointments.

The two institutions have agreed that research grants from the National Institutes of Health to support work by CCF-based investigators should be awarded to and administered by the Cleveland Clinic College of Medicine as an academic unit of Case. These awards will be included in the total amount of research support for the Case School of Medicine.

Case and the Clinic have collaborated on research and educational programs for many years. Dozens of the more than 100 scientists in the Lerner Research Institute, the Clinic's multi-departmental basic and translational research division, have held regular faculty appointments in the School of Medicine's basic science departments. These appointments have promoted collaborative research projects and provided opportunities to mentor Case graduate students.

Clinical education collaborations have also been ongoing. The Clinic has offered core third-year medical student clerkships in neurology, reproductive biology,

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and surgery, with Clinic physicians receiving clinical faculty appointments as appropriate. Further successful collaboration in the research and training arena comes with the recent award from the National Institutes of Health for a new K-12 program that will fund young clinical investigators doing mentored research. This highly competitive award, whose principal investigator is affiliated with the Clinic, resulted from the efforts of faculty at all the affiliated institutions in the community, including Case.

### METROHEALTH MEDICAL CENTER

As one of the principal teaching centers for the School of Medicine, MetroHealth maintains a fine tradition of academics and research. All active staff physicians are full-time faculty of the School of Medicine and actively participate in undergraduate and graduate medical education. Intensive training for physicians and medical professionals is offered in more than twenty-five medical specialties.

MetroHealth Medical Center provides care to more than 27,000 inpatients, including more than 3,500 newborns, annually. More than 600,000 visits are recorded each year in the medical center's 100 outpatient clinics. In addition, MetroHealth has the major level-1 trauma facility in the region; patient visits to the emergency room exceed 75,000 annually.

In August 2001, the university and the MetroHealth System announced an affiliation that reaffirms a relation between the two institutions dating back to 1914.<sup>3</sup> The MetroHealth System is one of the nation's largest and most successful public health care providers, offering a complete continuum of care. As in the previous agreement, signed in 1993, Case designated MetroHealth as its MetroHealth System Campus, a major hospital affiliate for education and research activities primarily with Case's School of Medicine, but also with the Bolton School of Nursing, the School of Dental Medicine, the College of Arts and Sciences, the Mandel School of Applied Social Sciences, the Case School of Engineering, and the Weatherhead School of Management.

### LOUIS STOKES CLEVELAND VETERANS AFFAIRS MEDICAL CENTER

The Louis Stokes Cleveland Department of Veterans Affairs Medical Center (VAMC) is a major teaching hospital of the School of Medicine, and an important site for the education of medical students. The Cleveland VAMC also supports more than 100 residency and fellowship training positions in medicine, surgery, and psychiatry and their subspecialties. Most VAMC physicians hold faculty appointments within the School of Medicine. The affiliation is overseen by the Dean's Committee, which consists of the dean, department chairs from the medical school, and key VAMC officials.

The Cleveland VAMC is a part of the VA Healthcare System of Ohio, linking VA health care facilities in the state in an integrated service network. Inpatient care is provided at the Wade Park and Brecksville divisions and includes medicine, surgery, psychiatry, spinal cord injury, neurology, and rehabilitation medicine as well as a nursing home and a domiciliary. Outpatient care is delivered in primary and specialty care clinics located at Wade Park, Brecksville, Akron, Canton, Cleveland, East Liverpool, Lorain, Mansfield, New Philadelphia, Painesville, Ravenna, Sandusky, Warren, and Youngstown. The medical center serves more than 77,000 individual veterans annually through approximately 8,000 hospital admissions and 685,000 outpatient visits.

An active research program includes activities funded through the Department of Veterans Affairs and other governmental and private funding sources. Total funding of approximately \$19.5 million annually (from all sources) supports more than fifty principal investigators in a broad range of research endeavors.

### HENRY FORD HEALTH SYSTEM

Case and the Henry Ford Health System, based in Detroit, Michigan, entered into an affiliation agreement in 1992 to enhance academic programs for each. Henry Ford partnered with Case to raise its academic profile, to provide teaching and research opportunities for its physician staff, and to better position its resident

3. Additional information on the Case School of Medicine and MetroHealth System affiliation may be obtained at [www.case.edu/pubs/cnews/2001/8-23/metro.htm](http://www.case.edu/pubs/cnews/2001/8-23/metro.htm).

recruitment efforts. For its part, Case found Ford's innovative primary and managed care programs attractive for both the didactic and clinical training of its undergraduate medical students.

The relationship flourished throughout the 1990s as dozens of medical students from Cleveland each year rotated in core and elective clerkships in Henry Ford Health System hospitals in the Detroit area. More than 100 Henry Ford physicians and scientists were awarded Case faculty appointments and entered into teaching and research collaborations with their Cleveland-based faculty colleagues. The educational centerpiece of the Case-Henry Ford relationship was a Robert Wood Johnson Foundation-funded primary care initiative, which developed a special curricular track to educate medical students for careers in primary care. Medical student participation in primary care expanded throughout the 1990s, and the proportion of graduating students entering primary care fields increased.

By the late 1990s, however, the relationship had lost momentum. Whereas a special primary care track made sense ten years ago, that part of the curriculum has now been integrated into every student's program. The difficulties of pursuing teaching and educational collaborations 100 miles apart across state lines proved too great to overcome. Henry Ford and Case, recognizing that certain goals of the affiliation had been achieved and that others were unlikely to come to fruition, dissolved their affiliation in July 2004.

#### SUMMARY: STRENGTHS AND CHALLENGES

The Academic Medical Center is clearly one of the outstanding features of the university. Its potent set of strengths prepares the university for continued success and recognition in the medical sciences and practice. For example, it is anticipated that when NIH funding from all affiliated institutions including the Cleveland Clinic is aggregated, the Case medical school will be in the top ten of NIH-funded medical schools in the country.

The new, collaborative affiliations of all the primary health providers in the Cleveland metropolitan area with the university have led to a period of stability and cooperation among biomedical researchers in the region and the ability to propose and coordinate large-scale projects through their combined institutional efforts. Examples of these include the Cleveland Center for Regenerative Medicine, the Structural Biology Center, the Clinical Scholars Training Program (K-12), and the Case Comprehensive Cancer Center. The new Lerner College of Medicine establishes a unique five-year curriculum focused on educating a small group of excellent clinicians also skilled in clinical research that complements the traditional but evolving medical training and the medical scientist training program at the Case School of Medicine.

Case continues to be at the forefront of medical education. An exciting revision of the curriculum is underway, with an emphasis on the integration of the practice of medicine and public health and a renewed commitment to research and scholarship at all levels.

Some challenges to success can be identified, however. Because the large-scale hospital affiliations are relatively new, these collaborations need to be nurtured and strengthened. The resolution of the process to create a unified faculty practice plan with the clinical departments at University Hospitals of Cleveland is an important component of this collaboration.

A further challenge stems from the elimination of the requirement that Case admit sixty percent of its medical students from Ohio. The school will need to develop recruitment approaches that attract a national pool of applicants.