A Medical School for International Health Run by International Partners
Carmi Z. Margolis, MD, MA, Richard J. Deckelbaum, MD, Yaakov Henkin, MD, Stavi Baram, PhD, Pamela Cooper, MA, and Michael L. Alkan, MD

Abstract
In early 1996, the Ben Gurion University Faculty of Health Sciences (BGU), Beer-Sheva, Israel, in collaboration with Columbia University Medical Center (CUMC), New York City, United States, decided to found a second medical school within BGU, the Medical School for International Health (MSIH), to prepare students to work both in medicine and in cross-cultural and international health and medicine (IHM). Methods used to establish and jointly run MSIH include (1) defining clearly the tasks of each university according to how it can best contribute to the new school; (2) establishing an organizational structure in each university for accomplishing these tasks; (3) establishing clear communication between the two organizational structures; (4) defining outcomes to measure success; and (5) developing methods for addressing management problems. CUMC’s functions were admission, public relations, and the fourth-year elective program. BGU’s functions were developing and running an innovative curriculum, including a four-year required track in IHM, evaluating students, taking the lead in helping students’ with their personal problems, and managing financial aid. The first students were admitted in 1998.

In early 1996, faculty members at two medical schools thousands of miles apart conceived the idea of opening a new medical school with a unique required curriculum in international health and medicine (IHM). The two schools were Ben Gurion University Faculty of Health Sciences (BGU) in Beer-Sheva, Israel, and Columbia University Medical Center (CUMC) in New York City, United States; the involved faculty members already had extensive experience in international cooperation in medical research and medical care; and the new school was to be at BGU. Over the next two and one-half years, the designated directors of the new Medical School for International Health (MSIH) at both parent institutions obtained support from the executive officers and faculty members of their universities, defined in a general way the roles of BGU and CU in the operation of the new school, hired skeleton startup staff, and obtained startup funds. BGU would provide funds; design, operate, and oversee the teaching program; and grant the degree. CUMC would help design the IHM curriculum; run the admission, recruitment, and public relations processes; assist in structuring the U.S.-style curriculum; assist in residency planning; and help establish and supervise the fourth-year elective program. It was agreed from the outset and then defined by contract that BGU and CUMC would relate as partners rather than in a hierarchical fashion, and that school policy and problems affecting the school as a whole would be addressed by designated faculty members at both schools. The startup staff proceeded to design the curriculum, hire the personnel required to run the school, acquire space and educational equipment, recruit the first and subsequent student cohorts and the teaching staff, and design and execute an extensive publicity program. In August 1998, we at MSIH admitted our first students and introduced them to a four-year, U.S.-style medical curriculum. An integral part of this curriculum was a four-year compulsory track in IHM that culminated in a two-month, required IHM clerkship in a developing country. Between May 2002 and May 2004, we graduated 85 students, almost all of whom are now residents in highly regarded and highly rated U.S. hospitals (the exceptions are either those in Master of Public Health programs (13%) or those who have extended their studies to complete a PhD or to pursue a special area of interest). We wrote this article to describe the rationale for and structure of the cooperation between BGU and CUMC, advantages and disadvantages of running the school jointly, and how we deal with problems occasioned by joint operation.

Goals
A medical school aims to produce graduates who are competent in basic medical knowledge, attitudes, and skills at a level of autonomy that is appropriate for beginning postgraduate training. All U.S. schools, or schools that have a U.S.-style curriculum, include training in a defined set of basic medical sciences and at least five major clinical specialties. Most schools also train students in family medicine. The four Israeli faculties of medicine currently reach this basic goal using a seven-year curriculum that begins either immediately after high school or army service and includes three years of basic medical sciences, three years of clerkships and electives, and a one-year rotating internship. Three of these faculties have distinct curricular orientations. Hadassah, in Jerusalem, which is the oldest school, emphasizes basic research; the Technion, in Haifa...
emphasizes technology; BGU is known for community and primary care orientation. However, all four faculties share the basic curricular structure outlined earlier, and they all aim to produce quality clinicians. Three of the four faculties, at Tel Aviv, Haifa and Beer-Sheva, in addition to their seven-year medical schools for Israeli students, in which the language of instruction is Hebrew, operate four-year, U.S.-style medical schools in which the language of instruction is English.

MSIH was established as a separate, second medical school within the Faculty of Health Sciences at BGU, in collaboration with CUHC. It shares the basic aim and curriculum described earlier, but in addition requires students to acquire competence in IHM. Although much has been written recently about the importance of IHM, its definition is elusive. Our working definition can be described as a “Global Health Wheel” (see Figure 1), the hub of which is a set of skills that help a clinician practice medicine outside the culture in which he or she grew up. These skills include communication skills, such as competence in foreign languages and in using translators; a knowledge of other cultures; and how cultural factors influence medical decision making. As indicated in the figure, around this hub of basic cross cultural competencies is a rim of disciplines that may help solve health problems when working in another culture. Some of these disciplines have been studied for years, such as geographic medicine, medical anthropology, tropical diseases, preventive medicine, and health education. Connecting the hub of cross-cultural practice with the disciplines at the rim are “spoke skills,” such as cross-cultural communication skills, grant writing for nongovernmental organizations, and diplomacy in relating to local politics.

The IHM school aims to produce graduates who are not only competent in medicine generally, but are also competent to “roll the Global Health Wheel” of cross-cultural skills, disciplinary knowledge, and special connecting skills. One measure of program success will be the number of graduates who pursue career paths involving global health or health care.

**Rationale for the New School**

Neither BGU nor CUMC was strongly motivated to open a new medical school at the time the suggestion was raised in 1996. It seemed at first to university officers at BGU that a new school with mostly U.S. students paying U.S.-level tuition might turn a profit for the university. However, it was clear that BGU would have to invest a considerable sum and then wait years to see any profit in the best of circumstances. CUMC, on the other hand, was under considerable pressure at that time to increase the number of graduates going into primary care, but it had better ways to increase the number of primary care graduates than opening a school abroad. Notwithstanding these reservations, it was also clear that there might be a considerable advantage to founding a new school in order to train a different sort of physician. From the perspectives of both schools, there was strong interest in attempting to create a new type of physician who would be skilled not only to practice internationally, but would also have special skills that would enhance competence in dealing with multicultural populations, particularly those within the United States and Israel.

From the CUMC perspective, there were at least four advantages to partnering with bgu to achieve this:

- Educating such physicians at BGU would enable them to learn in an intensely multicultural environment in a medical school whose academic standards, faculty, and clinical facilities were consistent with those of CUMC.
- BGU, with its internationally known and proven community-oriented curriculum, was better prepared than CUMC, with its tertiary care and specialty orientation, to impart to students a community and primary care orientation.
- BGU had a track record of intervening in the community to promote prevention and cost-effective health measures.
- BGU staff had extensive experience with starting a new school and with innovating significant change in the curriculum.

From the BGU perspective, there were at least six advantages to such a partnership:

- CUMC was in a better position than BGU to promote awareness and disseminate information about a new medical school, both from the perspective of international reputation and geographical location.
- Since prospective students would come mainly from North America and were required to have U.S.-type credentials when applying, it would be easier to manage the admission process from the United States.
- CUHC could provide fourth-year electives in its teaching hospitals that would help students prepare for U.S. graduate training programs.
- Faculty at CUMC could help in recommending students for residency training in the US.
- It was anticipated that the collaboration would benefit both BGU and CUMC by encouraging joint projects and joint research.
- Last, although there was much interest in attempting basic curricular change in the Israeli school at BGU, it had become difficult to make changes. Established in 1974, the BGU Israeli school was then an innovative school.

**Figure 1** The Global Health Wheel. Inside the wheel are listed some of the skills that help a clinician practice medicine outside the culture in which he or she grew up. Outside the wheel are listed disciplines that may help a clinician solve health problems when working in another culture.
that also had built-in mechanisms for change. However, in recent years, as the school passed its 20th year, it was, like any established school, having more difficulty with change and major curricular innovations. Partnering with CUMC meant creating a new school and a new curriculum, successful parts of which might then be adopted in the Israeli school.

**Major Administrative Functions**

MSIH’s major administrative functions are recruitment and public relations, admission, hiring teachers, operating and overseeing the basic science and clinical curricula, operating and overseeing the IHM curriculum, postgraduate planning, evaluating the students, evaluating the program, promoting student well-being (including student counseling), financial aid, and promoting faculty exchange. Operating the curriculum includes course planning, preparing materials, teaching courses and reviewing or debriefing courses taught, logistics of scheduling, and assigning classrooms.

**Functions carried out at Columbia University Medical Center**

Administrative functions carried out mainly at CUMC are recruitment and public relations, admission, managing fourth-year electives and residency planning, and arranging faculty exchanges. The IHM staff at CUMC includes a director, an administrative director, two other full-time staff, and a part-time chair of admission; all are employees of CUMC, and part or all of their salaries are paid by BGU. CUMC provides office, telecommunications and conference space, faculty support (mainly interviewers and occasional visiting faculty), and administrative support. Although most of this work is done at CUMC, BGU staff are always available for consultation, the BGU director visits several times a year and the BGU administrative director and various faculty visit at least once each year.

**Admission.** The admission process was modeled after the interview-based admission process pioneered at BGU in 1974 by Antonovsky and colleagues. \(^1\) Prospective students, who can come from all nations except Israel, are required to present either standard U.S. credentials, including a bachelor’s degree, a record of their premedical courses and scores on the Medical College Admission Test, or equivalent credentials. Not accepting Israeli students is a limitation imposed by the Ministry of Health in order to maintain the present number of graduates from the four Israeli medical schools. Applicants must also fill out a detailed questionnaire that includes an essay on their life history, a significant event in their lives, and a description of a personal ethical dilemma. All applications are screened and ranked by the CUMC chairperson of the admission committee for academic preparation level and for motivation and suitability to practice IHM. Suitable candidates are then interviewed twice by interviewers who have been trained using methods developed at BGU to assess candidates’ preparedness to study medicine and their motivation to study and practice IHM.

To date, the acceptance rate has been comparable to and the attrition rate somewhat higher than the mean for such rates at U.S. medical schools (acceptance rate, 50%; attrition rate, 4.6%). \(^2\) Students have come from more than 20 countries, speak as many languages, and practice a variety of religions, including Christianity, Judaism, Buddhism, Hinduism, and Shintoism. Over 80% of the interviewers have been CUMC faculty and the rest have been BGU faculty. The admission committee is chaired jointly by a senior faculty person from each faculty, with most of the work falling on the CUMC chair. Difficult decisions are made jointly.

**Public relations.** Public relations includes outreach to undergraduate prehealth advisors, university-based international studies offices, and biology and chemistry departments; a Web site that is updated yearly that can be accessed from either the CUMC or the BGU Web site; a very active program of publications in university, medical and public news media; an equally active program of campus site visits around the United States; and presentations at national and local meetings for medical educators and global health practitioners.

Almost all of this activity has been managed at CUMC, though some important internal publications, such as the *Student Handbook*, \(^3\) are published at BGU. MSIH’s Web site has several thousand visitors annually. CUMC program representatives participate in professional school fairs and visit approximately 20 U.S. university campuses each year, often accompanied by student ambassadors.

**Fourth-year electives.** Processing of student elective choices begins during the third year of studies in Beer-Sheva, managed jointly by the BGU and CUMC staffs, including substantial assistance from the Office of Student Affairs at CUMC. Almost all of the 85 students in our first three cohorts did between one and five electives (four electives are required) in the United States that were coordinated at CUMC. These electives are the only curricular activity that takes place in New York. CUMC permits students in the IHM school to complete all electives at CUMC hospitals, if the individual student so desires. Over 60% of fourth year students’ 287 electives for the period 2001–03 were conducted at CUMC-affiliated hospitals, though other sites included 52 medical schools in more than 19 states. Through the BGU–CUMC collaboration, fourth-year students at Columbia University’s College of Physicians and Surgeons can participate in the IHM clerkships and can take electives at BGU.

**Functions carried out at Ben Gurion faculty of health sciences**

Administrative functions that are carried out mainly at BGU include curriculum planning and implementation, student evaluation, student affairs (including counseling), and financial aid. Staff consists of the director, the administrative director, ten full-time staff, an associate director for academic affairs, a half-time clinical social worker, four part-time faculty who act as year coordinators, and three senior IHM faculty members. CUMC staff consult as required in any of these areas, the CUMC director visits at least twice a year, and the administrative director and CUMC faculty visit as required.

**Curriculum planning and implementation.** The first three years and final two months of the fourth year of the curriculum, not including the new IHM track described later in this article, were planned in consultation with CUMC and are taught in English, almost exclusively by BGU faculty at BGU, mainly at the Soroka University Medical Center in Beer-Sheva but also at other affiliated hospitals in Ashquelon and...
Jerusalem. The curriculum was based to a large extent on the successful Israeli curriculum at BGU (described in detail elsewhere) that pioneered early clinical teaching and intensive training in community medicine, epidemiology, and primary care. The first of several elements taken from the BGU Israeli curriculum is a month-long retreat that precedes the beginning of the first year and has three aims: to foster group cohesion, to teach Hebrew (needed so that students can interact with patients; Hebrew language training continues until the end of Year 2), and to introduce IHM. The first two years include a series of introductory courses, such as introduction to physiology and biochemistry, followed by 13 months of intensive systems-oriented courses, developed using the Case Western Reserve model for all major systems (e.g., the cardiovascular system, the mind, the endocrine system). Systems courses are coordinated by physicians, are taught by teams of basic science and clinical faculty, and are preceded by anatomy courses that cover the anatomy relevant to the system. The first year also includes a Clinical and International Health and Medicine Day each week for the first 30 weeks that introduces the student to patients in hospital, clinic, and community settings, as well as giving systematic training in communication, basic clinical skills, and cross-cultural issues. Another BGU curricular element is an intensive course in Biostatistics and Epidemiology at a Masters of Public Health level.

The third, clinical year, also based on the BGU Israeli curriculum, begins in August and ends at the beginning of the following July. Students rotate through seven major required subjects, including internal medicine, neurology, pediatrics, surgery, obstetrics-gynecology, psychiatry, and family medicine. Students function as junior members of the care team, similar to the U.S. apprenticeship model also used at BGU. A faculty member who is fluent in English coordinates each of the clerkships and makes a major contribution to teaching. The last two months of the fourth year are devoted to three “mini-clerkships” in surgical subspecialties, medical subspecialties, anesthesiology, and intensive care medicine.

All courses are taught exclusively to MISH students, except for a one-week course in atherosclerosis that is taught in English as a special joint course both to MISH students at the end of their first year and to BGU Israeli second-year medical students.

The international health and medicine track. IHM is taught as a required study track (described in detail elsewhere) that begins at the retreat in the summer before Year 1, when students attempt to plan an IHM curriculum in a problem-based-learning style exercise. The IHM track, summarized in Table 1, continues throughout the four years of study and includes three innovative courses: the IHM Modules in Years 1 and 2, the Cross-Cultural Communications Skills Workshop in Year 3, and the IHM Clerkship in Year 4. The IHM Modules, four to six of which are offered each year, are six- to 20-hour intensive courses that frequently have been designed and implemented with the help of students. Modules are held over two to four days in the late afternoon and evening on topics relevant to IHM that are offered every other year and have included Introduction to Medical Anthropology, Introduction to Alternative Medicine, Tropical Pediatrics, How to Write a Grant, and Water and Health, among others. The Workshop in Cross-Cultural Communication, described in detail elsewhere, sensitizes the student to cultural differences that influence communication, teaches how to use translators and is taught mainly by interviewing standardized patients who portray carefully designed cross-cultural scenarios.

The IHM Clerkship is a required clerkship experience in a developing country that is planned by local and BGU faculty and supervised by a local academic coordinator. Students join local medical students in the community and in the local hospital and complete a public health project that deals with a local health issue. The hosting medical schools are Moi University Faculty of Medicine in Kenya, Addis Ababa Faculty of Medicine in Ethiopia, Christian Medical College in Vellore, India, and B.P. Koirala Institute of Health Sciences in Dharan, Nepal. A few students each year, who for personal or health reasons are unable to travel outside of Israel, do the IHM Clerkship in Israel in the Arab community. Student reactions to this clerkship experience have been enthusiastic.

Students’ personal problems. A basic policy of MISH is that students must be viewed as people who are engaged in an arduous process of professional and cross-cultural socialization. Students’ problems, whether they seem trivial or routine, medical or psychological, are taken seriously at all times by the administrative and academic staff. Relating to students as people who are adjusting and changing rather than as pupils who sit in lectures, study, and take examinations, is seen not only as a way of caring for students, but also as a way of educating them to care for patients.

A half-time clinical social worker works with each class from the minute they arrive at the airport before they begin their studies. This individual anticipates problems and, through counseling and support, strengthens students’ ability to adapt. He is also available at all times for personal consultation. Most of the work with individual students is carried out at BGU, but the CUMC staff relate to students in the same manner when they are studying in New York on elective or visiting.

<table>
<thead>
<tr>
<th>Year</th>
<th>Course</th>
</tr>
</thead>
</table>
| Year 1 | Semester-long seminar on broad range of international health topics  
Introduction to IHM  
Clinical Day IHM course  
IHM modules (four modules required over the first two years)  
Advanced epidemiology |
| Year 2 | Complete the four IHM modules |
| Year 3 | Cross-Cultural Communication Skills Workshop—two days |
| Year 4 | International clerkship—two months (in Kenya, Ethiopia, India, Nepal, or Perú) |
Detailed discussion of the management of student problems is outside the scope of this article. However, many students form close relationships with administrative and academic staff, and both parents and students have commented repeatedly on the effectiveness of the school’s policy of viewing the student as a developing professional.

Joint functions
Functions carried out jointly by BGU and CUMC staff are setting institutional policy and curricular policy, including ongoing evaluation and revision of the IHM curriculum, making final decisions about student dismissal and other difficult decisions related to students, making difficult admission decisions, fund raising, planning and implementing faculty exchanges, attending to parents and to some student or parent complaints, carrying out specific teaching activities, preparing students for electives and residencies, doing long-term follow-up of graduates, and developing an alumni network.

How We Are Doing
Six years and three graduating classes after admitting our first students, the program overall is a success from the perspectives of BGU, of CUMC, and of the students and their families. We would be more comfortable making this statement on the basis of the achievements and performance of ten years of graduates. However, for the time being, we feel strongly that evidence for program success can be found in the following six achievements: success of students to achieve at a level comparable to that of students at U.S. schools in their U.S. licensing examinations, achievement of Honors grades in over 70% of U.S. electives, acceptance of all graduating students to quality residencies in the United States, over 20% of students achieve MPH degrees before graduation, a low attrition rate, and student-assisted development of a four-year IHM track that includes two highly successful activities, the Cross-Cultural Communications Workshop in Year 3 and the International Clerkship in Year 4. Though it is clearly too early to judge what effect the IHM track has had on student career choice, there is some objective evidence that knowledge of graduates in IHM is superior to that of other Israeli graduates and of U.S. graduates, and many graduates have already become involved in International Medicine activities during residency.

Given our apparent success, however, improvement of the IHM school in the future will depend on successful analysis of problems we have encountered while running the school and on our ability to solve these problems.

It is not our intention in this article, nor would there be space in any one article, to deal with all problems encountered while managing the first six years of the academic program. Rather, we will focus on the problems and disadvantages that have resulted from having a joint administration and will suggest approaches to solving these problems. A useful way to analyze these problems is from three perspectives: the BGU’s, the CUMC’s, and the students’.

Problems from the BGU perspective
From the BGU perspective, significant problems include tension created by having dual directorship, less control over the student admission process, and disproportionate cost of the office at CUMC when compared with the cost of running a similar office in Israel. Having two directors and not knowing who the boss is seemed initially to be a more significant problem than it has proven to be. In practice, there have been occasional disagreements about the content of publications, and the CUMC and BGU directors have occasionally seen negative results of a BGU or CUMC action over which they have no control. Examples are students’ bringing complaints about specific problems in Beer-Sheva directly to the CUMC rather than having dual directorship, less control over the day-to-day running of the program have resulted from having a joint structure and function of a program that is viewed more and more as being balanced by the uniqueness of CUMC functions.

Problems from the CUMC perspective
From the CUMC perspective, potential problems are limited control over the structure and function of a program that is mostly carried out in Beer-Sheva, risk of the program’s not succeeding, e-mail miscommunications between offices operating on different work weeks, cultural differences, and unfamiliarity with different institutional decision making processes that can lead to miscommunication, misperception of lines of responsibility, and occasional circuitous operating procedures.

Problems of limited control over the day-to-day running of the program have diminished as the CUMC office has taken charge in the fourth year of the elective program and of part of the residency application process. Frequent input into policy, face-to-face meetings between the CUMC director and the students, and CUMC’s considerable influence on planning the IHM track have also minimized this problem.

Communications, cultural problems, and interinstitutional problems have diminished as the staff have come to understand the program as a binational, dual-university entity that presents a unique challenge to establish a clear program identity and to concisely represent the program to students and medical educators in the United States and in other countries. Risk of the new school’s not succeeding has all but disappeared as the first successful classes
have graduated and moved on to residency training.

Problems from the students’ perspective
From the students’ perspective, significant problems include having to adjust to living in Israel simultaneously with experiencing the trauma of professional socialization, having to learn Hebrew to interact with patients, learning from lectures in English by teachers whose mother tongue is not English, and occasionally being regarded as “overseas students” within the BGU Faculty of Health Sciences.

Most students see adjusting to living in Israel and learning Hebrew as challenges that will help them be better international physicians. Other students usually accept these added difficulties because they anticipate excellent clinical teaching in the third year, value the prestige of their schools’ collaborations with CUMC, and look forward to the fine elective program. We have improved the quality of lectures by increasing self-study time, limiting lectures to the better ones, and improving lecture aids and study guides. A xenophobic attitude of Israeli students is not common; instead, most of them are interested or even eager to meet international students. Successful mechanisms for dealing with xenophobia have included offering each foreign student the opportunity to have a faculty host family (about 60% of these connections have proven very rewarding for the students and the families), giving all international students membership in the Israeli student organization, encouraging joint activities with Israeli students, and establishing a chapter of the Student American Medical Association.

A major shared problem
Geographical distance is a shared problem so obvious it is almost not worth mentioning. It will be no surprise that it challenges us on an almost daily basis. Its chief manifestations are difficulty with communication between the two staffs in Beer-Sheva and New York, necessity to travel 5,600 miles (9,296 kilometers) to attend key meetings and ceremonies, and students’ problems resulting from or exacerbated by distance and difficulty communicating with family and friends. Our main tools for dealing with this problem, none of which were in common use 20 years ago (for example, more general use of e-mail at some universities began around 1985) and most of which have only been in common use for less than a decade, are improved international telephone communication, effective wide-spread use of e-mail and fax, ease of international travel, and, most recently, video conference calls.

Working together on solving joint problems has required at least weekly and sometimes daily communication between relevant staff members, biweekly conference calls between key administrators from both staffs and a minimum of seven or eight round trips per year of key administrative staff (includes the five senior administrators; the two directors make most of the trips).

Summing Up
Overall, our attempt at using an international partnership to run a medical school that aims to graduate physicians with special skills in IHM is proving a success. The chief advantage of partnership is that it enables each school to benefit from strengths and resources of the other school that it alone would not be able to provide at the same level of quality. The CUMC office has been a strong proponent for the increasing importance of international health activities on the CUMC campus and MSIH is seen as a successful model for Columbia’s international collaborations. Our chief method for dealing with problems that have arisen from the BGU, CUMC, or students’ perspective is to define them jointly and to enable joint input into creating their attempted solutions. Since our first three classes have graduated and matched for U.S. residencies with considerable success, we look forward to intensifying the development of teaching and research in IHM.

Acknowledgments
We are indebted to Shraga Segal, PhD, Lhaim Naggan, MD, PhD, Rivka Carmi, MD, Herbert Parides, MD, Thomas Q. Morris, MD, and Joan A. Leiman, PhD, without whom the school would never have been born. We also thank Lynne Quittel, MD, and Shimon Glick, MD, co-chairs of the MSIH admission committee, Michael Karplus, MD, director of the International Clerkship, Yitzchak Lander, PhD, director, Counseling Service, Alan Jotkowitz, MD, and the entire MSIH administrative staffs at BGU and CUMC, without whom our school would never have grown up. Preparation of this manuscript was partially supported by a sabbatical leave at New York Presbyterian Hospital and at the Office of Medical Education, University of California, San Francisco.

This article was originally published in the August 2004 issue of Academic Medicine.

References