BEN-GURION UNIVERSITY OF THE NEGEV

Faculty of Health Sciences

The Joyce and Irving Goldman Medical School
The Medical School for International Health (MSIH)

Self-Evaluation Report

September 2013

EXECUTIVE SUMMARY

The Faculty of Health Sciences (the FOHS or the Faculty) was established in 1974 by Prof. Moshe Prywes, founding Dean and by Prof. Haim Doron, then Director General of Kupat Holim ("Sick Fund"), which is the largest HMO in Israel. The medical School, the first among the Faculty's schools, since 1996 named the Joyce and Irving Goldman Medical School, was established with the goal of revolutionizing primary care medicine and directing the medical curriculum to provide students with new models of health care delivery, in addition to preparing them for their traditional roles as clinicians and researchers. This is a 6-year program, followed by one year of internship that awards students with a degree of Doctor of Medicine (M.D.). Upon completion of the requirements for the 3rd year, students receive the degree of Bachelor in Medical Sciences (B.Med.Sc.).

In keeping with the "Beer-Sheva" Spirit, the Faculty of Health Sciences at Ben-Gurion University of the Negev views the approach to mental, social, cultural and inter-cultural aspects of life as an inseparable part of study, research, health promotion and treatment of the physical and mental health of the individual. The faculty supports the advancement of health services in the community. In addition to the faculty's local and national mandate, the establishment of the Medical School for International Health (MSIH) was aimed to turn BGU's focus internationally, a natural continuation and extension of its primary care, community focused and service oriented mandate. The MSIH was launched in 1998 specifically to advance global health medicine education. This school addresses the need for medical education that focuses on the interface between international health and community and preventive medicine. It follows the standard of the North American model for a 4 year medical program.

The faculty adopts a comprehensive approach that encourages creativity and academic freedom coupled with transparency, responsibility, affectivity, administrative and ethical accountability. The faculty operates in cooperation and coordination with the university authorities and the other faculties to promote teaching, research, and medical treatment in all the health professions. The faculty advances working relationships related to educational, scientific, and research issues with universities and other research organizations in Israel and abroad, promotes connections with public and private organizations targeted at recruiting support for its advancement. The faculty renders assistance to handle disparity by initiating and maintaining projects to increase the accessibility to higher education in medicine and other health professions for underprivileged populations.

Strengths, weakness and plans for improvement

The strengths of our admission process are reflected by focusing not only on cognitive but also on personality features. We have a successful admission policy for students from disadvantaged populations, a low number of dropouts and we are able to financially assist needy students. However, the admission process limits our ability to increase the number of such candidates and reduce the "Sechem" (a combined mark of matriculation and psychometric derived by a formula averaging the grades). Each year a new cut point is determined based on the academic achievements. We are planning to introduce a computerized pre-selection psychological questionnaire to further improve our selection process. The organization and activity of our alumni should be improved.

In general, the medical school is satisfied with the process of teaching and learning. This satisfaction derives from a close and continuous observation of all the educational processes by means of internal and external quality assessments, and correction of faults as they occur.

Learning outcomes and achievements are not only based on success in examinations. In addition to their superb knowledge, our students also excel in qualities such as humanism, communication skills, empathy and ethics, and are heavily involved in programs that promote health in the community. We are quite satisfied with the ability to extract maximal efficacy from our limited clinical fields. We are also satisfied with the successful integration of disparity populations. Our community oriented teaching, which consists of about 25% of all the clinical education, is relatively high. Nevertheless, we are not satisfied with this proportion and think that it should be increased in accordance with our mission. We need to improve our teaching methods through the use of simulation and computer based learning.

We are satisfied with the involvement of our students in community activities. However, the number of graduates recruited to the Negev area as residents is seriously insufficient and we are investing every possible effort together with the affiliated medical organizations in the Negev, to increase this number.

Research at FOHS is at a developed and advanced level and was recently further enhanced by the new initiative to promote research convergence through internal support to interdisciplinary research groups. The ability of the cooperative research groups to recruit substantial external grant support attests to the preliminary success of the concept underlying the research promotion initiative. Yet, we aim to further develop the cooperation between clinicians and researchers as well as to advance state of the art cooperative synergistic research projects that bring the best of the combined expertise of the FOHS researchers.

One of the main problems derives from the physical infrastructure of the faculty which is presently divided between several buildings. A second problem is the relative lack of space in some classrooms and labs. The encouraging news is the fact that the university authorities are aware of the situation and are considering the construction of an additional building which would house under the same roof all the labs and classrooms which are presently scattered in different buildings.

The process of self-evaluation

The two medical school directorates took upon themselves to lead the process and become a self-evaluation team. They managed the professional teams and coordinated the data supplied. The evaluation process is an ongoing established part of our faculty and will continue after this phase is completed.

Quality self-evaluation is a routine ongoing procedure in the medical school. It is followed by recurrent changes and updates of the curriculum. External evaluation processes are a strong additional stimulus for a structured and comprehensive self-evaluation. As the Faculty places special emphasis on teaching, it initiates workshops for teaching skills and regards teaching as a major component of the academic promotion process. The various schools' structures, the division of responsibilities and authority and the fact that the schools' directorates are directly responsible for quality evaluation ensure the continuation of this process.

The weaknesses highlighted by the self-evaluation activity, as well as plans and mechanisms for implementations of corrective activities are specified in each of the relevant sections. A decision has been taken to use the self-evaluation teams as a vehicle for planning, implementation and follow up of the improvement paths.

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CHAPTER 1
BEN-GURION UNIVERSITY

1.1. THE INSTITUTION

A brief summary describing the institution and its development since its establishment, including details of the campus(es) where the institution's teaching activities take place (number and location), names of the faculties /schools/departments in the institution, the overall number of students studying towards academic degrees in the institution according to faculty and degree (first degree, second degree with thesis, second degree without thesis, doctoral degree), the date of recognition by the Council for Higher Education.

The establishment of the "Institute for Higher Education in the Negev" was initiated by the residents of Beer-Sheva and the Negev during the early 1960s. Teachers from other academic institutions in Israel provided higher education in Beer-Sheva. Continuous efforts to convince the government to establish a full-fledged university in the Negev, in southern Israel, were eventually fruitful, and on November, 9, 1969, Yigal Alon, the Minister of Education and acting Prime Minister, announced that the Government had decided to build and support the "University of the Negev." In November 1970, the first meeting of the Board of Governors took place, and the "Institute for Higher Education in the Negev" became the "University of the Negev."

The University was formally accredited by the Council for Higher Education (CHE) in 1973 and after the death of David Ben-Gurion, Israel's first and legendary prime minister, it was officially named "Ben-Gurion University of the Negev."

The University started to take shape on the Beit HIAS (a former hostel) campus in Beer-Sheva during the early 1970s. It gradually came to include faculties of Natural Sciences, Engineering Sciences, Humanities and Social Sciences, Health Sciences, a Medical School, Institutes for Applied Research, an Institute for Desert Research, and the Ben-Gurion of the Negev Heritage Institute.

During the second half of the 1970s, the Council of Higher Education (CHE) authorized the University to grant Doctor of Philosophy (PhD) and Medical Doctor (MD) degrees. The Leon and Matilda Recanati School of Community Health Professions was also founded during this period.

During the 1980s, growth continued, new departments and study programs were opened, and the number of applications increased. In the early 1990s, academic cooperation agreements with many institutions throughout the world were signed, students from abroad were admitted to the University, and the number of students surpassed 10,000.

The past ten years have been marked by a rapid increase in the number of students, from about 11,000 in 1995/6 to over 19,500 by 2011/2012. The Kreitman School of Advanced Graduate Studies, which administers all PhD studies, was established in 1997, and generous fellowships were offered to outstanding PhD candidates and post-doctoral fellows. During that period, new departments and study programs were added, among them the School of Management (which has recently been upgraded and renamed The Guilford Glazer Faculty of Business and

Management), the Department of Middle East Studies, and the Department of Politics and Government.

The University has five campuses: (a) three in Beer-Sheva: the Marcus Family Campus (the main campus), the David Tuviyahu Campus (formerly Beit HIAS) and the David Bergmann Campus, (b) one in Sede Boqer (south of Beer-Sheva), which includes: the Jacob Blaustein Institutes for Desert Research, the Albert Katz International School for Desert Research, and the Ben-Gurion Research Institute for the Study of Israel and Zionism, and (c) the University's newest campus in Eilat, established in 2003. The Eilat Campus offers BA & BSc and MA & MSc degrees in several fields. Approximately 800 students are currently studying there. As a world leader in desert studies, BGU is dedicated to combating desertification through academic study, technological advancement and the global commercialization of applied research, especially in the field of solar energy. The University, however, looks far beyond the boundaries of Israel, especially toward the developing countries worldwide.

Ben-Gurion University of the Negev includes: the Faculty of Humanities and Social Sciences, the Faculty of Natural Sciences, the Faculty of Engineering Sciences, the Faculty of Health Sciences, the Faculty of Business and Management, and the Blaustein Institutes for Desert Research.

The number of student's enrolled (fall semester 2011/12), Beer-Sheva campuses only: For undergraduate degrees – 13,940 (b) for postgraduate degrees (MA, MBA, MSc, etc.). - 4,555 (including non-thesis tracks - 2,908 and 1,647 with thesis). (c) For doctoral degrees (PhD) – 1,195 and (d) postdoctoral fellows - 114

In addition, approximately 400 students were enrolled in The Center for Pre-Academic Studies.

1.2. MISSION STATEMENT

Mission statement of the institution, its aims and goals.

Universality of the University - The University is open to all, regardless of race, religion, national origin, or sex. There is no discrimination on the grounds of race, religion, national origin, sex or political views in its activities. The University is committed to safeguarding academic freedom.

Objectives

A. To constitute a scientific, educational, and cultural center in Israel and to assist in the development and advancement of the State of Israel, particularly in the Negev.

B. To maintain, develop, and advance education, teaching, and research in all fields of human knowledge.

C. To help in crystallizing the spiritual, cultural, and moral values of the State of Israel, and to assist in developing its society and economy.

D. To help in the spiritual and cultural absorption of Jewish immigrants to Israel from all countries and to develop academic programs for Jews living outside Israel.

Aims

A. To establish and maintain research and teaching institutions, especially in Beer- Sheva and the Negev region.

B.To encourage and develop the humanities and the social, natural, engineering, technological, health, and other sciences. To engage in research, teaching, and other activities for the advancement of these sciences. To ensure the professional level of the academic staff, their ability to impart knowledge and to spread values of culture, education, and learning to the University's students and the population of the Negev and Israel.

C.To constitute an academic community based on close cooperation between teacher-researchers and students.

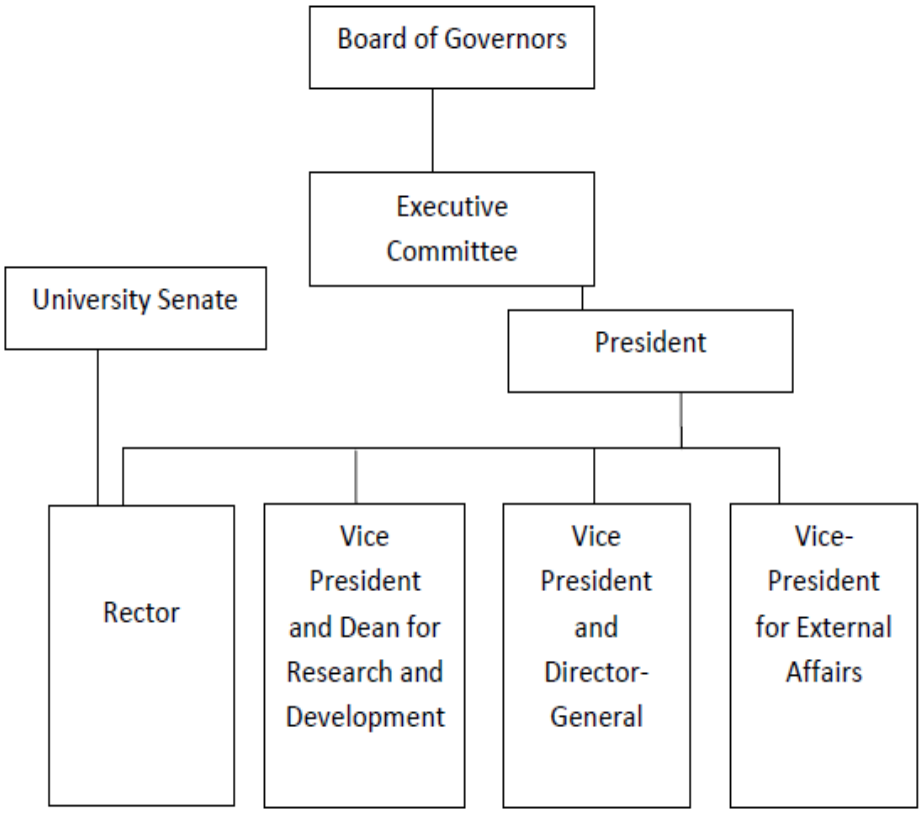
D. To engage and to train an academic cadre in academic research and instruction.

1.3. ORGANIZATIONAL STRUCTURE

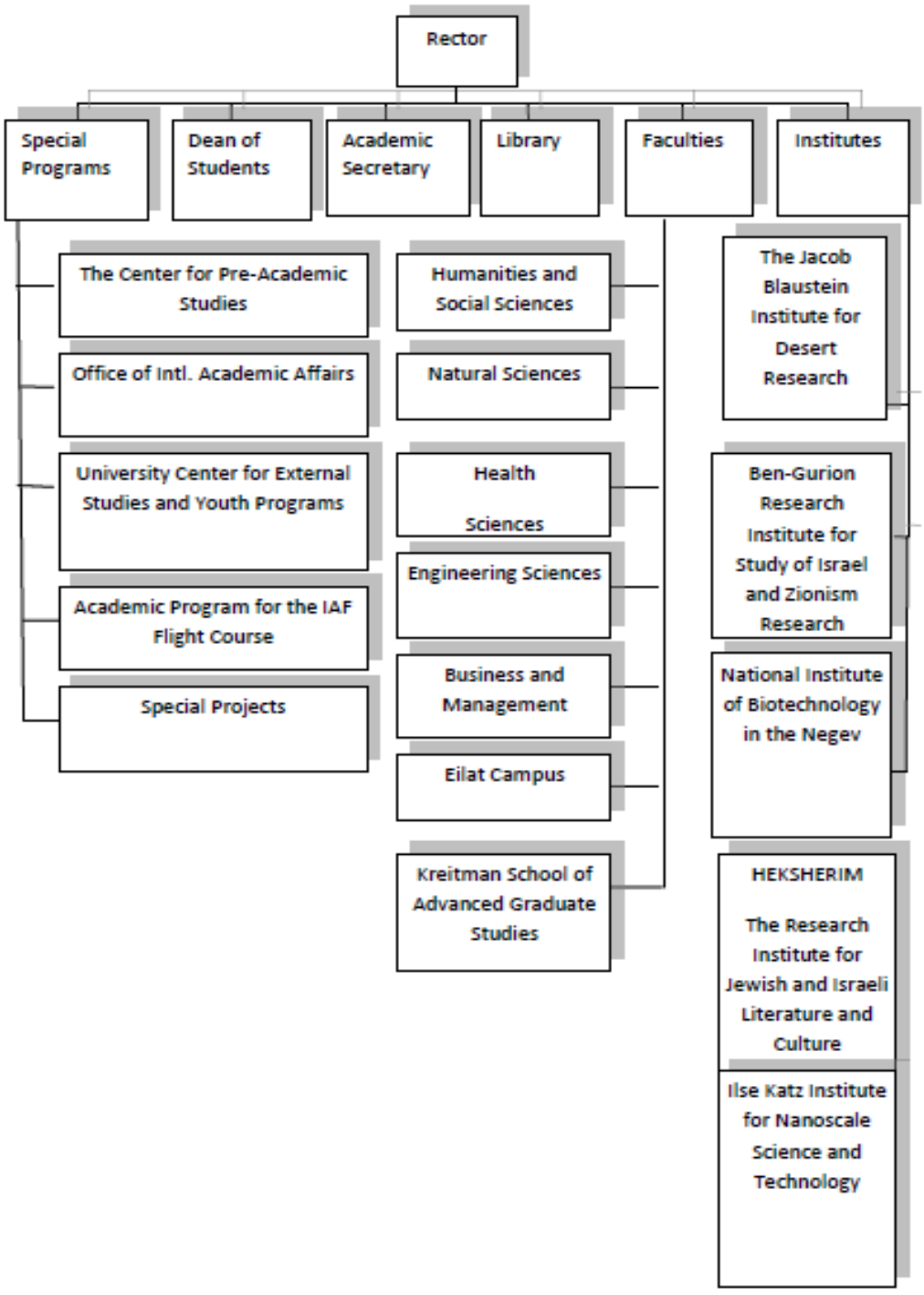
A description and chart of the institution's organizational structure, and the names of holders of senior academic and administrative positions

The University's main functions and committees and hierarchy with focus on the academic management of the University.

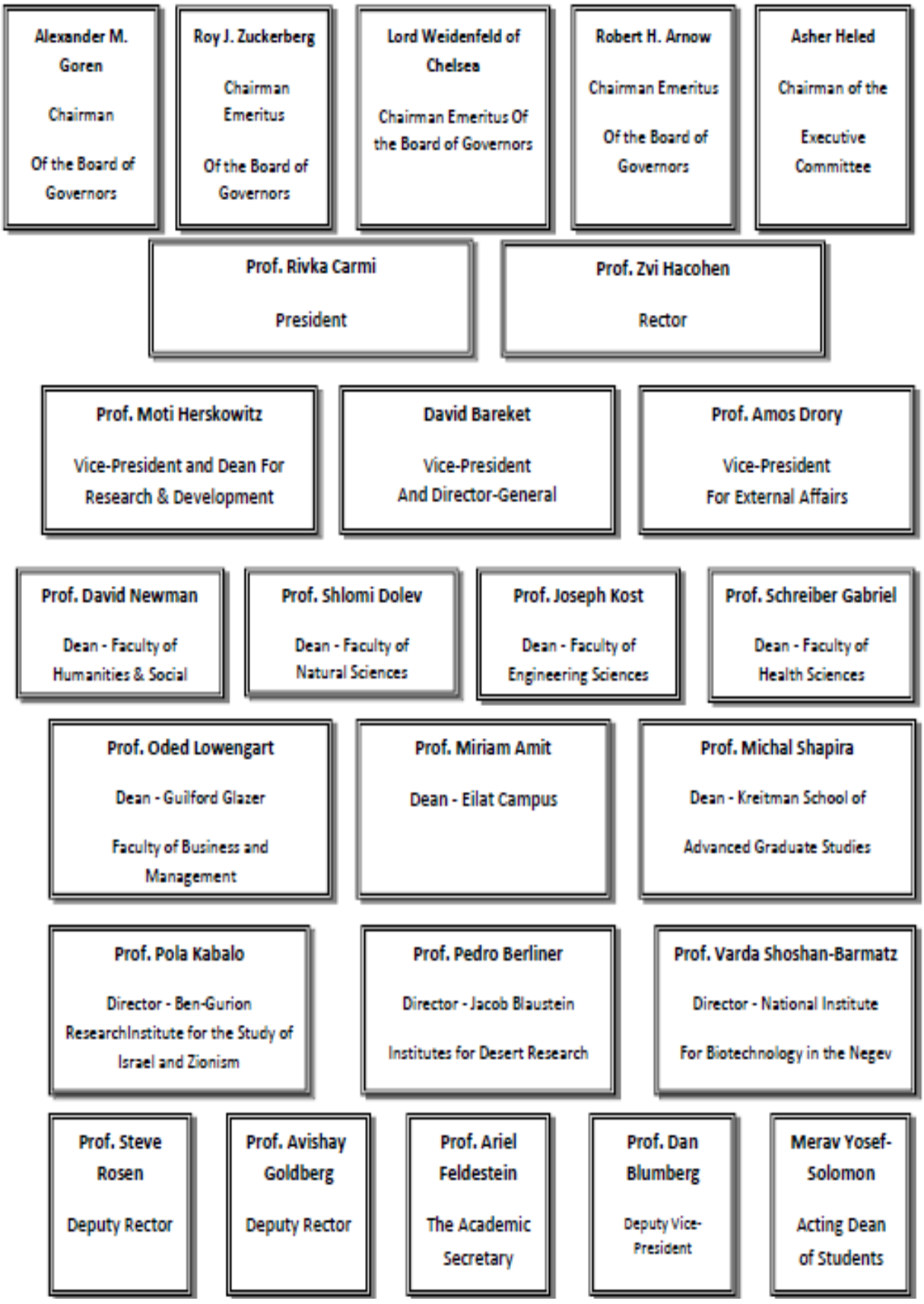
University Organizational Structure – Main Functions



Academic Organizational Structure



Holders of senior academic and administrative positions



CHAPTER 2
THE FACULTY OF HEALTH SCIENCES

2.1. THE FACULTY OF HEALTH SCIENCES

The name of the parent unit and a brief summary of its "history", its activities, and development in the period of its existence.

The Faculty of Health Sciences and School of Medicine was first envisioned in 1973, at the Arad convention which set the goals and objectives of the proposed unit. The faculty was actually established in the following year. In 1975, the Dozor Visiting Professors Program was initiated with the purpose of inviting leading professionals from abroad for short visits to lecture, teach and form research collaborations. This program has endowed the Faculty with the knowledge of some of the world's outstanding leaders in medicine and thanks to the Dozor Foundation the program is still ongoing. In 1978, the Leon and Mathilde Recanati School of Community Health and the Department of Nursing were established followed by the Department of Physiotherapy in 1979.

The decade of the 1980s saw slow growth, followed by a major period of development in the 1990s. In 1996, a process of reevaluation of the Medical School's vision, goals and teaching methods was initiated following a magnanimous donation from the Goldman Family which provided the medical school with a new and spacious state-of-the-art building. The Medical School was renamed "The Joyce and Irving Goldman Medical School", and the "International Advisory Review Committee" (IARC) for the Faculty and the Medical School was formed to play the roles of advisor, advocate, and gentle critic. In the same year the School for Medical Laboratory Sciences was founded. During the remaining years of the decade, the departments of Emergency Medicine and Health Systems Management and the Medical School for International Health (MSIH) in collaboration with Columbia University were established, and the Graduate Program in Gerontology was launched.

The pattern of growth continued through the early 2000s. In 2000 the Faculty moved to its new and spacious building. The "Buds of Medicine" Program for preparing and integrating members of the Bedouin population into the various study programs offered by the faculty various schools was established, the Master of Public Health (MPH) Program was launched, and "Sial Research Center for Family Medicine and Primary Care" was established. In the following year, the School of Pharmacy was launched, and in the following year, the School for Health Professions moved to the new Deichmann Building. The remainder of the decade was a period of serious budget constraints instituted by government cutbacks, resulting in low productivity and a degree of inertia.

The year 2012 realized new expansions with an increase in the number of students accepted to the Joyce and Irving Goldman Medical School from 70 to 90 students and the number of nursing students from 60 to 90 students. In addition, the initiation of the program of Medical Sciences (B. Med. Sci.), and the launching of the Research Initiative Program for promoting research convergence and research cooperation by interdisciplinary groups of basic and clinical researchers were initiated, not to mention the recruitment of several new outstanding young researchers.

2.2. MISSION STATEMENT

Mission Statement of the Parent Unit, its Aims and Goals

“A vision that is not coupled with action is a false vision" (David Ben-Gurion)

“Only through a united effort by the State … by a people ready for a great voluntary effort, by a youth bold in spirit and inspired by creative heroism, by scientists liberated by the bonds of conventional thought and capable of probing deep into the special problems of this country … we can succeed in carrying out the great and fateful task of developing the South and the Negev” (David Ben-Gurion).

The Negev Desert comprises over 60% of the land of Israel. Its residents form one of the most unusual ethnic mixtures in the world: immigrants from North Africa, Ethiopia, India, Europe, North and South America and the Republics of the former Soviet Union, Bedouin Arabs and Jews born in Israel.

In keeping with the "Beer-Sheva" Spirit, the Faculty of Health Sciences at Ben-Gurion University of the Negev views the approach to mental, social, cultural and inter-cultural aspects of life as an inseparable part of study, research, health promotion and treatment of the physical and mental health of the individual. The faculty will continue to support the advancement of health services in the community by the creation of a cooperative Negev community, integrating faculty members, directors and staff of the affiliated medical centers, patients, Negev inhabitants, and public supporters of the Negev. This support is enhanced through The Negev Forum, programs of students involvement in the community and research programs related to the unique population of the Negev community and its special and specific problems.

The faculty adopts a comprehensive approach that encourages creativity and academic freedom coupled with transparency, responsibility, affectivity, administrative and ethical accountability.

The faculty operates in cooperation and coordination with the university authorities and the other faculties to promote teaching, research, and medical treatment in all the health professions. The faculty advances working relationships related to educational, scientific, and research issues with universities and other research organizations in Israel and abroad, promotes connections with public and private organizations targeted at recruiting support for its advancement.

The faculty enhances 1st , 2nd and 3rd degree teaching programs in Medicine, International Medicine, Medical Professions (Nursing, Physiotherapy, Emergency Medicine), Pharmacology, Medical Laboratory Sciences, Medical Systems Management, Public Health, Gerontology, and Medical Sciences emphasizing professional and research qualities, humanism, ethics, inter-cultural aspects, professionalism and inter-professionalism, distinction and innovation.

The faculty helps to handle disparity by initiating and maintaining projects to increase the accessibility to higher education in medicine and other health professions for the underprivileged populations, including the Bedouin population of the Negev, the populations of the Negev’s development towns, and the ultra-orthodox population.

The faculty advances basic, clinical and applied research by promoting the creation of distinguished interdisciplinary research groups in medical innovation.

In order to maintain high level teaching and cutting-edge research, the faculty focuses on excellence in human resources. The dialogue with students, faculty members, retired faculty members, and the administrative staff is extended to assure fruitful cooperative work.

2.3. DESCRIPTION AND ORGANIZATIONAL STRUCTURE

Description and chart of the unit's academic and administrative organizational structure (including relevant committees), names of holders of senior academic and administrative positions and list of departments/study programs operating in its framework.

The Faculty Council is the highest academic and organizational body of the faculty. It is chaired by the Dean. The Faculty Council consists of all faculty members with academic positions of Senior Lecturer, Associate and Full Professor. It includes representatives from each of the other four BGU faculties and representatives of faculty members with academic positions of Lecturer and Assistant. It also includes representatives of the Medical Centers affiliated with the Faculty. The Faculty Council elects the Dean, regulates and approves educational and research programs, and recommends conferment of academic degrees to faculty students for Academic Senate approval.

- The Dean, Prof. Gabriel Schreiber, MD, PhD, is responsible for the academic and budgetary administration of the Faculty, assisted by a Deputy Dean and Vice Deans
- Deputy Dean for Research and Development, Prof. Angel Porgador, PhD.
- Vice Dean and Director of the Joyce and Irving Goldman Medical School, Prof. Klaris Risenberg, MD.
- Vice Dean and Director of The Medical School for International Health , Prof. Mark Clarfield, MD.
- Vice Dean for Academic Promotion, Prof. Amos Katz, MD.
- Vice Dean for Education & Corriculum, Prof. Doron Zahger, MD.
- Vice Dean for Student Affairs, Prof. Eli Witztum.
- The Dean is assisted administratively by the Head of Faculty Administration, Mr. Hertzel Jean.

Teaching is organized through five schools as follows:

- The Joyce and Irving Goldman School of Medicine, which is a 6-year program, followed by a one year internship that awards an M.D. degree, established in 1974, it was the first school of the Faculty. Present Director**:** Prof. Klaris Risenberg, M.D.
- The Medical School for International Health (MSIH), which is a 4-year, English speaking program for foreign students, governed conjointly by the Faculty and the Columbia University Medical Center, New-York. It was established in 1996. Its curriculum stresses issues related to global medicine with special emphasis on developing countries. The school awards an M.D. degree, which is recognized by the USA authorities since the graduates are required to take the USMLE examinations. Present Director: Prof. Mark Clarfield, M.D.
- The Leon and Matilda Recanati School for Community Health Professions, established in 1977, consists of the Departments of Nursing, Physical Therapy and Emergency Medicine. Present Director: Prof. Yaakov Gopas, Ph.D.
- The School of Medical Laboratory Sciences, which is a 3-year course, was established in 1996. It awards a Bachelor of Laboratory Science (B.Lab.Sci.) degree. Present Director: Prof. Yael Segev, Ph.D.

- The School of Pharmacy, established in 2001, is a 4-year course that awards a Bachelor of Pharmacy (B.Pharm.) degree. Present Director: Prof. Riad Agbaria, Ph.D.

The Faculty of Health Sciences has a unique structure comprised of:
(A) Researchers employed by the university, who work in the Faculty Research & Teaching Departments:

1. The Shraga Segal Department of Microbiology, Immunology and Genetics,
   Head: Prof. Noah Isakov, Ph.D.
2. The Department of Physiology and Cell Biology,
   Head: Prof. Israel Sekler, Ph.D.
3. The Department of Clinical Biochemistry and Pharmacology,
   Head: Prof. Galila Agam, Ph.D.
4. The Department of Public Health,
   Head: Prof. Michael Friger, Ph.D.
5. The Department of Health Systems Management,
   Head: Prof. Dan Greenberg, Ph.D.

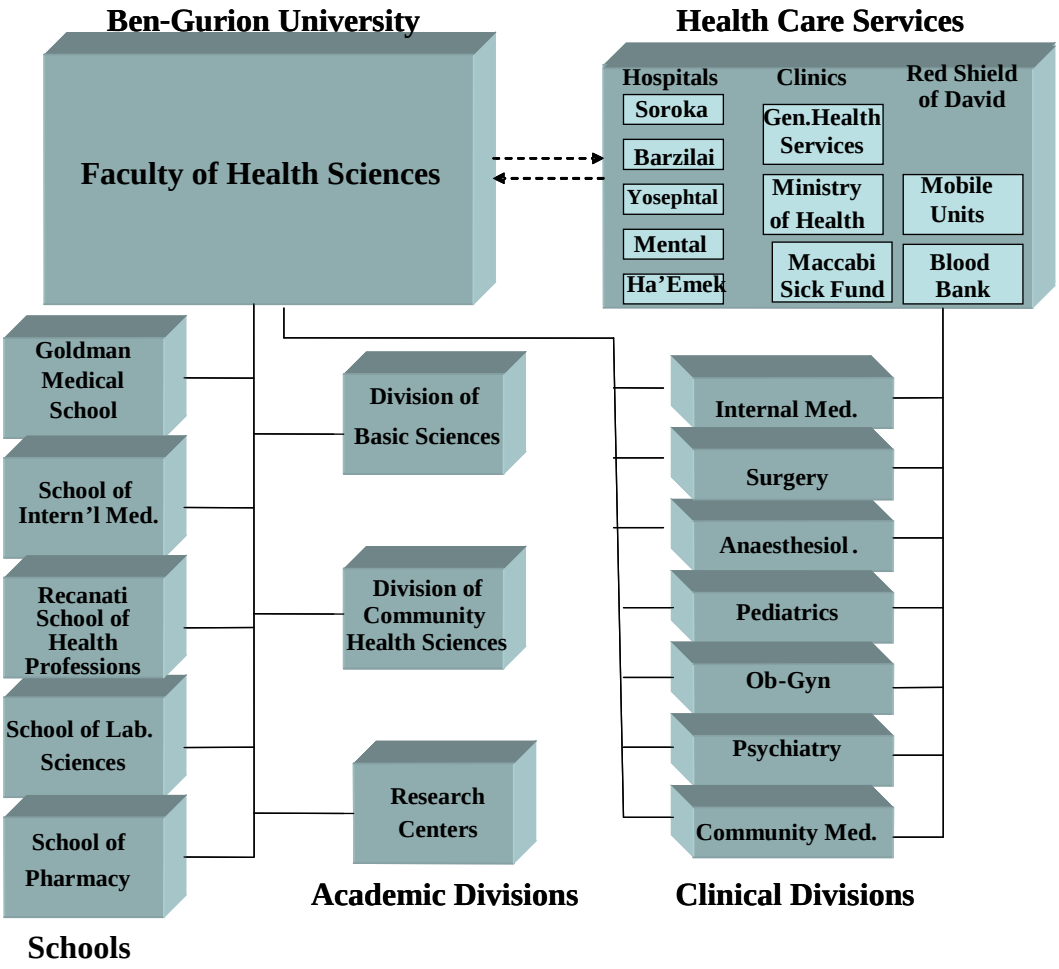
(B) Physician-researchers, employed by the affiliated Medical Centers, holding academic positions and rights from the University, involved in faculty research, teaching & service in Medical Divisions:

1. Division of Anesthesiology, *Chairman: Prof. Yoram Shapira, M.D, PhD.*
2. The Division of Community Health, *Chairman: Prof. Aya Biderman, M.D.*
3. The Division of Internal Medicine, *Chairman: Prof Yaniv Almog, M.D.*
4. The Division of Pediatrics, *Chairman: Prof. Matatiahu Lifshitz, M.D.*
5. The Division of Obstetrics and Gynecology, *Chairman: Prof. Eitan Lunenfeld, M.D.*
6. The Division of Surgery, *Chairman: Prof. Leonid Landsberg, M.D.*
7. The Division of Psychiatry, *Chairman: Prof. Zeev Kaplan, M.D.*

(C) Research Centers

1. The Center for Multidisciplinary Research in Aging
2. The Center for Women's Health Studies and Promotion
3. The Siaal Research Center for Family Medicine and Primary Care
4. The Leslie and Susan Gonda (Goldschmied) Center for Diabetes Research and Education
5. The Center for Asian and International Bioethics
6. The Center for Medical Decision Making
7. The Lord Rabbi Immanuel Jakobovits Center of Jewish Medical Ethics
8. The Moshe Prywes Center for Medical Education
9. The S. Daniel Abraham International Center for Health and Nutrition
10. The University Center for Cancer Research
11. The Zlotowski Center of Neuroscience
12. The Center for Emerging Diseases, Tropical Diseases and AIDS (CEMTA)

A Chart of the Faculty's Organizational Structure



2.4. STUDENTS

Please provide in the format of a table, the number of students in each one of the Unit's departments who are studying and have studied in the unit in each of the last five years according the level of degree (first, second with thesis, without thesis, doctoral).

Number of students

1st Degree

Year	2009	2010	2011	2012	2013	total
Medicine	496	492	500	518	554	**2560**
International Medicine	166	166	163	157	154	**806**
Nursing	210	246	218	235	282	**1191**
Physiotherapy	166	172	173	174	177	**862**
Nursing Completion	97	82	72	72	63	**386**
Medical Laboratory	158	142	140	147	137	**724**
Emergency Medicine	112	127	132	130	119	**620**
Emergency Medicine Completion	6	2	0	0	6	**14**
Medical management	107	115	111	113	102	**548**
Pharmacy	233	230	247	245	231	**1186**
Total	**1751**	**1774**	**1756**	**1791**	**1825**	**8897**

2nd Degree

Year	2009	2010	2011	2012	2013	total
Medical Sciences with Thesis	169	148	109	116	118	**660**
Nursing no Thesis	115	113	112	89	93	**522**
Nursing with Thesis	21	21	20	13	7	**82**
Physiotherapy no Thesis	0	0	14	32	40	**86**
Physiotherapy with Thesis	0	0	15	15	6	**36**
Emergency Medicine no Thesis	34	69	68	66	70	**307**
Emergency Medicine with Thesis	8	9	11	7	7	**42**
Gerontology no Thesis	73	62	83	87	69	**374**
Gerontology with Thesis	9	13	15	34	28	**99**
Public Health no thesis	101	94	63	59	76	**393**
Public Health with thesis	31	45	63	70	56	**265**
Total no Thesis	323	338	354	365	388	**1768**
Total with Thesis	238	236	233	255	222	**1184**
Total	**561**	**574**	**587**	**620**	**610**	**2952**

3rd Degree

Year	2009	2010	2011	2012	2013	total
Medical Sciences	202	202	186	181	187	**958**

2.5. GRADUATES

Please provide in the format of a table, the number of students who have graduated in each one of the Unit's departments in each of the last five years according the level of degree (first degree, second degree with thesis, without thesis, doctoral degree).

Number of Graduates

1st Degree and MD

Year	2009	2010	2011	2012	2013	total
Medicine, MD	62	66	83	66	61	**338**
International Medicine, MD	62	44	44	32	65	**247**
Nursing	85	90	111	66	71	**423**
Physiotherapy	41	35	42	42	40	**200**
Medical Laboratory	46	35	48	35	48	**212**
Emergency Medicine	34	31	27	35	49	**176**
Medical System Management	55	31	31	34	36	**187**
Pharmacy	39	44	42	47	43	**215**
Total	**424**	**376**	**428**	**357**	**413**	**1998**

2nd Degree

Year	2009	2010	2011	2012	2013	total
Medical Sciences with Thesis	61	48	60	67	50	**286**
Nursing no Thesis	57	39	38	58	42	**234**
Nursing with Thesis	3	3	6	9	9	**30**
Physiotherapy no Thesis	0	0	0	0	12	**12**
Physiotherapy with Thesis	0	0	0	0	0	**0**
Emergency Medicine no Thesis	0	0	30	32	30	**92**
Emergency Medicine with Thesis	0	0	2	2	2	**6**
Gerontology no Thesis	37	37	22	25	50	**171**
Gerontology with Thesis	2	1	1	0	2	**6**
Public Health no thesis	13	39	34	23	25	**134**
Public Health with thesis	7	7	4	6	11	**35**
Total no Thesis	107	115	124	138	159	**643**
Total with Thesis	73	59	73	84	74	**363**
Total	180	174	197	222	233	**1006**

3rd Degree

Year	2009	2010	2011	2012	2013	total
Medical Sciences	28	44	19	27	29	**147**

2.6. BODIES DETERMINING THE RATIONALE, MISSION AND GOALS

Who decides (internal/external bodies) on the rationale, mission and goals of the parent unit and of the study programs? What were the considerations behind these decisions and are they periodically re-examined and, if deemed necessary, changed? What were the changes made (if any)? How are the mission, goals and changes brought to the attention of the teaching staff, the students and the institution's authorities?

The goals and objectives of the Faculty of Health Sciences were determined and formulated in the Arad Convention that took place in 1973, before the establishment of the Faculty. At that time, they were formulated as a master description of the envisaged graduate. Since then, the Faculty adheres to the stated goals and objectives, and expands them to include the new schools and programs. In 1997 the International Advisory Review Committee (IARC) for the faculty and the Joyce and Irving Goldman School of Medicine was established. This Committee initiated strategic planning of the faculty and the Goldman School of Medicine, in the framework of which the goals and objectives from 1973 were reexamined. Although the decision was not to change these goals and objectives, they were reformulated. The new formulation was endorsed by the Faculty Council. Traditionally, the Goldman Medical School adopted, among other principles, the "Beer Sheva Spirit" (detailed above), early clinical exposure, and community teaching. In addition, twelve years ago, the faculty adopted a special education program to integrate underprivileged populations, i.e., members of the Bedouin population and students from low socioeconomic communities in the Negev, into its various schools. More recently, following the formulations of the new budgeting model of The Council for Higher Education (MALAG) through its Committee for Planning and Budgeting (VATAT), the faculty has adopted a new interdisciplinary research initiative emphasizing research convergence by supporting collaborations between basic and clinical researchers in projects enhancing research convergence, translational science, implementation science and community service. Also, new initiatives in medical education were launched which include: professional and inter-professional education, emphasis on education in the humanities, ethics and behavioral sciences, use of simulation techniques and adoption of a mentoring program. It should of course be mentioned that through the years the faculty has opened new schools and educational programs and has increased the number of students in each program.

The rationale, mission and goals of the faculty and of the study programs are determined and periodically re-examined by internal Faculty bodies, the Dean, the various Dean's forums, the various faculty committees, approved by the Faculty Council, and by BGU academic authorities. The Faculty is assisted by the International Advisory Review Committee which convenes annually to review the strategic planning activity of the Joyce and Irving Goldman Medical School and the Faculty, covering four fields of action – community health, research, medical education, and clinical and academic faculty enhancement.

The mission, goals and changes are brought to the attention of the teaching staff and students through the Faculty Council, the Faculty Committees, Faculty and school administrations, publications & Internet, Faculty and schools' mail system and the students association, the ASRN. Institution authorities regulate and approve mission, goals and changes through the various academic bodies in which the Dean and other faculty members participate by election or appointment: The BGU Central Academic Committee, The Senate, and various senate committees. Also, monitoring and feedback are achieved through on-going meetings and interactions with the Rector and his office, the Academic Secretary and his office, the President and her office, the vice president for research and development and his office, and the General Director and his office.

A. Bodies external to the Faculty:

1. **BGU authorities:** The parent unit and its study programs are administered and coordinated by BGU authorities: the BGU Rector, the Central Academic Committee and the Senate (chaired by the Rector), as well as the Academic Secretary, are responsible for the academic administration of BGU Faculties including the FOHS. The BGU Director-General and his affiliates are responsible for the administrative guidance and regulation of the FOHS. The Vice President of Research and his affiliates are responsible for research administration. The Vice president of International Affairs is responsible for FOHS relationships with BGU associates and donors, and, of course, the BGU president and her office oversees general university administration.
2. **The International Advisory Review Committee (IARC):** IARC convenes annually to review the strategic planning activity of the Joyce and Irving Goldman Medical School and the Faculty, covering four fields of action – community health, research, medical education, and clinical and academic faculty enhancement. The committee was initiated by the Goldman family in 1996 in conjunction with their magnanimous gift to the Medical School. Members of the committee include distinguished physicians and scientists from the United States, Canada, and Europe and from Israel, all of whom have extensive knowledge and expertise in their respective fields.

   Present IARC International Committee Members:

   - **Steve Schoenbaum**, MD, MPH, Professor and Chairman IARC, Special Adviser to the President, the Josiah Macy JR. Foundation, former Executive Vice President for Programs at The Commonwealth Fund, and former President of Harvard Pilgrim Health Care of New England.
   - **Howard Bergman**, MD, FRCPC Professor and Chair, Department of Family Medicine, McGill University
   - **Wendy Levinson**, MD, Professor and Chair, Department of Medicine, The University of Toronto
   - **Hogo Heymans**,MD, PhD, Professor and Chairman, Pediatrics Division, Amsterdam Medical Center.
   - **Laurennce Buckman**, MD, Chairman of the British Medical Association's General Practitioners' Committee practicing in North London.

   IARC Israeli Committee Members:

   - **Shlomo Mor-Yosef**, MD, MPA, Professor and former Director General, Hadassah Medical Center, Director General, National Insurance Institute (Bituach Leumi)
   - **Dina Ben-Yehuda**, MD, Professor and Chairman, Division of Hematology, Hadassah University Hospital.
   - **Chaim Doron**, MD, Professor and Chairman, Board of Trustees, The Israel National Institute for Health Policy and Health Services Research, former Chairman and Director General, Kupat Holim Clalit.

- **Ahuva Gulik**, MD, Professor and Head, Department of Medicine, Assaf Harofeh University Medical Center.

The committee meetings provide an impetus for the faculty and school to assess their activities and future programs with emphasis on excellence in teaching, service, and research, and to guide the faculty in pursuing their goal of training physicians in a more humanistic approach to medicine and medical care.

3. **The Dean's Forum:** Decisions concerning country-wide issues which apply to all medical students, i.e., length of medical studies, finals, etc., are made by the Dean's Forum, comprised of the deans of all the medical schools in the country, and applied to all medical Schools.

B. Internal Faculty Bodies:

The supreme organ of the Faculty is the Faculty Council. The members of the Council are the Dean, all the academic staff ranking Senior Lecturer and above, representatives of the lower academic ranks (Lecturers and Instructors), one representative of the University Senate, and elected representatives of the other four faculties. The Council elects the Dean every three years, and holds the authorization to impeach him or her, if necessary.

The Dean may appoint Vice Deans. Presently there are a Deputy Dean for Research and Basic Sciences and 4 Vice Deans as follows: Vice Dean and director of the Joyce and Irving Medical School, Vice Dean for Academic Affairs; Vice Dean for Education & Curriculum; Vice Dean for Student Affairs.

The Faculty's current affairs are managed by a few standing committees and additional ad-hoc task forces and committees. The standing committees are the following:

- The Vice Deans Forum consists of the Dean, Deputy Dean and Vice Deans
- The Extended Vice Deans Forum consists of the Dean, Deputy Dean, Vice Deans and Heads of schools.
- The Expanded Vice Deans Forum consists of the Dean, Deputy Dean, Vice Deans and Heads of Divisions and/or Departments.
- The Executive Committee is comprised of the 5 Heads of the Faculty schools; 7 Directors of the clinical divisions; 3 Directors of the affiliated hospitals; the Director of the Negev District of General Health Services HMO.
  The Committee is chaired by the Dean. Students are not represented.
- The Curriculum Committee is chaired by the Vice Dean for Education, and includes the 5 heads of the faculty schools, the 5 chairpersons of the curriculum committees of these schools, and a student representative from each school.
- The Advanced Studies Committee is chaired by Prof. Michal Hersfinkel. This Committee sets standards for admission and promotion of graduate and post-graduate students, and is also responsible for raising funds for such students and distributing them according to pre-set criteria. The Committee delegates authority to subcommittees for basic medical sciences, for public health and community sciences, and for Recanati School Graduate Studies Curriculum Committee
- Ethics Committee, chaired by Prof. Jacob Gopas, Ph.D.

- Infrastructure & Equipment Committee, chaired by Prof. Yaakov Polack, Ph.D.
- Library Committee, chaired by Dr. Daniel Flusser, M.D.
- Safety Committee, chaired by Dr. David Stepansky, Ph.D.

2.7. THE PARENT UNIT'S PERCEPTION OF THE EVALUATED STUDY PROGRAM

What is the Parent Unit's perception of the evaluated Study Program/Department within its greater framework? Is the Study Program represented in the Parent Unit's decision-making bodies?

The Joyce and Irving Goldman Medical School is considered the central body of teaching within the Faculty of Health Sciences. The traditional "Beer Sheva-Spirit" educational efforts emphasize: early clinical exposure, community teaching as well as novel medical educational efforts, humanities, ethics, professionalism, mentoring, and use of simulation. The program was initiated by the Dean, Vice Deans' Forum, School Directorate and Curriculum Committee and The Moshe Prywes Center for Medical Education and developed and enhanced with the support of the Faculty. Also, educational initiatives involving various schools, i.e., inter-professional education have been introduced, developed and supported at the faculty level. Until the year 2000, the Dean was the director of the medical school. As of that year, the autonomy of the medical school was expanded and a school director, who also serves as a Vice Dean, was appointed. At the same time, the organizational and managerial structure of the school was reformulated.

In August, 1998, the Faculty of Health Sciences initiated a new program aimed to extend the Medical school's philosophy and influence students from around the world. MSIH follows a four-year U.S. style curriculum that is taught in English by faculty members. The collaboration between Ben-Gurion University's MSIH and Columbia University Medical Center is one to which both universities have made a major commitment of academic and administrative resources. This partnership was founded on participation by both universities in student admissions, curriculum development, faculty exchanges, fourth year elective exchanges, residency planning, the MD/M.P.H. program and student support. In addition to offering a full North American-style curriculum, studies in all 4 years include a required (not elective) Global Health and Medicine (GHM) track. Centered on principles of effective cross-cultural medical practice, the GHM curriculum includes studies in medical anthropology, preventive medicine, geographic medicine, tropical diseases, global environment, and refugee and disaster medicine. The MD degree is awarded by Ben-Gurion University of the Negev. Nearly 400 graduates of MSIH have so far taken up positions as physicians in the US, Canada and around the world.

The Medical Schools operates *vis-á-vis* the Faculty of Health Sciences and Ben-Gurion University of the Negev in the following broad organizational structure:

1. The directors of both medical schools are appointed by the Dean and have the status of a Vice Dean.
2. The directors of both medical schools are members of the Vice Deans' Forum, the Extended Vice Deans' and School Directors' Forum, the Expanded Vice Deans' & Heads of Division Forum, and the Faculty Executive Committee.
3. The Heads of Schools and the Chairpersons of the Curriculum Committees are members of the Faculty Curriculum Committee, chaired by the Vice Dean for Education. The heads of

the other Faculty schools and divisions (excluding clinical divisions) and the chairpersons of their curriculum committees are also members of this Committee, as well as student representatives of each school. The role of this committee is to examine newly offered courses and programs and their impact upon the existing teaching, and also to examine the regulations and bylaws of the various schools and divisions and their admission processes in order to prevent conflict with the Faculty's policies and vision.

4. Representatives of the Schools participate, upon election or appointment, in all the relevant Faculty committees, such as the Curriculum, Ethics, Academic Appointments, Research, Library, and Safety Committees.
5. Senior faculty members (associate and full professors), which belong to the Medical School, upon election or appointment, are members of the University Senate and its committees.
6. The medical school has a complete autonomy regarding the process of admission, planning and implementation of the curriculum (see Chapter 3)
7. The Joyce and Irving Goldman medical school has no running budget and is not managed economically as a "closed market". However, the school has limited financial autonomy, especially regarding compensation for guest lecturers, printing and other teaching aids. The school has access to a few academic positions that may be used to compensate part time faculty members with teaching responsibilities in interdisciplinary areas.
8. For its part, MSIH runs its own budget and is considered a closed economic unit for such purposes. The school's budget comes entirely from student tuition fees which are administered by BGU and allocated each year according to the MSIH budget which is approved by BGU authorities.
9. The Chief Administrator of the School is subordinate to the Chief Administrator of the Faculty in all the budgetary matters and position allocations.

CHAPTER 3
THE SCHOOLS OF MEDICINE

3.1. THE GOALS AND STRUCTURE OF THE STUDY PROGRAM

3.1.1. Name and History

The name of the department / study programs, a brief summary describing its development since its establishment. Please attach a copy of the academic diploma awarded to students.

Forty years ago only two physicians who had been educated in Israel served as family physicians (or general practitioners) in the entire Negev region and only 0.5 percent of the graduates of all Israeli medical schools chose a career in primary care. The Soroka Medical Center (known then as "the Central Negev Hospital) was a small community hospital and almost no tertiary care was available. It was obvious to all involved in health care that only a community-oriented medical school, founded on the principles of community medicine and primary care, could improve the quantity and quality of care and attract to the region academic specialists of high quality.

The Faculty of Health Sciences (the Faculty) was established in 1974 by Prof. Moshe Prywes, founding Dean, and by Prof. Haim Doron, then Director General of Kupat Holim ("Sick Fund"), which is the largest HMO in Israel. The medical School, the first among the Faculty's schools, was renamed the Joyce and Irving Goldman Medical School in 1996, was constructed with the goal of revolutionizing primary care medicine and directing the medical curriculum to provide students with new models of health care delivery, in addition to preparing them for their traditional roles as clinicians and researchers. Created under extremely adverse economic and social conditions, the Medical School accepted its first students immediately after the Yom Kippur War in 1973.

This new program marked a dramatic departure from conventional institutions for medical education in Israel and even abroad. In order to counter the trend toward training specialists who tend to focus on only the "sick" part of the patient, and whose services are usually rendered in large central hospitals, the new medical school presented a so-called experimental program. Its goals were:

- ♦ To train its students to be aware not only of their patients' medical problems, but of their psychological and social backgrounds as well. The patient is to be regarded as a person - part of a family, community and culture - factors which must be taken into account when treating an illness.
- ♦ To assume responsibility for the health care of the population of the Negev by delivering medical services of the highest standards both in hospital and in the community.

- ♦ To hire and train first-rate clinicians and health-care professionals and to support continuing medical education programs for practicing physicians and other health professionals.
- ♦ To conduct clinical and basic biomedical research of the highest standards as well as to establish programs for health economics and policy, health promotion and disease prevention.

The result of this effort has become a model of medical education and the Joyce and Irving Goldman Medical School of Ben-Gurion University (BGU) is now a world leader in the field of primary care and community medicine. This "experiment" in medical education is, in reality, a radical return to medicine's roots wherein the physician cares for the patient as well as the illness.

After 40 years, the Faculty still coordinates with various regional health care providers, including hospitals, neighborhood clinics, preventive services, mental health and geriatric institutions, within the framework of The Negev Health Forum that is a coordinating committee chaired by the Dean. This committee encompasses the Regional Directors of several HMO's which are represented in the Negev, including the Clalit Health Services (which owns the Soroka University Medical Center, as well as many primary care clinics in the south), the directors of all affiliated hospitals, the Regional Director of the Ministry of Health among others.

Among the most striking features of the Joyce and Irving Goldman Medical School is its persistent effort to cultivate humane, empathetic, caring and communicative professionals. This is reflected, for example, by student selection (for many years this process was unique among Israeli faculties of medicine), by the Physician's Oath that the freshman class take at the beginning rather than at the end of their studies and by the curricula program in early clinical practice (see section 3.1.3). Moreover, the basic sciences, learned simultaneously, are still taught along with the clinical program throughout the six-year curriculum. The "spiral" configuration of the curriculum is one of the characteristics of our medical school. Although this approach is not specifically a BGU innovation, rather it was adapted and updated to include in the integrated body organ system not only the basic but also the clinical and behavioral sciences to create meaningful clusters of knowledge (*Prof. Dan Benor "Sustaining Change in Medical Education," 2005).*

During the last two the years Joyce and Irving Goldman Medical School directorate under the directorship of the Dean and the Faculty has focused on four strategic topics:

1. Increased enrollment at the Joyce and Irving Goldman Medical School.
2. Reevaluation of the curriculum of the medical school according to the institutional goals.
3. Senior and active partnership in the new pilot initiative of research promotion in the FOHS.
4. Handling underprivileged and disadvantaged populations.

A thorough description of these topics is given in the future sections. For the Medical School for International Health (MSIH) see appendix A MSIH 1, 2.

A Copy of a diploma is presented in appendix A.3.1.1

3.1.2. Mission statement, aims and goals.

Please describe the mission statement of the department / study programs, its aims and goals.

"Everything in the world began with a yes. One molecule said yes to another molecule and life was born. But before prehistory, there was the prehistory of prehistory and there was the never and there was the yes. It was ever so. I do not know why, but I do know that the universe never began. Let no one be mistaken. I only achieve simplicity with enormous effort…" from 'The Hour of Star', the last novel written by Clarice Lispector, a Brazilian Jewish author, in 1977, the year of her death from a proliferative disease. It is surprising to reveal that her disease was diagnosed only after she completed writing her novel about the death of a young girl coming to the big city, just like Lispector herself, from the provincial north of Brazil.

Excellence should be interpreted as saying yes. The medical profession requires multiple and complex qualities. But the most desired quality is that of saying yes. By saying yes to oneself and to the 'Other', the universe can each day be created for oneself and for the 'Other'. We decided to use Lispector's "yes" as a motto in describing the Vision and Mission statements of the Joyce and Irving Goldman Medical School and the steps being made to achieve educational and research goals.

Vision Statement of the Medical School: The Joyce and Irving Goldman Medical School will become a leading research, education, and community-oriented institution. It will provide on-going quality education to physicians and health professionals in a research environment and on integrated primary/tertiary care as well as preventive/curative care environment in all specialties, with special emphasis on community-oriented care, both locally and via our international school (MSIH) in the domain of Global Medicine.

Mission Statement of the Medical School:

To open new frontiers through the pursuit of excellence in medical education, service and research. Within the context of the Beer-Sheva mission, excellence has the following specific dimensions:

Teaching

Using progressive, quality teaching methods, including student participation, to educate humane and competent physicians who will be oriented towards the other, towards primary care and towards the community

Service

Collaborative development of effective preventive and curative health services for the population of the Negev with special emphasis on the provision of services to all with sensitivity to the needs of individuals and communities, and exploring appropriate innovative models of care.

Research

Encouraging excellent research projects in all fields of health sciences. Enhancing and supporting interdisciplinary research groups involving basic and clinical researchers in order to facilitate research conversion, translational science, implementation science, community service.

3.1.3. Organizational structure

Please describe the study program's structure and content, including specializations/tracks within the program, division of courses according to number of credits and fields within the discipline. How are the mission statement, aims and goals of the program reflected in the study program?

The medical school educates students to receive the degree of Doctor of Medicine – M.D. following 6 years of study and one year period of internship. Upon completion of the requirements for the 3rd year, students receive the degree of Bachelor in Medical Sciences (B.Med.Sc.). In the case of MSIH, students receive a BGU MD. Almost all them return to North America for residency training but each year a few decide to stay on in Israel and take a year of internship like other Israeli students.

One of the most important education principles of medical education at BGU is the spiral approach. This principle is based upon cognitive psychology theories which maintain that understanding, recall and retrieval of new information is superior when it is interwoven into an existing conceptual framework and creates a meaningful wholeness. In the 1st and the 2nd years of medical school, "pre-clinical years", we create introductory courses in each basic science - cell biology, physics, basic and organic chemistry, biochemistry, embryology, histology, molecular biology, cell and general physiology, genetics, microbiology, virology, basic epidemiology and statistics, pathology, pharmacology (details about study program and credits in table 7.1, appendix A.3.1.8).

Each such introductory course presents a small portion of its entire content. However, these introductory courses are not isolated from each other. Careful scheduling has enabled us to create meaningful clusters even for these introductions. The courses are scheduled in such a way that each provides the necessary prerequisites to the others. The spiral principle also requires vertical integration, a continuity of every major discipline and subject matter over the years on an ever growing level of sophistication and complexity. The dual concept of creating meaningful clusters and carrying them on from year to year creates a special structure of a DNA-like spiral. Every subject is taught in conjunction with the other subject matter learned at the same time, while there is a continuity of each subject throughout the course of studies and progress from the basic to more advanced levels.

The 3rd year of studies integrates knowledge of basic sciences into the entire body systems structure, function and pathology: cardiovascular, respiratory, endocrine, gastrointestinal, musculoskeletal, central nervous system, kidney, reproductive and hematology (Table 7.1; appendix A.3.1.8). Major rotating clinical clerkships are carried out from mid-4th year throughout the 6th year. Clinical clerkships include Internal Medicine, Pediatrics, Ob-Gyn, Surgery, Neurology and Psychiatry, subspecialties of internal medicine and surgery (most of them as Selective studies) and Family Medicine. The rotations in internal medicine and pediatrics are repeated twice: a junior rotation in the fourth year, and a senior one during the sixth. In the senior rotations, students shoulder some roles of interns, with many more clinical responsibilities toward their patients, although not with the same independence as interns. The clinical clerkships take place in the hospital wards, outpatient clinics and community care facilities as well**.** Out of 84 weeks of clinical instruction, 21 weeks (25%) are performed in the community.

Elective programs are offered in the 5th and 6th year. The total duration of the electives is seven weeks. Electives can be performed in Israel or abroad. In addition, the faculty also offers electives for foreign/exchange students. (For more details see appendix A.3.1.3).

The MSIH School follows the standard North American model for a 4 year medical program. Since all of these students have already acquired a previous 1st degree (either BA or BSc) and have also taken the required prerequisite courses, the first 2 years of MSIH program comprise

the relevant advanced basic science courses (similar to the Israeli school and taught by the same FOHS staff). In addition, MSIH also provides both early clinical exposure as well as an integrated curriculum related to the school's main mission, Global Medicine (See appendix A. MSIH 1).

The third year is devoted entirely to the core clinical clerkships of Internal Medicine, Surgery, Ob/Gyn, Family medicine, Pediatrics and Neurology and Psychiatry, all of which are taught almost entirely at our two teaching hospitals Soroka and Barzilai.

Medical ethics as well as ongoing curricular material in Global Medicine are integrated throughout the year.

In the 4th year, students return to North America where they take 4-5 electives (many but not all at our collaborating institution in New York, Columbia University). Choice and location of electives is supervised and authorized by senior staff both in Beer Sheva as well as in our NY office. From mid-January to mid-March students are offered the "capstone" clinical experience of two months in Global Medicine at sites chosen, visited, and supervised by our staff.

We have 3 sites in India and one each in Ethiopia, Sri Lanka, the Philippines, Peru, and Nepal. We also have relevant rural sites in North America (for those whom for family and/or health reasons cannot travel to the developing world) under the auspices of the University of Kentucky in the US and McGill University and the Northern Ontario School of Medicine (NOSM) in Canada.

In mid-March, all students return to Beer Sheva for 8 weeks of "Selective" in subspecialties - both medical (ophthalmology, hematology, geriatrics, etc.) and surgical (ENT, neurosurgery, urology, etc.). Graduation is held in the 3rd week of May.

Also, a role of "physician's assistant" was created, Vice Deans in which outstanding senior students may work, for salary, at night and weekend duties. The major goals of this program are to ease the burden of work for the attending physician on the wards, to expose the student to clinical work in the hospital, to strengthen the students' connection to the hospital, with the hope that he/she will decide to remain at Soroka Medical Center for their specialization, and to expose the students to emergency situations with emphasis on the initial treatments in the wards (See details in appendix A.3.1.3).

Out of the "spiral" strategy, there are some educational strategies/principles that are present in medical studies program along all the years.

Comprehensiveness

This principle is an attempt to establish a comprehensive outlook of the students toward health and disease, and define medicine in a context wider than merely curative or preventive. The curriculum aims to create a humanistic approach towards patients, families and various communities and populations. The most important and innovative strategy to achieve these objectives is the introduction of **Early Clinical Program** (ECP) in the medical school curriculum. The ECP purpose was and is to expose the students to a very wide range of clinical settings from the very first week of the medical studies. This early clinical experience allows students to preserve their enthusiasm and altruism, to promote proper patient-doctor communication and to develop empathy, to demonstrate the relevance of the sciences learned in this early phase, and to facilitate interdisciplinary education.

Two basic concepts guide the program. The first is the "life cycle". Students learn to follow the patient "from cradle to grave", or from growth and development to geriatrics and to death

and dying. This theme is emphasized during the first year. The second concept is the "health-disease" axis. Students relate to the natural history of disease from primary onset to clinical manifestations, breakdown and rehabilitation, with special emphasis on public health issues, risk factors, screening of populations under risk, and primary, secondary and tertiary prevention. In every stage, students have to apply scientific knowledge to solve clinical problems. (Details of the EC are presented in appendix A.3.1.3)

Humanism

In addition to our usual efforts in this domain, another strategy is the introduction of multi-annual humanism studies in the curriculum: literature and poetry in the 1st year, psychology and ethics in the 2nd year and philosophy in the 3rd year.

Following a successful pilot in our international school (MSIH), beginning this academic year (2012/2013), teaching Ethics has become an integral part of clinical clerkships. Each discipline can decide how they would like to incorporate ethics into their rotation. Important in this regard is to view ethics not as an extraneous subject but as an integral part of the discipline. The importance of role-modeling cannot be overemphasized. Ethics rounds are carried out throughout all years. In these rounds ethical problems, related to the discipline which is taught at that time, are presented and discussed by the students. (Details are presented in appendix A.3.1.3)

Inter-professionalism education (IPE)

In March 2012, the Faculty curriculum council decided that IPE will be a part of the curriculum. The aims of this program are to expose students from medical professions to the various professions which surround them in the hospital and in the community and to improve team work and quality of care based on enhanced understanding and communication. During the program, the student will be taught the basic terms of IPE through an introductory lecture, and then gradually through the years he or she will be exposed to more professions and more complex cases which require a multi-professional approach. The shared activities with different medical professions will provide students with a better understanding of each role, improved communication and team work.

(For a detailed description see appendix A.3.1.3).

Health Sciences Students' Association of the Negev (A.S.R.N) activities in the community (years 1-6).

The faculty encourages, promotes and supports these activities. (For a detailed description see appendix A.3.1.3). In addition MSIH students are encouraged to become members of the relevant International Student Association.

3.1.4. Strategic plan

What is the Strategic Plan of the department and its study programs? Please attach the Strategic Plan.

The strategic plan of the Joyce and Irving Goldman Medical School includes:

A. Enlargement of the Joyce and Irving Goldman Medical School
B. Enhancement of medical education in outpatient clinics and in the community
C. Improving the quality of teaching of medicine
D. Handling disparity: The gates of medicine - a preparatory program for medical and health professions studies designed for the religious population

E. Enhanced research convergence through continuation of the new pilot initiative of research promotion in FOHS.

A thorough description of the strategic plan is attached in Appendix A.3.1.4

For MSIH, please see material from the NY State Board of Education Site Visit which took place in January 2013 and (appendix A.MSIH 1) as well as relevant material from a site visit from our sister institution Columbia University which was held a month later in February 2013 (appendix A.MSIH 2).

3.1.5. Internationalization

Internationalization: are there any international features (e.g. students exchange, teaching in English etc.) in the department?

In order to assist students and members of the Faculty to progress in research and development, the Faculty has signed international scientific and education cooperation agreements with many overseas universities and institutions that share mutual interests with BGU.

These agreements are aimed at developing, advancing and strengthening excellence in our own academic programs, research, health care delivery and instruction of students, residents and professionals, through ongoing exchange programs with universities and institutions. These agreements also aim to promote and develop medical schools in developing countries and to assist Western universities who seek curricular reforms. BGU holds agreements with the following institutions (in alphabetical order):

- McGill University, Montreal, Canada
- Hospital for Sick Children, Toronto, Canada University of Toronto, Toronto, Canada
- Esculela Colombiana de Medicina, Columbia
- Addis Ababa Faculty of Medicine, Addis Ababa, Ethiopia
- Ulm University, Ulm, Germany
- Wesftaler Wilhelms University, Munster, Germany
- Christian Medical College, Valor, India
- Moi University, Eldoret, Kenya
- Kohn-Kaen University, Kohn-Kaen, Thailand
- Albert Einstein College of Medicine, Yeshiva University, New York, USA
- Berkshire Medical Center, Massachusetts, USA
- Case Western Reserve University, Cleveland, USA
- Columbia University, New York, USA
- Fox Chase Cancer Center, Philadelphia, USA
- Stanford University, Palo Alto, USA
- Tulane University Medical Center, New Orleans, USA
- University of Birmingham, Birmingham, USA

- University of California, Los Angeles (UCLA), USA
- University of Chicago, Chicago, USA
- University of Miami, Miami, USA
- University of North Carolina, Chapel Hill, USA
- University of Rochester School of Medicine and Dentistry, Rochester, USA

Whether being on the side of the donor or recipient, these cooperative agreements have proved to be of great value and mutual benefit. BGU enjoys the unique educational opportunities that world class institutions may provide to BGU students and staff by exposing them to some of the leading medical centers in the Western World. BGU students benefit from high level elective rotations, clinicians gain specialty and subspecialty experience and basic scientists reap the fruits from participating in collaborative projects in some of the world's most advanced research laboratories.

Some partners provide BGU students and staff with exclusive opportunities to become familiar with medical reality in developing countries. The experience of different cultural and geographical orientation provides them with both enrichment and a window on global health issues. These experiences are important especially, but not only, for students and staff of our School for International Medicine. These collaborative schools include: Addis Ababa Faculty of Medicine, Ethiopia, Moi University, Kenya; Christian College of Medicine, India; Koirala Institute of Health Sciences, Nepal; Medical School, Iquitos, Peru.

The other side of the same coin is the placement of foreign undergraduate, graduate and post-graduate students in various BGU clinical and basic science departments. The visits range from a month or two in the case of undergraduates elective clerkships, and from two to three years for fellowship or post graduate doctoral candidates. The visiting students are mainly from the Western countries, but occasionally, students come from African and Far Eastern countries and the Palestine Authority.

BGU's assistance in establishing new community-oriented medical schools or reforming curricula in existing Western, and sometimes highly reputed schools, goes far beyond the institutions with which BGU has signed an agreement. Examples include the Catholic University of Ecuador in Quito, Ecuador (1996); University of Hawaii, Honolulu (2001-3) and the University of Hanoi, Vietnam (2003).

BGU can boast a history of providing assistance beyond medical schools. BGU participated in providing emergency medical services to world disaster areas such as to refugees after the Cambodian holocaust (1981); to San-Salvador and Belize victims of a cholera epidemic (1991); to victims of the earthquake in Kosovo (2002) and to Congolese victims of a volcanic eruption in Goma (2003).

Furthermore, BGU scholars continue to advise governments and regional health authorities in various developing countries including the fight against the spread of HIV in Ethiopia; treatment of famine in Ethiopia (2000); reforming rural health services in Somalia and primary care services in Kyrgyzstan and Tajikistan (2001) and Papua-New-Guinea (2003-4).

BGU has made several past efforts to promote regional cooperation but most of the projects were disrupted by the eruption of violence in the area from 2000. We are however, hoping to reinitiate cooperation with Jordan on a collaborative research project related to cerebral palsy.

Naturally, MSIH is the Faculty's largest and most comprehensive international collaborative program and is described wherever relevant throughout this report

3.1.6. Academic and administrative organizational structure

Description and chart of the academic and administrative organizational structure of the departments and its study program/s (including relevant committees and names of senior administration).

There are two schools of medicine within the faculty of health sciences:

1. The Joyce and Irvin Goldman School of Medicine
2. The Medical School for International Health (MSIH)

Each school has its own director and administration. The two directors hold the position of a vice dean. Faculty bodies such as the Centre for Medical Education, the Jacobovitz Centre for Medical ethics and the vice dean for curriculum and the vice dean for student affairs are involved with academic activities in each one of the schools.

Organizational Structure of the Joyce and Irvin Goldman Medical School

1. Skeleton team (academic and administrative)
2. School directorate
3. Teaching coordinators
4. Extended directorate
5. The Chairmen years' Forum
6. School committees (Admission committee, Research projects committee, Promotion and evaluation committee)
7. Curriculum committee
8. Ad-hoc committees
9. Institutions and committees of the Faculty of Health Sciences

1. Skeleton team

Academic:

- Director of the medical school Prof Klaris Riesenberg
- Assistant director and the curriculum coordinator Mrs. Batia Gvili
- Deputy Director of the medical school Prof. David Greenberg

The academic skeleton team convenes once a week to discuss subjects requiring immediate attention. The team identifies subjects that require further attention and refers them to other bodies of the medical school.

Administrative:

- School secretary Mrs. Mali Heler
- Administrative teaching coordinator Mrs. Batia Kotler
- Student affairs secretary Mrs. Maytal Mareli

2. School directorate

The Medical School Directorate includes the skeleton academic team, the teaching coordinators, the heads of the admission committee and the evaluation and promotion

committee, the head of the medical students' organization, the faculty administrative director and the Dean. The directorate convenes every three months. If relevant issues arise, the head of the appropriate year committee is invited. The skeleton academic team reports his activities to the directorate.

3. Teaching coordinators

Owing to the heterogeneous format of the curriculum in the various years of the program, three coordinators with distinct responsibilities were appointed:

- Basic sciences coordinator
- Body systems teaching coordinator
- Clinical teaching coordinator

4. Extended directorate

The extended directorate also includes the heads of all year committees and the teaching coordinators and serves as a steering committee.

5. The Chairmen Years Forum

For each medical school year there is a year committee, with 6-7 members. They are chosen from faculty members involved in teaching that year. The committee members follow closely teaching performance and the student achievements and can be approached for academic and personal issues. The heads of the year committees are ex officio, members of the extended directorate of the medical school. The Chairmen Years Forum members are:

- The director of the medical school - Chairman
- The heads of the year committees
- Vice Dean for student affairs.
- Teaching coordinators
- Deputy director of the medical school
- Head of Examinations unit

This forum convenes every two months.

6. School committees

- The Admissions Committee is in charge of the admission of new students. (See detailed report in chapter 3.3).
- Evaluation and promotions committee discusses the achievements of all the students, but especially of those who failed to achieve the appropriate academic results. The committee passes its conclusions and suggestions to the director of the medical school (See detailed report in chapter 3.3).
- Research Project Committee directs monitors and approves dissertation proposals and is in charge of reviewing and accepting research projects. (See detailed report in chapter 4).

7. The Curriculum Committee

The Curriculum Committee is the supreme body of the medical school and convenes three times a year. The committee discusses major topics such as changes in curriculum, procedures and regulations, and appointment of officials (heads and members of committees).

- The director of the medical school - Chairman
- The Dean
- The director of Soroka Medical Center
- Curriculum coordinator- Committee secretary
- Chief administrator of the faculty of health sciences
- Deputy director of the medical school
- Teaching coordinators
- Vice dean for curriculum
- Vice dean for students' affairs
- Chairman of the center for medical education
- Internship program coordinator
- Chairman promotion and evaluation committee
- Chairman of the research projects committee
- Chairman admission committee
- Representative of the Medical School for International Health.
- Chairman of the division of Internal Medicine
- Chairman of the Surgery division
- Chairman of the Gynecology & Obstetrics division
- Chairman of the Pediatric division
- Chairman of the Anesthesiology division
- Chairman of the Basic Science division
- Chairman of the Health in the Community division
- Chairman of the Public Health division
- Chairman of the Psychiatric division
- The heads of the year committees
- Representative of Barzilay Medical Center
- Chairman of ASRN (Medical students association)
- Representative of ASRN

8. Ad-hoc Committees

The director of the medical school may sometimes appoint ad-hoc committees to deal with specific issues (such as examining the curriculum and the teaching method of a certain subject) and to present their recommendations to the directorate.

For specific MSIH structure, please see material from NY State Site Visit (appendix A.MSIH 1).

9. Academic Divisions (common to the two schools)

The school has seven professional, clinical academic divisions - Internal Medicine, Surgery, Pediatrics, Gynecology and Obstetrics, Psychiatry and Anesthesia and university academic divisions - Basic Medical Sciences (virology, microbiology and immunology, morphology, physiology, biochemistry, pharmacology), Community Health (family medicine, health promotion, occupational medicine, pediatric primary care) and the Division of Public Health (epidemiology, sociology of health, health systems management). The head of each division is responsible for teaching the relevant subjects in his discipline. He is assisted by the heads of the departments and senior faculty members of the division.

Faculty Council (common to the two schools)

The supreme statutory body is the Faculty Council that convenes at least four times a year. Members of the academic staff, from the rank of senior lecturer and up, and representatives of the lecturers and instructors, sit on the council. The council has extensive authority: electing a dean, changing principal regulations and procedures such as the system of appointments and promotion. The decisions of the council are binding as long as they do not contradict the general academic regulations of the university. The agenda is determined by the Faculty Committee and the Dean.

The council operates through its various committees, the Faculty Committee, Curriculum Committee, Regulations Committee, Appointments Committee, Library Committee, Computing Committee, Research Committee, Graduate Students Committee, Animal House Committee and Safety Committee. The Faculty administrative director assists the Dean in issues related to finances and budget, administrative staff, purchasing and supplies, etc.

The Faculty academic staff is divided as follows:

1. Senior faculty with full university appointment and salary.
2. Senior clinical faculty whose salary is paid by the hospital or the health services, while sabbatical and scientific liaison funds are paid by the university.
3. Junior faculty with a rank of an instructor. These are usually senior residents of the clinical departments.
4. Junior academic (non-clinical) faculty members are appointed from among the graduate students.
5. There are several non-faculty teachers, a few of them senior. Most are medical students who serve as instructors in courses such as anatomy, clinical confrontation, first aid, emergency medicine, etc.

The medical school has supportive logistic facilities that include a medical library, Preclinical Research Center an audio-visual aids unit, teaching laboratories and a medical computing unit (See chapter 3.5).

The Faculty of Health Sciences has academic regulations that govern its affairs.

3.1.7. Location

Location: the campus where the study program is taught (if the institution operates on a number of campuses). If the study program is offered on more than one campus, is the level of the program uniform on different campuses, and what measures are taken in order to ensure this?

All the preclinical studies are carried out in the BGU campus in Beer-Sheva. Clinical studies take place at affiliated hospitals, clinics and medical facilities. Apart from the Soroka University Medical Center in Beer Sheva which is the main teaching hospital of the FOHS there are 8 other affiliated medical facilities that serve as teaching venues for the medical school:

1. Yoseftal Hospital, Eilat
2. Health Services and Ministry of Health community clinics all over the Negev
3. The Center for Mental Health, Beer-Sheva (Psychiatry)
4. Barzilai Medical Center, Ashkelon
5. Assaf Harofeh Medical Center, Beer Yaakov
6. Laniado Hospital, Netanya.
7. Maanei Hayeshua Hospital, Bnai Brak.
8. Central Blood Bank of Magen David Adom, Sheba Medical Center, Tel Hashomer
9. "English" Hospital in Nazareth
10. In the case of MSIH overseas clinical locations see section 3.1.3 above.

The Soroka University Medical Center is the largest and most central teaching facility. Therefore, until now, the heads of clinical divisions in Soroka (apart from psychiatry) hold prominent influence and responsibility within the medical school. The director and many of the senior physicians of Soroka chair many of the medical school's committees and a large proportion of the teaching takes place in this medical center. Hands-on teaching for medical students is taking place in all the above mentioned facilities. Teachers are awarded academic appointments that grant them eligibility for sabbatical and scientific liaison fund payments. (See also 3.1.9)

3.1.8. The structure of the study program

Please provide in the format of Table 7.1 (page 14) the structure of the study program its content, and scope (years of study, semesters, hours per year and credits) and the distribution of the studies throughout the academic year. Does the study program supply courses to other units?

See appendix A.3.1.8 for the Joyce and Irvin Goldman School of Medicine and appendix A.MSIH 1 for the Medical School for International Health.

3.1.9. Planning and managing of the study program

Specify what bodies are responsible for the planning and managing of the study program. What are the mechanisms responsible for introducing changes and updating the study program, and how do they operate. If fundamental changes have been introduced into the study program during the last five years, please specify what they are.

The bodies that determine the educational goals of the school and the curriculum are the medical school directorate and the curriculum committee. The Center for Medical Education engages in research and in development of new teaching and evaluation methods. In addition, an annual evaluation is carried out via The International Advisory Review Committee (IARC) for the Goldman Fund.

Educational goals are determined by the changing needs of medicine. The curriculum committee and the school directorate discuss teaching subjects and methods and adapt them to the demands of the individual divisions, according to changes and innovations in medical sciences. Each of the divisions has a teaching committee the members of which include representatives from each of the relevant teaching sites. Their task is to determine curriculum content and appropriate methods of teaching. For parts of the program with several teaching sites, a strong effort is made to maintain uniformity in content and level of teaching. This is done by means of the supervision of the teaching committee for each division and the distribution of a uniform syllabus. Although it is not possible to maintain a completely uniform curriculum in all teaching sites the differences are, in our view, not substantial and the overall teaching objectives are not compromised.

The school provides special workshops for the promotion of teaching and evaluation methods. In mid-2011, a decision was taken to conduct an extensive reassessment of the medical school curriculum. This emanated from the realization that such a process had not been done for the past 10 years and our understanding that changes in the educational environment in which we operate necessitated this process. A committee was therefore created, chaired by the Director of the Medical School and Vice Dean for Education in which representatives of all clinical and pre-clinical divisions, as well as the Center for Medical Education, participated. Input was actively sought from all senior Faculty members as well as from members of our International Advisory Board. After initial discussions among committee members and consideration of multiple suggestions made by Faculty and staff, a decision was reached to concentrate on the following:

1. The committee identified a pressing need to expand the teaching of the humanities and especially medical ethics. Although taught for many years as a successful elective course, it became a compulsory offering. Therefore, a new 3 year mandatory program was created under the leadership of Prof. Yaniv Almog, the Chief of the Department of Medicine, incorporating courses in literature, philosophy and medical ethics. In addition, workshops on ethical issues have been introduced into the clinical rotations. The program was launched during this school year (see 3.1.3. and appendix A.3.1.3).
2. Responding to what we believe is a need to educate medical students in working with other physicians and health care professionals; we have established a new program of inter-professionalism under the leadership of Prof. Asher Bashiri. The program involves workshops to discuss and practice inters -professionalism during the clinical rotations. This program has also been launched this year, and is intended to eventually expand to other schools of the Faculty (see 3.1.3. and appendix A 3.1.3.).
3. A committee was created to re-examine the Early Clinical Exposure program. They have come up with suggestions to modify the program for 2nd year.

4. To improve communications between teachers of various courses and to identify areas of duplication and voids, a 2 day workshop was held last year in which representatives of all courses in the pre-clinical years presented their courses. A substantial number of topics were identified in which there was unnecessary duplication and/or omitted subjects. The pre-clinical teaching is being modified accordingly. A notable example is the addition of a full course on cell biology.
5. A new course was added on Medical Informatics and an Introduction to Health Economy, replacing a course on Introduction to Computer Applications.
6. A new course was added on sleep medicine.

In addition several other initiatives and activities have been carried since December 2011:

1. Increased enrolment of the Joyce and Irving Goldman Medical School: During the last year, the number of medical students rose by 25% up to a total of 90 students. In the next academic year a new 3 year Pre-Med program for 50-60 additional students will be initiated.
2. Handling inequality ("The Gates of Medicine"): a preparatory program for medical and health professions studies designed for the ultra-religious population has been developed for the roughly 50% of the youth in Israel who are not registered in state schools. These figures constitute a significant challenge to Israeli society. It is imperative that we try to improve this situation. We intend to use our previous expertise which has already enabled dozens of students from the Bedouin community to study health professions in FOHS by establishing a preparatory course on core subjects in the health sciences for the ultra-orthodox religious population. Students successfully completing these studies will be encouraged to apply to the admission committees and commence their health studies at the medical and health professions schools at FOHS. We are presently negotiating the details of such a program with relevant regulatory bodies.
3. The Faculty of Health Sciences is in the midst of a process of developing a Medical Simulation Center. The project has been approved by the university authorities, and construction is going ahead. Our faculty representatives (Prof. Pollack and Henkin) meet on a weekly basis with the construction crew. The architectural plan for the rooms is virtually completed. An expanded academic advisory committee, consisting of representatives from all schools and medical departments, continues to meet on a monthly basis and present plans for each department. A group of faculty recently visited Medical Simulation Center (מסר) in Tel Aviv again and exchanged ideas and plans. In addition to planning the academic schedule for the full operation of the center (hopefully in 2 years), we intend to implement simulation in 4 major courses already in the coming academic year:
    - ♦ Medicine clerkship introductory course (mostly examination techniques and procedures)
    - ♦ Surgery clerkship introductory course (mostly procedures).
    - ♦ Acute medical emergencies.
    - ♦ Inter-professionalism course – a full day of scenarios using simulated patients is planned for mixed groups of medical and nursing students, to be done several times during the year in small groups.

MSIH - For details please see the NY State Board of Education Report (appendix A.3.1.1-13 MSIH 1) which provides information on MSIH activities and plans in this domain.

3.1.10. Coordinating and examining the study program

Describe the mechanism for coordinating and examining the contents that are, in fact, being taught, if such a mechanism exists.

There are several internal and external mechanisms for coordinating and examining the content that are, in fact, being taught.

1. A debriefing method for on-going assessment of the curriculum has been used since the faculty was established. Debriefings take place at the end of all courses and clinical rotations. Participants include the course coordinator and major teachers, student representatives and a representative of School executive. The student representatives bring to the meeting a summarized assessment questionnaire filled-in by their class mates.
2. The annual evaluation of The International Advisory Review Committee for the Goldman Fund includes interviews with students and faculty members.
3. An annual meeting with all graduates is carried out after completion of their internship. All the heads of the departments and the school directorate are also invited. This traditional meeting includes awarding of diplomas and a festive lunch. Each of the graduates is asked to debrief his medical studies. At that time most of the graduates are already in the first year of residency. Therefore, they are able to compare themselves to graduates of other medical schools and have a better perspective of their medical studies.
4. There is an ongoing annual comparison of each student's achievements in the final examinations of all the Schools of Medicine in Israel (see 3.2.3).
5. A mentoring program for medical students was been introduced to our medical school in 2011. (See 3.3.7.1 and A.3.3.7.1 for detailed description).
6. There are other surveys evaluating and comparing specific issues between Schools of medicine in Israel:

   - A survey by Davidovitch (2012) was conducted in order to compare graduates from medical schools in Israel on the following issues:

     1. Physicians' perception regarding the dominant orientation of their medical studies (research vs. socially oriented).
     2. The percentage of graduates that work/have worked in the geographic periphery.
     3. The rate of physicians' involvement in social activities.

     The results of these comparisons are provided in section 3.2.2

   - In December 2012, a survey by Dr Oshrit Kdoshai evaluated the graduates' attitudes and follow-up regarding the following issues:
     1. Employment
     2. Residency
     3. Satisfaction from the academic and administrative atmosphere at Ben-Gurion University.

     The results are provided in section 3.2.2

3.1.11. Involvement of non-academic bodies

Are non-academic bodies involved in the running and the activities of the parent unit and study program? If so, what are these bodies and what is the mutual relationship between them and the leadership of the parent unit (for instance, the mutual relationship between the Business School and the Manufacturers' Association or Industrial Factories)?

Clinical studies are carried out in affiliated Medical Centers and Clinics owned by non-academic bodies (See 3.1.7). Physicians and researchers employed by these non-academic bodies hold academic positions at Ben-Gurion University. Nevertheless, academic activities (teaching and research) are based on a pure academic basis without employer intervention. The academic affiliation increases the prestige of heath providing organizations and is in accordance with their own interest. Moreover, the affiliation enhances their possibility of employing of highly trained and qualified personnel. (See appendix A 3.1.11 for the detailed agreements with the affiliated medical centers). No other non-academic bodies are involved in the running and the activities of the schools of medicine.

3.1.12. Collaboration with other departments

To what extent does the department collaborate with other departments within/outside the institution?

The Schools of Medicine operate within the Faculty of Health Sciences. Teaching is carried out by the academic staff, each holding a position in one of the various divisions, i.e., Basic sciences, Epidemiology, and the Clinical divisions. The same staff provides teaching to other schools in the faculty (nursing, paramedics, physiotherapy, pharmacology, etc.).

There are several collaborations with other faculties of BGU.

1. Department of Cognitive and Brain Sciences

There is a close and active collaboration between the Faculty of Health Sciences and specifically the Medical School and the Department of Cognitive and Brain Sciences at the Inter-faculty School for Brain Sciences at BGU. As part of this collaboration, Faculty members of the Medical School teach courses in the undergraduate and graduate programs for Cognitive and Brain Sciences, supervising undergraduate research projects as well as graduate students research theses. In addition, students enrolled in the brain and cognitive sciences program take courses together with medical students (Physiology, electrophysiology, neurophysiology, biochemistry etc.).

2. Department of Biomedical Engineering

Diagnosis and treatment in modern medicine is becoming more complex due to the accumulation of knowledge, complex methods, equipment, and instruments used in treatment and diagnosis. Along with the allocation of additional resources in the field of medicine and health by public and private entities, there is a growing need for skilled manpower possessing in depth understanding of medicine and the new engineering tools available to doctors.

This new track, run jointly by the Department of Biomedical Engineering and the School of Medicine Faculty of Health Sciences, is limited to a few outstanding students who wish to combine engineering and medicine. The syllabus provides a combined degree in biomedical engineering to graduates (B.Sc. and M.D.), after nine years of study instead of 11 years. The goal of this new track is to train the most skilled doctors – engineers - with a comprehensive knowledge of both engineering and medicine that can be applied in treating patients at a highly

professional level.

Students accepted to this course will learn the professions of engineering and bio-medicine, especially in the first two years. Starting from the third year, they will join the early clinical exposure track in the medical school and will incorporate the professions of medicine concurrently with their knowledge of education in engineering. The students' final project will be related to medical engineering. Upon submission of the final project, students will receive a B.Sc. degree in biomedical engineering. From the fifth year, students will fully integrate into the medical school's pre - clinical and clinical studies and will be awarded an M.D. degree after completion of their studies and one year of internship. Research Project Committee directs monitors and approves dissertation proposals and is in charge of reviewing and accepting research projects. (See detailed report in chapter 4).

Prerequisite to receiving the common route is to meet the admission criteria of each track separately. Admission will be based on track - according to academic excellence and the number of places annually located to the track. A committee comprised of representatives of the Health Sciences Department of Bio-Medical Engineering, the teaching committee of the School of Medicine and Teaching committee of the Department of Biomedical Engineering will supervise these students.

3. The Faculty of Humanities and Social Sciences.

The courses in literature, philosophy and medical ethics (see section 3.1.9 and appendix A.3.1.3) are taught in cooperation with members of the Department of Literature.

3.1.13. Future development Plans

What are the future development plans of the evaluated program, and how are they decided upon?

Answers to this question were given in sections 3.1.1, 3.1.2 and 3.1.3

3.1.14. Program summary

In summary, to what extent has the program achieved its mission and goals? What are its strengths and weakness?

As specified in the statement (3.1.2) our mission is excellence in teaching, service and research.

Teaching:

We are quite satisfied with the improved outcomes of our students in the national final examinations (see section 3.2) and from their ability to extract maximal efficacy from our limited clinical fields. We are also satisfied with the successful integration of disadvantaged populations. Our community oriented teaching, which consists of about 25% of all the clinical education, is quite high. Nevertheless, we are dissatisfied with this percentage and every effort should be made to upgrade our teaching methods through the use of simulation and computer based learning.

Service:

We are satisfied with the involvement of our students in community activities (see A.3.1.3). However, the number of graduates recruited to the Negev area as residents is insufficient and we are investing every possible effort together with the affiliated medical organizations in the Negev to increase this number (see mentoring program appendix A.3.3.7.).

Research:

There was a marked increase in research activity and achievements in the last two years, especially research converging clinicians and basic scientists (see section 4). However, we should promote and strengthen community based research. Nine new gifted researchers were recruited to the faculty during this period and there has been a substantial increase in external competitive grant money.

3.2. TEACHING AND LEARNING OUTCOMES

3.2.1. Teaching

3.2.1.1. Teaching Evaluation

Does the Department have a structured system for evaluating teaching? If 'yes', please specify what the process includes. How the results of the evaluation activities are used, specifically, the negative findings about faculty members' teaching?

There is a continuous and structured system for evaluating teaching. This includes debriefings, lecture evaluations and personal evaluation of teachers. Debriefings take place at the end of all courses and clinical rotations (see 3.1.10). At the end of every course, the student is required to fill out evaluation forms which are summarized by the class representatives and presented to the forum which includes the course coordinator, the main teachers of the course, and the directorate of the medical school. For the lecture courses, individual evaluation of the teachers is carried out. Summaries of the evaluations are prepared by the Center for Teacher Evaluation of BGU. In the clinical courses, an individual evaluation form is completed related to the clinical instructors on the wards. Each student is requested to evaluate his/her teachers. The teachers pass out the evaluation forms to the students before the students receive their grades for that clerkship. The student grades are prepared before the evaluations are submitted. The evaluating questionnaire contains structured questions addressing the teacher's motivation, quality of frontal and bedside teaching, the ability of the teacher to serve as a role model, and a global assessment. The computer unit and the medical school administration prepare a summary of the student evaluations. The results for each clinical instructor are given to that individual and to his/her direct supervisor. (For examples of debriefings see appendix A 3.2.11).

Those teachers whose performance is found to be below standard are called in for a conversation with the head of the medical school, where possible ways of improving his/her teaching are offered, including more structured teacher training and supervision. Summaries of evaluations for several years are regularly transferred to the Committee for Academic Promotion of the Faculty of Health Sciences where teaching accomplishments are an important component of determining academic promotion. (See 3.4.1)

3.2.1.2. Excellence in teaching

How does the unit foster excellence in teaching? How are excellent teachers rewarded?

The names of those teachers rated excellent are published each year by the university and they receive a certificate of merit and a small gift from the Faculty of Health Sciences and from the Medical Student Association. Teachers who received outstanding evaluations receive an award from the President and the Rector of the University.

Bracha Ramot prize is given annually to young physicians who demonstrate excellence in doctor-patient relationship. This prestigious prize was donated by the Goldman family through the IARC in the memory of the late Prof Bracha Ramot, who served as an IARC member. The awardees are selected by the chairmen of the divisions.

3.2.1.3. Teaching enhancement

Does the institution have a center for the enhancement of teaching? If not, does the institution/ unit/department offer the teaching faculty systematic activity, such as courses/in-services/training/instruction and guidance programs in order to improve the quality of teaching?

The Moshe Prywes Center for Medical Education was established by the founder and first Dean of the Faculty of Health Sciences, Prof. Moshe Prywes. Its major objective is to assist the Faculty of Health Sciences to educate students to excel as graduated professionals in serving society and individual patients as therapists, researchers, and teachers. This is translated to various activities that support, encourage and provide tools for teaching enhancement.

A traditional activity of the Center was a three-day orientation retreat in which young and experienced faculty members met and discussed various educational issues such as: the structure and function of the faculty subunits and committees, building a curriculum, planning a course and a lesson, teaching styles, small and large group teaching, and problem-based learning. Owing to structural changes in the health care services in Israel, such long retreats are no longer feasible. Starting this academic year, the retreat will be replaced by a full, one semester course with 13 meetings, three hours each. During this course, participants study the basics of adult teaching skills which include the principles of adult learning, what characterizes a good teacher, dealing with the difficult learner, presentation skills, planning a learning experience, providing feedback, and more.

The Center for Medical Education is acting as an advisor-member in the Faculty's curriculum committee for the development of the center for medical teaching by simulation and in the development of the new module of teaching inter-professionalism.

Keeping-up with innovations in medical education, the Center for Medical Education is distributing emailed up-to-date summaries on selected publications from contemporary medical education journals. Latest topics include: bedside teaching, using the patient's chart for teaching medical reasoning, and how to encourage students to become active learners.

The Center for Medical Education is offering individual mentoring for teachers who would like to get personal feedback on their teaching. This feedback will be presented in a friendly, less intimidating, and discrete manner. This is in addition to the university mentoring system. (See 3.2.1.4).

The Center is leading the OSCE (Objective Structured Clinical Evaluation) tests in the Faculty of Health Sciences. This includes: planning the examination stations, supervising, execution,

and evaluation. The quality of written tests as a tool for learning assessment is supported by workshops on how to write high quality MCQ (Multiple choice questions) tests.

The Center for Medical education conducts regular meetings of faculty members who have special interests in education. Being a unit that serves all the schools in the Faculty of Health Sciences, these meetings bring together teachers from medicine, nursing, physiotherapy, and paramedics. Discussions on teaching methods and experiences are shared. (See sections 3.1.3 and A.3.1.3 for inter-professionalism).

The center invites and hosts international leading figures in the field of medical education. The visiting professors last year were:

Prof. David Berg Ph.D, an organizational psychologist with special interest in group and inter-group relations. (Yale University, School of Medicine, New Haven CT, USA). Prof Berg carried out lectures and workshops on learning from stories on how to deal with educational dilemmas.

Prof. Hedy S. Wald Ph.D, a clinical psychologist, (Warren Alpert Medical School, Brown University, Providence RI, USA), carried out workshops on reflective writing as a tool for professional development of students.

Prof .Yvonne Steinert Ph.D., the head of the Center for Medical Education at McGill University (Montreal, Canada), recently spent two weeks with us conducting workshops and lectures in medical education. During her visit, she actively participated in a national conference on medical education in Beer-Sheva organized by The Moshe Prywes Center.

The Center for Medical Education is acting in concert with the Center of Excellence in Teaching at Ben-Gurion University. The courses in teaching skills, offered by the university, are open to all faculty members and are especially designed for teachers in basic sciences.

The Center encourages the Faculty of Health Sciences to enhance the linkage of good teaching and academic promotion (See 3.4.1). It also promotes the parallel track of promotion based on the burden of teaching and related achievements.

Since 1.3.2013, Prof Emanuel Sikuler is spending a sabbatical in the Center. Prof. Sikuler is Director of the Department of Medicine B and the Clinic for Liver Diseases at the Soroka Medical Center. He is a former chairman of the Division of Internal Medicine, Vice Dean and Director of the Goldman School of Medicine and has been involved in frontal and bed-side teaching since the 1974. His activities are:

1. Peer couching by attending lectures and providing personal feedback to teachers.
2. Enhancing bed-side clinical teaching at the Soroka and Barzilai Medical Centers.
3. Participating in planning and executing a strategic plan for the Center of Medical education.
4. Coordinating the current self-evaluation report.

3.2.1.4. New faculty members

Do new faculty members receive special support? Does the department have a mentoring program for new faculty? If 'yes' – please specify.

New teachers are required to take part in a two day workshop entitled “Orientation Workshop”. In this workshop, the teachers become acquainted with the structure of the medical school, the Faculty of Health Sciences, educational goals and teaching principles. Periodically, the Faculty offers a workshop on writing high quality exam questions. In

conjunction with the Evaluation Center of the University, the Faculty teachers are offered a course in the principles of effective teaching. The course combines hands-on practice and feedback from colleagues.

Ben-Gurion University conducts a mentoring program for new/young teachers. Upon appointment of a new faculty member, the head of the department appoints the mentor by a formal letter and the university manpower unit is informed. Mentors are senior faculty members who work in the same field as the mentee. Mentoring is done on a one to one basis for a period of one year.

The responsibilities of the mentor are:

1. To meet the mentee before and at the beginning of his appointment.
2. To carry out an orientation tour in the department in order to get to know the structure, facilities and staff (academic and administrative).
3. To introduce the mentee to key faculty members.
4. To carry out an orientation tour in the university campus.
5. To introduce the mentee to key university staff members.
6. To offer the mentee help in knowing the city and the surrounding neighborhood.
7. To ensure that the mentee is invited to teaching and research orientation workshops.
8. To ensure that an equipped office and an email address were provided for the mentee.
9. To provide support in teaching and research
10. To offer the mentee the first address for all problems, especially those involving basic knowledge of the university, its structure, its functions and its expectations.

3.2.1.5. Rankings of the courses

Please provide in the format of Table 7.3 (page 18) as an appendix to the report, the rankings of the courses as found in the results of the teaching surveys given by the program in the last 5 years (those of faculty members and those of adjuncts). Please divide the information by obligatory courses, electives, seminars, and labs/workshops. Please specify any other methods of evaluation.

Not required.

3.2.1.6. Information technology

Describe the use of information technology in teaching and learning: methods, scope, types of courses etc.

The medical school encourages the use of information technology (IT) over a wide range of uses in teaching and learning, and supports its implementation via funding and implementation of projects, software, personnel and infrastructure. The use of IT is tailored to the needs of the students at different stages of their training (i.e. pre-clinical and clinical), as well as to support the teaching.

Personnel and support

A dedicated professional unit (medical computation unit) which includes technical IT and database expert staff and is supported by clinical advisors and experts in the realm of medical education oversees the implementation of IT in the medical school.

Infrastructure

To encourage the use of IT – the medical school supports 4 computer halls for the use of the students, as well as a "fleet" of laptop computers which are accessible to students for classes requiring the use of IT. These computers have a wide variety of licensed medical education software – anatomy, histology, physiology, pathology - which are all accessible to students on campus. Several dedicated servers run software, allowing remote access for specific needs. One such example is a virtual microscopy server – allowing medical students to access thousands of histological and pathological preparations -24/7. This server is in use in a wide variety of pre-clinical and clinical courses.
WiFi – The entire campus has coverage of hotspots – allowing the use of personal computers, laptops and tablets and access to the different resources offered to the students.
The medical school has been a leader in BGU in implementing the use of online learning management software (LMS). As such – nearly all courses offered at the school have an online accompanying site on one of the LMS run by the school or the university. The two major platforms in use are the HighLearn platform and Moodle platform. These platforms offer not only distribution of learning materials, but rather facilitate other meaningful educational interactions such as assessment and self-assessment, teacher – student interaction via forums etc. Currently we have over 150 such registered courses.

Bio-Medical, pre-clinical and clinical databases

The medical school facilitates access to a wide variety of Bio-Medical, pre-clinical and clinical databases including – bio-molecular DB's, Genetic DB's, Clinical DB's – including literature (access to hundreds of online e-journals, a wide variety of e-books and textbooks), clinical information (Up-to-Date, MD consult) drug DB's (Micromedex), bibliographic databases and software (reworks, endnote) . Additionally clinical research is supported by the Oclinica clinical research platform.

Education

The medical school offers various relevant IT training to students including: first year online introductory course to medical informatics, medical / clinical informatics – offered in conjunction with the library, sixth year – introduction to clinical informatics.

Clinical information systems

All students in their clinical rotations are granted (granular) access to various clinical information systems (EMR, Radiology, Labs etc') which have now become an integral part of patient care. All clinical courses and rotations implement the use of these clinical information systems.
A course entitled "Principles of Medical Informatics and Health Managements" is taught in the sixth year. It objectives are to teach the general principles of the Israeli healthcare system, health economics and medical information systems as they apply to a young physician in the first few years in training.

Content: Introduction to Medical Informatics, Quality Assessment in Healthcare, Standards in medical informatics, information security, use of clinical knowledge resources, patient centered informatics, clinical decision support systems, principles of health economics, structure of the Israeli healthcare system, inequalities in health. In addition to attendance in

class, students are expected to read material provided on the course web site and to do assignment and individual work.

On successful completion of the course, the student should be able to:

1. Understand the principles upon which the Israeli healthcare system operates
2. Understand basic health economics principles
3. Use and evaluate clinical decision support systems
4. Understand basic tenets of medical informatics, such as standards, electronic medical records, population based informatics and others

The course consists of four consecutive whole days (32 hours) during the first semester of the sixth year. Attending this course requires an understanding of clinical work; therefore successful completion of clerkship in internal medicine is a prerequisite. The responsible department is the hospital administration and most of the teaching is carried out by Prof. Dan Greenberg and Dr. Shlomi Codish.

Teaching arrangements and methods of instruction: Lectures and presentations, the course relies on BGU CMS for material dissemination. Attendance of at least 80% and active participation is required. The Grading scale is: pass/fail, based on attendance, participation and a MCQ test.

3.2.2. Learning outcomes

3.2.2.1. Intended learning outcomes

What are the program's intended Learning Outcomes (LO)? How were they set and where are they stated? Are LO defined in the course syllabi?

The general intended Learning Outcome (LO) is to train students to become high quality physicians aware not only of their patients' medical problems, but also of their psychological and social backgrounds and to be able to conduct clinical and basic biomedical research of the highest standards. These LO are stated in the mission of the schools of medicine.

Specific LO are defined for each one of the courses and are stated in the syllabus of each course. During the planning phase of the courses, there are peer reviews with emphasis on 3 components: 1) relevance of the material being taught to the discipline of medicine, 2) methods for transmitting the material, 3) lessons drawn from previous feedback.

The relevance of the material being taught in any particular course is measured, among others, by its standing as a prerequisite for other courses and by national and international standards (comparison with the study program of other medical schools and an assessment of the requirements for the national exams).

3.2.2.2. Assessment of learning outcome

Describe the methods applied to measure Learning Outcomes according to the following:

A. Examinations and exercises:

1. *Describe the method of examinations and their character, the relative weight of each type of examination in the program (written/oral/open/multiple-choice etc.).*

   In the preclinical years (1-3) most of the examinations are multiple choices. In the Early Clinical Practice (ECP), students are evaluated by their preceptors, both physicians and other health professionals, at every station through the entire ECP program. This evaluation is based upon student attendance, involvement, activity, knowledge, interpersonal relationship and empathy. In addition, the student's performance during the "Disabled in the community" clinical week is evaluated by the quality and clarity of his or her presentation on the last day of the week. At the end of the first year, an oral examination takes place. It includes a 15-minute interview with a real patient in one of the described stations, randomly assigned. Three examiners grade the examinee on a detailed checklist. Thereafter, the student observes another patient and submits a detailed written report, which again, is graded on a detailed checklist. Finally, the student responds to a standardized videotape of a patient who represents a health problem. In his or her responses, the examinee has to demonstrate clinical judgment, based upon careful listening and observation of the videotaped patient.

   During clinical clerkships, there are several methods for evaluating students' accomplishments: A ward assessment is based on a structured form and given by the clinical tutors. The form addresses rating of the student's knowledge, clinical skills, dedication, personal relationship with his group mates, interaction with patients and supervisors and a global rating (see A.3.2.2.2). At the end of the clerkship the ward assessment is given personally to the student by the head of the department or the main tutor.

   At the end of a clinical clerkship a written multiple choice examination is carried out.

   In the case of MSIH these are often shelf tests from the NBME

   In some of the clinical clerkships, an OSCE or an oral clinical examination takes place.

   At the end of medical studies, Final examinations are carried out on a national basis and enable comparison of the results of all Israeli Schools of Medicine.

   In the case of MSIH, in addition to ongoing school assessments, all students take the USMLE parts 1 and 2.

2. *Who writes the examinations and exercises and how is their validity assessed?*

   The Faculty of Health Sciences is the only faculty in Ben-Gurion University that holds a separate examination unit. Our examination unit is well recognized and appreciated by all Israeli schools of medicine. This is reflected by its nomination to manage the national final boards in medicine.

   Over the years, the medical school has developed a special computerized system for preparing and grading exams. The system includes a bank of questions according to subject. The bank includes tens of thousands of questions that have been prepared over the years. Every exam is written by the teachers who teach that course and it is prepared according to the "test map" which reflects the syllabus of the course. As

mentioned above, MSIH also supplements faculty questions/exams with those from the US NBME.

Grading written exams: Every exam goes through the computerized quality control of the exam unit of the school. The control includes data related to the reliability of the exam and the quality of the questions. The questions are measured according to the following parameters: difficulty, ability to discriminate between 'strong' and 'weak' students, distribution of responses among the various alternatives in a multiple-choice question (among all those taking the exam and among the groups of 'strong' and 'weak' students).

After the initial test-run and before posting the grades for the students, the statistics on the questions are analyzed together with the course coordinator and those who wrote the exam. On encountering "problem" questions (inexact, ambiguous, or incorrect wording, questions too difficult for the course level, questions not covered in the course material) the teacher has several possible courses of action:

- Eliminating that question
- Accepting an additional response as correct

Any change that is made to the questions on the exam holds for all those taking the exam. It is important to note that the discussion with the teachers about the questions takes place before the exam results are posted. Only at the end of this discussion do the teachers receive the report on the grades.

The statistics for each question (measure of difficulty, measure of discrimination, and distribution of responses) are added to the question bank. Each question in the question bank includes information about all past uses of the question. The purpose is to give the teachers these data in order to improve the questions for future use of the questions.

Grading the OSCE (Objective Structured Clinical Examinations): The exams are graded by means of a computer according to the following measures:

- Reliability
- Construct validity
- item analysis, which includes inter-rater reliability, difficulty index, discrimination index and inter-station reliability
- Correlation among the items

After each exam session, a meeting is held with representatives of the clinical divisions who provide feedback regarding the results of the exam. It is not unusual for this feedback to result in change in the teaching content.

3. *Who grades the examinations and exercises? Please describe the feedback given to students, apart from the grade*

   See 1+2.

4. *Please present the distribution of the final grades over the last three years in the format of a histogram (in all degree levels).*

The mean and range of the grades in the final national examinations, in the last 3 years, for graduates of the Goldman School of Medicine are presented in the following table. For MSIH data see appendix A.MSIH 1.

	2010	**2011**	**2012**
Obstetrics and Gynecology			
Mean	**79**	**78**	**80**
Range	68-89	50-91	62-91
Psychiatry			
Mean	**76**	**76**	**78**
Range	65-88	51-90	60-90
Internal Medicine			
Mean	**77**	**75**	**80**
Range	53-92	51-91	62-94
Pediatrics			
Mean	**78**	**75**	**78**
Range	61-91	60-90	56-92
Surgery			
Mean	**71**	**68**	**72**
Range	54-86	53-83	58-85

B. Written assignments (seminar papers, projects, theses, dissertations, etc.)

1. *Describe the types of written assignments and other projects required in the program, their contents and scope.*

Patients' admission and follow-up notes:

During the clinical clerkships, mainly medicine and pediatrics, students have to admit at least two patients weekly. This includes a written structured medical report (medical history, physical examination, laboratory findings, a problem list, and discussion, plan and follow-up notes). These reports are presented to and discussed with the clinical tutor. The quality of these notes is part of the student's assessment during the clinical rotation.

Research project

The research project is an independent research project by the student and is part of the requirements for completion of the M.D. degree. An approved proposal is one of the conditions for advancing from the fifth to the sixth year.

The primary advisor for the research project must be someone holding a Ph.D. or M.D. degree or the equivalent and a rank of a senior lecturer, or higher, at any recognized university in the country.

This project (thesis) may involve:

- Research in basic sciences or clinical research.
- Development of tools or methods in a clinical, research or educational field.
- Meta-analysis of a well-defined topic and development of conclusions.

Proposals on appropriate subjects are then submitted, after primary consultation with the head of the research projects committee. The research projects committee is chosen by the Vice Dean of the Medical School and is responsible for overseeing the projects. The process for receiving approval on a research proposal is as follows:

The students suggest a topic to the research projects committee during their third or fourth years of study. The proposal must include a scientific background, objectives, and detailed plans for carrying out the study which include: samples, methods and materials, possible conclusions, definition of that part of the project which the student is supposed to carry out, and a references list. The committee discusses the proposal, and then approves, rejects, or requests corrections. The approval process must be completed by the beginning of the student's sixth year of study. This approval is a prerequisite for the sixth year study. The same topic cannot be approved for several students, and no group projects are allowed.

The research projects committee will ensure that notice of approval or rejection of the proposal will be given no later than 3 months following submission. The evaluation and advancement committee may allow an extension for a student who did not receive notice of approval/rejection on time, after having coordinated this with the research projects committee.

The research project is to be carried out during the student's free time or during periods specified for such activity in the academic calendar. A detailed description of the project and its results are acceptable as fulfilling the requirements of the program, even if the results do not confirm the study hypotheses presented as the basis for the project.

In those instances, whereby the student's project is a part of or a stage within a larger research undertaking, and the student is involved in only a part of the larger project, the student must submit a summary of his/her experience within the overall project and his/her contribution to the study. The student may submit an article which has been accepted for publication, if he/she is listed as first author, on condition that the published study received prior approval by the committee. In this case, there will be a statement in the article that this study was carried out as partial fulfillment of the requirements for receiving the M.D. degree.

The written research project report should be submitted before the end of the sixth year and should include an abstract and title in Hebrew and English, and keywords in English. The report should be submitted in Hebrew/English, printed and bound. The advisor(s) has to attach a signed confirmation letter. The report is evaluated by reviewers who hold academic positions of senior lecturer or higher. The research project is graded as fail, pass, or excellent, and this information is given to the student and the advisor(s) by the secretary for student affairs of the medical school. After receiving the final grade on the project, the student must submit two bound copies. One copy is for the medical library and is thus available for the perusal of faculty members and students. The other copy is kept in the faculty archives. A student may not begin his/her internship without the completion and final approval of the research thesis.

Studies graded as 'excellent' are presented in a special forum headed by the dean, and the awardees receive a special certificate of merit.

2. *Who writes the assignments and how is the validity of the assignments assessed?*

   See paragraph 1.

3. *Who grades the written assignments?*

   See paragraph 1.

4. *What methods are applied to evaluate written assignments and projects? What kind of feedback, apart from the grade, is given to the students?*

   See paragraph 1.

5. *What is the average grade given to the graduates of the program in the final project/ final seminar/thesis in each of the last three years? Please present (in the format of histogram) the grades distribution of the final project/final seminar/thesis.*

Final Project Grades

Year of graduation	No of graduates	Pass	Pass with excellence	Failed	No of PhD/MPH
2009	66	65	1	1	6
2010	69	69	7	0	6
2011	72	72	5	0	6

C. Training and field work:

1. *Describe the training/field work required in the program, their contents and scope. Please provide us with a list of places of training including the number of students in each place.*

   Training and field work are carried out in the affiliated hospitals and clinics during the clinical clerkships (see 3.1.3 and 3.1.7). During clerkships the class is divided to small groups that rotate in the clinical departments. Although the size of the groups differs among the various disciplines, it usually includes 4-8 students per department. Family medicine clerkship is an exception since it is carried out on a one to one basis (rarely two) per tutor.

   At MSIH, in addition to all of the above, all students are sent out in their final year for an 8 week Global Medicine clerkship. Most students do this in special sites in the developing world such as India, Nepal, the Philippines, and Ethiopia among others, and at special rural, under-serviced sites in North America. This rotation is considered the capstone experience which brings together the entire Global Medicine curriculum in a concentrated clinical experience.

2. *What methods are applied to evaluate training/field work? What kind of feedback is given to the students?*

   See A.1

3. *Please specify the number and percentage of graduates who graduated with honours.*

   The final grades for M.D. degree of the Joyce and Irvin Goldman School of Medicine graduates is presented it the following table.

Year	Total No of graduates	As expected	With excellence (%)	With distinction (%)
2013	**66**	54	11 (16.6)	1 (1.5)
2012	**66**	54	10 (15.1)	2 (3.0)
2011	**83**	68	12 (14.4)	3 (3.6)
2010	**66**	66	0	0
2009	**55**	55	0	0
Total	**336**	**297**	**33 (9.8)**	**6** (1.8)

The final grades of MSIH are presented in appendix A.MSIH 1.

D. Other - any other methods applied to measure the achievements of the students.

Graduates of the Joyce and Irving Goldman Medical School are accepted to residency programs in all the prestigious departments in Israel. From the feedback provided by their heads of departments, it appears that the graduates distinguish themselves by their "spirit of Beer-Sheva".

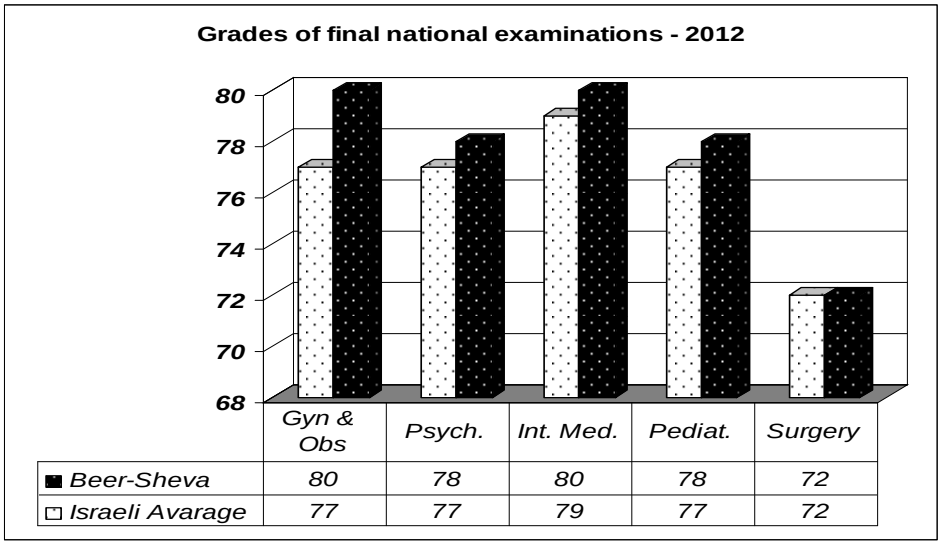
MSIH students for the most part return to the US to take part in prestigious residency programs all over the US (see list in appendix). A few students decide to make aliyah (immigrate to Israel) and follow the path of the Israeli students into Israeli residency spots. (See appendix A.MSIH 1)

3.2.3. Summary of learning outcomes

In summary, to what extent have the methods applied to measure the teaching and learning outcomes achieved their goals? Do you think that the intended LO were achieved by the students?

In general, the medical school is satisfied with the process of teaching and learning. This satisfaction derives from a close and continuous observation of all the educational processes by means of internal and external quality assessments, and correction of faults as they occur.

Final examinations are carried out on a national basis and allow the comparison of the results of all Israeli Schools of Medicine. In the 2012 final examinations, the Goldman Medical School graduates were ranked above or equal to the average in Gynecology & Obstetrics, Psychiatry, Internal Medicine, Pediatrics and Surgery as depicted in the figure:



In addition, in 2013 the mean grade in pediatrics was the highest in Israel (81 vs. an Israeli average of 79). For some years, the achievements of our students in surgery were inferior to the other Medical Schools. This led to an action which involved the teaching committee, the medical school directorate and the heads of the departments of surgery. A thorough revision in syllabus and teaching methods was undertaken leading to a marked improvement observed in the last examination.

Learning outcomes and achievements are not only successes in examination. In addition to their superb knowledge, our students also excel in qualities such as humanism, communication skills, empathy and ethics, and are heavily involved in programs that promote health in the community. This is reflected in the following reports:

The **Davidovitz** report (See 3.1.10) came to the following conclusions:

1. The rate of graduates from the Technion and Ben-Gurion University that work or worked in the (geographic) periphery is higher than the rate in Jerusalem and Tel Aviv.
2. Though other studies done in Israel have not shown that graduates of the Ben-Gurion University specialize more in family medicine compared to graduates of the other schools, the findings of this study shows that graduates of Ben-Gurion University are more involved in community programs vis-à-vis other graduates. Furthermore, they have the most positive perspective regarding the influence of the medical education they received at medical school in relation to social involvement. Likewise, they believe more than graduates of other universities that it is the role of the physician to work towards the reduction of health disparities. Graduates of Ben-Gurion University indicated that the orientation of their studies was significantly more social in relation to the other schools graduates. In contrast, the graduates of the Hebrew University indicated that their studies were significantly more research oriented compared to the other schools.

The **Kdoshai** survey (see 3.1.10) found that 92% of the graduates expressed satisfaction from the studies and 94% claimed that they would recommend study at the Faculty of Health Sciences in Beer-Sheva to their friends.

With respect to MSIH, a recent internal study indicated that almost 2/3 of our graduates are involved in some kind of meaningful Global Medicine activity after graduation.

Examples of Thesis are attached as an appendix on a CD (A.3.2.3).

3.3. STUDENTS

3.3.1. Admission criteria

What are the entry requirements/criteria for the program (first degree and advanced degrees), including the "on probation" status.

Criteria for acceptance to the Joyce and Irving Goldman Medical School:

In order to be accepted in to the program, the candidates must fulfill the following requirements:

Registration requirements

1. Israeli citizenship or permanent residency in Israel at the time of registration.
2. Completion of the Israeli matriculation exam (*bagrut*). For those who finished high school abroad and have a high school diploma allowing them to be admitted to a university abroad or those who successfully completed a recognized pre-academic preparatory year in Israel, their status will be decided in a committee for exceptions.
3. At least age 20 or two years after having completed high school, with the exception of deferred army inductees.
4. Knowledge of Hebrew. The minimum requirement is level 6. Those who took the matriculation exams in a foreign language must take the Hebrew competency exam or show proof of completion of a preparatory Hebrew course from one of the recognized universities.
5. Knowledge of English. The minimum requirement is Advanced level 2.

Criteria for acceptance to the Medical School of International Health (MSIH)

This medical school admits foreigners to a 4 year (North American style) program. All applicants must hold a first degree (BA or BSc) including science prerequisites as well as MCAT or equivalent. Those who meet our minimal academic requirements (usually high grades and an MCAT no lower than 30), are interviewed by two separate senior faculty members almost always in the NY office at our sister institute, Columbia University. The NY office is independent in this domain and runs the admission procedures. Please see Appendix A. MSIH 1 (NY State Board Site Visit 2013, p 40) for a summary of the average MCAT scores over the last few years.

3.3.2. Psychometric test or equivalent scores

In the format of a histogram, please present the range of psychometric test scores or the equivalent as well as the range of matriculation averages of the students that were admitted to the program in the last five years. If there is a discrepancy between the admission criteria and the de facto admission data please elaborate.

Since we are not able to accept all candidates, we use the following procedure to determine who is accepted. It has several stages.

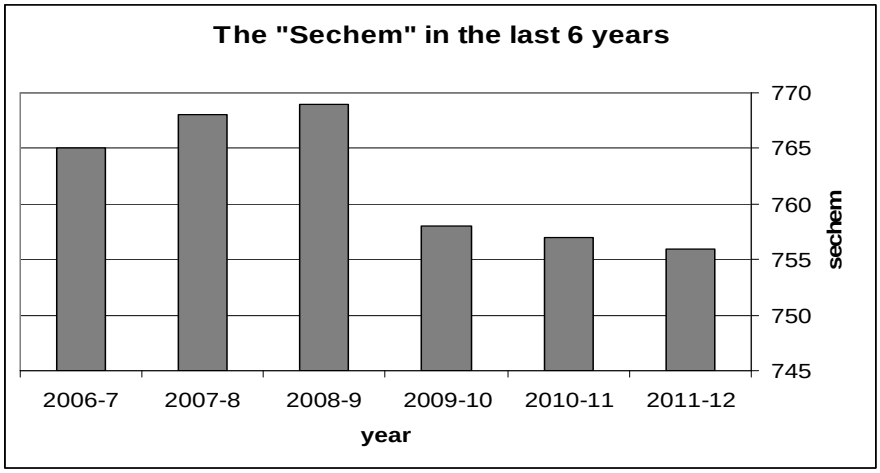
Cutting off stage

The purpose of this stage is to identify those candidates with excellent intellectual qualifications and excellent study capabilities. This is a cutting off stage which decides which

candidates will be invited to an interview.

1. The standard route is decided by a weighted summary grade cut point – "*sechem*" (combined mark of matriculation and psychometric derived by a formula averaging the grades). Each year a new cut point is determined based on the academic achievements of the candidates for that year and our interviewing capability. Our efforts to increase the number of interviews have been successful in reducing the "*sechem*" cut off. The range of psychometric test score, the range of matriculation averages and the "*sechem*" for recent years is depicted in the following table and histogram.

Year	No of admitted students	psychometric test score (range)	matriculation averages (range)
2006-2007	79	664-800	95.46-116.74
2007-2008	83	684-793	87.77-114.39
2008-2009	80	682-785	95.38-115.58
2009-2010	91	663-790	98.94-118.22
2010-2011	97	640-793	98.92-116-76
2011-2012	94	663-783	92.84-116.97
2012-2013	97	689-800	89.76-115.39



2. The academic distinction route is determined on the basis of excellent grades in previous academic studies. In other words, instead of the cut point grade mentioned above, a small number of candidates are invited to the interview stage if they have met the following requirements at the university level: a Bachelor degree with a final average of at least 90, or completion of four full semesters of study with a full academic schedule of courses toward a Bachelor degree with a grade average of at least 90, or completion of three semesters with a grade average of at least 95, and on condition that their grade on the psychometric exam is at least 660.
3. A policy of preferential treatment (affirmative action) is used for the following populations:

   - Students from development towns whose '*sechem*' was 5% lower than the one used as a general criterion (usually 5% of the interviewed and 1-2 students per class).

- Candidates who studied in the project: "Buds of medicine in the Negev" (See 3.1.2) which is aimed and especially designed for training Bedouin youth and development town youth in the pre-med subject (usually 1-4 students per class).

For more information regarding MSIH see appendix A.MSIH 1 page 40.

3.3.3. Student statistics

Please submit data concerning the number of students in a format of a table in the last five years (divided by degree) as follows: a. Numbers of applicants; b. number of admitted students and students admitted on probation; c. number of students who started studying in the program; d. number of students that completed their studies, including those admitted "on probation".

The number of students interviewed (see 3.3.4), admitted and completed their studies in the Joyce and Irving Goldman Medical School is depicted in the following table.

Year	Number of applicants	1st interview	2nd interview	Started studying	Completed B.Med.Sc.	Completed M.D.
2006-2007	1334	736	183	70	62	60
2007-2008	1377	728	182	75	69	
2008-2009	1384	787	257	75	76	
2009-2010	1268	766	209	75	71	
2010-2011	1267	825	277	75		
2011-2012	1311	818	297	85		
2012-2013	1283	835	422	90		

Five-year MSIH Admissions statistics, 2008-2009 to 2012-2013

Number of / year	2012-13	2011-12	2010-11	2009-10	2008-09
Applicants	132	178	155	178	192
Admitted	64	85	78	80	84
Matriculated	38	31	35	45	40
Graduates	N/A	N/A	N/A	N/A	*36

* Three students took a year off to research; one retook coursework in second year

3.3.4. Selection, Admission and Advancing Process

Describe the selection and admission process, the criteria of advancement from year to year and for completion of the studies, including the requirements for being entitled to receive an academic degree. Is there a policy of affirmative action and standards for the admittance of candidates with special needs? In case such policy and standards have been established, please describe them. How are the admission criteria decided upon, and to what extent are the criteria and procedures for admission related to the aims of the program? What have been the lowest admission data (psychometric score and matriculation grades) for the program?

Joyce and Irving Goldman Medical School:

Interview stage: There are two rounds of interviews during which each candidate is interviewed by two interviewers in each round. All those, with a summary grade equal or above the cut point are invited to the first round. All those who received a qualifying evaluation for the first interview are invited to the second round. Candidates are accepted into the medical school if they have received a sufficiently high evaluation on both interviews.

The interview stage in the acceptance process is the unique contribution of the medical school in the Negev. Until recently, other medical schools in Israel accepted candidates purely on the basis of the weighted summary grade (*sechem*). If the schools used interviews, they were solely for the purpose of rejecting exceptional candidates. The interviews in our school are the decisive factor in the process of accepting candidates. The "*sechem*" is used only as the cut point for determining who will be invited to the interview stage. The purpose of this stage is to get to know the candidate during a face-to-face interview which examines personal qualities, attitudes, ways of thinking, and functional characteristics. These above mentioned interviews have proved to assist us in choosing the most appropriate candidates on a personal level, in a humane, interactive, inter-personal setting, and not solely on the basis of grades. The public message is: the doctors of the future are chosen by people and not in an anonymous fashion.

Some of the interviewers are members of the Faculty of Health Sciences, some are members of other faculties, and some are public figures or volunteers who recognize the importance of contributing to the selection of Israel's future physicians. The interviewers are chosen according to their resumes and recommendations by a committee which includes the former heads of the acceptance committee, the dean of the medical school and the administrative director. The interviewers receive training in a special preparatory workshop for their role of selecting appropriate candidates.

In 2004, a new system was introduced based on normalizing the grades of the interviewers. The question had been raised as to the validity of the assumption that the grouping of the interviewers' grades is a homogeneous group. The factors which may change the grouped grades of all the interviewers into something no longer homogeneous are the interviewers themselves.

We have attempted to attain standardization of the evaluations through the workshop for the interviewers and by using evaluation forms which indicate in detail the parameters that are to be evaluated. Even so, one cannot ignore that we are dealing with evaluations that have a very large subjective component that is related to the personality of the interviewer, his/her personal emphases, and the relatively tense atmosphere that reigns at the time the interview. Analysis of the results of the interviews shows that there are significant differences in the averages and standard deviation of the scores given by the interviewers, which makes it impossible for us to accept them as one homogeneous group. In 2004 we proposed and adopted a new system for standardizing the evaluation results from groups or interviewers with different grade distributions.

Standard Scores and Normalizing Distribution

$Z = (X-Xa) / s$

Z = a standard score

X = an original measurement

Xa= the mean of the distribution

s = the standard deviation of the distribution.

The fact that the mean of all the standard distributions of the grades is always equal to 0 and that the standard deviation is always equal to 1 is critically important in statistical analysis. Standardized scores from one distribution can be compared to standardized scores from another distribution with a similar structure.

Transformed standard scores

We define a new score with a mean of 'a' and standard deviation of 'b' such that:
Z = a + b ((X-Xa) / *s*)

By chosing 'a' as the mean of all the scores and 'b' as the standard deviation of all the scores, we end up with standardized scores after transformation that are identical to the original group of scores.

Flowchart of the work of the committee in 2011

Candidates applying 1311

Cut point 757

Candidates interviewed in the first round 818 (62% of those applying)

Candidates interviewed in the 2nd round 297 (23% of those applying)

Total number of interviews 1113

Final size of class 85 (6% of those applying)

Flowchart of the work of the committee in 2012

Candidates applying 1224

Cut point 756

Candidates interviewed in the first round 835 (65% of those applying)

Candidates interviewed in the 2nd round 422 (33% of those applying)

Total number of interviews 1257

Final size of class 90 (7% of those applying)

Applicants with special needs: There are no written standards concerning applicants with special needs. It is the task of the Medical School to prepare physicians who are capable of treating patients. For that reason it is difficult to establish fixed, written standards for students with special needs. Candidates with special needs are dealt with in a special subcommittee of the Acceptance Committee on an individual basis. Classrooms, the library and the laboratories are all accessible for those with physical handicaps.

Criteria of advancement from year to year:

1. Attendance is all study programs with mandatory attendance requirements.

   According to the university regulations, attendance at lectures is not mandatory. Attendance at laboratories, practice sessions, discussions, and all clinical teaching is mandatory. Attendance at the mandatory activities is checked. Absence from more than a third of the meetings, even for a justifiable cause, will require repetition of the course.

2. Passing all the examinations during the year study is a prerequisite for advancement from year to year.
3. Fulfilling all the rules for behavior regulations defined by the University and Faculty's. (Rules for behavior are defined in the regulations for evaluation and promotion and can be found in the University Catalogue and Faculty's website). The Medical School emphasizes:
    - Credibility
    - Ethical and professional attitude toward patients
    - Safety of the patients and the students
    - Initiative and diligence

The above criteria are particularly important in the evaluations given by the departments for the clinical clerkships. A passing grade for a department evaluation is a condition for passing the clerkship and is a part of the overall weighted grade.

Steps taken when these criteria are not met:

The procedure for discontinuation of studies or, alternatively, for dealing with a student whose academic status is not up to the university standards, includes several stages. The first recommendation comes from the year committee (see 3.1.6) which sends its recommendation to the Committee for Evaluation and Promotion (see 3.1.6). As a preliminary step before the discussion in the Committee for Evaluation and Promotion, a sub-group from the Committee meets with the student. This sub-group includes the chairperson of the Committee, the Vice-dean for Student affairs, and the faculty member responsible for clinical studies or for the course schedule or for preclinical studies (see 3.1.6). This group makes its recommendations and transfers them to the Committee for Evaluation and Promotion, which includes the Vice dean for Student Affairs and the faculty member responsible for clinical studies or for the course schedule or for preclinical studies.

The recommendation of the Committee for Evaluation and Promotion is sent to the Vice Dean of the Medical School who is also the Director of the Medical School and holds the authority decide the future status of a medical student. The decision can entail the suspension of the student, the repetition of a year or a specific course. The student has the right to appeal the decision of the Medical School Director via the Dean.

Requirements for BSc. degree:

Successful fulfillment of all the obligations in study years 1-3.

Requirements for starting sixth year study:

Successful fulfillment of all the obligations in study years 1-5 and an approved proposal of a research project.

Requirements for starting internship:

Successful fulfillment of all the obligations in study years 1-6, completion and final approval of the research study, success in the final national examinations.

Requirements for accepting a Diploma:

Successful fulfillment of all the items above.

In accordance with the regulations, a student must complete all requirements of the curriculum within 9 years of starting the program (not including one year's leave of absence). In exceptional cases, a student who has studied medicine within a recognized academic framework and has demonstrated a high academic achievement may be accepted directly into the advanced years of the program. Student progress through the curriculum within the recommended timeframe is followed by the regular procedures for student advancement within the university.

MSIH

With occasional minor modifications (e.g., taking into account that it is a 4 year program and are also subject to accreditation by the NY State Board of Educational and the US Federal Dept. of Education [re. Federal student loans]), we strictly adhere to all FOHS and BGU guidelines for promotions and other relevant issues. Our exam staff works as a part of the FOHS exam unit located in the Caroline building, adjacent to the Faculty's main building.

Combined degrees: MD-MPH and MD-PhD

MD-MPH (Master in Public Health) program.

In parallel to medicine studies, some students are interested in expanding their knowledge with other medicine related subjects. The MD-MPH program is aimed to expose medical students to epidemiology, public health and clinical research. An MPH degree is a prerequisite for specialization in public medicine and in medical management.

Admissions process: Students are eligible for admission after the first semester of 4th year studies (in special occasions, admission after 3rd year is allowed). The applicants should fulfill all the study requirements up to this stage and achieve grades above the class' average. The admission has to be approved by the medical school directorate and the MPH admission committee.

Length of the study program: Two years in parallel to 5-6th years in the school of medicine.

Requirements for MD-MPH degree: Students must fulfill all the requirements of the school of medicine, all the requirements of the MPH program and submit an MPH thesis. This thesis replaces the need for a research project in the school of medicine.

Ph.D. Program

Admissions process: The Kreitman School of Advanced Studies administers doctoral studies at Ben-Gurion University. A candidate can only be accepted for advanced graduate studies on the recommendation of the department where the research will be carried out and with the

approval of the graduate studies committee of the faculty. In addition to the above, the candidate must fulfill all of the following requirements:

The candidate must have a master's degree (MA/MSc) from Ben-Gurion University or from an equivalent institution and must have completed the course work and thesis with distinction. The candidate must be qualified in the chosen field of research, as determined by the Kreitman School Committee.

The Kreitman School Committee may accept a candidate who does not fulfill these requirements if it is convinced that the student is capable of achieving the necessary level by doing supplemental courses at Ben-Gurion University for a period not exceeding a year. The Committee, in consultation with all of the interested parties, will design a special course of study for the candidate who will register as a "probationary student". At the end of the academic year, The Committee will discuss the candidate's admission to advanced graduate studies in light of his/her accomplishments.

The admissions process itself consists of the submission of the following documentation to the Kreitman School: the application form, three letters of recommendation (including one from the Master's degree advisor), copies of diplomas and transcripts from earlier degrees, an agreement from the potential advisor, and a curriculum vita. Submissions are electronic. These materials are transferred to the appropriate department which approves or rejects the application. In the case of approval, the application is then passed on to the faculty committee, which may also approve or reject the application, and then finally to the Kreitman School, which may also approve or reject it. The student is accepted for a trial period of twelve months, after which he/she is expected to submit a detailed research proposal and defend it in an oral examination.

Proposal examination: Advancement from the first to second year of doctoral studies is predicated on successfully defending the doctoral research proposal before an ad hoc committee consisting of the advisor, two staff BGU members and an external reviewer from another university or academic research institution. The two "internal" referees will accompany the student as a doctorate committee until submission of the thesis.

Direct and combined doctoral programs: Students studying towards their master's degree at BGU who have successfully completed the majority of their course program and have demonstrated excellent research capabilities may apply to the combined program for PhD studies. Admission follows the requirements indicated above. Once accepted the student will continue his or her research for additional four years, and the thesis will include the research results of the six years of study at BGU. The research proposal is submitted following acceptance to the combined program.

Students who are graded among the top 10% of their class in BGU or a parallel academic institution may apply to the direct program for PhD degree directly after graduating their bachelor's degree. If admitted, they submit and defend their research proposal after two years and the thesis is submitted after five years.

Year to year advancement: Beyond the first year, students submit yearly reports summarizing their research progress. These reports are first approved by the doctoral advisor. The student then meets with the doctoral committee for further feedback on his/her progress, and the committee also must approve the report. The Kreitman School then finally approves the progress report.

The student is expected to complete his/her dissertation within four years (regular program) or five years in the direct program. . Extensions are approved for women who have given birth during their period of PhD studies, or to students who were recruited for exceptionally long

periods of military reserve service. . Extensions may also be granted when funds derive from research grants. Students who do not complete their dissertations within the allotted time may request extensions, on condition that they provide a reasonable academic explanation. All applications must be approved by the advisor and the host department. In the case of a student who receives no funding or who is employed by the university, the duration of studies may not exceed six (6) years.

Courses: All PhD students must take courses that grant them with 6-10 credit points.

Final seminar: All students must deliver a final seminar in their host department.

Granting the Doctor of Philosophy Degree: The dissertation itself is submitted to the Kreitman School after approval by the advisor, and sent out to three reviewers, one internal and two external to the university. Evaluations may accept the doctorate as is, request minor changes, major changes, a rewrite, or may fail it. In the case of failure, appeals may be made, and the dissertation may be sent out to additional reviewers, based on those appeals.

The Doctor of Philosophy degree will be granted by the senate upon recommendation of The Committee. Approval is granted once the thesis is approved; the student has completed his or her course program, and has delivered a concluding seminar in the host department.

Fellowships: Fellowship support may be provided by the host faculty and department. The Kreitman School offers a program of a limited number of fellowships which are granted based on excellent achievements. Fellowships administered by the hosting faculty or the Kreitman School are limited to a period of four years (five years in the case of direct route).

A dedicated fund provides extra support for an additional semester, to students who gave birth during their PhD studies.

3.3.5. Drop-out rate

What is the drop-out rate of students from the program in each of the study years over the last five years, and what are the reasons for their leaving (academic/financial/other)? Is there satisfaction with the drop-out rate? If not, what steps does the unit take in order to change it?

Drop-outs (D.O) - The Joyce and Irving Goldman Medical School

Year	**N^{o} of D.O**	**% dropouts**	**Reasons for dropping out**		
			Personal reasons	**Academic reasons**	**Transfer to other school**
2007-08	5	1.18%		3 (0.70%)	2 (0.47%)
2008-09	3	0.71%	1 (0.23%)	2 (0.47%)	
2009-10	7	1.65%	2 (0.47%)	2 (0.47%)	3 (0.70%)
2010-11	7	1.62%		5 (1.15%)	2 (0.46%)
2011-12	3	0.68%	2(0.45%)	---	1(0.22%)

As indicated in the table, the percentage of dropouts is relatively low. A student can be asked to leave the school only after a very long and comprehensive procedure, after all those involved in the case are convinced that it is impossible to allow that student to continue his/her studies in the Medical School. Leaving the school for personal reasons often also entails a decision that medicine is not the right profession for that student or the wish to transfer to another medical school.

Drop-outs (D.O) - MSIH

	Entering class of 2013	Entering class of 2012	Entering class of 2011	Entering class of 2010	Entering class of 2009	Entering class of 2008
Number of students withdrawing	N/A	1 of 31	none	1 of 45	none	1 of 32
Drop-out rate	N/A	3.22%	0%	2.2%	0%	3.1%

3.3.6. Involvement of students in research

To what extent are the program's students involved in research projects of the staff members? Specify in which projects, the number of students involved and the scope of their involvement. Is there a procedure for encouraging students to carry out independent research of their own?

The requirement for completing a research project is a condition for receiving the MD degree. The connection between the student and researchers/advisors is made on an individual basis and must uphold the criteria defined in the regulations for evaluation and promotion in the section dealing with research projects. In addition, the Faculty has a MD-MPH and a MD-PhD program and encourages students to enroll in the program and take part in research (See 3.3.4 and chapter 4).

The faculty supports student involvement in research by allocating summer research scholarships to interested students with faculty supervision. The faculty provides monetary support for students who present their research finding at international scientific conferences.

3.3.7. Counseling systems:

3.3.7.1. Counseling system description

Describe the system of academic counselling for students before and during the period of study (including reference to the structuring and approval of the study curriculum). Do students with special needs receive special support? If so, please specify.

Academic counseling: The school has a framework for academic counseling throughout the years of study. For each year there is a year committee consisting of faculty members at the various levels and from the different divisions of the Faculty of Health Sciences. The year committee consists of approximately eight faculty members and at its head is the chairperson of the year committee. The committee and its head are chosen by the Curriculum Committee. The year committee, together with the teaching unit, keeps track of how teaching is carried out and serves as a counseling and support service for the student. Each student has a personal counselor from among the members of the year committee with whom he/she meets at least once a year for the purpose of getting acquainted and conversation (especially in years 1 – 3), or more often if necessary. When a problem cannot be solved on this level, it is presented to the medical school director. The Dean's involvement is required in only the most complicated cases.

Members of the year committee keep close track of the academic achievements of each students in that year. The tracking is carried out by means of reports from the lecturers and the course/system coordinators and from regular reports of the exam results. The exam unit

transfers all exam results to the head of the year committee immediately upon publication. If an academic problem is discovered, the student is asked to speak to the counselor and/or the head of the year committee in order to discuss the situation, especially if the problem has occurred previously. In other words, a system for continuous tracking and reporting of the academic achievements of the students is in place, so that one-time or recurring problems that are reported to the year committee are dealt with in real time. According to each individual case, the year committee decides if there is a need for additional interventions, for example assigning a tutor, extra review sessions, and referral to a counselor, or referral to the evaluation and promotion committee, etc. Counseling for specific problems is available through the Student Counseling Services of BGU.

This unit encompasses clinical psychologists and psychiatrists. They provide clinical evaluation and short term individual as well as group treatment. The unit may also provide, with the consent of the student, long term treatment or referral to outside institutions. The unit offers special group intervention for examination-anxiety.

With the exception of the year committee, and student participation in various committees and the directorate of the medical school, there is an "open door" policy in the school. All teachers, including department heads and the director of the medical school are available to students after hours by appointment.

A mentoring program for medical students was been introduced to our medical school in 2011 (See A.3.3.7.1) and has been operating successfully since then.

The MSIH follows similar guidelines. In addition, our associate director Dr Asher Moser, meets face to face with *every* student who fails or even has a "near fail" on any exam, quiz, test, etc. after which he provides appropriate counseling and ensures follow up when necessary, either academic or psychological. In the latter case MSIH keeps a psychologist on full time retainer and students can (and do) use this service 24/7 at no cost to the student.

3.3.7.2. Counseling perspectives

Are counselling and assistance provided to students with regard to possible directions for their future professional careers? If so, describe these procedures. Are there work placement services for the graduates? If so, please describe this activity.

The BGU Career Counseling Center deals with a spectrum of needs and problems concerning students and alumni employment and in the connection between employers and students. The Center focuses on helping students use the specific skills and degrees earned at BGU in areas such as job placement, electronic employment resources, career fairs, and guidance relating to resumé and CV writing and job interviews.

The center operates specifically in these areas:

- Job placement (permanent or temporary)
- Guidance and counseling (writing CV, preparation for job interviews, workshops, and general tools for active and effective job searches, etc.)
- Management of the BGU occupational WEBSITE
- Management of industry relations projects including tutoring, employment fairs, "spotlight" days etc.

Assistance in choosing a medical specialty: Within the mentoring program ((See A.3.3.7.1) the choice of a medical specialty is one of the issues discussed. Students are allowed to choose a mentor according to their desired future field of specialty. Extra assistance is available upon request by individual students, or in the situation where it is felt that there is a problem, especially during the clinical clerkships. During their studies, the students are exposed to many faculty members and physicians from many disciplines, and generally there is no problem in deciding on a future career direction.

The MSIH follows similar guidelines. In addition, all students meet with senior faculty both from Beer Sheva as well as NY over each of the 4 years (especially in the 3rd and 4th years) in order to counsel them regarding their upcoming electives in the US as well as residency placement. In addition, we have set up a mentoring and counseling service with our alumni in the US who advise students on both a geographical basis as well as according to their specific specialty interests.

3.3.8. Students' complaints

What are the mechanisms that deal with student complaints? Please provide a list of students' complaints over the last two years and the way they were resolved.

Student complaints are usually submitted to the year committees and to the course coordinator. Individual counseling services are available through the services that were detailed in the section on Academic counseling. A counseling service and student clinic are located on the main university campus run by a senior family physician, appointed by the academic staff of the medical school. The clinic works on a regular schedule and the service is available to any student on the basis of self-referral.

Generally, there are three types of complaints:

- ♦ Related to exams (the majority)
- ♦ Related to curriculum
- ♦ Personal matters

Examples:

Complaints related to exams:

After the Limbs Anatomy exam, this year, students complained that the teacher did not remain until the end of the exam (contrary to the standing orders of the University) to answer questions, that the exam was difficult but fair – (by design) and that the exam included numerous questions with a high level of discrimination. A number of the students scored very well on it but a relatively high number of students failed the exam. Because the physical conditions did not allow the teacher to remain until the end, the Medical School Directorate, with the full agreement of the teacher, decided that every student who requested to take the second date of the anatomy exam could do so and only the higher score would count. Students who failed both exams would be allowed to take a third exam.

Complaints related to curriculum:

This year, the Deans Forum decided to shorten the 6th academic year by three months.

The only way to cut without significantly affecting the educational program was by canceling elective rotations, which caused great dissatisfaction among the students.

The Curriculum Council reviewed the 6th year academic program and suggested shortening some of the clinical rotations and so to salvage four weeks of elective rotations. Nevertheless, the students were not completely satisfied

Complaints/problems concerning personal issues

A pregnant student who could not take an anatomy course due to Formalin hazards, complained that she would not be able to finish her studies in due time. After checking with The National Poison Control Center for guidelines, she was offered individual training in the dissection room financed by the faculty so she could continue her studies in the 4th year.

MSIH deals with these kinds of complaints in exactly the same fashion.

3.3.9. Financial Assistance to Students

What financial assistance is provided to students with financial problems and to outstanding students? What other types of financial support is available to students?

Support for students is offered at several levels. The university office of the dean of students offers aid to needy students with scholarships and loans, the repayment of which begins only after graduation. There are special scholarships and support for disadvantaged minorities (e.g., Ethiopian-born students, Bedouin students, and others). Prizes for academic excellence are offered by the rector, the deans, and the individual departments. Additional special prizes, such as the Zlotowsky prizes, are awarded to outstanding entering students. The various prizes and scholarships range from tuition exemptions and living allowances, to partial tuition exemptions, and to one time cash awards.

The Medical School has a number of funds which grant scholarships on a regular basis for students. The Vice-Dean for Student Affairs is responsible for evaluating and checking the eligibility of the students for these grants. The grants that were given in the year 2011-2012 are depicted in the following table:

Name of the grant	Amount (NIS)	Number of students
The late Idda Abush	80000	13
Holstein fund, JDC Israel	150000	10
Solomon and Matilda Bloch, Basel and Margaret and Walter Lichtenstein.	90000	9
The Dean of Students	130000	28
Total	**450000**	**50**

Selection of distinguished students is according to academic achievements. The University has a procedure for distribution of awards and certificates of merit, presented according to University criteria. The top 2% of undergraduate students in every Faculty, that distinguished themselves in the previous academic year and are still registered in the University, are eligible. Recipients are chosen in competition with other students of the schools and divisions of the Faculty.

The distribution of awards and certificates is as follows:

- ♦ 10% receive the Rector's prize for superior achievement. A certificate of merit and a scholarship grant of 6000 NIS.
- ♦ 30% receive the Dean's prize for superior achievement. A certificate of merit and a scholarship grant of 3000 NIS.
- ♦ 60% receive the head of the department prize for achievement. A certificate of merit and a scholarship grant of 1000 NIS.

The medical school has some special means to reward excellent students.

A prize, (4000 NIS) donated by the family of the late Dr. Judith Bernstein, who was the coordinator of the "Clinical communication course", is awarded annually to a student that distinguished his/herself in this course. The award ceremony takes place in the final meeting of the "Community hospitalization week" in the presence of prominent Faculty members and the family.

MSIH:

Over the past six years, the MSIH has been able to offer merit-based scholarships to individuals whose academic and personal accomplishments and interests most closely reflect the mission of the MSIH: to prepare doctors to address the cultural, political, economic and environmental factors that impact the health of populations and individuals. For a detailed look at scholarship recipients, you can visit our scholarship page at http://cumc.columbia.edu/dept/bgcu-md/ps/scholarships.html, where each recipient is highlighted.

MSIH Scholarship allocation, 2008-2013 entering classes						
	Entering class of 2013	**Entering class of 2012**	**Entering class of 2011**	**Entering class of 2010**	**Entering class of 2009**	**Entering class of 2008**
# of Scholarships awarded	9	2	0	3	1	2
Dollar amount(s)	**One four-year, $12,000 per year; four four-year $7,500 per year; four one-year $4000 stipends**	**Two, four-year, $12,000 per years**	**N/A**	**Three, one-year scholarships of $10,000 each**	**One, ½ tuition scholarship for four years**	**Two, ½ tuition scholarships for four years**

This year, for the entering class of 2013, the MSIH was fortunate to receive additional funding for scholarships. Several one-year stipends of $4,000 each were awarded to students who had a demonstrated interest in global health.

Applicants are eligible for tuition scholarships and stipends if they have submitted their complete application by February 1 of the year of matriculation. Recipients are expected to provide annual updates on their global health activities

Grants for foreign/exchanged students in electives courses: see A.3.1.3

3.3.10. Alumni

Alumni: do the institution and/or the department maintain contact with their alumni, employers, and employment market? Please specify the extent of integration of alumni into the labour market (especially relevant when the study program is "professional"): where have they found employment, what positions do they hold, how much time has elapsed between graduation and employment, and how many students continue their studies to advanced degrees or other areas (specify area of study and degree level). Relevant surveys would be appreciated.

With approximately 5000 alumni from all Faculty departments and schools, the Faculty decided to foster a lifelong relationship with its current and future alumni.

In 2003, the university office of Public Relations, with the blessing of the Faculty, addressed the 1300 medical alumni to establish its alumni association. With positive responses to our approach, the PR office, with a help of several alumni, is in the process of developing a special web site in which alumni can discuss and find relevant issues and information. The faculty hopes that all the other departments and schools will follow the medical alumni and will establish their own alumni associations. The PR office will assist with establishment. Once the alumni association is established, the alumni will run the association independently.

The existing alumni database is not complete and we don't have data regarding the integration of alumni into the labor market.

MSIH

Over the last two years the alumni have formed a very active association based in the US with elections, a budget, development of a website and a number of activities (some alluded to above). In addition, the association sends an alumnus to address the 1st year students at our White Coat ceremony in true BGU tradition. As indicated above, alumni are also very active in counseling and mentoring MSIH students. (See appendix A.MSIH 1).

3.3.11. Students Section Summary.

In summary, what are the strengths and weakness of the issues specified above?

Strengths:

- An admission process which examines not only cognitive but also personality features.
- A successful acceptance policy for students from disadvantaged populations.
- A low number of dropouts.
- A satisfactory ability to financially assist needed students.

Weakness:

- The admission process, which includes two rounds of interviews, each one involving two interviewers, limits our ability to increase the number of candidates and reduce the "*Sechem*". We are planning to introduce a computerized pre-selection psychological questionnaire.
- The organization and activity of our alumni should be improved.

3.4. HUMAN RESOURCES

3.4.1. Teaching Staff

3.4.1.1. Teaching Staff profile

Describe the profile of the program's teaching staff in the format of the tables 7.2A through 7.2D (pages 15-17).

See appendix A.3.4.1.1

3.4.1.2. Faculty members profile

How are the faculty members divided into areas of specialty in the discipline?

The Faculty of Health Sciences has a unique structure being comprised of researchers employed by the University, and physician-teachers/researchers, employed by the affiliated Medical Centers. University employed researchers are gathered in the Faculty Research & Teaching Departments. Clinicians hold academic positions and rights from the University and are mainly in the Medical Divisions. See section 2.3 for more details.

3.4.1.3. Skills of Faculty members

What specializations and skills (including experience and training) are required of the staff members teaching in the study program, including those who teach practical courses/practical training.

Researchers employed by the University have a PhD degree and have completed a post-doctoral program (usually abroad). All the clinical staff members have an M.D. degree and a license to practice medicine approved by the Israeli Ministry of Health. Senior clinical staffs are board certified physicians with a national license in the field of their specialization. For teaching experience and training see section 3.2.1

3.4.1.4. Faculty members – keeping updated

What steps are taken to ensure that staff members are updated, academically and professionally, with regard to the program?

Teachers, researchers and clinicians, teach in the field of their expertise/training. Therefore, their professional academic update is relevant for the study program. Specifically, academic updating for researchers takes place at several levels. Each department has a weekly seminar dealing with teaching and research issues in which all the research students and the faculty members of the department are required to participate. Interdepartmental seminars, occasionally with an active participation of visiting professors, are carried out 2-3 times in each semester. Each department carries out an annual research-day in which studies are presented. Researchers actively participate in national and international scientific conferences.

There is an ongoing process of professional and academic updating for clinicians. This takes place at several levels: departmental, divisional, national and international. At the departmental level, there is wide range of variability. Nevertheless, some common major principals prevail. Each department has its own morning report chaired by the head of the department and/or senior physicians. New patients are presented and their problems are discussed. Complicated hospitalized patients are presented as well and the residents, interns and students in clinical rotation are asked to prepare relevant literature review. Some of the morning reports include a lecture or a "Journal club". The division: Most of the divisions have a weekly "grand round" in which each one of the departments or units within the division is responsible for the presentation. National and international activity: Physicians, especially those with academic appointments, actively participate in national and international professional meetings and postgraduate courses.

In addition, there is an ongoing process of updating and improving teaching activity under the leadership of the faculty's Centers for Medical Education and the university center for teaching enhancement (see 3.2).

3.4.1.5. Appointment of academic staff

What are the rules, criteria and procedures for appointing the head of the study program and the academic staff, including tenure and promotion, the standard duration of service at each position, renewal of appointment in elected positions and dismissals? What steps are taken to ensure that the faculty is informed of these policies and procedures? Are you satisfied with these procedures?

Principles/working method/academic promotion

General: Academic promotion is an integral aim of every faculty member during each phase of his academic career. The process of academic promotion strictly adheres to the regulations laid down by the Faculty and the University.

Method: On receipt of a letter of recommendation from the Chairman of the Division/promoter of the procedure (according to the definition of the constitution) the following steps will be carried out:

- ♦ A promotion file will be opened
- ♦ A follow-up page in Excel containing: the date of each stage and steps taken, and all correspondence (letters of recommendation) carried out.

A personal letter by email will be sent to each candidate from the Assistant Dean for Academic Promotion containing:

- ♦ Official confirmation that a promotion file has been opened
- ♦ The name of the initiator
- ♦ Detailed description of the expected procedure; a request for list of recommenders; the various committees involved; the dates of the committee meetings; the estimated time for the completion of the procedure.
- ♦ If necessary, the applicant can contact the Assistant Dean for Academic Promotion by email or telephone

Every candidate receives an update every 3-6 months on the progress of the procedure with a copy to the Chairman of the Division or the initiator.

A quarterly progress summary is sent to the Dean and the Chairman of the Division. Should the candidate fail to meet the promotion criteria, he will be informed personally by the

Assistant Dean for Academic Promotion followed an official letter with a copy to the Dean and initiator.

See appendix A.3.4.1.5

Tenure appointment:

Researchers are candidates for a tenure appointment after being promoted to a higher academic rank. The appointment process includes: a recommendation by the head of the department, a positive vote of the majority of the tenure members of the department, letters of recommendations from outside reviewers, discussion and approval by the faculty promotions committee, discussion and approval by the university promotion committee, and final approval by the university executive committee.

Heads of departments appointments:

In the university, heads of departments are elected by the tenured academic members for a period of two years with a possibility to extend their term by two additional years. One of the heads of the departments is elected as the head of the division for 2+2 years.

The heads of the clinical departments or units within the divisions are nominated by the health organizations. Although, this nomination takes place without university involvement, their clinical and teaching experience, leadership and academic rank have a critical role in the nomination process. The university is the only authority academic appointment and promotion.

The nomination of chairpersons of divisions involves both the health care provider (mainly the director of the Soroka Medical Center) and the Dean of the Faculty of Health Sciences. A search committee is nominated and interviews candidates holding an academic position of at least an associate professor. The final one or two candidates are brought to vote among the heads of the departments and units within the division. The director of the health care provider organization and the Dean have to give their final approve for the nomination. A chairman of a division is elected for 3 years with a possibility for additional 3 years only.

3.4.1.6. Head of the study program

What is the definition of the position of the head of the study program? What credentials (experience and education) are required for this position?

The two heads of study programs, the Goldman Medical School and the MSIH are nominated by the Dean and hold a position of a vice Dean. The nomination must be approved by the faculty council. The prerequisites for this position are an academic rank of at least associate professor, extensive and long term high quality experience in teaching, and proven clinical, academic, and administrative leadership.

3.4.1.7. Employment conditions of academic staff

How is full employment defined in the institution for senior and junior staff, and how many hours are they required to teach in each of the study programs?

Full time employment for senior staff, as defined by the Council of Higher Education, comprises three general functions: research, teaching, and administration (committee work, etc.). Senior staff members in the research track (tenured and tenure-track) are required to teach 8 hours weekly, consisting of six hours of frontal teaching and two hours of research

student supervision of at least two students. Senior staff members in the teaching track are required to teach 16 hours weekly, consisting of 12 hours of frontal teaching, and 4 hours of undergraduate and graduate student project supervision, new text preparation, or other administrative tasks as approved by the dean of the faculty. For the purposes of calculation, two hours of class exercise or laboratory teaching are the equivalent of one hour of frontal lecture). Reductions in teaching load may be approved, for leading researchers, by the dean and the rector.

Full time teaching employment by junior staff is calculated according to the teaching load, and may supplement fellowships. Thus, full time teaching employment for doctoral teaching assistants consists of eight hours of frontal teaching/exercise or 11 hours of laboratory supervision (or some prorated combination of the two). Similarly for MA teaching assistants, full time teaching consists of eight hours of frontal teaching/exercise, 11 hours of laboratory supervision, or 22 hours of exercise grading (or some prorated combination of the three).

Clinical teachers holding an academic appointment are employed by the health care providers and not by the University. Their teaching and research activities, on top of their routine clinical obligations, enables them to be eligible for an academic appointment (see 3.4.1.5.). Most of the clinical staff holds a partial academic position that is proportional to their volume of teaching.

3.4.1.8. Advisory activity of academic staff

Are staff members obliged to serve as advisors for final projects, theses and dissertations? Is there a limitation of a maximum number of graduate students per faculty? Are there criteria for assigning advisors to different research projects?

Advising final projects is one of the criteria for promotion to the higher academic degrees (associate and full professor) for both researchers and clinicians. There is no limitation of a maximum number of graduate students. Nevertheless, this number is limited by the number of scholarship funds.

There are no criteria for assigning advisors to different research projects. Assignment is based on the mutual interest of the student and the mentor.

3.4.1.9. Recruitment of academic staff

What is the policy regarding recruiting and absorbing teaching staff (senior as well as junior) and what are the plans for future recruitment to the study program? How are these plans designed and by whom?

Senior teaching staff is recruited after a post-doc period on the basis of distinguished academic achievements and assessment of an appropriate future in research and education. Candidates are recruited through active advertisement and initiated applications. Candidates are assessed by the Dean, Vice Dean for Research and Heads of Departments. Appropriate candidates are invited for a 1-2 days of interviews and presentations. Approved candidates are suggested to the University Absorption Committee at the Rector's Office. The Vice President for Research and Development then negotiates and suggests a recruitment budget. Approved candidates then receive a letter of acceptance and a detailed offer by the President of the University. Future recruitment will be determined within the Faculty according to specific research and educational goals by the Dean, Vice Dean for Research and Development and Heads of Departments.

3.4.2. Technical and administrative staff

Describe the technical and administrative staff, including the number of staff members and their job descriptions. What kind of support does the technical and administrative staff provide for the academic activity?

The Dean is assisted administratively by the Head of Faculty Administration, Mr. Herzl Jean, who is in charge of all the administration related to the Faculty of Health Sciences.

The administrative staff of the Goldman Medical School (see also 3.1.6):

The Curriculum coordinator is responsible for coordinating the time tables derived from the Medical curriculum approved by the curriculum committee, and monitoring its ongoing implementation. The curriculum coordinator serves also as the secretary of the research projects committee and monitors the follow up after students' research proposals and research projects.

The Secretary for Student Affairs keeps track of student achievements during their study years in the school of medicine. She is also responsible for carrying out the administrative procedure of clinical teaching evaluation done by the students at the end of every course or clerkship of the curriculum.

The Secretary of the Medical School assists the school director as well running the managerial routine of the entire school.

In addition, there is a faculty administrative staff which operates under the responsibility of the Head of Faculty Administration. This includes, technical and secretarial staff, computing unit, video studio, animal house and library staff.

For the administrative staff of MSIH see A.MSIH.1

3.4.3. Summary of the human resources section

In summary, what are the points of strength and weakness of the human resources (teaching staff, technical and administrative staff)?

Academic promotion:

For many reasons, the process can cause the candidate to experience a period of oversensitivity, misunderstanding, and even frustration. Many factors contribute to the feeling of dissatisfaction during the process of faculty promotion, for example, lack of update especially when the process is especially drawn out for various reasons. Every effort is made to speed up of the process and to update the candidate during each stage of procedure.

Computation and uniformity: promotion process.

- ♦ Receipt of letters of recommendation from Israel and abroad present one of the main hurdles in the process of academic promotion. In the future (6-12 months), we plan to standardize the process of solicitation of letters of recommendation by the use of computerization and internet.
- ♦ In parallel, (the computer site is in preparation), we will design an optional format for letters of recommendation (in Hebrew/English) according to the Faculty's principles of academic promotion.

A similar process will be applied to the various professional committees. This site will contain full details of the chairman and members of the committees.

Correspondence related to academic promotion will be carried out by internet/electronic mail. Every effort will be made to eliminate correspondence by regular mail.

The Faculty site will contain an additional site for academic promotion which will contain all the relevant information.

- ♦ An explanation on the principles and procedures of academic promotion
- ♦ An example of a written CV
- ♦ Requirements for academic promotion according to rank
- ♦ Methods of communication and submission

The official dates (from rank to rank) will be followed up on the initiative of the Assistant Dean for Academic Promotion. The purpose is to evaluate the academic standard of faculty members who have not been promoted for the past five years. The aim is to encourage faculty to aspire for academic promotion, provided that they meet the criteria, and to foster involvement at all levels. The follow up will be extended to two levels:

- ♦ As opposite to a faculty member.
- ♦ As opposite to Chairman of the Division/Head of the Department of the faculty member.

All the above will be coordinated with the University's academic manpower department.

Recruiting and absorbing teaching staff:

The criteria for absorbing new teaching staff in needed areas can pose certain demands. New recruits of teaching staff are expected to fulfill the requirements of the new research model of the university formulated by the Committee for Planning and Budgeting (VATAT) of the Israeli Council for Higher Education (MALAG) (e.g., ability to publish in highly ranked peer-reviewed international journals and to compete for competitive research grants). Thus, candidates have to fulfill both high research qualifications and specific educational capabilities. Nevertheless, in the last year, we were able to absorb 9 new researchers with the specific educational capabilities who have been successful with their recruitment of external and internal competitive grant support (see section 4) and have injected new blood into level of research.

3.5. INFRASTRUCTURE RESOURCES

3.5.1. Physical location

Where the unit is physically located in the institution, in which building, and where does the study program under evaluation operate? Do other study programs share the building?

The Faculty of Health Sciences is located across the street of the main campus of the Ben-Gurion University of the Negev and within the boundaries of the Soroka University Medical Center. It occupies 26395 square meters in several buildings (see appendix A.3.5.1). The majority of teaching and research activities are carried out in buildings M 5, 6, 7, 8, and 10 which were built and are managed by the university. Due to space shortages, the faculty also uses for these activities, space rented from the hospital in buildings M, M1, M2, M3 and M4 which are located within a reasonable walking distance from the main faculty center. Except for secretariat space, no other areas are dedicated for specific schools. Appendix A.3.5.1.a describes in detail the physical infra-structure of the faculty regarding various parameters asked to be reported in this document. Please refer to this appendix when reading the following sections describing verbally and briefly short the main physical features of the faculty.

3.5.2. Overall infrastructure

Please describe the overall physical infrastructure that serves the unit and the study program under evaluation. Please refer to classrooms, computerization, administrative and academic faculty offices; to what extent does this infrastructure enable the parent unit to operate the study program according to the set aims and goals?

Classrooms

Regular classrooms intended mainly for frontal presentations. These are located in the following buildings:

M1: 6 classrooms – 363 seats.

M2: 3 classrooms – 206 seats

M3: 7 classrooms – 451 seats

M6: 1 classroom – 40 seats.

M8: 15 classrooms – 987seats.

M10: 1 classroom – 39 seats.

In total, the faculty is able to provide concomitantly teaching space for almost 2100 students. Although differing in comfortableness due to style and time of construction, all classrooms meet the required standards; all are air conditioned with fully audio-video equipped.

Laboratory classes

The four student laboratory classes are located in the M2 building. They serve all students who study microbiology, virology, immunology, biochemistry, histology, pathology, molecular biology and genetic engineering. Each laboratory contains general laboratory equipment: incubators, refrigerators, freezers, centrifuges, dry and wet heating devices, vortex, pipettes and micropipettes. Special equipment for nucleic acid analysis (PCR machine), protein separation devices (electrophoresis), ELISA reader and spectrophotometry devices,

microscopes (light, fluorescent, multi-channel connected to video device that allows all class to watch microscopic specimens on monitors. Each laboratory can serve 24-30 students.

Computer classes

Two classes are located in building M6 and one in building M8. In each one of them there are 30 computer stations- a total of 90 computer stations.

Training classes

All these classes are located in the M8 building and include two classes containing 46 physiotherapy beds used mainly by physiotherapy students, 8 classes for medical simulation used mainly by medical and emergency medicine students and 4 classes containing 24 hospital beds used mainly by nursing students.

Dissection class

One dissection class containing 17 active carbon ventilated dissection beds is located in building M2.

Auditorium

Located in building M5 with a capacity of 180 seats, Auditorium can be used as a class when needed and most guests lectures are held in this building.

Pre-clinical research center (animal house facility).

This is a state of the art facility for research by scientists & students.

Space For the benefit of the students

1. In each of the buildings there are several computer terminals where the student can get administrative data regarding their studies.
2. A cafeteria serving hot meals from 8.00 to 16.00 hours is located in building M5. In other buildings vending machines are serving hot/cold beverages, sandwiches and snacks.
3. The Caroline Building student center was built, as the name implies, for the welfare of the students. The idea was to concentrate under one roof several activities common to all students. In this case this includes the offices of the medical student association in the Negev, two large lobbies equipped with computer hook-ups, lobby for various activities, lounges, offices of several secretariats, office of examination center, self-learning space suitable in a comfortable and aesthetic atmosphere.

3.5.3. Laboratories

What laboratories serve the program, who makes use of them, how are they equipped, and how many seats do they have?

There are basically two types of laboratories in the faculty, the relatively newer version in building M6 and the older one, in all the other buildings. The newer version is a 42 sq.meter module containing 4X3.6 meter long working benches and 4X1.2 meter sitting station (see appendix A.3.5.3). Such a lab can accommodate up to 6 students. The older type labs are being remodeled according to this module. The basic equipment used in the faculty research is found in appendix A.3.5.3.a. It should be noted that the faculty has a policy of financing purchase and maintenance of equipment which is of common usage.

3.5.4. Library and Information Technology (IT)

3.5.4.1. General Description

Describe the library including computerized databases, which serves the students and the teaching staff of the study program, its strengths and weaknesses.

Staff: 6 academic librarians, most of them with a degree in library sciences.

Physical description:

- The library is located in the center of the Soroka campus, to allow easy accessibility to students who spend a major portion of their time in the hospital.
- 60 seats in the quite study hall
- 26 seats in the group study hall (plans of extension in the coming year)
- Opening hours: Sunday-Thursday 08:30-18:45

Collection:

- Number of titles - ~27,000
- Periodicals - ~800 e-journal titles are the core of the collection. This collection is enriched by the general e-collection of the University that includes many hundreds of periodicals in all areas of research, including clinical and medical research.
- University online databases, relating to the library's area of specialty –26 in number including Access Medicine and Cochrane Library for example.
- E-journals providers for the University – 28 (including Wiley, Leibert, Elsevier, LWW) some in agreements with MALMAD.
- Purchase and collection update
- The head of the library with the collection development librarian, select books and other items to be purchased within a given budget. Selection is based on physicians/researchers/teachers recommendations as well as librarian lists (Doody's). We buy more and more e-books rather than print ones.
- Textbooks are purchased with a ratio of 1 copy per 6 students, and 1 copy per 3 for titles that are required for the final exams, e.g., Harrison's Internal Medicine and Nelson's Pediatrics. Most copies are for extended loan (copies are given on yearly loan by the Dean of Students' office).
- The core list of periodicals is updated annually with the help of the academic Library Committee taking into consideration university and hospital faculty needs (usage stats and recommendations), budget, and impact factor.

Computing services:

- 24 public computer stations
- Netbook lending
- Wireless network including Eduroam
- Printing and Scanning services
- A self-check station

- All digital services supplied by the University, including online databases and electronic journals, are available to students and faculty in the campus and remote access.

Reference and Instruction:

- New students take a compulsory library introduction course plus a tour.
- Reference and instruction is given at the service desk, by telephone and e-mail.
- Information Literacy and Library instruction is given to advanced students.
- The library offers free individual sessions with a librarian for instruction and information retrieval.
- The library staff prepare online Guides in Information Literacy http://libguides.bgu.ac.il

Other services:

- The Library website is constantly updated (blog style) with latest purchases and information literacy tips. http://medlib.bgu.ac.il
- The website is divided into specialty portals for example: http://libguides.bgu.ac.il/medicine
- The Library has a website for mobile devices
- A weekly newsletter is sent to the Faculty list server.
- Interlibrary loan and Document delivery for students and faculty.

3.5.4.2. Accessibility:

Do the institution and the study program take steps to enable the convenient access of the students with special needs to the study material and the different facilities, e.g. classrooms, laboratories, library? If part of the programs takes place on different campuses, how is equal opportunity of access to the facilities and equipment at the main campus ensured for all students?

All classrooms, laboratories, offices, library, etc. are conveniently accessible for the disabled. In classrooms with fixed seats either the first or the last row are reserved for the disabled as well as allocated seats for the hard of hearing.

3.5.4.3. Infrastructure Section Summary

In summary, what are the points of strength and weakness of the physical infrastructure?

The main problems in the physical infrastructure of the faculty are a certain level of waste of time and a certain feeling of lack of unity as a result of the faculty being divided between several buildings (in spite of the fact that all of them are within a relatively short walking distance). A second problem is the relative inconvenience of some classrooms and labs. The encouraging news is the fact that the university authorities are starting to consider the erection of an additional building adjacent to the M-5-6-7 complex which will house all the remaining activities which now, are scattered across the medical campus.

Another point of strength is the recent establishment of a central faculty committee for infrastructure that plans, advices and regulates issues of space and equipment.

CHAPTER 4
RESEARCH

4.1. GENERAL PERCEPTION

What is the department's perception of research, and what are the expected outcomes?

The unique structure of the Faculty of Health Sciences formed of a variety of Schools in which basic researchers and physician researchers teaching and work, has created a school wide perception of research rooted in the Faculty's central values concerning research and expected research outcomes. The Faculty principles of administrating research are delineated in the following:

Administrating research

Usually deans and heads of departments in the academia have experience in administrating educational programs, academic promotions, etc. The concept of administrating research seems contradictory to the value system of academic freedom. Scientists are accustomed to play solely with their original, sometimes idiosyncratic ideas, hypotheses, and research adventures. Sometimes (not always) it pays off.

A new paradigm of biomedical research: convergence

In the last decade, we have witnessed the development of interdisciplinary research fields such as bioinformatics, tissue engineering, computational biology, nanobiology, synthetic biology, systems biology, biomaterials, etc. These innovative research branches present a new research model, convergence. Research convergence is expected to become a leading paradigm for biomedical research in the future. One of the major goals in administrating research in FOHS is to facilitate the creation of interdisciplinary research groups, beyond the solitary researcher, that will carry out research convergence and intra-faculty cooperation involving basic and clinical research, as well as inter-faculty cooperation.

Academic freedom and accountability

Academic freedom given to researchers in the faculty and the university is an essential value. However, this value exists in equilibrium with other values, including the value of accountability. Academic freedom should be coupled with the principle of accountability, and researchers should be accountable for scientific productivity under strict ethical rules.

Coupling between investments and productivity

The faculty and the university are investing in research by providing resources such as research infrastructure (space, facilities, equipment and a reagent budget) and by supporting human resources (the scientists themselves, student grants, technicians, and administrative staff). These investments must be coupled to research productivity, and allocated appropriately. Research productivity is expressed according to the new model of budgeting of The Committee of Planning and Budgeting, "VATAT", the Israel Council of Higher Education, "MALAG", by publication indices, competitive grants and research students. It is clear to us that excellent researchers classified according to the budgeting model will be encouraged and supported by investments.

Administrating research infrastructure and facilities

Research infrastructure and facilities, though used by researchers, are the property of the faculty and the university and should be centrally administered, regulated by faculty committees, and allocated to researchers according to productivity. Less productive researchers should be reminded of the Buddhist concepts: we are all temporary; everything is flowing; adhering (to property such as laboratory space or technicians) creates suffering. We would be wise to adopt the attitude well expressed in Wallace Stevens' poem "Notes toward a Supreme Fiction" (Wallace Stevens Transport to Summer in The Collected Poems Vintage Books New York, 1982, p. 380):

"From this the poem springs: that we live in a place

That is not our own and, much more, not ourselves

And hard it is in spite of blazoned days."

Helping researchers regain productivity

"Seed money" grants are provided to support and encourage non-established researchers who are struggling to achieve good standing, so that they will be able to feel that "the route is still open lengthwise" (Nathan Alterman, "Again the melody returns"). Researchers whose applications to outside competitive funding agencies were evaluated as "very good" (falling short the grade required for funding), may apply for internal competitive funds from the Faculty of Health Sciences.

Enabling creative researchers to pursue their original research paths

We should be aware of the possibility of the biased impact of administrating research on creative and original research paths of individual scientists. Toward this end, we will act carefully according to Maimonides' advice:

"For by following entirely the guidance of lust, in the manner of fools, man loses his intellectual energy, injures his body and perishes before his nature time, sighs and cares multiply; there is an increase of envy, hatred and warfare for the purpose of taking what another possesses“ (Moses Maimonides, Guide for the Perplexed, Part iii, Chapter XXXIII)

Delineating the central problems characterizing FOHS research divisions that have partially been addressed during the last two years:

1. The Divisions of Basic Sciences and of Public Health were unequally divided into departments of various sizes, a fact that had negative influence on educational, research and administrative aspects.
2. Interdisciplinary cooperative research involving basic science- and clinical-researchers was sparse and needed to be enhanced.
3. The past growing shortage in standard positions for researchers within the Divisions had to be addressed.
4. A past significant decrease in qualified post-graduate students in M.Sc. and Ph.D. programs had been addressed.
5. Distinguished sites of excellence in research within the Divisions should be defined and encouraged.
6. The very significant existing and growing shortage of technicians' positions should be addressed.
7. A shortage in adequate research facilities and equipment and inappropriate maintenance of research equipment should be addressed.

In general, upgrading and enhancing research and improving its quality depend on cooperative efforts among the researchers, the faculty and the university.

Steps taken by the researchers:

1. Researchers' agreement for re-organization of the Division of Basic Sciences into three Departments of similar size, and the Division of Public Health into two departments of similar size.
2. Researchers' agreement for strategic and effective management by Faculty and Departments of integrating new researchers, new technicians, research space, and research facilities according to the new budgeting model, which encourages research excellence by optimizing research productivity.
3. Steps taken by the Faculty
4. Faculty investment to encourage and support application for grants from competitive external sources.
5. Allocating administrative staff positions to the future new departments and to the centers of excellence in research.
6. Undertaking fundraising from inside and outside sources in collaboration with the University.

Steps taken by the university:

1. Allocating a five year budget to hire technicians using "soft money", to be ultimately replaced by officially budgeted positions.
2. Support for grant applications from external competitive sources.
3. Budgeting a future faculty research coordinator.
4. Budgeting a new B. Med. Sci. (Pre-Med) program.
5. Upgrading the position of the newly formed departments to be regarded as academic departments for all intents and purposes.
6. To facilitate research, the university intends to build a new laboratory building which will house the sometimes physically dispersed faculty members into one hi-tech building together with the newly recruited researchers.

One of the major goals in administrating research in the Faculty of Health Sciences at BGU is to facilitate the creation of interdisciplinary research groups. Interdisciplinary research groups will carry out research convergence and intra-faculty cooperation involving basic and clinical research, as well as inter-faculty cooperation.

A new pilot initiative of research promotion in FOHS:

FOHS and BGU have launched a new initiative to promote research in the FOHS. The initiative is a three part agreement of mutual investment by the university, the faculty and the researchers. The three party agreement includes: 1. Reorganization of the research divisions into academic departments, 2. initiating the construction of a new laboratory building in the FOHS, and 3. establishing and supporting a 5 year period of research competition for interdisciplinary projects involving collaborations between basic, pre-clinical and clinical researchers.

Rules and Procedures

The Initiative begins with a call for papers that occurs once or twice a year by email announcement to members of the Faculty. Submitted proposals are initially reviewed by the Faculty’s Dean and Vice Dean for Research to ensure that the projects are interdisciplinary in scope and have financial backing from the researchers themselves (another required component of the Initiative). Proposals meeting this criteria are reviewed by a prestigious panel of external reviewers (from within Israel and from abroad) who select the finalists who move on to the next state of the competition.

Selection Criteria

1. True synergy and cooperation in that the scientists' expertise is complementary and facilitates the comprehensive exploration of projects that otherwise would not be possible,
2. Background and merit of the researchers, including their publication and funding history, The project's novelty and feasibility,
3. Ability of the project to lead to future project development, publications, and project-based fund raising.

During the next stage of the selection process the finalists present their research proposals to members of the Faculty and the local review committee whose members represent institutions such as the Weizmann Institute, the Hebrew University, the Technion, and Tel Aviv University. The top ranked projects are selected for funding, and the distribution of funds is based on this ranking. In order to encourage broad participation in the program, principal investigators may only receive funding for one project during each round of applications.

Issues Promoted by the Research Initiative

Research convergence – Convergent research, the designed use of more than one theoretical approach to examine a problem space, may help to adequately address the complexity of medical disorders along with their therapeutics to enable deepened understanding of both and expanded opportunities for application.

Translational science – Bringing together researchers from different disciplines fuels research that facilitates the transition from pure basic science to practical real-life applications (moving research from bench to bedside).

Implementation science – Collaborations among basic scientists and clinicians improve the odds that research findings will promote changes in medical practice and healthcare policy and facilitate research-based interventions that improve quality of care.

Community services – Faculty clinicians are often community based and bring a community oriented outlook to the research team, increasing the impact of research to affect change on the ground, addressing the health issues of the Negev, and improve community health care.

The initiative represents a broad-based partnership. As mentioned above, in order to be eligible for this project, the researchers themselves must be able to demonstrate that they have the ability to help fund the research. The researchers are partners with the University and the Faculty in advancing this vital research. During the Initiative's pilot phase, project funding was divided as follows: $1.6 million from BGU, $400,000 from the Faculty and $400,000 from the researchers.

Selected Projects - First Round

In May 2012, nine interdisciplinary proposals were selected from 27 submitted in the Initiative's first round (initial pilot phase) based on outside reviewer assessment of their relative and absolute value. Following the concept of convergence of disciplines in bio-medical research as a route to breakthroughs, the teams include more than 50 researchers (principal investigators and participants/advisors) from the Faculty including basic researchers, pre-clinical researchers, and research clinicians from a wide range of disciplines.

The winning research groups included 31 principal investigators (7 physicians and 2 MD-PhDs) and 28 collaborating investigators (8 physicians). These research groups will be similarly supported for the next academic year.

Research Project	Principal Investigators	Participants/Advisors
The Involvement of the Immune System and Inflammatory Processes in Mood and Anxiety Disorders – a Translational Science Study – From Animal Models to the Clinics	Prof. Hagit Cohen, Prof. Galila Agam, Dr. Claude Brodski, Dr. Abed N. Azab	Prof. Zeev Kaplan, Dr. Boris Nemetz, Prof. Yuly Bersudesky, Dr. Alon Monsonego, Dr. Abraham Zangen
Male Infertility: Propagation, Differentiation and Preservation of Human Male Testicular germ Cells to Sperm in 3D Artificial Matrices and/or in Xenografts, Genetics and Safety	Prof. Mahmoud Huleihel, Prof. Eitan Lunenfeld, Dr. Leslie Lobel, Dr. Esther Manor, Prof. Ruti Parvari	Dr. Vered Caspi, Dr. Daniel Fishman, Dr. Dror Meirow, Dr. Ruth Shemer
Effect of Inflammation on the Fate of Embryonic and Cancer Stem Cells	Dr. Ayelet David, Prof. Roni Apte, Dr. Rivka Ofir, Dr. Eitan Rubin	Dr. Elena Voronov, Dr. Ran Taube
Immune-Brain Interactions Underlying the Pathology and Therapy of Cerebrovascular Injury	Prof. Alon Friedman, Dr. Alon Monsonego, Dr. Gal Efergan	Prof. Ilya Fleidervish, Dr. Dani Gitler, Dr. Ran Taube, Prof. Hagit Cohen, Prof. Etta Livneh, Dr. Ilan Shelef, Josh Hasidim

Not Just APT: Mitochondrial Ca2+ Signaling in the Brain	Prof. Israel Sekler, Prof. Ilya Fleidervish, Dr. Rony Azouz	
Stem Cell Lines for the Study of Human Monogenic Diseases	Prof. Ohad Birk, Dr. Arie Koifman	Prof. Ilya Fleidervish, Dr. Dani Gitler, Dr. Ran Taube, Prof. Hagit Cohen, Prof. Etta Livneh, Dr. Ilan Shelef, Josh Hasidim
Volumetric Imaging to Detect Dynamics in Fat Distribution and Vascular Atherosclerosis: Outcome Measurement in Cardio-Metabolic Randomized Controlled Intervention Trials	Dr. Ilan Shelef, Prof. Assaf Rudich, Prof. Iris Shai, Prof. Ya'akov Henkin	Dr. Dan Schwarz Fuchs, Dr. Ilana Harman-Boehm, Dr. Talya Wollak, Dr. Lior Zeller, Prof. Arie Moran, Dr. Arik Wolak
Digestive Systems Disorders – From the Gene to the System	Prof. Michal Hershfinkel, Dr. Elena Voronov, Dr. Leah Gheber	Prof. Roni Apte, Dr. Ayelet David, Prof. Ruti Paravri
PICOT: a possible New Drug Target for the Prevention of Atrial Remodeling in Patients with Atrial Fibrillation	Dr. Yoram Etzion, Prof. Noah Isakov, Prof. Gideon Sahar	

A new and enthusiastic atmosphere has been created among researchers and physician-researchers in FOHS. The first sign of success is that recently FOHS members have been awarded 8 USA-Israel Bi-National (BSF) grants, including the Helmsley Foundation grant for the best annual BSF proposal this year. This constitutes an 800% increase over the previous period, more than any other medical faculty in Israel, leading BGU to become second to Weizmann Institute among winners of BSF grants. Fourteen of the recipients of our research initiative competition (leading researchers of 7 out of 9 winning cooperative projects) were awarded BSF or ISF grants. This highly unprecedented success attests to the high quality and appropriateness of the external and internal evaluation process in the research initiative program.

In March 2013, four out of seven finalists were selected from a pool of 17 submitted papers in the Initiative's second round. Three of the selected interdisciplinary projects involve facilitation of the transition from pure basic science to practical real-life applications. These projects address health issues of the Negev and are expected to improve community health care: 1. familial cardiomyopathies and arrhythmias in the Negev population, 2. new avenues to treat meningitis in the community, and 3. new ways to treat HIV carriers in the Negev. The selection of these teams reflects the Initiative's commitment to encouraging and rewarding collaboration that involves teams of researchers with expertise in the basic sciences and research clinicians. The list of 20 researchers involved in these projects includes ten PhDs, seven MDs, and three MD-PhDs.

Research Project	Principal Investigators	Co-Investigators
1. Role of SETD6 Methyltransferase in Modulating HIV Replication	Ran Taube, PhD Dan Levy, PhD Klaris Riesenberg, MD	Jacob Gopas, PhD Yonat Shemer-Avni. PhD
2. From Gene to Heart: Identifying and Studying the Mechanisms of Novel Mutations Leading to Familial Cardiomyopathies and Malignant Ventricular Arrhythmias	Ruti Parvari, PhD Yoram Etzion, MD, PhD Aviva Levitas, MD Guy Amit, MD Jean Mark Weinstein, MD	Ilya Fleidervish, MD, PhD
3. Mechanism of Action of Zinc and Calcium Ions in Bone Cells	Noam Levaot, PhD Michal Hershfinkel, PhD Israel Sekler, PhD	
4. Contribution of S. Pneumoniae Host Receptors and Immune Mediators to Meningitis	Yafa Mizrachi Nebenzahl, PhD Alon Friedman, MD, PhD ,Alon Monsonego, PhD, Ron Dagan,MD, David Greenberg, MD	Esther Priel, MD

4.2. POINTS OF STRENGTH

What are the department's special strengths and uniqueness in research?

FOHS researchers comprise the bulk of researchers that teach in the various schools of the Faculty. Figure 4.2 below shows the summary of current research interests of the FOHS researchers. The font size and the boldness of a research interest shown in Figure 4A are directly correlated with the number of FOHS researchers that explore it. E.g., Brain, Cancer and Cardiology research topics are examples for the special strengths of the FOHS research as well as Diabetes and infectious disease research.

Figure 4.2 Summary of current research interests of the BGU-FOHS researchers that teach at the Medical School. The font size and the boldness of a research interest shown in the Figure are directly correlated with the number of researchers involved in the specified area.

4.3. PUBLICATION RECORDS

Please list the leading journals in the field (including ranking, if possible, see appendix A.4.3).

The research departments at the FOHS are: The Shraga Segal Department of Microbiology, Immunology and Genetics, Department of Physiology and Cell Biology, Department of Clinical Biochemistry and Pharmacology, Department of Public Health and Department of Health Systems Management. Therefore, Table 4-3 below shows the ordered list of the first 20 leading journals for the following research categories studied by the Departments: Microbiology, Immunology, Genetics and heredity, Physiology, Cell Biology, Biochemistry and Molecular biology, Pharmacology, and Public, Env&Occu Health.

Table 4-3 Ordered list of the first leading journals in each research category

	Genetics & Heredity	Immunology	Microbiology
1	NAT REV GENET	ANNU REV IMMUNOL	NAT REV MICROBIOL
2	NAT GENET	NAT REV IMMUNOL	CLIN MICROBIOL REV
3	ANNU REV GENET	NAT IMMUNOL	ANNU REV MICROBIOL
4	TRENDS ECOL EVOL	IMMUNITY	CELL HOST MICROBE
5	ANNU REV GENOM HUM G	J EXP MED	MICROBIOL MOL BIOL R
6	GENOME RES	IMMUNOL REV	FEMS MICROBIOL REV
7	GENE DEV	J ALLERGY CLIN IMMUN	ADV MICROB PHYSIOL
8	AM J HUM GENET	TRENDS IMMUNOL	CLIN INFECT DIS
9	TRENDS GENET	CURR OPIN IMMUNOL	PLOS PATHOG
10	GENOME BIOL	CLIN INFECT DIS	CURR OPIN MICROBIOL
11	PLOS GENET	J AUTOIMMUN	TRENDS MICROBIOL
12	CURR OPIN GENET DEV	MUCOSAL IMMUNOL	J INFECT DIS
13	HUM MOL GENET	AUTOIMMUN REV	CRIT REV MICROBIOL
14	MOL THER	J INFECT DIS	ENVIRON MICROBIOL
15	MUTAT RES-REV MUTAT	SEMIN IMMUNOL	CELL MICROBIOL
16	ONCOGENE	SEMIN IMMUNOPATHOL	MBIO
17	J MED GENET	ALLERGY	ADV APPL MICROBIOL
18	CIRC-CARDIOVASC GENE	AIDS	J ANTIMICROB CHEMOTH
19	HUM MUTAT	EMERG INFECT DIS	MOL MICROBIOL
20	MOL BIOL EVOL	J IMMUNOL	CURR TOP MICROBIOL

	Public, Env&Occu Health	Pharmacology & Pharmacy	Biochemistry & Molecular Biol	Cell Biology
1	EPIDEMIOL REV	NAT REV DRUG DISCOV	ANNU REV BIOCHEM	NAT REV MOL CELL BIO
2	ENVIRON HEALTH PERSP	ANNU REV PHARMACOL	CELL	CELL
3	INT J EPIDEMIOL	PHARMACOL REV	NAT MED	CANCER CELL
4	EPIDEMIOLOGY	ADV DRUG DELIVER REV	NAT CHEM BIOL	CELL STEM CELL
5	ANNU REV PUBL HEALTH	TRENDS PHARMACOL SCI	MOL CELL	NAT MED
6	AM J EPIDEMIOL	MED RES REV	MOL PSYCHIATR	NAT CELL BIOL
7	J TOXICOL ENV HEAL B	DRUG RESIST UPDATE	GENOME RES	ANNU REV CELL DEV BI
8	EUR J EPIDEMIOL	PHARMACOL THERAPEUT	NAT STRUCT MOL BIOL	MOL CELL
9	B WORLD HEALTH ORGAN	NEUROPSYCHOPHARMACOL	ACTA CRYSTALLOGR D	DEV CELL
10	J CLIN EPIDEMIOL	CURR OPIN PHARMACOL	PLOS BIOL	CELL METAB
11	CANCER EPIDEM BIOMAR	DRUG DISCOV TODAY	TRENDS BIOCHEM SCI	CURR OPIN CELL BIOL
12	AM J PREV MED	J CONTROL RELEASE	PROG LIPID RES	NAT STRUCT MOL BIOL
13	AM J PUBLIC HEALTH	DRUG METAB REV	TRENDS MOL MED	TRENDS CELL BIOL
14	INT J HYG ENVIR HEAL	CLIN PHARMACOL THER	MOL ASPECTS MED	GENE DEV
15	INFECT CONT HOSP EP	NEUROTHERAPEUTICS	ADV MICROB PHYSIOL	TRENDS MOL MED
16	DRUG SAFETY	CLIN PHARMACOKINET	CURR OPIN CHEM BIOL	J CELL BIOL
17	GENET EPIDEMIOL	EXPERT OPIN INV DRUG	NAT PROD REP	CURR BIOL
18	MED CARE	CURR DRUG METAB	CURR BIOL	CURR OPIN STRUC BIOL
19	ENVIRON RES	AAPS J	CURR OPIN STRUC BIOL	CSH PERSPECT BIOL
20	J ADOLESCENT HEALTH	J ANTIMICROB CHEMOTH	BBA-REV CANCER	EMBO J

4.4. FUNDING

What are the research funds (in $) of the institution, faculty/school, evaluated unit/study program in each of the last five years according to the source of funding: competitive sources (government/non-government), non-competitive public funds, other non-competitive funds (non-government), internal funds, donations. [1] Please refer also to the research infrastructure: research laboratories, specialized equipment and budget for maintenance (level and sources of funding).

In the past five years the annual funds received by FOHS researchers were as follows:

- Competitive grants based on the VATAT model (e.g. ISF, BSF, EC,..) (in $) -

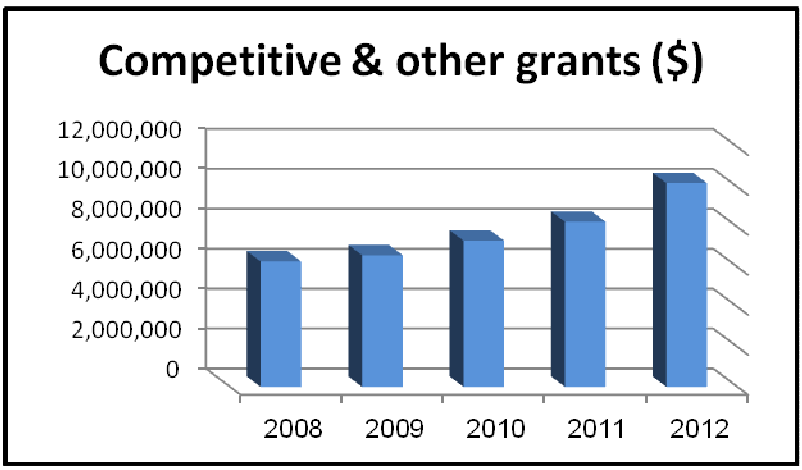
2008	2009	2010	2011	2012
2,592,056	**2,909,626**	**3,424,000**	**4,719,213**	**4,527,686**

- Other grants based on the VATAT model (e.g. non-competitive or competitive that are not included in the VATAT primary list) (in $) -

2008	2009	2010	2011	2012
3,684,569	**3,579,551**	**3,891,374**	**3,540,838**	**5,669,376**

- Total (Competitive and other grants) (in $) -

2008	2009	2010	2011	2012
6,276,625	**6,589,175**	**7,315,374**	**8,260,051**	**10,197,062**



4.5. FUNDING ACHIEVEMENTS

Please list grants, honours, fellowships/scholarships, etc received by faculty (senior and junior). List of Chairs, research institutes, research centres and research facilities established in the last five years, including specialized laboratories.

The Excel file, named "FOHS 5 year Grant approvals" lists the different research funds approved and received by specific FOHS researchers in the last 5 years. The list includes the full name of the researcher, the name of the grant agency and the name of the specific call. This list appears as an appendix in the CD version of this report.

4.6. FUNDING OF RESEARCH STUDENTS

Please provide data on research students (master degree with thesis, doctoral degree): overall number (internal/external), sources of funding, level of funding, number of graduates (of the university, faculty/school, parent unit/study program) in each of the last five years.

The data on research students at the FOHS in the last 5 years is as follows:

Year	MSc with Thesis	MSc w/o Thesis	Total MSc	PhD	Total
2009	74	107	181	28	209
2010	59	115	174	44	218
2011	70	122	192	19	211
2012	84	136	220	27	247
2013	74	159	233	32	265

4.7. PUBLICATIONS BY TEACHING STAFF

Please provide a list of publications in the last five years (only by the teaching staff of the evaluated study program) according to refereed journals, books (originals or editions), professional journals, conference proceedings, professional reports, prizes etc. Please include data on impact factor.

The attached Excel file (found in the appendixes; CD version of the report), named "Faculty Academic Papers After filter 2900", lists the Papers published by FOHS researchers (2009 – 2013). The following parameters are included and detailed per each publication: Article ID, Times cited (correct for March 2013), Journal expected citations, Category expected citations, Journal Actual/Expected Citations, Category Actual/Expected Citations, Percentile in Subject Area, 2011 Journal Impact Factor, Publication Year, Subject Area, Document Type, First Author, All Authors, Journal, Document Title, Unique Identifier, Volume and Page.

4.8. COMMERCIALIZATION UNIT

Is there a commercialization unit in the institution? Briefly describe its function: number of patents registered and where have they been registered.

BGN Technologies is the technology transfer company of BGU and as such, it is responsible for the commercialization of research performed by the researchers teaching at the various Faculty schools. The website of BGN is: http://cmsprod.bgu.ac.il/eng/BGN1. BGN has

delivered the following information about the number and registration of the patents registered by FOHS researchers (Table 4.8, appendix A4).

4.9. COOPERATION ACTIVITIES OF DEPARTMENT MEMBERS

Please list cooperation activities by department members both in Israel and abroad.

Research activities are specifically structured to advance ongoing investigative interests or to acquire specialized research skills. Clinical activities range from initial subspecialty training to the acquisition of advanced research or clinical skills. All individuals nominated by one university/institute to receive special training in research or to pursue a specific area of scholarship, are subject to the approvals required by the host university/institution, and must be invited to join the appropriate academic unit.

This collaborative exchange offers and consists of:

- ♦ Participation in joint research programs and higher education programs
- ♦ Engagement in teaching and/or research related to the needs of the instructional and research programs of the host university
- ♦ Promotion of scientific meetings
- ♦ Scientific exchanges related to conferences, symposia and scientific meetings
- ♦ Promotion of books, reviews and publication of other scientific works
- ♦ Exchange of activities of papers concerning issues of common interest

The Faculty strives to develop, advance and strength the excellence in basic and clinical academic programs, research and health service activities, through the continuing exchange programs with universities/institutions such as (alphabetical order by country):

- ♦ McGill University, Canada
- ♦ Esculela Colombiana de Medicina, Colombia
- ♦ ULM University, Germany
- ♦ Wesftaler Wilhelms University of Munster, Germany
- ♦ Moi University, Kenya
- ♦ Medical School of Oporto, Spain
- ♦ Wytham Hall, UK
- ♦ Albert Einstein College of Medicine of Yeshiva University, USA Berkshire Medical Center, USA
- ♦ Case Western University, USA
- ♦ Children's Hospital Medical Center, USA
- ♦ Fox Chase Cancer Center, USA
- ♦ Medical College of Pennsylvania, USA

- ♦ Stanford University, USA
- ♦ Tulane University Medical Center, USA
- ♦ University of Alabama at Birmingham, USA
- ♦ University of California in Los Angeles (UCLA), USA
- ♦ University of Miami, USA
- ♦ University of North Carolina at Chapel Hill, USA
- ♦ University of Rochester School of Medicine and Dentistry, USA
- ♦ University of California, Irvine, CA

The cooperative activities by Department members in Israel and abroad are too numerous to organize and list. Screening the lists of authors at the publications listed at the attached Excel file, named "Faculty Academic Papers After filter 2900", reveals the significant amount of national and international collaborations. Another proof for the numerous collaborations is the number of Bi-National grants submitted from 2010 by FOHS researchers (e.g. 39 BSF and 24 GIF) as well as 28 submissions for FP7-cooperation grants.

4.10. CONSULTING ACTIVITIES

Please list the major consulting activities done by faculty.

Consulting activities are conducted by faculty researchers on an individualistic basis. Following are some examples:

Prof. Assaf Rudich, Department of Clinical Biochemistry and Pharmacology: International Consultant: Toronto Bioscience Consulting Group, a part of Toronto Bioscience Inc. The Group provides a roster of top scientists from around the world to companies that need a highly credible global expert. Each of the consultants has established a reputation as a world leader in his field of research. Toronto Bioscience Consulting Group is based in Toronto, Canada and has a global profile with a consultants network spread over several continents. The Group was founded by Dr Gary Sweeney with a mission to provide outstanding intellectual acumen from recognized world-leading researchers in health and life sciences to a wide range of clients in industry, academia, law and governments.

Prof. Ron Dagan, Division of Pediatrics, A member of several national and international advisory committees , he has been Chairman for the Advisory Committee for Infectious Diseases of the Israeli Society of Pediatrics from 1992 to 1997 and Member of the National Vaccine and Infectious Disease Advisory Board since 1994. He is also a Founding Member of the World Society of Pediatric Infectious Diseases (WSPID), Member of the Executive Committee of the International Society of Infectious Disease (ISID) and a Fellow of the Infectious Diseases Society of America (IDSA). Professor Dagan has been involved in the World Health Organization (WHO) Working Group on Pneumococcal Nasopharyngeal Carriage and the WHO Pneumonia Radiology Working Group. He served as President of the European Society for Pediatric Infectious Diseases (ESPID) from 2004 to 2006 and as President of the World Society for Pediatric Infectious Diseases (WSPID) from 2006 through 2009. Prof. Dagan is currently the chair of the board of the International Symposia on Pneumococcus and Pneumococcal Diseases (ISPPD).

Prof. Angel Porgador, Department of Microbiology, Immunology and Genetics. Scientific Advisor and Member of the SAB , Vaxil Bio Therapeutics Ltd., is a clinical stage company developing a new class of synthetic T-cell therapeutic and preventive vaccines with promiscuous MHC class I and II binding, based on its proprietary VaxHit technology.

Dr. Lesli Lobel, Department of Microbiology, Immunology and Genetics, in collaboration with Dr. Marks of the Biotechnology Dept. in BGU have assembled a worldwide consortium of partners with whom they have active collaborations. These global collaborators include the Uganda Virus Research Institute in Entebbe, The National Institute for Communicable Diseases (NICD) in Johannesburg, South Africa, The University of Pretoria and the University of the Free State, South Africa, The Institute of Virology, Marburg, Germany and the Institute Pasteur in Ho Chi Minh City, Vietnam.

Dr. Ayelet David, Department of Clinical Biochemistry and Pharmacology. A member of the consortium of Focal Theology Area on Nanomedicines for Personalized Theranostics.

Dr. Simona Bar-Haim, head of the new Laboratory for Rehabilitation and Motor Control of Walking, has built a consortium of physiotherapeutic research and rehabilitation with several Arab countries. Within the consortium, she makes a point of advocating for more inclusion of women, both as researchers and as patients.

Prof. Dov Chernichovsky, Department of Health Systems Management. Technical Advisory Committee, Global Task Force on Expanded Access to Cancer Care and Control in Developing Countries.

Prof. Eliahu Heldman, Department of Physiology and Cell Biology. Chief Scientific Officer of Lauren Sciences, Lauren Sciences LLC is a privately-held New York biotechnology company focused on developing its V-Smart™ platform to create a robust pipeline of V-Smart™ therapeutics consisting of central nervous system (CNS)-active drugs that normally do not cross the BBB. V-Smart™ is a platform technology that can be used for a variety of uses including delivery of therapeutic drugs. The V-Smart™ drug delivery system is based on novel nanovesicles that have unique superiority to other nanovesicles, such as liposomes. Major advantages of the V-Smart™ nanovesicles include: high stability, large encapsulation capacity of a variety of potential drugs (e.g., small molecules, peptides, proteins and nucleic acids), ability to transport the drugs across the BBB, targeting to specific cells and release of encapsulated drugs in a controlled manner at targeted sites.

Prof. Zevi Bentwich, Department of Microbiology, Immunology and Genetics. Chief Scientist, Rosetta Genomics, Rehovot

4.11. TEACHING AND RESEARCH SYNERGY

What is the level of synergy between research strengths and teaching needs at the various degree levels?

We recruit researchers to FOHS based primarily on their research strengths. Yet, over the years, emphasis was also given to teaching needs at the Medical school. Thus, overall, we can state that there is a high level of correlation between research strengths and teaching needs.

4.12. RESEARCH SECTION SUMMARY

In summary, what are the points of strength and weakness of the research, and are you satisfied with the research outcomes of your department?

Research at FOHS is developed and advanced. Yet, we aim to further develop the cooperation between clinicians and researchers as well as to advance state of the art cooperative synergistic research projects that bring the best of the combined expertise of the FOHS researchers. The weak points were delineated in 4.1 together with the Faculty new approach to tackle these points through the new research promotion initiative and the early indicator signs of success.

CHAPTER 5
THE SELF-EVALUATION PROCESS, SUMMARY AND CONCLUSIONS

Quality self-evaluation is a routine ongoing procedure in the medical school. It is followed by recurrent changes and updates of the curriculum. External evaluation processes are a strong additional stimulus for a structured and comprehensive self-evaluation. As the Faculty places special emphasis on teaching, it initiates teaching skills workshops and regards teaching as a major component in the academic promotion process.

This is the fifth round of quality self-evaluation. Previous processes were as follows:

2000 - Self assessment report to the Council for Higher Education

2002 - Reevaluation and update of the curriculum

2006 - Self assessment report to the Council for Higher Education

2011 - Reevaluation and update of the curriculum

In addition, under the Chairmanship of Prof. Steven Schoenbaum, the International Advisory Review Committee (IARC) for the Goldman Fund has been evaluating the school of medicine on a regular basis since 1997. The last reviews were on: Dec 2006, Dec 2008, May 2010, Dec 2011 and May 2013. The oncoming reviews are scheduled for: Dec 2014 and May 2016.

5.1. THE PROCESS OF SELF-EVALUATION

Please describe the way that the current Self-Evaluation process was conducted, including methods used by the parent unit and the department/study programs in its self-evaluation process, direct and indirect participants in the process etc. What are your conclusions regarding the process and its results?

The two medical school directorates took upon themselves to lead the process and become a self-evaluation team. They managed the professional teams and coordinated the data supplied. The evaluation process is an ongoing established part of our faculty and will continue after this phase is completed.

For this report, a coordinator was appointed. The coordinator is a Professor of Medicine, a former head of a department, chairman of medicine, vice dean and director of the Goldman medical school who is now on sabbatical in medical education. The report was prepared in collaboration with members of the medical schools directorates and other faculty members, each reporting on his specific area of responsibility (e.g., heads of the admission, library and research dissertation committees; Head of the evaluation and examination office, etc.). After the material was collected it was appropriately organized by the report coordinator.

5.2. THE CONSOLIDATION OF SELF-EVALUATION

Describe the consolidation process of the Self-Evaluation Report, including its preparation and final approval (including a description of the contributions of staff members to the process).

A team composed of the Dean, the report coordinator, the two directors of the medical schools and one member of each of the schools' directorate served as a final leading committee. Meetings were carried out on a weekly basis. The material collected and organized by the report coordinator was presented and discussed. Changes in the initial report were made either by the committee or by asking changes from the faculty member who wrote the relevant section.

The version approved by the leading committee was transferred to the vice rector of the university for final updates and approval.

Editing and corrections were made by Caroline Simon, Office of the Dean.

5.3. TREATMENT OF WEAKNESSES

If a mechanism/structure has been decided upon for the future treatment of weaknesses that were highlighted by the self-evaluation activity, please specify it while referring to those within the institution who would be responsible to follow up on this activity. Please refer to the question: how do the institution and the parent unit intend to deal in the future with quality assessment and its implementation?

The Faculty of Health Sciences views the quality evaluation process as a routine, continuous process, performed regardless of the need to report to the Council for Higher Education. The schools' structures, the division of responsibilities and authority and the fact that the schools' directorates are directly responsible for quality evaluation ensure the continuation of this process.

The weaknesses highlighted by the self-evaluation activity, as well as plans and mechanisms for implementations of corrective activities are specified in each of the relevant sections. Our decision is to use the self-evaluation teams as a vehicle for planning, implementation and follow up of the improvement paths.

5.4. ACCESSIBILITY OF THE SELF-EVALUATION REPORT

Is the full Self-Evaluation Report accessible? If 'yes' - to whom it is accessible and to what extent?

Our point of view is that accountability requires that the self-evaluation report should be transparent. Therefore, the results of the self-evaluation process are reported to the Faculty council, the BGU Central Council and the Senate. In addition the report is available to all Faculty members and to student's representatives upon request.

CHAPTER 6
IMPLEMENTATION OF PREVIOUS QA RECOMMENDATIONS

If the evaluated department/study programs have been reviewed in the past by a CHE evaluation committee, please describe the main changes that were made as a result of the recommendations, such as strategic planning, mission and goals, curriculum, faculty, student body etc.

A report dealing with implementations of the previous evaluation process and recommendations (2007) was presented to the MALAG on Nov 2, 2011. This report addresses the following issues: Clinical teaching and agreements with the affiliated health organizations, research activity of students, ambulatory teaching in the community and simulation center.

A. Clinical education and agreement with Clalit Health Services

An agreement has been achieved and concluded with mutual letters between Prof. Carmi, the president of Ben-Gurion University of the Negev and Mr. Defes, The CEO of Clalit Health Services, declaring the agreement of Clalit Health Services to accept the general proposal of the Glazer and Israeli committee report regarding monetary arrangements between universities and hospitals requested by the Planning and Budgeting Committee of the Council for Higher Education in Israel (http://www.israelhpr.org.il/1060/479.htm, in Hebrew).

B. Research activity of students

Difficulty

Over the years, there has been a decrease in the number and quality of post-graduate students engaged in M.Sc. and Ph.D. programs at the Faculty of Health Sciences (FOHS). The main cause for this situation is that most of our undergraduate students study towards professional B.Sc. degrees such as Pharmacy or Laboratory Medicine and hence do not pursue graduate studies.

Approach to resolve the difficulty

Establishment of a Pre-Med program (B.M.Sc.) for approximately 70 students from October 2013. We will contact candidates who were not accepted into the Medical School (> 600 excellent candidates) and suggest that they enter this bachelor's degree program. Briefly, the B.M.Sc. program will be based on the first 3 years of the 7-year Medical School program with a focus on bio-medical research (e.g., more laboratory courses). The incentive for students to enroll to the B.M.Sc. program will stem from the following reasons:

(i) Acceptance of excellent graduates of the program (top 30%) to either 4th year at the Medical School or advanced MD-PhD and Direct PhD programs

(ii) Financial support to top students to conduct research during the undergraduate years

Difficulty

A paucity of cooperative interdisciplinary research projects involving researchers from the Division of Basic Sciences and clinical researchers from the affiliated medical centers.

Approach to resolving the difficulty

(i) Internal grants with emphasis on true collaboration between PhD researchers (FOHS affiliation) and MDs from (Soroka and FOHS affiliations). Of course, MD-PhDs (representing both worlds) would also be entitled to submit grants. The focus of these internal grants should be on translational science.

(ii) Developing unique programs for MD-PhD students (see below). MD-PhD students will naturally favor (or can be directed into) research subjects (e.g., translational science subjects) that involve collaboration of clinicians and basic researchers.

Difficulty

Though our experience shows that physicians who completed MD-PhD programs in our Faculty have a better chance to continue their internships and residencies in the medical centers affiliated with our Faculty, and a better opportunity for eventual promotion to form the framework of the Faculty's senior academic staff, only a small number of medical students are prepared to embark on MD-PhD programs.

Approach to resolving the difficulty

Developing unique programs for MD-PhD as follows:

(i) MD-PhD from day 0 – a significant fraction of the candidates for the 6-year-Israeli Medical school have a B.Sc. in life sciences or a similar degree. We will approach these candidates at the stage of the first interview (750 are invited and at least 10% have a B.Sc.) and offer them an attractive MD-PHD track in which they can complete both MD and PhD in 8 years. This is in addition to the existing and only MD-PhD program at the FOHS which begins in the 4th year of medical studies and in recent years has had only 1-2 new students per year out of 75 students.

(ii) MD-PhD track for excellent bachelor's degree graduates of the planned pre-med program described above [MD and PhD in 8 years as in (i)].

(iii) MD-PhD as part of the 4-year Columbia program for 10 Israeli students (MD and PhD in 7 years). Note that if a 4-year program is approved for the Israeli medical school then both sections (i) and (ii) will offer a 7-year MD-PhD track.

We believe that these new programs will expand the source of candidates by accepting applicants through the Colombia program and candidates to the Israeli school from the first interview (750 candidates, at least 75 of whom have a B.Sc.). Personal guidance of the students and offering attractive fellowships during the MD-PhD track should have the potential to elevate the number of excellent candidates.

C. Ambulatory teaching in the community

A steering committee was formed by the Faculty of Health Sciences to discuss and plan specialist teaching in the community with regard to several aspects including contents, integration with teaching in the medical centers, sites, personnel, allocation of teaching time, and budgetary issues. The assessment is coordinated by Prof. Dan Greenberg, Chairman of the Department of Health Systems Management. Participants include senior executives from the four HMOs in Israel: (Prof. Avi Porath, Director, Division of Health, Maccabi Health Care Services; Prof. Daniel Vardy, Deputy Director-General for Health, Leumit; Prof. Asher Elhayany, Director-General, Meuchedet; Dr. Nicky Lieberman, Head, Community Medical Division, Clalit Health Services, Dr. Orit Jacobson, Deputy Director-General, Clalit Health Services, Dr. Nitza Hyman-Neumann, Deputy Director, Soroka University Medical Center). Representatives from the Faculty of Health Sciences include: Prof. Doron Zager, Vice Dean for Education; Prof. Klaris Risenberg, Vice Dean of the Medical School; Prof. Aya Biderman, Head, Division of Health in the Community.

Several meetings to discuss ideas and challenges for transferring part of the medical education to the community were held during the past month. Thinking, planning, cooperative and integrative actions, and resources are needed in order to implement this transfer. This document is a preliminary result of these discussions. Additional deliberations are planned for the near future. At the end of this process, we will generate a plan and provide recommendations.

Background

- The Israeli healthcare system operates under the 1995 National Health Insurance Law, which guarantees access to a basic package of health services to all permanent residents.
- All residents are free to choose from among the country's competing, non-profit HMOs. At the end of 2010, the national market shares of these plans were as follows: Clalit Health Services (52.3%), Maccabi Health Care Services (24.9%). Meuchdet (13.6%), and Leumit (9.3%). The market shares are slightly different in the Negev region.
- Provision of care in the community varies by HMO. Clalit Health Services provides community-based services via a network of salaried physicians working in facilities owned by Clalit, while Maccabi Health Care Services provides care primarily through a network of independent, self-employed physicians.
- Although all general hospitals operate outpatient clinics, most specialized ambulatory care is provided in community-based settings and the vast majority of visits to specialists take place in the community.
- Medical education, however, is still predominantly hospital-based in all medical schools in Israel. Only very few clerkships (i.e., family medicine) are currently community-based.

Limitations of hospital-based medical education

The limitations of hospital-based medical education have recently been outlined by Ogur et al (2007)[2]. Several of these pitfalls could be addressed by transferring part of the medical education to a community setting:

- Because of decreasing lengths of stay and an increasing focus on care in the ambulatory setting, students in inpatient services rarely see patients through whole episodes of illness, from presentation through outcome; thus, students are rarely able to participate actively in the full spectrum of diagnostic reasoning and therapeutic decision-making. This problem is even more acute in Israeli medical centers where the average length of stay is very low and patient turnover is high compared to other Western healthcare systems.
- Students fail to see patients with a number of significant conditions that are increasingly managed through outpatient evaluation and treatment.
- The rapid pace of clinical care marginalizes the teaching of foundational skills such as diagnostic reasoning, communication, professionalism, cultural competence, mastery of physical examination, and epidemiology.

Rationale

- Transferring part of medical education to the community will help to improve medical teaching by exposing students to medical conditions that are usually not prevalent in the hospital setting, and thus prepare future physicians for integrated community care.
- Transferring medical education to the community may expand clinical teaching capacity, thus allowing the expansion of medical school classes.
- Transferring medical education to the community will improve and expand medical services in the Negev, empower specialists in the community, and strengthen the relationships between the Faculty of Health Sciences and the four HMOs.

Models for teaching in the community

Two potential models for teaching medical students in the community have been proposed. These models will require further development:

- **Community medicine clerkship** – This clerkship will be offered to 6th-year medical students who have already completed hospital-based rotations, including internal medicine, pediatrics, surgery, etc. Students will be exposed to various options for integrated care in the community. Preceptors will consist of specialists in primary care, specialized medicine (e.g., neurology, rheumatology, psychiatry, orthopedic surgery, etc.). Students will be exposed to multi- and inter-disciplinary services, such as a geriatric clinic, a diabetes clinic, a child development center, etc., and to services that exist only in the community, such as home care facilities, home hospice, etc. It is also recommended that students be exposed to the work of other health professions in the community (e.g., physical therapists, dieticians, occupational therapists).
- **Integrating community specialists in current clerkships**– According to this option, specialists in the community will tutor medical students during an integrated hospital/community clerkship, where part of the training will be provided in hospital

[2]Ogur B, Hirsh D, Krupat E, Bor D. The Harvard Medical School-Cambridge Integrated Clerkship: An Innovative Model of Clinical Education. Acad Med 2007; 82:397-404.

wards, and the remainder in the community. We believe that this is the second best option. Integrative transfer of medical education to the community means that during clerkships in pediatrics, internal medicine, neurology, psychiatry, and other professional specialties time will be allocated for teaching in the community.

Potential tutors in the community

Transferring part of the medical teaching to the community will be possible only if sufficient specialists are involved in mentoring medical students. Mentors should be specialists in the specific medical field who work in the community (part time or full time). Several opportunities to engage community-based physicians may exist and should be further explored:

- A large number of specialists forming the medical staff of the medical centers affiliated with the Faculty of Health Sciences (mainly Soroka and Barzilai Medical Centers) also work in the community. It should be emphasized that Clalit Health Services, the largest HMO, owns both Soroka Medical Center and the community outpatient clinics.
- All of the HMOs have specialists who are part-time employees of the medical centers and part-time employees of the community medical facilities. Some of the specialists may work full time in the community. A mapping of these resources in all HMOs that operate in the Negev region will be required.
- Distinguished retired specialists, who previously worked as heads of departments and as senior physicians are currently employed in the community.
- Special teaching outpatient clinics can be established through a mutual and coordinated effort involving the Faculty of Health Science, the four HMOs, Negev municipal councils, and the Ministry of Health. Some of these clinics should be located in currently underserved areas.

Potential barriers to change

- Medical schools are often conservative and reluctant to initiate major curricular changes, particularly changes that emphasize primary/community care, because such modifications are difficult and expensive and often fail to result in enduring and desired outcomes.
- Furthermore, medical school administrators may fear that successful curricular changes will come at the cost of lowering students' level of preparation, faculty's research productivity, and the institution's reputation.[3]
- Transferring teaching to the community will require a one-time effort in designing and establishing such a clerkship and large financial investments in infrastructure (if special teaching clinics are established), as well as financial commitment to HMOs for compensating specialists, overhead, coordination, and so on. These resources are not currently available.

[3] Bland CJ, Starnaman S, Harris D, Henry R, Hembroff L: "No fear" curricular change: monitoring curricular change in the W.K. Kellogg Foundation's national initiative on community partnerships and health professions education. Acad. Med 2000; 75:623-633.

Budgetary implications

- Prof. Avi Israeli and Prof. Jacob Glazer have recently assessed the issue of monetary arrangements between universities and hospitals in Hebrew). Their proposal is supported by Prof. Manuel Trachtenberg, Chairman of the Budget and Planning Committee for the Council of Higher Education in Israel.
- Israeli and Glazer's proposal fails to address the issue of medical teaching in the community. The authors did not discuss the current monetary arrangements and did not propose a future monetary arrangement for medical education in the community. Their report mentions, however, the lack in incentives to move medical education to the community due to the absence of appropriate financial arrangements.
- Previous studies suggest that the need to supervise students on a daily basis may have significant impact on the length of consultation times, increasing waiting lists and resulting in financial loss both to practicing physicians (mainly self-employed physicians) and to HMOs.
- Transfer of medical education to community settings will only be possible if additional resources are allocated to HMOs and tutoring physicians to compensate them for the loss of income, the necessity to increase the length of each consultation, and the need to pay a clerkship coordinator.
- The Faculty of Health Sciences will not be able to financially compensate each preceptor individually. Rather, the compensation will be negotiated with each HMO and will be based on the number of students placed with each HMO and the length of clerkship.
- In addition to financial compensation, physicians with appropriate credentials will be considered for academic appointments in the Faculty of Health Sciences.

Questions for further discussion

Beyond the abovementioned issues, successful implementation of community-based medical education will be possible only after the following questions are discussed and answered:

- What are the incentives for HMOs that manage community medical care to be engaged in community medical education? Our current impression is that HMOs have an interest to engage in teaching, which may be a win-win situation. However, administrative and financial issues may be challenging.
- What are the incentives for community-based specialists to be engaged in community medical education? And what incentives should be provided (i.e., financial, academic affiliations, continuing education)?
- What are the incentives for family physicians to support and be engaged in specialist community medical education?
- How can we enable coalition building among all parties involved (faculty, HMOs, municipalities, government) to bring about the change?

D. Simulation Center for medical education

The Faculty of Health Sciences and Ben-Gurion University of the Negev have succeeded in allocating budgets required for building a new facility for a significantly enlarged simulation center. We are in a process of decision-making concerning its location. In parallel, an academic director has been appointed and a steering committee elected to concentrate on curricular integration of simulation in medical education.