

Faculty of Health Sciences
Making a Difference in the Community



Service

Outpatient Care

Research

*To Teach is to Serve
to Serve is to Teach*

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On the cover: Faculty Student with children
from "Aviv" outreach project.

Dean's Message

How can one sum up 37 years of community involvement – of dedicated health service to the Negev population, research and education? The Faculty of Health Sciences was founded in 1974 under extremely adverse socio-economic and psychological conditions in response to an urgent need to address the special health care problems of the Negev. Its mission was to train humane, holistic, ethical and skilled physicians and personnel oriented toward primary care and community service.

Looking back, I am proud to say that we have surpassed even our wildest dreams and have truly become a part of the community we serve. The quality and dedication of our faculty and students to the Negev play an integral role in reaching our goals to educate the finest and most compassionate health professionals. We have excellent, socially dedicated students, many of whom participate in a variety of volunteer community activities, mentioned in this brochure. Many of our graduates are prominent and well known in the national medical system for their service, research, management and communal medicine.

We have pursued advanced medical research while adhering to the very highest standards with special emphasis on the health problems of the Negev. International recognition has been garnered for the advanced level of research being carried out in the community, especially in the fields of nutrition, infectious diseases and immunization. In order to develop educational programs and to launch health promotion projects in the community, the Faculty established a special unit for Health Promotion and Disease Prevention. Some of these programs are also described in this brochure.

We can look back with satisfaction on the Faculty's impact on the health of the Negev community, but much work still lies ahead to fully accomplished our goals.

I invite you to read a selection of highlights as we continue to fulfill the dream...

S. Sofer.
Prof. Shaul Sofer



Making a Difference in the Community

Looking Back

Looking Back

In 1978, when Yerucham, 40 kilometers south of Beer-Sheva, was left without a single physician, a group of residents from the Faculty's and the Soroka University Medical Center's Division of Internal Medicine, volunteered to serve as primary care physicians in the town and to provide the health needs of the community.

This pioneer project continued for several years until the first class of the Joyce and Irving Goldman Medical School graduates committed themselves to the community by serving as physicians in Yerucham for one to two years. The involvement of these young physicians with the local clinic brought unprecedentedly high standards of medical care.

Dr. Rafi Boehm, one of those residents, continued the bond with the town by running the local clinic and supervising generations of young graduates from the medical school, thereby creating a lasting connection between the Yerucham clinic, the Soroka University Medical Center and the Goldman Medical School.

In the 1990s, with the massive immigration from the former Soviet Union began, newly arrived immigrant physicians, who came from a completely different cultural background than the residents and had no experience with Israel's medical system, were sent to Yerucham. Boehm continued to volunteer in the town, instructing the new immigrant doctors, and with the support of the Rashi Foundation, set up a special community-oriented



program to retrain Russian immigrant physicians. Many of these doctors remained in the Negev as primary care internists, teachers and directors of clinics.

Still personally involved in many areas of Yerucham's welfare and education, Boehm has helped to develop play centers for underprivileged children, first-aid courses for adolescents, recreation centers for handicapped children and services for the elderly. He is also actively involved in the war on alcohol and drugs (both severe problems in Yerucham).

Nearly four decades later, FOHS students and faculty continue to be involved in the Yerucham community through the many outreach projects which provide them with knowledge and experience beyond the hospital setting.

“ The early years of the medical school presented a constant challenge to those of us who were committed to the idea of medical students doing much of their training in the community. Prof. Moshe Prywes, the founding father of the Faculty, had persuaded prominent medical educators that Ben-Gurion University of the Negev was taking the lead in a new and exciting endeavor. Many deans and leaders of various medical fields accompanied me to my Ofakim clinic and to other development towns where our graduates were serving an additional year of community service before starting their residencies. Their enthusiasm for our students and the programs being developed by the new Faculty were inspiring and reinforced the feeling that “the Beer-Sheva Experiment” in medical education was truly significant. ”

Prof. Emeritus Boaz Porter, senior pediatrician



“ The Medical School was approved in 1974 in order to train community-oriented physicians. Yet, despite our specially designed training program in local clinics, in 1980 – a year before the charter class was to graduate – there was little direct effect on improving care to patients coming to those clinics. Prof. Prywes called a meeting at his home and offered the graduates the opportunity to do at least one year of service in Negev clinics before continuing to residency training. Almost all of them accepted this challenge, and the first graduates began to work in clinics throughout the Negev. Gradually, the quality of care in the clinics improved, and this tradition has carried on until today. ”

Prof. Emeritus Carmi Margolis, senior pediatrician

Making a Difference in the Community

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Community Health

Through service, education and research, the Division of Community Health emphasizes the integration of health care services within the community and is charged with managing programs that provide primary care medicine and health promotion expertise in the following areas.

Family Medicine

The majority of primary care services in the Negev are provided by family physicians or general practitioners affiliated with the Faculty's Department of Family Medicine. The existence of a single department and a single university facilitates coordination and allows a high level of proficiency. Board certified family physicians, trained by the Department, provide integrated care and preventive services to adults and children throughout the Negev. Seven of these community clinics have been recognized by the Scientific Council of the Israel Medical Association as teaching clinics for residents in family medicine. The Department of Family Medicine provides a four-year academic course for residents in family medicine. Additional clinics, serving 60,000 people, are involved in teaching medical and nursing students.

Occupational Medicine Unit

The Occupational Medicine Unit focuses on teaching, health promotion in the work place and research. Some of the Unit's staff are members of a number of University committees involved with health issues related to staff and students.

The Unit conducts lectures on safety and prevention of work related illnesses to safety supervisors and employees in workplaces, especially in industry, throughout the south. A vital role of the Unit is its research on health related issues of workers in the various chemical plants and industry in the Negev. This includes studies on diagnosing occupational hazards.

Smoking Cessation and Prevention Center

According to Israel's National Center for Disease Control, an average of 24% of Israelis over the age of 18 smoke. The rate is even higher in the southern region – close to 30%. The Smoking Cessation and Prevention Center was established in 2003 with the aim of helping Negev residents quit smoking. The Center combines the resources of all the health providers in the Negev, as well as the Ministry of Health and the Israel Cancer Association. The Center trains smoking cessation consultants, mainly for group treatment, and now has nearly 100 consultants. The Center organizes dozens of smoking cessation groups, which are covered by medical insurance. In follow-up studies, more than 50% of the participants had abstained from smoking six months after the course. Other prevention activities include lectures at schools and workplaces, presentations to family physicians, nurses and social workers and a short intervention workshop for smoking cessation for medical students.

Edy's House - Ma'agan Support Center for Cancer Patients and their Families

Ma'agan was established in 2000 with the aim of providing social and emotional support to people with cancer, together with their families and friends, as a supplement to conventional medicine. Ma'agan offers free-of-charge networking groups, lectures, workshops and social events in a warm, nonresidential, home-like setting. No such program previously existed in Israel, where the increasing incidence of cancer, especially among young people and new immigrants, generated an urgent need for auxiliary care. The Center, with 400 registered patients and their families, welcomes all in need.

"...We are committed to the development of innovative community health service models and disease prevention on a national level and strive to improve the health of the Negev population."

Sial Research Center for Family Medicine and Primary Care

The goal of the Center (an acronym for the Arabic *Acacia Raddiana*) is to nurture quality, scientific research in family and primary care medicine on the local, national and international levels. It aims to contribute to the improvement of health in the community by providing relevant data on the health problems and needs of the population.

The Sial Center continues to broaden and develop the services both to specialists and residents in family medicine and to other professionals relating to research in primary care and community health. The Center encourages multidisciplinary proposals with cooperation of physicians and nurses from the community and Soroka hospital.

"Until recently, the Division was the only body specifically devoted to teaching family medicine. It is committed to the development of innovative community health service models and disease prevention on a national level and strives to improve the health of the Negev population by focusing on high priority public health issues" say Prof. Pesach Shvartzman, incumbent of the Mayman Chair in Family Medicine, and Prof. Aya Biderman, former and present chairmen of the Division of Community Health respectively.



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Diabetes and other chronic diseases in children may be prevented by the consumption of healthy foods and physical activity.

How Do You Help People Improve their Health?

The main causes of death in the developed world today are cardiovascular diseases and cancer – both diseases that are often related to negative health behaviors such as dietary habits, smoking, lack of physical activity and stress. To overcome these obstacles, health promotion strategies must first be aimed at minimizing the community gaps in health status especially in high and low socioeconomic strata, related to income, housing, food, security and employment. These gaps are particularly evident in the Negev, which has Israel's highest infant mortality, smoking and road accident rates.

In 2003, the Faculty established a special Unit for Health Promotion and Disease Prevention with the aim of developing educational programs and launching community health promotion projects in the Negev. Since then, the Unit, headed by Dr. Dov Tamir, has initiated many effective programs.

Health Promotion at Work and School

Supported by the Ministry of Health and regional health services, the Faculty runs a many-pronged healthy living campaign in the workplace and at schools in the Negev. Originating in the Negev's large industrial plants, it has since widened its scope. The program includes lectures to the workers by top medical experts on the main causes of obesity and mortality and the importance of adopting healthy lifestyles. In addition, each worker is interviewed by a physician and dietician regarding personal health risks and the need for changes in his or her lifestyle. Over the years, many important changes in health policy and the work environment have been implemented by the plants' management, including a ban on smoking and healthier nutrition in the local cafeteria. A similar health promotion program has been carried out for University personnel and will serve as a pilot for all academic institutions in Israel.

In the Negev's public schools, the Unit runs educational health programs in collaboration with the local authorities, the Ministry of Education and the regional health services. One of them is the annual "Health Education Week".

Prevention of Diabetes among Children

The Bedouin community in the Negev is a developing population in a developed country. Over the past 30 years, they have rapidly changed their lifestyle from a nomadic existence to a Western urban environment. They experienced better living conditions followed by decreased rates of infectious diseases and infant mortality. But, in the same period, they also experienced a rapid increase in the rate of obesity and Type 2 diabetes, due to consumption of high caloric food, saturated fats, sugars and salt, low fibers, and diminished physical activity.

In order to prevent diabetes in childhood, local peer instructors, in cooperation with kindergarten teachers, met with groups of mothers in 60 Bedouin kindergartens and advocated the consumption of healthy foods and physical activity. This kind of intervention has shown that short term behavioral changes, and possible primary prevention of risk factors for diabetes and other chronic diseases, is possible in a developing community where these diseases are just emerging.



Peer Education for Bedouin Women

The Unit recruited a group of Bedouin women who are high school and university graduates, with leadership potential and some teaching experience to participate in a preparatory course to serve as instructors for healthy lifestyles. Today, they advise Bedouin mothers by introducing a healthier diet, aerobic activity, prevention of smoking and stress management. They meet with groups in kindergartens, mother and child clinics, community centers and private homes, and discuss the need for lifestyle changes to prevent the emergence of chronic diseases, with notable success.

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Mobile Health Care Unit for the Bedouin Community

Close to one-third of the Negev's population are Bedouin whose traditional lifestyle is nomadic or semi-nomadic. While approximately half of them have been resettled in government-built towns, the remainder – some 80,000 – have opted to abide by tradition. They live in small villages or encampments, in tents and metal-roofed shacks with concrete walls and bare floors, scattered across the Negev countryside. Often without electricity or running water, these homes in “unrecognized villages” are frequently inaccessible by car and far from permanent primary care clinics. The health care of these citizens presents a unique challenge to the standard system. This challenge has been partially met through the use of a mobile health care unit, providing treatment – preventative and follow-up care – to the Bedouins in their dwellings.

In a four-wheel vehicle with “Mobile Health Care Unit” emblazoned on the side Said El-Sana, a veteran Bedouin community worker, travels around the Negev on a daily basis with a rotating team of nurses and physicians (both Jewish and Bedouin), in rain or shine, over desert sand dunes and makeshift roads.

What began as an initiative of the Faculty, the mobile health unit project was eventually partnered with Clalit Health Services, the largest health care provider in Israel. The Unit makes 120-150 visits per month, paying special attention to following up with patients who have been discharged from the hospital.

A typical day of the Unit can include performing “home dialysis,” giving injections, caring for the chronically ill, providing diabetic care, supplying medication, checking equipment, teaching



nutrition and disease prevention and more. The staff is well versed in cultural sensitivities and practices, and also in spotting developing health situations that require further treatment.

El-Sana has accompanied the Unit since its beginning. He acts as translator, coordinator and all-around fixer for the Unit. “When we started, this was mainly an educational project. Also, there were almost no clinics in the Bedouin community, but today there are several, yet we never fail to reach those who have no access to transportation or are bedridden” he says.

The project – unique to Israel and possibly the world – aims to alleviate symptoms and improve the quality of life for chronically or terminally ill patients.

Compassion Reaches Home: The Negev Palliative Care Unit

The last weeks of life of terminally ill patients are, not uncommonly, accompanied by much suffering in every sense: physical, psychological and spiritual. The concept of palliative care (from the Latin word for “to cloak”) aims to alleviate symptoms and to improve the quality of life for chronically or terminally ill patients, and above all to assuage their fear and anxiety.

For those whom modern medicine can no longer offer relief, the Negev Palliative Care Unit, founded and directed by Dr. Yoram Singer, has been operating throughout the Negev for nearly two decades under the umbrella of the Faculty's Division of Community Health. The Unit's mission carried out in partnership with the Israel Cancer Association and Clalit Health Services, is designed to help patients suffering from advanced progressive chronic diseases to end their lives at home if they so wish. The project includes homecare hospices in Beer-Sheva, Kiryat Gat, agricultural settlements and Bedouin towns.

The Mobile Palliative Care Service reaches terminally ill Jewish and Bedouin patients in the Negev's remotest regions, not accessible by the normal regional road network. These home visits are conducted by the mobile unit's rotating team of nurses, social workers, physicians and a Bedouin guide-translator.

In a four-wheel drive vehicle packed with medical equipment, Singer, who has been described by the patients as “an angel of mercy,” goes into the field at least twice a week accompanied by Said El-Sana (see accompanying article) who serves as partner, guide, cultural bridge and translator from Arabic to Hebrew.



Each patient and his family cared for by the Palliative Care Unit has a regular team of a doctor, nurse and clinical social worker. One member of the team is in contact with the patient and his caregiver almost every day, and the unit is on call 24/7. The average response time for a request is around 20 minutes.

“There's no difference when it comes to dying,” says Singer. “Most people still hope for a cure up until the end”. Singer received the 2009 Ben-Gurion Negev Award in recognition of his devotion and compassion to mankind.

The project – unique to Israel and possibly the world – exemplifies the great importance that BGU and its Faculty have always placed on community service since its inception.

Making a Difference in the Community

Service

Building a Medical Model in the Negev

Wadi Na'am is a small Negev Bedouin village of 5,000 people, located in one of the most polluted areas of the country. Situated at the entrance to the Ramat Hovav industrial zone and toxic waste disposal site 10 km south of Beer-Sheva, it is one of some 26 unrecognized Bedouin villages that has neither running water nor electricity.

For many years, the village did not have a medical clinic and people in need of health care were sent to the nearest facility in the Bedouin town of Segev Shalom – a 20 km drive away, with no direct bus route. Local leaders and international volunteers joined an organization known as Bustan, to construct a solar-powered medical clinic in Wadi Na'am.

More than 80 Faculty physicians and students from the Medical School for International Health and the Joyce and Irving Goldman Medical School began providing medical services on a volunteer basis including some basic medical equipment and medicine, which were provided free of charge.

The aim of the project was to provide humanitarian medical relief to one of the most deprived populations in Israel. "Our vision was to use medicine as a leverage for creating a positive connection between the diverse populations of the Negev – Jewish and Bedouin alike. We hoped to create a model in which medicine would be used as the first step for social action and social change," says Dr. Assi Cicurel, initiator of the project and an instructor in the Faculty's Department of Community Health.



We hoped to create a model in which medicine would be used as the first step for social action and social change.

Eventually, the Clalit Health Services recognized the necessity of taking responsibility for medical care in Wadi Na'am and formally opened a clinic in the village. There is no doubt that this would not have occurred without the motivation, drive and impetus of the Faculty's volunteers. It is the beginning of a bridge between the communities living in the Negev region, and the hope that this medical model will serve as a foundation for future projects.

Promoting Healthy Communities:

Beer-Sheva Joins the Healthy Cities Network

What is a “healthy city”? According to the World Health Organization (WHO), a healthy city is one whose government puts health high on its agenda. The goal of the WHO Healthy Cities Network is to help cities develop and promote a comprehensive and systematic policy with special emphasis on the needs of vulnerable groups. In 2008, through the initiative of the Faculty’s Health Forum, headed by Dean Prof. Shaul Sofer and managed by Prof. Dov Chernichovsky with the assistance of Dr. Nadav Davidovich of the Department of Health Systems Management, city of Beer-Sheva become a member of the network. Joining this network has been a shot in the arm for both the city and the Faculty to advance and promote the wellbeing of the Negev population through planned strategies.

Beer-Sheva has a diverse and heterogeneous population and the challenges facing the health care system are enormous. To upgrade the level of health care in the city, the Health Forum and the Municipality have launched collaborative activities and ongoing services for the current and future generations. These include:

- Training kindergarten teachers in nutrition, physical activity and healthy environment to teach young children who, in turn, can potentially influence their parents’ lifestyle
- Smoking cessation activities ranging from health education to law enforcement
- Improving access to physical activities for all age groups by providing walking and bicycle paths and public training facilities in open spaces
- Alcohol and drug prevention programs aimed particularly at teenagers
- An annual “Health Week” with activities to promote the WHO values of urban health
- Establishing community gardens and recycling projects with environmental groups
- Founding a steering committee to discuss potential influences of the Beer-Sheva Metropolitan Plan on public health from the perspective of Health Impact Assessment methodologies



A “Healthy City” can creatively improve its physical and social environment and expand local resources. This concept perfectly matches the vision of the Faculty, which now works hand in hand with the Beer-Sheva Municipality to promote a healthy community.

Making a Difference in the Community

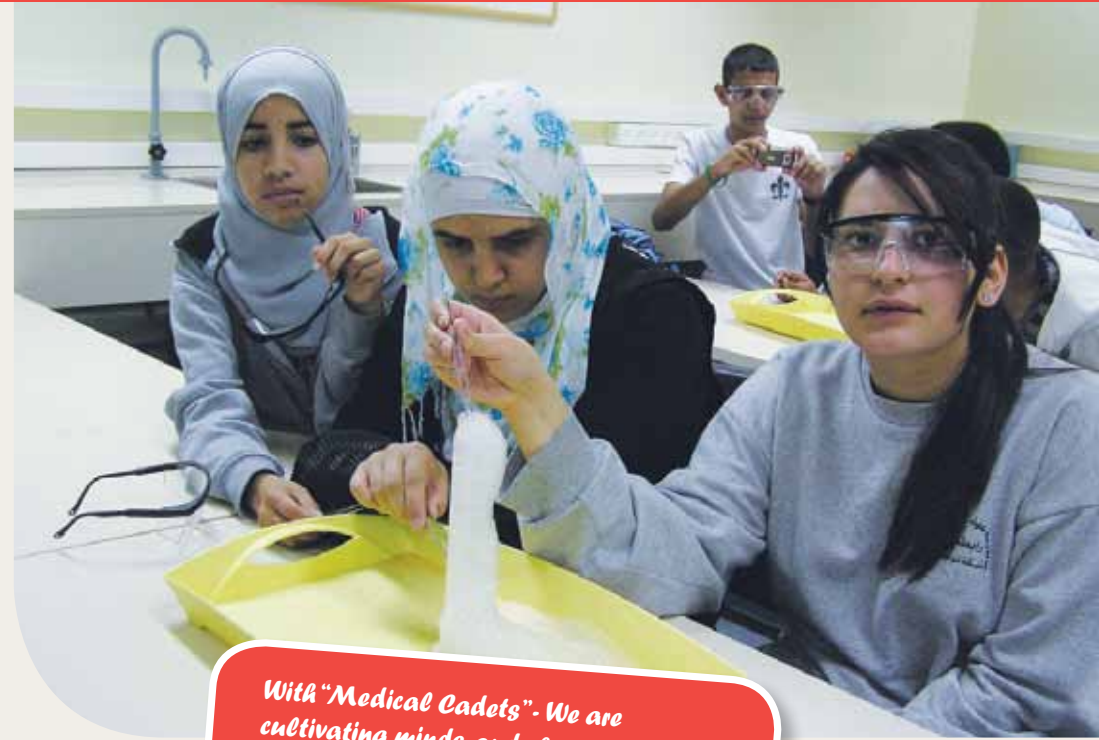
Service

Head Start for Gifted Youth

"If we wanted to, we could open a clinic staffed totally by Bedouin medical experts", declares Prof. Riad Agbaria, head of the School of Pharmacy. "This is no small accomplishment and is the result of a very successful Medical Cadets project for promising Bedouin high school students. Today, there are Bedouin doctors, medical students, nurses and paramedics, who never would have made it academically without the support of this outreach program", he says.

With a lack of qualified teachers and resources, most Bedouin high school graduates cannot meet the Faculty's high criteria for acceptance. Understanding the pressing need to educate more Negev Bedouin (especially women) in the health services, and to be attuned to the traditions of the community, Agbaria, together with the late Prof. Shraga Segal, former Dean of the Faculty, launched in 1995 a three-year enrichment program in the health sciences - the "Medical Cadets" program, when there were few Bedouin health professionals and almost no Bedouin students at BGU in any field.

Sixty 11th graders are chosen each year for the program, which was expanded, thanks to a grant from the UJA-Federation of New York. High school graduates who successfully finish the program can continue studies in the special pre-academic program "First Year in the Health Sciences" for Bedouin students interested in pursuing their studies in the health professions. They take half the usual course load of basic health courses in regular – not special – classes, enabling them to adjust to the University milieu and academic demands. Students who complete their studies with an average above 90 are interviewed for the Joyce and Irving Goldman Medical School.



With "Medical Cadets" - We are cultivating minds, and changing the reality in the Negev.

The "Medical Cadets" and "First Year in the Health Sciences" programs are a source of enormous pride to the University, the Faculty and the Bedouin community. During the last decade, 75 have graduated in the related fields of medicine, pharmacy, physiotherapy, nursing, paramedics, laboratory sciences and health management. Four men and two women have become physicians. At the beginning of 2011, there were 70 Bedouins studying in various tracks in the Faculty, including 22 in medicine, of whom 17 were women.

"We are cultivating minds, and changing the reality in the Negev," believes Agbaria.

Emergency Medicine Saving Human Lives

From the man-made disaster of 9/11 to the most recent natural disaster in Japan, the pressing need for knowledge on issues related to emergencies has become increasingly crucial. In 1995, in response to both the threat of terrorism and the rising demand for paramedics in Israel, the Department of Emergency Medicine was established as part of the Leon and Mathilde Recanati School for Community Health Professions, granting the only university academic degree for paramedics in the Middle East.

The curriculum includes theoretical medical knowledge and hands-on training in undergraduate and graduate programs. The Department maintains the highest international standards, as well as an optimal environment for research, study and practice, and actively reaching out to the community. All these have become vital factors in saving human lives in Israel. Two such lifesaving activities that are exceptional emergency outreach programs are described below.

Jordanian and Israeli Paramedics Train Together

BGU, in cooperation with the Jordanian Red Crescent and Magen David Adom Emergency Services, initiated a program in 2009 for regional cooperation, preparing for a mutual threat of earthquakes rooted in the shaky Syrian-African Rift that separates the two countries. A joint training exercise and workshop simulating regional preparedness for an earthquake and managing a mass casualty event was held in the Eilat region in March 2011, during which the Jordanians and Israelis set up a camp for “internally displaced persons”. Taking part in the exercise were trained professionals and faculty students, including 14 Jordanian students participating in a special Faculty paramedics course.



The PREPARED Center for Emergency Response Research

Established in 2009, the Center carries out practical research with continuous assessment to pave the way for integrated, more effective preparedness systems. The Center has initiated an innovative project which strives to use the University's human resources to empower local services in times of crisis. Students and employees are trained to serve as a permanent team of skilled volunteers who will be assigned to assist the affected populations according to the needs of the municipality and Israel Defense Forces Home Front Command.

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A Pioneering Bedouin Academic Nursing Program

With the aim of filling the serious void of nursing professionals in the Bedouin communities, especially in view of the constant demographic growth of the Bedouin population and rising health needs, the Nursing Department of the Leon and Mathilde Recanati School for Community Health Professions runs a program designed specifically for Bedouin students residing in the Negev. Now midway through the pioneering four-year academic nursing program, 23 young students are on their way to becoming fully fledged professional nurses.

Candidates for the program were recruited by the Israeli Ministry of Health, which funds the program. Due to the generally low educational standards in the Bedouin community, the candidates were required to pass a special four-month preparatory course prior to acceptance.

“The program is extremely challenging and demanding,” says Dr. Pnina Romem, Head of the Nursing Department. “These students must overcome a multitude of problems, including social pressure on the women to get married and have children. For many, it has been like stepping onto a new planet, but expectations are high that the students will successfully complete the national exams,” she adds.

“This initiative is an historical first,” comments Dean Prof. Shaul Sofer, incumbent of the Lubner Family Chair in Child Health and Development, “and represents a further expression of the Faculty’s mission to develop effective, preventive and curative health services to the entire Negev population, including the under-served Bedouin communities.”

"We offer the most gifted students the opportunity to fully realize their potential through academic studies."

The Shraga Segal "Chais-ORT Israel" B.Sc. *Academic Program*

Some talented and ambitious Israeli youngsters interested in medicine are getting a head start in the profession thanks to a joint Faculty-ORT Israel program. ORT, the world scientific and vocational training educational network, which combines high school studies with academic studies at the university level, has for many years been offering the most gifted students the opportunity to fully realize their potential through academic studies towards a bachelor's degree, in parallel to their high school studies.

In 2005, the late Prof. Shraga Segal, former Dean of the Faculty and BGU's Deputy Rector, initiated a collaborative academic program with the Faculty's School of Medical Laboratory Sciences for outstanding pupils in ORT secondary schools in the Negev. Prof. Esther Priel, as the head of the school, was asked to design and establish the new syllabus.



Two schools in Ashkelon and one in Arad are participating in this program. Pupils beginning in 7th or 8th grades take part in special pre-academic classes in science, technology and mathematics in the university. From the 9th grade they start actual academic courses, which can be credited for future university studies. Their studies are divided into preparatory and academic programs and through accelerated studies, they are able to complete their B.Sc. after only two additional years.

This program, funded by the the Chais-ORT Israel Academy, will promote science and technology reserves in the Negev, contribute to the IDF and to the Israel's economy and society, and most importantly, to the achievements of the outstanding pupils of the Negev.

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Open Lecture Series on Health Issues - A Hit

Commitment to the health of the Negev community - the principle guiding force of the Faculty since its establishment in 1974, prompted the Faculty, in cooperation with the Soroka University Medical Center (SUMC), to inaugurate a series of lectures open to the general public on various health issues.

Since 2005, senior members of the Faculty and SUMC have delivered a monthly series of public lectures. Stress, attention deficiency in children, healthful aging, sleep apnea, the early detection of brain seizures, and swine flu are just a few of the subjects covered in this popular series.

The hour-long presentations, followed by discussion sessions, emphasize health promotion, disease prevention and the adoption of a healthy lifestyle.

As a consequence of the tremendous positive impact of this lecture series, which reinforces the Faculty's relationship and involvement with the community, the program, organized by Ronit Temes, director of the Faculty's Public Relations Unit and Inbar Gutter, Soroka's spokesperson, was expanded in 2009 to include the Negev Bedouin population. The new lectures series, which are given in the Bedouin settlements themselves, address the essential needs of their daily life through topics such as accident prevention, nutrition, smoking cessation and genetics.

"The personal reward that comes from giving back to the community is invaluable."

Medical Students Outreach Program

"The personal reward that comes from giving back to the community is invaluable," says medical student Dvir Gat, the cultural and community volunteer coordinator of the Medical Students Association of the Negev. "ASRN" (the acronym for the Hebrew name of the Association), representing more than 2,500 students in the health professions, organizes and runs a dozen year-round community projects in the Negev area.

"Ma'amatz" ("Effort") runs workshops for high school students on preventing sexual abuse. The goal of the project is to raise awareness of the problem of sexual violence – exploring its roots and encouraging communication skills to cope with the issue. The students undergo intensive training by professionals at BGU and the Center for Support of Victims of Sexual Abuse. More than 150 workshops are organized annually.

The **"Teddy Bear Hospital"** helps young children overcome their fear of doctors and nurses. At the annual event held in conjunction with the Soroka University Medical Center, children from kindergartens in the South bring their teddy bears to the "hospital," and together they pass through various medical stations, such as hygiene, pharmaceuticals, ambulance, physical therapy and casts, taking on the role of the bear's personal doctor. The students who man the stations also prepare in advance the children in their kindergartens.

The **"Good Neighbor Café"** project supports Beer-Sheva's cognitively and psychologically challenged citizens. Teams of medical school and physical therapy student volunteers coordinate monthly social gatherings designed to foster a friendly, cheerful atmosphere in 11 area institutions. These include a group facility for youngsters with Down's Syndrome, a hostel for schizophrenics, a geriatric home and a family crisis center.



Other volunteer projects include: **"Sela,"** giving private lessons in a wide array of subjects for local high school students. The lessons, with four pupils in each group, take place twice a month at the Faculty; **"Aviv,"** providing private lessons to Ethiopian immigrant children; **"Beit HaGalgalim"** - "The House of Wheels", organizing general activities for wheelchair-bound youngsters.

Making a Difference in the Community

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Medicine Beyond Borders

During the time Isa Abdula lived in Darfur, Sudan, all the men in his community over the age of 15 were murdered. Isa survived. In 2010, at age 23, Isa fled. Paying Bedouin smugglers to take him through the Sinai desert, he made his way to Israel. While attempting to scale the barrier fence between Israel and Egypt, an Egyptian soldier spotted Isa and shot him in the stomach.

An Israeli soldier witnessed the shooting and radioed for help. Isa was airlifted to the Soroka University Medical Center and was eventually released to a temporary care facility for the homeless, without any friends, family or health insurance. It was there that volunteers from the Faculty's Medical School for International Health (MSIH), stepped in. The MSIH students helped Isa with physical therapy, showering, administering medications and dressing. They showed Isa that there were people in his life that cared about him and his recovery.

Isa's story is an example of one of a wide range of community-based and volunteer focused activities in which MSIH students are engaged, either in small groups or individually during their four years in Israel.

MSIH community activities include a variety of causes, from health issues to education. Students initiated the Good Neighbor Project, which carries out health promotion and education with at-risk youth. Many students work with the "Save a Child's Heart" organization, where they play with children from around the world who have come to Holon's Wolfson Hospital for heart surgery. In addition, they take part in a project to visit hospitalized Holocaust survivors who do not receive



other visitors. Students also travel weekly to unrecognized Bedouin villages in the Negev to tutor children in English and coach soccer.

MSIH, the ground breaking collaboration between BGU and the Columbia University Medical Center, USA, is the only medical school in the world established specifically to train future doctors to provide healthcare for underserved populations around the globe. During their last year of clinical rotations, the students serve in two-month internships in Africa, Asia and other regions.

As a physician and Pulitzer Prize winning journalist, Dr. Sheri Fink told the 2010 graduates of MSIH: "You've had an education that has prepared you to pursue a career in medicine, that sees equal human worth beyond borders, front lines, skin shades, social stations and religions."

"The community will always be an integral part of our philosophy of saving lives. We provide medical care in any situation."

Surgery in Any Situation

Over the past 13 years, Prof. Soli Mizrahi, member of the Faculty and head of the Department of Surgery "A" at the Soroka University Medical Center, has strived to foster an organizational structure, environment and attitude aimed at providing excellence in patient care. The first primary objectives are to reach patients as close as possible to home and to shorten the bureaucratic procedures in order to administer the best possible care and facilitate a speedy return to their families.

At least twice a month, a member of the departmental team attends the surgical community clinics in kibbutzim, towns and villages throughout the southern district for consultations with family practitioners. In addition, the team carries out screening for breast cancer, thyroid gland and bowel cancer, and provides early diagnoses of malignancies. The surgical team also delivers lectures related to various medical issues, and is available by telephone around the clock to provide professional advice.

Patients requiring urgent assistance are referred from the community clinic directly to the Department. This procedure reduces the bureaucracy that going through the Emergency Room would entail and decreases the patients' levels of anxiety. Not only does this system have a positive effect on the patients, but it also improves the Department's ability to administer efficient medical care in the shortest possible time.

"We provide medical care in any situation. Even when Qassam rockets were falling incessantly



on the city of Sderot and the surrounding area, we continued to receive patients. Only twice were we forced to close the clinic: when there was a direct hit on the generator that supplied electricity, and again on a particularly harrowing day when most of the population of Sderot was confined to the shelters. The ongoing contact and collaboration between the Department of Surgery 'A' and the community will always be an integral part of our philosophy of saving lives," says Prof. Mizrahi.

Making a Difference in the Community

Outpatient Care



OB-GYN – in the Bedouin Population

Of the 14,000 annual births at the Soroka University Medical Center (SUMC), the highest in Israel, 70% are Bedouin whose families are still living in substandard conditions.

In order to provide proper midwifery and gynecological services to this dispersed population, the Faculty's and SUMC's Division of Obstetrics and Gynecology has set up a special unit with trained nurses, midwives, and obstetricians to provide care in Bedouin settlements and towns. Together with the Regional Council, the Division also operates a women's health care center in the largest Bedouin town of Rahat in addition to several well-baby clinics.

"The doctors and nurses in these clinics are mainly women, and most are themselves Bedouin," says Dr. Arnon Wiznitzer, head of the Division, adding that there are now three Bedouin women doctors completing their residency training, who will be joining the outreach project in the future.

In view of the custom of intermarriage in the Bedouin population, there is a high rate of congenital abnormalities. To combat this devastating problem, the Division operates an ultrasound unit for prenatal screenings. "More and more Bedouin women are taking advantage of these genetic screenings to check for abnormalities, which are of prime importance in this population," says Prof. Wiznitzer.

The Division has also initiated several successful educational projects, including lectures to the Bedouin settlements on women's health care and family planning. "In all the Division's departments, there are Bedouin nurses who are an essential component in providing education since they speak the language and understand the culture," says Wiznitzer. "It is a long process and will take one or two generations to significantly upgrade family planning, but we are moving in the right direction."

The examinations are carried out on a large number of residents, allowing low-income patients to receive routine medical services close to their homes without the burden of a long distance visit to the district outpatient ophthalmology clinic.



Looking at the “Eye” of the Community

The Department of Ophthalmology at the Soroka University Medical Center, directed by the Faculty's Prof. Tova Lifshitz, incumbent of the Dr. James and Ahuva Desnick Chair in Ophthalmology, has for many years offered an extensive range of medical services to the community. As part of their clinical training, residents provide vision care services to underserved populations and work in satellite clinics that offer a variety of clinical procedures.

In one of the Department's major projects, young residents visit community clinics in the Negev's peripheral settlements to screen patients for diabetic retinopathy, which may cause damage to the retina in those suffering from diabetes. The examinations are carried out on a large number of residents, allowing low-income patients to receive routine medical services close to their homes without the burden of a long-distance visit to the district outpatient ophthalmology clinic.

A related project is the use of special digital photography for diabetic patients which can be performed by a technician at remote community clinics. The photos are interpreted by a senior ophthalmologist and the results are sent to the patient's family doctor. Only when necessary and when diabetic retinopathy is diagnosed, is the patient referred to the outpatient ophthalmology clinic for treatment and close follow up.

Along the way, a specialized program has been developed to address eye and vision problems within the Negev's nomadic Bedouin population. A fully equipped mobile unit for ophthalmological examinations visits small settlements scattered throughout the south, resulting in a marked improvement in their medical situation.

Making a Difference in the Community

Outpatient Care

Meeting your Psychiatrist

Dedicated to the crucial task of improving mental health in the Negev, the Faculty's Division of Psychiatry, headed by Prof. Zeev Kaplan, offers many advanced mental health services to the community through early and intensive intervention. These are available to the multifaceted population in the periphery, including immigrants from the former Soviet Union and Ethiopia, Bedouin Arabs, members of the ultra-religious sector, the handicapped and drug addicts.

For residents in the area surrounding the Gaza Strip who live in daily fear of rocket and mortar attacks, chronic anxiety and trauma have become part of their life. To alleviate their mental stress, the Emergency Psychiatric Unit, in cooperation with all Negev public services, has developed a protocol which has proved to be effective in administrating on-site care.

Another unique initiative of the Division is a tele-video psychiatric service providing round the clock professional consultation for new immigrants in Negev absorption centers and the prison system. This open line has, on many occasions, served as "a lifeline" for those in deep distress. Plans are underway to establish a similar service for army bases in southern Israel.

The Division set up a multi-language counseling center to support and rehabilitate the families of psychiatric patients in Beer-Sheva and the surrounding communities in the outpatient clinic of the Beer-Sheva Mental Health Center. Similar clinics exist in Netivot, Sderot and Yerucham. Another unique project "Tzipor Hanefesh" (Bird of the Soul) supports and follows up with children and family members of psychiatric patients. The Division also runs outpatient units for adults, children and adolescents as an alternative to full time hospitalization.



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Geriatrics in the Negev

“In medicine, the connection between service and teaching is quite intimate,” says member of the Faculty Prof. A. Mark Clarfield, incumbent of the Sidonie Hecht Chair in Geriatrics and Head of the Geriatrics Department at the Soroka University Medical Center. “Part of the secret of the department’s success in this endeavor is our ability to bring various services and actors together, providing an integrated and seamless system of care for our elderly population.” These actors include the Soroka University Medical Center, staff from the Clalit and Maccabi Health services and nursing homes, as well as the Beer-Sheva Mental Health Center.

Israel’s aging population has grown more than 20% in the past two decades. This increase is partially explained by the wave of Russian immigration in the early 1990s, as well as improvements in health care regarding prevention and treatment of diseases. As the community ages, the quality of life depends more and more on the availability and level of health care.

Understanding the challenges faced by the elderly in the surrounding community, the Geriatric Department affiliated to the Faculty has developed a mechanism of specialized geriatric consultation, assessments and treatment in many of the family medicine clinics in the Negev.

Through this community health care model, consultant geriatricians collaborate with primary care physicians, psychiatrists, social workers and many chronic care community institutions. This unusually close interdisciplinary cooperation, Clarfield feels, has most likely resulted in a significant drop in the number of inappropriate hospitalizations and out-patient referrals.



The wide range of community-based geriatric services in the Negev offers a unique framework for teaching medical students and residents. The network built by Clarfield and his team offers a clear advantage in educating the next generation to provide a high level of geriatric care.

Making a Difference in the Community

Outpatient Care



Kids Come First

The number of children in the Negev has skyrocketed in recent years as a result of a large influx of new immigrants and a record high birth rate in the Bedouin communities. Local socio-economic factors contribute to the workload of the community pediatricians in the form of a rise in new diseases, many of which are related to immigrants from underdeveloped countries. These are challenging times for the Pediatric Primary Care Unit directed by Dr. Jacob Urkin, part of the Faculty's Division of Community Health.

Service is at the forefront of the community pediatricians' commitment. Five pediatric health centers and countless mother and child clinics operated by Faculty pediatricians are scattered throughout the development towns of the Negev. The largest of these is in the Bedouin town of Rahat, caring for over 12,000 children and young babies. These clinics offer a community-based model in a homey clinical setting, focusing on comprehensive primary care, immunizations, prevention, diagnoses and treatment of local pediatric health conditions. The medical staff's early intervention, dedication and untiring commitment have had an unprecedented success in reducing morbidity and improving the children's lives.

Medical students are exposed to community pediatrics from the very first year of their studies. During these "clinical days" the students are introduced to programs that emphasize normal and diverse aspects of the human life cycle. Community-based pediatricians also teach the students for eleven weeks during their fourth and fifth years. This exceptional spiral system of teaching produces highly skilled pediatricians, and, for many, the integration of theoretical, academic and practical aspects in child care play a significant role in nurturing a healthier community.

"Our efforts are very effective in disease prevention, alleviating future cases and pain to families"

It's All in the Genes...

The Institute of Genetics at the Soroka University Medical Center plays a pivotal role in solving genetic puzzles to the benefit of the community. Through generation and implementation of the most novel technologies, as well as collaborations with patients and scientists, the Institute has been able to decipher the causes of genetic diseases in the Negev populations, especially the Bedouin, who are known to have a high incidence of hereditary disorders resulting from consanguineous marriages.

As a means of preventing inbred genetic diseases, the Institute offers the Bedouin premarital carrier testing and pre-natal diagnosis. Trained Bedouin nurses go into the villages and draw blood from pregnant women as part of the diagnosis process. When a suspect gene is found, the woman is invited to the hospital for further testing and counseling.

Within a four year period, the number of genetic tests has quadrupled and infant mortality has markedly dropped. In addition, to increase the awareness and prevention of genetic problems, educational programs are given to high school students through audio-visual materials and recruiting community champions.

Beyond treatment and education, the Institute focuses on genetic research, including the identification and characterization of genes associated with human diseases. The Institute, originally established by BGU's president, Prof. Rivka Carmi, a pediatrician and geneticist, is presently led by the Faculty's Prof. Ohad Birk, who also heads the Morris Kahn Laboratory of Human Genetics. Birk and his multidisciplinary team of 45 Faculty professionals have so far identified the molecular basis of fifteen human diseases, including myopia, a variant of



seborrheic dermatitis and psoriasis, and other rare and common diseases, such as eight severe neurodegenerative diseases found in the Bedouin and the Jewish populations.

The findings, of both scientific and medical interest, led by massive government-funded free carrier testing and prenatal diagnosis. These discoveries will undoubtedly benefit not only Israel's population, but also other communities worldwide.

"Since genetic diseases are both severe and common, testing for these mutations is becoming routine. Our efforts are very effective in disease prevention, alleviating future cases and pain to families," says Birk.

Making a Difference in the Community

Research

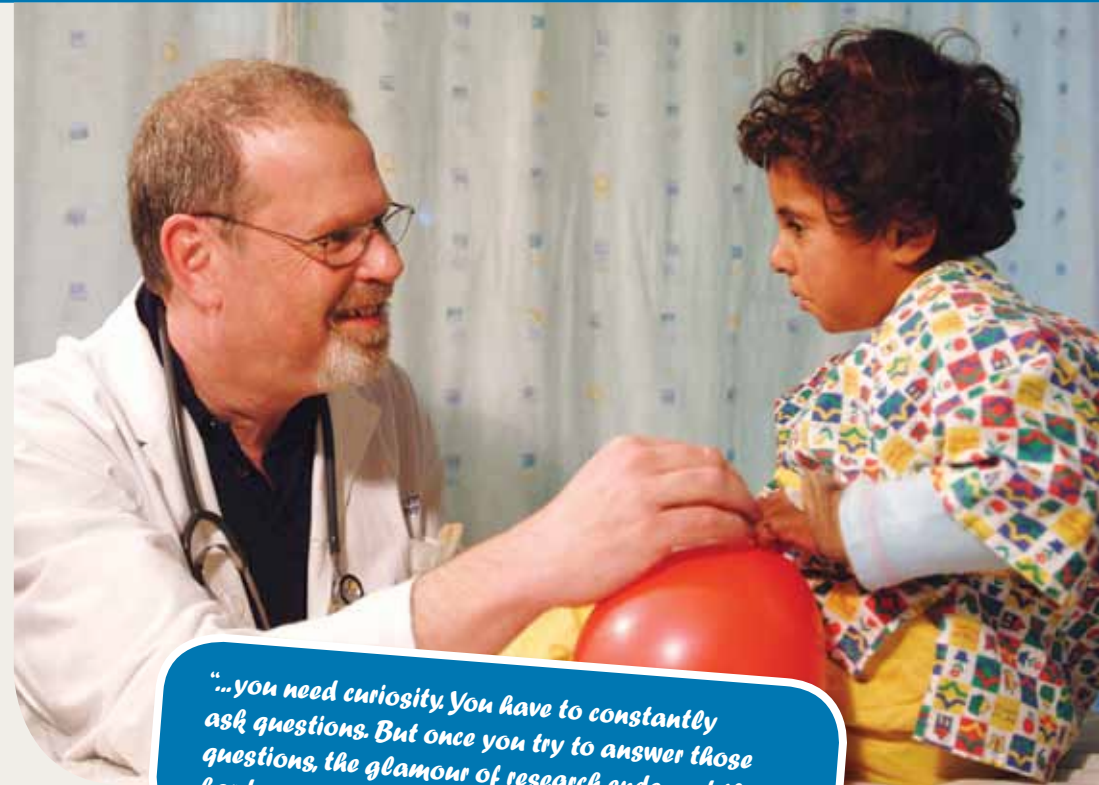
Breakthrough Vaccinations

It's not often that medical research directly affects official policy. But that is what happened when Prof. Ron Dagan's research on developing vaccinations against children's life threatening diseases led Israel's Ministry of Health to revise its entire policy regarding immunization of children.

Dagan, Director of the Pediatric Infectious Disease Unit (PIDU) at the Soroka University Medical Center, incumbent of the Werner J. and Charlotte A. Gunzburger Chair for the Study of Infectious Diseases and one of the world's leading authorities in his field, conducted epidemiologic and vaccine studies on Hepatitis A in the community. The findings led to the decision by the Ministry of Health to offer free vaccinations against the virus to all toddlers, the first country in the world to do so. It was a success: Hepatitis A in Israel has almost completely disappeared and the program became a model for other countries concerned about eliminating the disease.

Another significant research area carried out by the PIDU in the community with national and international impact was on the pathogen *Streptococcus pneumoniae*, the main cause of pneumonia, sepsis, otitis media and meningitis in all ages worldwide and Haemophilus Influenzae type B infections. By conducting extensive epidemiologic and clinical studies, the PIDU was able to convince health authorities to implement vaccines that considerably reduced the child morbidity rate of these previously rampant illnesses in Israel. Furthermore, the research at PIDU resulted in the invention of new vaccines that are now part of pharmaceutical industry. These innovative achievements have not only greatly contributed to improving pediatric health in the Negev and Israel, but have also had a global impact.

In a speech to graduates of the Joyce and Irving Goldman Medical School in 2008, Dagan explained what makes a truly successful medical researcher: "Geniuses can succeed in



"...you need curiosity. You have to constantly ask questions. But once you try to answer those questions, the glamour of research ends and the hard work begins."

research, but that isn't the main thing, and being a successful researcher is not at all about being a genius. First of all, you need curiosity. You have to constantly ask the most annoying questions. But once you systematically try to answer those questions, the glamour of research ends and the hard work begins. It is Sisyphean, and sometimes monotonous. And that's where dedication comes in. You have to raise money, supervise staff, appear before ethics committees and be updated on the latest equipment. And then, if you don't publish, you perish." Dagan, senior faculty member, has been honored with numerous awards and has been the recipient of extensive research grants over the years.



“Tripping” the Scale

In 2008, a research team led by nutritionist Prof. Iris Shai of the S. Daniel Abraham International Center for Health and Nutrition in the Department of Epidemiology and Health Services Evaluation took over the workplace cafeterias of the Nuclear Research Center, which then underwent a “health revolution” to provide healthy menus to the participants.

In the study, 322 moderately obese people were randomly assigned one of three diets: a low fat, calorie restricted diet; a Mediterranean calorie restricted diet with the highest level of dietary fiber and monounsaturated/saturated fat; or a low carbohydrate diet with the least amount of carbohydrates, and highest fat, mostly vegetarian, and protein. The low-carb dieters had no caloric intake restrictions.

The results of the long-term study showed exciting findings: low-carbohydrate and Mediterranean diets may be safer and more effective in achieving weight loss than the standard, low-fat diet recommended for so many years; these diets had more favorable effects on lipids and/or glycemic control, a key factor in controlling diabetes. According to Shai, this dietary study, “not only has an international impact, but also demonstrates a successful model for other Negev communities.” Similar groups of BGU personnel also participated in the study under supervision.

In subsequent studies, Shai and her team found that healthy, long-term weight loss diets can significantly reverse carotid atherosclerosis, the hardening of the main arteries to the brain. Atherosclerosis is a direct risk factor for strokes and heart attacks, and the study is one of the first to prove the potential of moderate weight loss as a strategy to reverse hardening of the arteries in overweight and mildly obese people. For the practicing clinician, the study demonstrated that carotid atherosclerosis is reversible by long-term adherence to dietary strategies to induce weight loss.

Making a Difference in the Community

Research

How to Combat Obesity in Children?

Childhood obesity remains a leading public health problem that disproportionately affects low-income and minority children in all industrialized countries, and Israel is no exception. The population of the Negev has a high proportion of new immigrants and low socioeconomic status (LSES) families compared with other areas in Israel. Thus, there is a relatively high incidence of childhood obesity amongst the local population.

The influence of demographic and socioeconomic factors on the rates of childhood obesity among LSES populations has seldom been studied, but a 2008 breakthrough study in 12 Beer-Sheva kindergartens led by Vered Kaufman Shriqui of the Faculty's S. Daniel Abraham International Center for Health and Nutrition of the Department of Epidemiology and Health Services Evaluation, developed and evaluated an integrative model for early intervention. The project was supported by ASHALIM (the Association for Planning and Development of Services for Children and Youth at Risk of the Joint Distribution Committee (JDC).

The lifestyle program involved nearly 400 children ages 4-7 and their families, who received instructions in nutrition, physical education and dental hygiene. Half the families agreed to participate in a project to measure the outcomes of the program. Based on the research findings, the JDC decided to expand the program to other cities in Israel. Today, kindergarten children are benefitting from the joint BGU-JDC program in 14 cities throughout the country. Vered Kaufman Shriqui and her colleagues are now compiling a companion booklet in healthy nutrition for families with low budgets. The booklet will be published by the JDC for free distribution in all the LSES kindergartens throughout Israel.



“Childhood obesity remains a leading public health problem that disproportionately affects low-income and minority children in all industrialized countries, and Israel is no exception.”

Reducing Infant Mortality

Among the Negev Bedouins

The Negev Bedouin have the highest birthrate and rate of infant mortality in Israel – triple that of the Jewish population. The leading cause of infant mortality is related to congenital anomalies and hereditary diseases as a result of a high rate of consanguineous marriages and limited use of available preventive technologies due to cultural and religious traditions.

In the mid-1990s, the Ministry of Health and the Faculty's Department of Epidemiology and Health Services Evaluation launched a community based project aimed at reducing the Bedouin infant mortality rate. The first step was to recruit and train local women to be peer-instructors at the Mother and Child clinics and to provide reliable, easily understood information for pregnant Bedouin women and mothers of young children. Community women activists organized 20 groups, educating women about health problems, hereditary disease, and home accidents.

“As with most issues, health solutions offered to the Bedouin community have profound socio-cultural and religious ramifications,” says Prof. Ilana Shoham-Vardi of the Department of Epidemiology and Health Services Evaluation and incumbent of the Isaac and Elizabeth Carlin Chair in Public Health and Epidemiology. “Thus, early on we needed to establish an ongoing dialogue with influential communal leaders.”

In cooperation with a local religious leaders, a forum was set up to find medical solutions that could be adopted by the community. In addition, an educational program was devised for Bedouin high school pupils who marry and become parents at a relatively young age.



While today there remain serious health and infrastructure problems, the continuing project has succeeded in significantly reducing both the number of deaths and congenital defects amongst the Bedouin population. During the period 2000 to 2008, the total infant mortality declined from 16/1000 to 10/1000 live births, and infant mortality from congenital anomalies from 6.6/1000 to 4.4/1000.

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