

**Fourth Planning Meeting  
of the Steering Committee of  
the Middle East Association For Managing Hearing Loss (MEHA)\***

October 23, 2002

**FINAL REPORT**

1. OPENING OF THE MEETING (Agenda item 1)

1.1 The Chairman of the meeting, His Royal Highness, Prince Firas bin Raad, Patron of the Association, opened the meeting at 11:00 and welcomed the Canadian, Israeli, Jordanian, and Palestinian Steering Committee and Operating Committee members, and the observers to the Fourth Planning Meeting of the Steering Committee, held at the Hilton Hotel, Nicosia, Cyprus.

1.2 The list of participants is given in Appendix A.

1.3 HRH Prince Firas expressed his appreciation of MEHA participants' continuing commitment to MEHA and the importance of MEHA as one means of seeing the human side during difficult times.

1.4 The chairman acknowledged the support provided by the Human Security Program at the Department of Foreign Affairs and International Trade, Canada for holding this Fourth Planning Meeting of the MEHA Steering Committee. He also recognized the roles of the Isabel Silverman Canada International Scientific Exchange Program (CISEPO) based at Mount Sinai Hospital and the University of Toronto; the Canadian International Development Agency (CIDA), as part of its development assistance program; Unitron Inc, Canada; Yad Hanadiv, Israel; the Royal Medical Services of Jordan; the Schneider Children's Medical Center of Israel; Al Quds University; as well as other Canadian, Israeli, Jordanian, and Palestinian governmental and institutional organizations in their support of MEHA.

2. ADOPTION OF AGENDA (Agenda item 2)

2.1 The meeting was invited to comment on the agenda.

2.2 The agenda was adopted as reproduced in Appendix B.

### 3. STEERING COMMITTEE MEMBERSHIP (Agenda item 3)

The Chairman informed the meeting that Professor Menahem Fainaru was completing his term as a member of the Steering Committee thanked him for his ongoing contributions as a strong supporter of MEHA. He introduced and welcomed Professor Fainaru's replacement, Professor Rivka Carmi, Dean, Faculty of Health Sciences, Ben Gurion University of the Negev. The Chairman also welcomed Ms. Josée Levasseur, Coordinator of Professional Education, Auditory-Verbal Therapist, Learning to Listen Foundation, Toronto, as the Canadian member of the Operating Committee.

### 4. STEERING COMMITTEE MEMBERS' PRESENTATIONS (Agenda item 4)

4.1 The Chairman invited the members of the Steering Committee: Professor Abdeen, Professor Carmi, Professor Fainaru (retiring), Dr. Hijazi, and Professor Noyek each to address the meeting.

4.2 Professor Ziad Abdeen indicated the strong support of Al Quds University and its President, Professor Sari Nusseibeh, for MEHA and for its programs and activities. Professor Abdeen also identified the formula for success in MEHA in that MEHA deals with real scientific and health problems of mutual concern. He indicated that once obstacles are removed, science flourishes across borders for the benefit of all concerned, "a prescription for peace in the Middle East".

4.3 Professor Menahem Fainaru brought greetings to the meeting from the CEO of Maccabi Healthcare of Israel, Director General Prof. Joshua Shemer. Professor Fainaru indicated that all members of MEHA could look back with satisfaction, and forward with hope, based on the accomplishments of MEHA to date. He extended his special appreciation to His Royal Highness, Prince Firas bin Raad, the Patron of MEHA, for his relentless devotion to the progress of MEHA, and for bringing the members of MEHA together working for a better tomorrow.

4.4 Professor Rivka Carmi expressed her conviction that collaboration among academics, as found in MEHA, can influence events and succeed in creating cooperation and understanding which promote peace. She brought greeting from her colleagues, the other Deans of Medicine at universities in Israel, which were endorsed by Professor Dov Lichtenberg, Dean, Sackler Faculty of Medicine, Tel Aviv University.

4.5 Dr. Manaf Hijazi indicated his support and that of the Royal Medical Services for the goals of MEHA. He reported that, on the basis of the results in Jordan of MEHA Project 1, The Early Detection of Hearing Loss in Infants, the Royal Medical Services of Jordan (RMS) decided to introduce universal screening of new born infants for hearing loss as a standard practice. The program is already functioning at the King Hussein Medical Centre and once the necessary equipment for the remaining RMS hospitals is delivered, universal screening will be in place at all RMS hospitals throughout Jordan.

4.6 Professor Arnold Noyek brought greetings to the meeting from Ambassador Franco Pillarella, Canadian Embassy, Damascus, and High Commissioner, Cyprus; Mr. Steve Hibbard, Head, Canadian Representative Office, Ramallah; Prof. Robert Birgeneau, President, University of Toronto; Prof. David Naylor, Dean, Faculty of Medicine, University of Toronto; Professor Harvey Skinner, Chair, Public Health Sciences, Faculty of Medicine, University of Toronto (in attendance and representing Dean Naylor); Professor Patrick Gullane, Chair, Department of Otolaryngology, Faculty of Medicine, University of Toronto; Mr. Joseph Mapa, President and CEO, Mount Sinai Hospital, Toronto; Dr. Catherine Chalin, Vice Chair CISEPO (in attendance);

Greetings and regrets were brought from Dr. Akram Shannak, University of Jordan, on behalf of Dr. Samih Abu Rageb, Dean, Faculty of Medicine; and from Brother Vincent Malham, Vice Chancellor, Bethlehem University.

Professor Noyek noted with pleasure the participation of Professors Hani Abdeen, Dean of Medicine, Al Quds University; Ziad Elnasser, Dean, Faculty of Applied Medical Sciences, Jordan University of Science and Technology, and Mohammad Shaheen, Dean, Public Health, Al-Quds University and of Dr. Suliman Zaa'Roura, Chair, Department of Otolaryngology, French Nazareth Hospital.

Professor Noyek also tabled letters of support from Ambassador Michael Bell, Canadian Embassy, Tel Aviv, and Ambassador Roderick Bell, Canadian Embassy, Amman, please see Appendices C and D.

Professor Noyek expressed his satisfaction with the progress of MEHA and his gratitude for the involvement of His Royal Highness, Prince Firas bin Raad in MEHA's and in CISEPO's programs.

## 5. OPERATING COMMITTEE AND MEHA REGIONAL CENTRE REPORTS (Agenda item 5)

5.1 The members of the Operating Committee, Dr. Mohammad Al Masri, Prof. Joseph Attias, Mrs. Rema Othman Jebara, and Ms. Josée Levasseur, reported on their activities. They placed particular emphasis on MEHA Project 1, The Early Detection of Hearing Loss in Infants, describing the results of the testing conducted in Jordan and in Israel, and planned for the Palestinian Authority. Highlights included:

5.1.1 The project has been rescheduled for completion by June 2004;

5.1.2 Approximately 5,500 infants in Israel and 3,500 in Jordan have been tested to the end of September;

5.1.3 Forty-six infants in Jordan were diagnosed with bilateral hearing loss ranging from mild to profound, 38 children were fitted with hearing aids and 30 of these 38 started the MEHA habilitation program. Those children who have been fitted with hearing aids are receiving intensive auditory verbal therapy program through MEHA.

5.1.4 The incidence of hearing loss in Jordan found to date is remarkably higher than that for developed countries. For example, it is about 5-7 times the incidence in the USA.

5.1.5 In Israel, six infants were diagnosed as having bilateral moderate to profound hearing loss. All these babies have been referred for auditory habilitation.

5.1.6 Plans for the prototype testing of 500 Palestinian infants at Makassad Hospital have been completed. The transfer of the instruments from the Israeli partners to start testing in Makassad Hospital is expected imminently.

5.2 Additional points presented in the Operating Committee reports included:

5.2.1 The Committee met in Cyprus in January 2002 and in Italy in May 2002 to review progress in MEHA Project 1, to modify the experimental procedures based on experiences to date, and to discuss arrangements for the prototype project for testing Palestinian children as part of Project 1.

5.2.2 The Committee held the “Advanced Technical Workshop for the Early Detection of Hearing Loss in Infants”, August 19-20, 2002, in Israel for three Palestinian audiologists and technicians with the support of the Schneider Children's Medical Center of Israel (SCMCI), the Canada International Scientific Exchange Program (CISEPO), and MASHAV, Ministry of Foreign Affairs of Israel. The workshop was the initial activity in the pilot project plan for the testing of the Palestinian Infants.

5.2.3 MEHA activities in the region are progressing exponentially and becoming a recognized identity in the region. The MEHA Regional Centre in Amman regularly receives requests for consultations from the Arab world and international bodies related to the provision of training courses and implementing neonatal hearing screening programs. Since the last Steering Committee meeting, training programs were provided for colleagues from Qatar and from the Arab Emirate.

5.2.4 In the last year at SCMCI's Department of Audiology, 14 Arab children were found to have a significant hearing loss and did not have health care insurance. In

order to initiate the habilitation process, the children were fitted bilaterally with hearing aids which were donated through MEHA and CISEPO by Unitron Canada.

5.2.5 The Operating Committee developed a policy for habilitating infants diagnosed as severely hearing impaired within MEHA Project 1 which proposes immediate habilitation of those infants as an ethical requirement of MEHA when habilitation is not available through a national health care system.

5.3 The MEHA Project 1 Habilitation Policy was adopted, please see Appendix E.

5.4 The meeting was advised that a new proposal has been developed in which CISEPO/MEHA would undertake a comprehensive, 18 months, post MEHA Project 1, habilitation program for those infants diagnosed with significant hearing loss during Project 1. CISEPO has submitted the proposal to CIDA for consideration. The Chair noted the urgent need to engage national health systems in the diagnosis and habilitation aspects of infant hearing loss so that protocols and programs exist to follow on from MEHA's projects.

5.5 The Chair introduced the discussion paper submitted by Ms. Manal Hamzeh, CCC-A, FAAA, Educational Audiologist, Al-Miran Group for Advanced Sciences in Hearing, Language-Speech, and Deafness, Amman. He highlighted the point made by Ms. Hamzeh that based on the accumulating results and evidence of infant hearing loss, especially in Jordan, MEHA should develop proposals for:

5.5.1 The MEHA post-Project 1 Habilitation Project;

5.5.2 Expansion of Project 1, The Early Detection of Hearing Loss in Infants;

5.5.3 Planning and development of a Cochlear Implant Program in Jordan, and

5.5.4 MEHA involvement in the WHO protocol for a National Survey on Deafness in Jordan.

5.6 Comments on the Operating Committee reports included:

5.6.1 Project 1 in Israel has been concentrating on screening infants in the central region of the country. Following the completion of the prototype testing of 500 Palestinian infants and the return of the project equipment to Israel, the project in Israel needs to expand its testing to include all regions and all interested hospitals.

5.6.2 The post-MEHA Project 1, habilitation program should include a research component which interalia extends cooperative activities among MEHA partners;

5.6.3 Representatives from national hearing associations should be invited to future Steering Committee meetings;

5.6.4 Existing materials should be researched and/or sought for Arabic/Hebrew language testing and educational materials required for Project 1 and post-Project 1 habilitation activities;

5.6.5 Genetic studies should be initiated for the children diagnosed with significant hearing loss in Project 1;

5.6.6 MEHA should ensure that appropriate ethical review processes are followed in planning and implementing its projects;

6. MEHA FINANCIAL REVIEW 2001-2002 (Agenda item 6)

6.1 Financial support for MEHA has been based on CISEPO's commitment to fund and/or to find funding of CDN\$150,000 a year for three years beginning in 1999/2000. During this three year period, CISEPO provided funding to MEHA of approximately CDN\$600,000. The bulk of the funding went to support MEHA Project 1, The Early Detection of Hearing Loss in Infants.

6.2 The original estimate of the cost for Project 1 was CDN\$300,000. The revised budgeted cost in 2000, was CDN\$710,000 (including an in-kind contribution of hearing aids valued at CDN\$240,000). A further revision to the project in 2002, which included a 25 per cent increase in the number of children to be tested, an eighteen month extension in the duration of the project, and a six months habilitation program in Jordan, now has costs projected at CDN\$1,267,500.

6.3 Considering current approved and pledged funding to MEHA (including an additional CDN\$100,000 committed to MEHA by CISEPO) an additional CDN\$371K (US\$250K) is required for completion of Project 1.

6.4 The meeting noted that the completion of Project 1, the implementation of subsequent cooperative projects including the Post Project 1 Habilitation, and the ongoing operating aspects of MEHA are dependent on finding additional resources. Steering Committee members and other participants suggested a number of potential sources of funding including the Canadian government, Bill Gates, and US AIDE.

6.5 The Chair, as Patron of MEHA, identified his commitment, with the assistance of CISEPO, to raising the US\$500,000 needed for the completion of Project 1 and the post-Project 1 Habilitation project.

7. STEERING COMMITTEE PRIORITIES (Agenda item 7)

Prof. Noyek reported on his commitment at the previous Steering Committee meeting to support investigation of hearing loss in Negev Bedouin through a needs assessment and description of services. Please see Appendix F. He indicated that CISEPO would initiate a further study to assess the issue as it applies to the Bedouin populations of northern Israel and Jordan.

8. CLOSING OF THE MEETING (Agenda item 8)

8.1 The Steering Committee will meet next in approximately 12 months.

8.2 The Chairman thanked all the participants for their ongoing involvement in MEHA and for their productive participation in the meeting. He noted the maturation of MEHA as an organization with the completion of its fourth Steering Committee meeting, and its sponsoring of the First MEHA International Scientific Symposium on Regional Health Issues: Regional Cooperation in Research and Science, as prime examples. The Chairman also thanked Phil Aber, Adviser and Secretary to the Steering Committee and CISEPO Policy and Planning Adviser for comprehensively preparing the participants and the documentation for this Steering Committee meeting.

8.3 The Steering Committee, on behalf of all present, expressed their gratitude to His Royal Highness Prince Firas for his ongoing involvement, his encouragement and for his role as Patron of MEHA.

8.4 The meeting closed at 12:45, October 23, 2002.

Original Approved by  
His Royal Highness  
Prince Firas bin Raad  
Chair of the Meeting

November 16, 2002

APPROVED \_\_\_\_\_ DATE: \_\_\_\_\_

His Royal Highness  
Prince Firas bin Raad  
Chair of the Meeting  
Patron of MEHA

Fourth Planning Meeting  
of the Steering Committee of  
the Middle East Association for Managing Hearing Loss (MEHA)

October 23, 2002

**MEETING PARTICIPANTS**

***Chair of the Meeting***

His Royal Highness, Prince Firas bin Raad of Jordan, Patron of MEHA

***Steering Committee***

Professor Ziad Abdeen, Coordinator Health Sciences Faculties and Dean of Research, Al Quds University, CISEPO Director, Palestinian Program

Professor Menahem Fainaru, Medical Director, Maccabi Health Organization, Israel  
Major General, Dr. Manaf Hijazi, Director, Royal Medical Services Directorate, Royal Medical Services of Jordan

Professor Arnold Noyek, Chair, the Isabel Silverman Canada International Scientific Exchange Program (CISEPO), Director, Peter A Silverman Centre for International Health, Mount Sinai Hospital, the University of Toronto

***Operating Committee***

Dr. Mohammad Al Masri, Head, Department of Audiology, King Hussein Medical Centre (KHMC), and Royal Medical Services of Jordan (RMS)

Professor Joseph Attias, Haifa University, Director, Institute for Clinical Neurophysiology and Audiology, Schneider Children's Medical Center of Israel (SCMCI)

Mrs. Rema Othman Jebara, Faculty, Al Quds University; Audiologist/Speech Therapist, Hadassah Medical Organization

Ms. Josée Levasseur, Coordinator of Professional Education, Auditory-Verbal Therapist, Learning to Listen Foundation, North York General Hospital, Toronto

***Executive Assistant to the Patron***

Major General (Ret.) Dr. Mohammed Al-Omari, Otolaryngologist

***Adviser and Secretary to the Steering Committee***

Mr. Phil Aber, CISEPO Policy and Planning Adviser



***Observers***

Colonel, Dr. Ziad Abd Lateef, Neonatology, KHMC, RMS

Professor Hani Abdeen, Dean of Medicine, Al Quds University

Mr. Qadr Alfawwaz, Office Director, the Office of HRH Prince Firas

Brigadier General, Dr Nabil Ardah, Head ENT, KHMC, RMS

Professor Karen Avraham, Department of Human Genetics, Sackler School of Medicine,  
Tel Aviv University

Ms. Pearl Bader, Manager, Consultants in Behavior Change, Centre for Addiction and  
Mental Health, Toronto

Professor Rivka Carmi, Dean, Faculty of Health Sciences, Ben Gurion University of the  
Negev

Professor Catherine Chalin, Department of Public Health Sciences, Faculty of Medicine,  
University of Toronto, Vice Chair CISEPO

Professor Ziad Elnasser, Dean, Faculty of Applied Medical Sciences, Jordan University  
of Science and Technology

Professor Dan Farine, Department of Obstetrics and Gynecology, Mount Sinai Hospital,  
Departments of Obstetrics and Gynecology and of Public Health Sciences, Faculty of  
Medicine, University of Toronto

Ms Aliza Inbal, Coordinator for Middle East Activities, Center for International Cooperation  
(MASHAV), Ministry of Foreign Affairs of Israel

Dr. Moien Kanaan, Associate Professor of Molecular Genetics, Director of the  
Hereditary Research Laboratory, Life Sciences, Bethlehem University

Professor Dov Lichtenberg, Dean, Sackler Faculty of Medicine, Tel Aviv University

Dr Hasan Malkawi, Head Oby/Gyn, KHMC, RMS

Professor Hillel Pratt, Professor of Medical Science and Bio-Medical Engineering,  
Director, Evoked Potentials Laboratory, Technion - Israel Institute of Technology,  
Adviser to the Operating Committee

Dr. Yehudah Roth, Deputy Director, CISEPO Israel, Vice Chairman, Department of  
Otolaryngology – Head and Neck Surgery, Director, the Institute for Nose and Sinus  
Therapy and Clinical Investigations, CISEPO Deputy Director Israel

Professor Mohammad Shaheen, Dean, Public Health, Al-Quds University

Mr. Hashem Shahin, PhD Student, Bethlehem and tel Aviv Universities

Dr. Itamar Shalit, the Schneider Children's Medical Center of Israel (SCMCI), Adviser to  
the Steering Committee

Professor Harvey A. Skinner, Professor and Chair, Department of Public Health  
Sciences, Faculty of Medicine, University of Toronto

Dr. Suliman Zaa'Roura, Chair, Department of Otolaryngology, French Nazareth Hospital

**Fourth Planning Meeting  
of the Steering Committee of  
the Middle East Association For Managing Hearing Loss (MEHA)**

October 23, 2002

**PROVISIONAL AGENDA**

1. OPENING OF THE MEETING
2. ADOPTION OF THE AGENDA
3. INTRODUCTION OF STEERING AND OPERATING COMMITTEE MEMBERS
4. STEERING COMMITTEE MEMBERS' PRESENTATIONS
5. OPERATING COMMITTEE REPORTS
6. MEHA FINANCIAL REVIEW
7. STEERING COMMITTEE PRIORITIES
8. CLOSING OF THE MEETING

MEHA SC 4  
Final Report  
October 23, 2002  
Appendix C

**CANADIAN EMBASSY**

3 Nirim Street, 4th Floor  
Tel Aviv 67060  
October 18, 2002

Dr. Arnold Noyek  
600 University Avenue, Suite 401  
Toronto, Ontario  
M5G 1 X5 Canada  
Fax (416) 586-8600.

Dear Dr. Noyek:

As Canada's Ambassador in Israel, I am pleased to offer my very best wishes to the Middle East Hearing Association and its Steering Committee, as you meet to chart a course for the future.

MEHA has brought impressive benefits to the communities it serves. You have effectively addressed specific, priority fields of health care – from newborn screening for hearing loss and the provision of hearing aids, to speech therapy. You have worked to enrich academic medicine, and you have strengthened the capacity of local communities to lead their own health development.

From our perspective, the collaborative approach that you take has been an equally impressive factor. You have shown us how projects between Israelis, Palestinians and Jordanians serve as a channel to open communications and attitudes. The work is all the more remarkable given the current context of conflict and mistrust. In a difficult security and political situation, you have persevered and worked together.

We are proud of the part that Canada and Canadians have played in your successes. Part of the Canadian role comes from the inspiration and sheer hard work of the Canada International Scientific Exchange Program, and people like Dr. Arnold Noyek. Another part of our role is financial: Our Department of Foreign Affairs is supporting today's meeting through the Human Security Programme, and we have provided funding through the Canadian International Development Agency. A third part of our role is a genuine and vocal admiration for your accomplishments. Canada's Minister of Foreign Affairs, Bill Graham, has publicly singled out your work as an example of how all sides could benefit from peace.

MEHA is doing good work, and doing it effectively. I would urge you to continue the unique vision and tireless leadership that has characterized all your work to date.

Yours sincerely,  
ORIGINAL SIGNED BY  
Michael D. Bell  
Ambassador

## **CANADIAN EMBASSY**

October 20<sup>th</sup>, 2002  
RAGR-O143

By E-Mail:arnold. [noyek@utoronto.ca](mailto:noyek@utoronto.ca)

Dr. Arnold Noyek  
Chairman, CISEPO Program  
University of Toronto  
600 University Avenue, Suite 401  
Toronto, Canada M5G 1X5

Dear Dr. Noyek:

I wish first to extend my regrets to you that the Canadian Embassy in Amman, Jordan, is not able to participate in the first MEHA International Scientific Symposium on Regional Health Issues, to be held in Nicosia, Cyprus on October 23 and 24, 2002. We had made firm plans for my colleague Eric Mercier to attend but, as you know, a small health problem intervened. You will be glad to know that Eric is doing well but it is best that he not travel for awhile.

I wish to commend you and your colleagues in the MEHA, CISEPO and the University of Toronto for your efforts to address the issues of health research and hearing loss in the Middle East. Your work is clearly already leading to real benefits for the lives of many people in this region, particularly children. You will recall Minister Graham's successful visit to the MEHA clinic in Amman last May.

Your approach reflects very sharply the human security agenda which the Government of Canada has promoted in recent years. This focuses on the individual as much as the state. How can there be state security if the individual is insecure? The dedication of you and your colleagues to promoting "soft" security on both banks of the River Jordan is commendable. I simply wish more would follow your example.

I wish you great success in Cyprus and beyond.

Sincerely,

ORIGINAL SIGNED BY  
Roderick L. Bell  
Ambassador

MEHA Project 1, The Early Detection of Hearing Loss in Infants

**HABILITATION POLICY**

*Background*

MEHA Project 1, The Early Detection of Hearing Loss in Infants, was designed as a collaborative study between Jordanians, Israelis, and Palestinians. During the project, 15,500 infants in Israel, Jordan and the Palestinian Authority will be tested and treated for hearing loss. The results from these tests will be directed to develop new protocols for universal newborn hearing screening program which will guide the decision makers in the region in developing universal programs to achieve early identification of hearing loss. Infants diagnosed as having a significant bilateral hearing loss during the project will receive initial habilitation as part of the study.

The initial results of screening some 1,400 infants in Jordan indicate that the incidence of hearing impairment in high risk children is about 11% and in non risk children is about 1%. Based on these results, about 125 children are expected to be diagnosed as hearing impaired following the screening of the 8,000 Jordanian infants. In Israel, of about 2000 infants screened, four have been diagnosed with significant hearing loss, two of them with bilateral, severe hearing loss. Habilitation, generally, will be provided through the national health care system. Other arrangements will be made as required.

*Policy*

Immediate habilitation of those infants diagnosed as significantly hearing impaired will be implemented as an ethical requirement of MEHA Project 1, when habilitation is not available through a national health care system. This habilitation will be continued for six months as part of Project 1, will follow procedures recommended by the American Academy of Audiology, and will comprise:

1. Providing access to ENT and other specialists following a definitive audiological assessment;
2. Fitting all infants who have significant, bilateral hearing loss with appropriate hearing aids;

3. Providing the parents and children with the appropriate guidance, counseling, and therapy during the initial six month period;
4. Providing audiological follow-up and hearing aid fitting evaluation using the latest technology, such as probe microphone measurements and/or aided evoked potential measurements, on a monthly basis up to the age of six months. Ear moulds will be replaced when needed (usually every two months) during this period;
5. Informing the infants' health care support system of the child's hearing status and establishing contact with the child's care givers in any formal settings which are providing therapy;
6. Referring the infant to the national health care system for assessment for alternate treatment where other intervention is recommended.

## **Hearing Loss in Negev Bedouin: a needs assessment and description of services.**

Israel A, Chalin C, Shoham-Vardi I, Noyek A.  
The University of Toronto, Ben Gurion University and  
The Canada International Scientific Exchange Program (CISEPO)

Non-syndromal recessive hearing loss (NSRD), sensorineural in nature, is extremely common in certain tribes of Negev Bedouin whose marriage patterns are characterized by high rates of consanguinity. This needs assessment attempts to quantify the phenomenon, to describe its present management, and to identify holes and barriers in the system. Semi-structured interviews were conducted with seventeen key informants who work with the deaf and their families in this community.

Hearing-impaired children are identified through targeted screening of high-risk newborns with otoacoustic emissions testing, and through routine behavioural screening tests at maternal-child health centres. The audiology clinic at Soroka gave definitive diagnoses of significant bilateral hearing loss to 56 children aged three and under from Jan. 2000 to Aug. 2002; 39 of those were Bedouin. There are an estimated 220 deaf Bedouin students aged 3 to 20 in the Negev, of which 45 are integrated with some assistance into regular classes, 103 are in special classes of deaf children in three Bedouin schools, and 72 attend a special school for the deaf in Be'er Sheva. Universal health coverage refunds 75% of the cost of hearing aids and 100% of the cost of cochlear implantation for children under 18, and social security provides a monthly stipend for the care of deaf children, but most children come to school without aids of any sort.

The most commonly-identified barrier to effective management is a lack of qualified professionals in Southern Israel, particularly absent being Arabic-speaking speech therapists and specially-trained teachers. Other barriers identified are a lack of priority placed on this issue by families of deaf children, and rampant under-use of hearing aids.

Future plans in the area to improve access to services include a training program for speech and language professionals at Ben Gurion University, and a cochlear implantation program at Soroka.