

MAYFLOWER MEDICAL OUTREACH

PROGRAM OVERVIEW
CGHH Annual Meeting 2019



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MAYFLOWER MEDICAL OUTREACH, INC.

Strengthening hearing health and deaf education in Nicaragua



NICARAGUA



- Second poorest country in the Western Hemisphere: 6 million people
- Very basic health care provided by the Ministry of Health (MINSa)
- 2 audiologists/2 speech therapists in Managua: private practice/MINSa/military hospital
- 49 ENT doctors: concentrated in Managua



JINOTEGA, NICARAGUA



JINOTEGA, NICARAGUA

- Located 100 miles north of Managua
- Coffee growing region
- Population: approximately 123,000 regional (417,000 Department)
- Employment: coffee trade, agricultural
- Indigent but basic needs are provided for
- War-torn region during the Sandinista-Contra war
- Civil unrest April 2018
- 1 hospital (Victoria Motta)
- Prior to MMO: no access to otologic care
- Prior to MMO: no access to hearing aids



MAYFLOWER MEDICAL OUTREACH MISSION STATEMENT



Provide ENT and Audiology Services

Provide opportunities for deaf students

Strengthen training in the fields of ENT,
medicine, audiology and deaf education

HISTORY



- Formed by the Mayflower Congregational Church in Oklahoma City, Oklahoma
- First trip to Nicaragua: 1998
- Concentrate resources in one location
- First medical mission trip to Jinotega: 1999
- ENT and audiology clinic housed in an Eye clinic adjacent to the Victoria Motta Hospital
- 2003: 2 room audiology sound booth suite constructed
- 501 (c) 3 charity formed: 2010

BOARDING SCHOOL FOR RURAL DEAF CHILDREN



- Albergue Mayflower 2007: 25 students ages 7 and up
- Attend the Max Senqui school (NSL)
- Educational enrichment program
- Vocational training for teenagers
- Audiological protocol for testing/ hearing aid fittings/management
- Speech therapy training program with ASU

OTOLARYNGOLOGY SERVICES



- Provide medical care
- Dispense medications
- Provide surgical services
- Support ENT residency training
- Created a full-time position for a Nicaraguan ENT doctor supported by MINSA
- Ototoxic prevention program
- Genetic study

AUDIOLOGY PROGRAM



- Provide complete audiological evaluations
- 2 room audiology sound booth
- Audiometer, impedance equipment, OAE, SF/ COR
- donations, loans, discounts, grant funding
- Hearing aid fittings
- School screenings – 1st graders
- Forms developed in Spanish



EQUIPMENT MAINTENANCE



- Daily biologic checks
- Compare tests from home
- Compare tests: portable and diagnostic audiometer
- Sound field speaker calibration
- Annual calibration: goal
- Availability of a “handyman” during trip

HEARING AID PROGRAM

- Fit Hearing Aids as per WHO guidelines
 - all ages
 - children: bilateral (MMO policy)
 - adults: unilateral (MMO policy)

WHO GUIDELINES FOR HEARING AID FITTINGS

(Hearing loss in the better hearing ear)

- ✓ Children: (<15 years): 31dB or greater (31-80dB)
- ✓ Adults: 41dB or greater (41-80dB)
- ✓ Permanent Hearing Loss
- ✓ Unaided 4 frequency PTA: 500, 1k, 2k, 4k Hz

HEARING AIDS



- New digital BTE models: trimpot adjustments
- Different models: mild to profound hearing loss
- Adjustments: frequency response (L, H adjustments), MPO
- Volume control, telecoil, environmental programs

INTERNATIONAL HUMANITARIAN HEARING AID PURCHASING PROGRAM

- High quality low cost hearing aids available in low-resource countries
- In existence: since 1995 (different parent organizations)
- IHHAPP formed in 2012
- Prices range from \$59- \$83
- Administered by Mayflower Medical Outreach
- Supported by the Coalition for Global Hearing Health
- Available to humanitarian audiology programs



www.ihhapp.org

HEARING AID FITTINGS



- Hearing aid batteries: one year supply
 - replenished annually
- Earmolds: temporary, custom, pre-made
- Makeshift dri-aid kit: 20 kernels of rice
- Written materials
- Counseling
- Record keeping
- Patient donations

HEARING AID VERIFICATION AND VALIDATION



- Real ear measurements
- Soundfield testing
- Ling 6 sounds



COCHLEAR IMPLANT AND BAHA PROGRAM



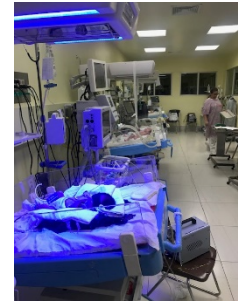
- Not covered by the public health system
- Cochlear Implants
 - nascent program
 - 17 recipients
 - programming and therapy services: Managua
 - multiple challenges
- Baha
 - surgical and soft band
 - 15 recipients
 - Bone conduction hearing aids
 - 7 recipients



Obtained through discounts, self-pay, donations, clinic stock.

EARLY HEARING LOSS DETECTION AND INTERVENTION PROGRAM

- Victoria Motta Hospital: 4,623 births with 1,311 NICU admissions (2018)
- OAE screenings on all NICU babies prior to discharge
- Refer: rescreen 3-4 weeks later (at time of medical follow up)
- Refer again: ENT/Audiology clinic 1 month later
- Diagnostic ABR tests in Managua (click ABR)
- Initial goal: diagnosis of hearing loss by age one
- Essential: educational program, hospital program manager
- OAE screenings available to all babies in the community (outpatient service)



MISSION TRIPS



- Twice yearly group trips/9 days each
- Focus: training, hearing aids
- Audiologists nationwide
 - website, word of mouth
 - participant's handbook, teleconferencing
 - core group: new volunteers welcome
- Hearing aids, equipment and supplies
 - hand carried, suitcases, container

PATIENT PROFILE



- Seen through MINSA
- Wide geographic reach
 - Centered in the northern region of the country
- Learn about the mission:
 - radio, word of mouth, our local partners/local staff
 - other NGO's
 - established presence
- Travel by bus and by foot
- overnight stay
- Long clinic waits



FORMING ALLIANCES



Asociación de Padres de Familia con Hijos Discapacitados



LOS PIPITOS

- Partner with professionals
 - otolaryngologists
 - audiologist (day of free testing)
 - speech therapists
- Partner with organizations
 - MINSA/SILAIS
 - Todos Con Voz
 - Ministry of Education
 - Los Pipitos
 - ANSNIC
 - Casa Materna
 - Rotary Club
 - Other NGO's

MAYFLOWER MEDICAL OUTREACH

STAFF

- In country operations manager
 - advances the program
 - day to day operations
- In country Nicaragua medical director (ENT physician)
 - advances the program
 - administrative support and oversight
- Audiometric technician
- Albergue Mayflower staff
- U.S. based office administrator
- Executive director: future goal

SUSTAINABILITY OF THE AUDIOLOGY PROGRAM BETWEEN TRIPS

- Two audiometric technicians year-round
- Audiological evaluations
- Custom earmolds are made and fitted
- Hearing aid troubleshooting/hearing aid fittings
- Batteries dispensed
- Patient statistics maintained
- Communication with Mayflower audiologists for professional support as needed (email/Whats App, Skype)
- Assist with coordination of mission trips

SUSTAINING THE AUDIOLOGY PROGRAM ON ITS OWN



- Key concept in international development
- Strengthen clinical skills
- Provide hearing aid fittings year round
- Clinic expansion to different regions of the country
 - 1 new ENT/audiology clinic completed in Esteli. Operations impacted by civil unrest.
 - 1 new clinic established in Leon (in partnership with the University of Nebraska)
- Formalized audiometric technician training program
 - inaugural class: 7 students (3 graduates)
- Provide ongoing support and oversight

AUDIOMETRIC TECHNICIAN TRAINING PROGRAM



**HEAR
THE WORLD
FOUNDATION**

a Sonova Group initiative



- Academic course work
 - in-country lectures for one week
 - workbook provided
 - textbook and otoscope
- AICME: www.aicme.com
 - International Hearing Care Technician program
- Clinical training
 - direct supervision: 2 months
 - independent: 6 months
- Written and clinical exams
- Certificate granted by MINSA
 - employed by MINSA

GOAL

- Train technicians to try to carry out accurate basic hearing evaluations including:

Case history

Pure tone air and bone

Interpretation

Otoscopy

Speech audiometry

Recommendations

Tympanometry

Masking

- Additional training: Hearing Aid Fittings, Earmolds, OAE



FINANCIAL SUPPORT



- Fundraising events: car raffles, rummage sale, bake sale, fundraiser
- Grants
- Financial donations: individuals, corporate, church
- Sponsorships for the students in the Albergue Mayflower
- Equipment/supplies: donations, discounts
- Create local businesses to support programs

FUTURE GOALS

- Continued clinic expansion
- National first grade hearing screening program
- Strengthen speech therapy services
- Strengthen and expand the Early Hearing Loss Detection and Intervention Program: Community based program.
- Challenges
 - lack of resources
 - bureaucracy



RECOMMENDATIONS



- Don't lose sight of the big picture
 - remain open-minded and resourceful
- Form relationships and network
 - key to program development and expansion
 - allows for collegial collaboration
- Learn something new on every trip
 - strengthen your program

THANK YOU!!!

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