



The Hearing and Otitis Program: A Model of Community Based ear and Hearing Care Services for Inuit of Nunavik



Le programme Otite et Audition : un modèle de services de soins de santé auditive pour les Inuit du Nunavik

KEY WORDS

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Isabelle Billard

Abstract

More than 20 years ago, Crago, Hurteau and Ayukawa (1990) described in detail the foundation of the project for Hearing Impaired Inuit of Northern Quebec (HIINQ), designed to offer culturally based audiological services to the population in an area now known as Nunavik. From the middle to the end of the 1980s, during the first phases of the project, services transitioned from being Montreal-based and delivered by southern professionals to Northern-based services provided by trained Inuit hearing specialists. The change in focus targeted the empowerment of the Inuit in their own ear and hearing health care and the provision of audiology services that are culturally and linguistically appropriate.

Today, the project, now known as the Hearing and Otitis Program (HOP), has evolved, facing old and new challenges and audiology services, despite different models of delivery, having been maintained in the North. While standard hearing evaluation still has its place in the program, activities also tend to be oriented towards community based rehabilitation services.

This article aims to give a description of the program, its model of service delivery, the role of the different contributors to the program, and its challenges and proposes avenues to explore in order to maintain and enhance the community based aspects of the program.

Abrégé

Il y a plus de vingt ans, Crago, Hurteau et Ayukawa (1990) décrivaient en détail un projet destiné aux Inuit malentendants du Nord du Québec (HIINQ - Hearing Impaired Inuit of Northern Quebec). Ce programme a été conçu pour offrir des services d'audiologie adaptés à la culture de la population vivant dans une région maintenant connue sous le nom de Nunavik. Vers la fin des années 1980, pendant la première étape du projet, les services sont passés d'une prestation basée à Montréal par des professionnels du Sud à des services basés dans le Nord par des Inuit ayant reçu une formation comme spécialistes de l'audition. Ce changement visait la prise en charge par les Inuit de leur propre santé auditive ainsi que la prestation de services d'audiologie culturellement et linguistiquement adaptés.

Aujourd'hui, le projet, connu sous le nom de Programme Otites et Audition (HOP - Hearing and Otitis Program), a évolué, faisant toujours face à différents défis, peu importe les modèles de prestation de services. Par ailleurs, le modèle actuellement en cours maintient toujours l'idée d'offrir des services basés au Nord. Le programme compte à la fois des services d'évaluation auditive individuelle ainsi que des activités de nature communautaires.

Le but de cet article est de décrire le programme, ses modèles de prestation des services, le rôle des différents membres de l'équipe ainsi que les défis à relever. Il vise également à explorer différentes avenues afin de maintenir et améliorer sa vocation communautaire.

Isabelle Billard, M.O. A.
Audiologist
Coordinator of the Hearing and
Otitis Program
Inuulitsivik Health Center
Puvirnituq, QC
CANADA

Introduction

Hearing loss among the Inuit population has been well documented over the past decades (Baxter, 1977; Baxter & Ling, 1974; Julien, Baxter, Crago, Ilecki, & Therien, 1987). Depending on the study, it has been established that 19 to 25 % of school-aged children have a significant unilateral or bilateral hearing loss, mostly due to ear infections, as compared to 10 % of hearing loss in non-Inuit children (Ayukawa, Lejeune, & Proulx, 2004; Julien et al., 1987). Otitis media (OM) in Inuit children has been the primary focus of research (Ayukawa, H., Bruneau, S., Proulx, J. F., Macarthur, J., & Baxter, J. (2004); Baxter, Julien, Tewfik, Ilecki, & Crago, 1986). In adults, the Nunavik Inuit Health Survey of 2004 explored the prevalence of hearing loss and found 25 % of adults were suffering from hearing loss in one or both ears. It also found that by the age of 45, 75% of Inuit male adults experience significant hearing loss, predominantly due to noise exposure (Ayukawa, Bélanger, & Rochette, 2007). This prevalence increases with age. As a comparison, in the general population, at age 65, only 33% of adults present a hearing loss. Therefore, the prevalence of hearing impairment in Nunavik itself justifies the existence of audiology services, targeting not only children but the whole population.

Prior to 1985, Inuit children and adults in Nunavik, in need of audiology services or hearing aid fitting, had to travel to Montreal where they would have very limited services in their own language. For these individuals, no follow-up was planned after their hearing aid had been sent by mail to their community. In the late 1980s, a project called the Hearing Impaired Inuit of Northern Quebec (HIINQ) drafted the basis for audiological services that were more appropriate to the Inuit population of the northern part of the province (Crago, Hurteau, & Ayukawa, 1990). The goals were to reduce the negative effects of otitis media while empowering Inuit in the provision of ear and hearing health services. In order to achieve these goals, audiology services were transferred from Montreal to the North and training of Inuit hearing specialists was offered so they could provide basic services to their community. One of the major outcomes of this project was that sustainable funding from the Ministry of Health and Social Services was given to guarantee continuity of the services. Now known under the name of Hearing and Otitis Program (HOP), the program offers primary ear and hearing care in Nunavik and makes ongoing efforts to ensure its adequacy and congruency with the cultural and linguistic aspects of Inuit lives.

General context

Geographic and demographic considerations of Nunavik

Nunavik is the northernmost region of the province of Quebec, a territory located above the 55th parallel and covering about one third of the province's surface. Fourteen villages are scattered along the coasts of the Hudson Bay, the Hudson Strait, and the Ungava Bay. Nunavik stretches from 1500 to 2500 kilometers North of Montreal. (Makivik Corporation, 2012). Since there are no roads connecting the communities or southern cities all health-related travel is done by airplane. The number of inhabitants in the different villages range from approximately 200 to 2400 for a total of 12 000 people in the area (Ministère de la culture et des communications, 2012). Thirty-four percent of the population is under 15 years-of-age and the life expectancy is 66 compared to 81.8 in the general population of Quebec (Payeur, 2012).

Culture and language

More than 95% of the population of Nunavik is of Inuit ancestry. Major changes occurred in their traditional ways of life when, in the 1950s, during the Cold War, the Canadian government created communities where Hudson's Bay trading posts already existed. In order to establish its sovereignty throughout the northern part of Canada, the government sent nurses, administration clerks, and police services. Inuit were strongly encouraged to settle in these new villages leaving their nomadic lives. Since then, the population has continued to face ongoing challenges, rapidly adopting southern Canadian lifestyle while practicing traditional activities such as fishing, hunting, camping, and berry picking.

Inuktitut is the language spoken in most aspects of people's lives, whereas English and French are mostly used for communication between Inuit and non-Inuit.

Education

Overseen by the Kativik School Board (KSB), northern schools offer primary and secondary classes (Kindergarten to grade 12). From Kindergarten to grade 3, schooling is in Inuktitut and from grade 4 teaching is given in either French or English, according to parents' preference. Inuktitut continues to be taught throughout the student's curriculum. According to Nunavik Regional Board of Health and Social Services (2011), 10% of people residing in Nunavik aged 25 to 64 have a high school diploma, 30% have a post-secondary diploma below a bachelor's degree, and 10% have a university degree. Very few post-secondary degrees are completed in a health-oriented discipline. An itinerant non-

Inuit speech-language pathologist is hired by KSB to support the work of the special education teachers.

Medical services delivery

Health services in Nunavik are under provincial jurisdiction through the Nunavik Regional Board of Health and Social Services. This organization is also responsible for managing subsidies from federal programs targeting needs in native communities like mental health, prenatal nutrition, family violence, and child development.

There are two hospitals in Nunavik, one on each coast, offering short-term, long-term, and specialized medical care to Nunavik residents. The Inuulitsivik Health Center in Puvirnituaq delivers services to the Hudson Bay residents from Kuujuaapik to Salluit and the Tullatavik Health Center in Kuujuaq offers services to the residents from Kangiqsujaq to Kangiqsuallujuaq in Ungava Bay. Professional services such as laboratory, pharmacy, dental care, radiology, and rehabilitation are provided in each hospital and those departments ensure access to the different communities through nursing stations by air mail or regular visits.

In Quebec, those nursing stations are called CLSCs (from the French: Centre local de services communautaires or local community services centers). They are the entry to both preventive and curative care and are present in each community. Nurses offer immunization services, well baby clinics, follow-up of different physical health problems, and deal with emergencies. In remote areas such as Nunavik, nurses have an enlarged role and are able to prescribe certain medications following therapeutic guidelines. There is also a program aiming at giving home care called PLA program (for People in Loss of Autonomy)

There are four communities of more than 1000 people in Nunavik: Puvirnituaq, Salluit, Inukjuak, and Kuujuaq and each has one or more full-time doctors. Other communities receive monthly visits from doctors holding full-time position in the hospital of Puvirnituaq or Kuujuaq.

Hospitals and CLSCs receive a range of visiting medical specialists. Some, such as paediatricians, ear nose and throat (ENT) physicians, and ophthalmologists travel to each community while others like gynecologists, orthopedists, and psychiatrists visit only larger communities. Patients in need of an appointment have to fly and usually stay overnight to these centers in order to benefit from their services.

Patients requiring more urgent and complex services are transferred to Montreal where the Northern Quebec Module

has the mandate to coordinate patients' visits in health institutions in the South as well as offering transport and lodging while accessing those services.

Audiology services in Nunavik

Community based model

In an area such as Nunavik where communities are isolated and the cost for travelling by plane is highly prohibitive, health programs need to be planned in order to offer the best access to services while being financially sustainable. The World Health Organization (WHO) has developed an expertise for research and program-development in areas of the world facing, to different degrees, similar issues. The development of audiology services in northern Quebec was highly influenced by their approaches.

From the mid-1970s on, health policies in developing countries and remote regions moved away from a specialized and centralized approach to a community based model, revolutionizing provision of health services by training local people to give basic health services within their communities (Black, 1986). The 1975 recommendations of the UNICEF/WHO Joint Committee on Health Policy were key concepts on which the HINQ project and its structure were originally conceived (Crago et al., 1990). Today, the Hearing and Otitis Program in Nunavik has maintained its commitment to this approach by giving ongoing training to Inuit hearing specialists without depending exclusively on visiting audiologists or hearing instrument specialists (HIS), and without having patients travelling South for services.

Community based rehabilitation (CBR), which emphasizes inclusion and participation of people with disabilities has started to influence health services provision since the mid-1970s (Black, 1986). Within this framework, the World Health Organization (WHO) has more recently given specific attention to hearing problems and ear and hearing care. Here is how the WHO (2012) describes the roles of CBR specific to this matter:

- Advocate and campaign for ear and hearing health services at all levels of health care;
- Facilitate access to ear and hearing health care services for all members of the community and promote the prevention of avoidable causes of hearing loss;
- Create public awareness of all aspects of hearing loss;
- Raise awareness in schools and within education systems of the need to include children and adults with hearing loss;

- Promote and provide accessible communication for those with hearing loss;
- Ensure that people with hearing loss receive the necessary attention at times of humanitarian crisis and that their needs are considered in all disaster preparedness initiatives;
- Ensure that individuals with hearing loss have access to education and training programs that may lead to employment;
- Include people with hearing loss in the decision-making processes that affect their lives;
- Encourage society to ensure that people with hearing loss are included in social groups and community events.

Some activities of the Hearing and Otitis Program are already in phase with this model, providing information to the population through different means of communication. Activities of prevention of ear and hearing problems take place at school as well as with high risk groups such as daycare children and hunters. Information about issues such as prevention of otitis media (OM), noise-induced hearing loss, and development of normal hearing behavior are also transmitted through FM radio to connect to a broader audience as it is a widely used means of community communication.

Roles of the different members of the Hearing and Otitis Program

In order to better understand the way services concerning ear and hearing care are provided to the Inuit population of Nunavik, it is essential to clarify the role played by the different members of the HOP. The role of the members is essentially similar on both coasts, but some regional disparities exist in terms of service delivery models, as shown on Table 3.

There is no registered Inuit audiologist or hearing instrument specialist in Quebec. Therefore, in the descriptions below, those professionals as well as the coordinator are non-Inuit.

Inuit involved in the program have two different roles: the *siutilirijiit*¹ and the *aaniasiurtiapiit*.

The *siutilirijiit*

Central to the activities of the HOP are the *siutilirijiit*, meaning “the ones who know about ears”. Their role essentially lies within what SAC describes as the scope of practice of supportive personnel in audiology (SAC, 2013, p.3) as shown on Table 1. In this table, it is said that it is possible that supportive personnel also “assist the

Audiologist with communication with patients/clients when there are language differences in which the Supportive Personnel is competent”. The *siutilirijiit* can often play the role of cultural counsellor, allowing acceptable responsiveness, both linguistically and culturally, to the proposed solutions offered to hearing impaired Inuit in terms of prevention or rehabilitation.

Siutilirijiit are selected for their sense of initiative, organizational skills, ability to communicate verbally in English (or French) and Inuktitut, and being respected by the community. Many *siutilirijiit* have had either personal or professional experiences with hearing impairment, and therefore are able to share their own experiences with the population they serve. For example, one worked previously with a Deaf child in school, another had a Deaf child, another had a progressive hearing loss and wore hearing aids and many others had experienced otitis media either themselves or with their children.

The *aaniasiurtiapiit*

In their recommendations, Crago et al. (1990) suggested that Inuit hearing specialists should be trained for each community. On the Hudson coast, in each community, an *aaniasiurtiapiik* (“little nurse”) acts as the local resource person for the audiology program by being the principal link between hearing impaired persons in his/her community and the other actors of the program. As full-time or part-time interpreters/health workers at the CLSC, the *aaniasiurtiapiit* usually volunteer to assist the HOP team. It was agreed by the administration of Inuulitsivik Health Center in Puvirnituq that the HOP budget would recognize the contribution of the time the *aaniasiurtiapiit* spends for the HOP which also means that during the HOP yearly visits, the administration would allow the *aaniasiurtiapiit* to be replaced by another interpreter while they assist the team.

The role of the *aaniasiurtiapiit* is described in Table 2. Because they are the primary contact with the population, they are soon recognized as the community leader of “ear matters”. As an example, a hearing aid user with a broken device would usually first go to see the *aaniasiurtiapiit*, who would do a visual and listening check, and try to make minor repairs. If these were not effective, they would either contact the HIS of the team for help or send the hearing aid for repair by mail. As for the other duties, the *aaniasiurtiapiit* are also involved in screening at school and work together with the audiologist and the *siutilirijiit*, in prevention activities. Finally, because they have good knowledge of their community, *aaniasiurtiapiit* are responsible for making appointments during audiologist’s visits. This task alone can be challenging for an outsider of the village since many

Table 1. Scope of practice of supportive personnel in audiology as described by SAC (2013)

- Assisting with hearing screening programs for all ages.
- Screening and basic test measures such as otoscopy, immittance, oto-acoustic emissions, pure tone air and bone conduction, and basic speech testing.
- Assisting patients or clients in completing case history and other relevant forms.
- Reporting and documenting patient or client information, observations regarding behaviours, and ability to perform tasks to the supervising audiologist.
- Assisting the audiologist with testing difficult-to-test patients or clients.
- Assisting the audiologist during assessments. This may include assisting with electrophysiological assessments and vestibular testing.
- Assisting the audiologist with formal and informal documentation, preparing materials, and performing clerical duties.
- Conducting electro-acoustic analysis of hearing aids and FM systems.
- Providing listening checks and troubleshooting hearing aids, FM systems, and other assistive listening devices.
- Troubleshooting issues with, conducting minor repairs for, and cleaning hearing aids.
- Demonstrating and orienting patients or clients to assistive listening and alerting devices.
- Making earmold impressions.
- Making earmold modifications and shell modifications.
- Educating patients or clients regarding hearing protection devices (e.g., earplugs), prevention of noise-induced hearing loss, and proper ear hygiene.
- Assisting with departmental operations, e.g., scheduling appointments, preparing charts, collecting data, documentation, safety procedures (including infection prevention and control), maintaining supplies and equipment, and operating audio-visual equipment.
- Maintaining, troubleshooting, and performing basic calibration checks of equipment.
- Assisting the audiologist with research projects, in-service training, and family or community education.
- Assisting the audiologist in communicating with patients or clients when there are language differences and the supportive personnel is competent in the patient or client's language.
- Assisting the audiologist in the installation of sound field amplification systems (e.g., classrooms, meeting rooms).
- Attending case conferences with a supervising audiologist.
- Teaching courses within a supportive personnel training program as long as the course content is related to professional roles, responsibilities, and issues of supportive personnel. The course content must be approved by an S-LP or audiologist involved in the training program.
- Assisting with student training and practicums.

Table 2. Role of the aaniasiurtiapik

- On-going services to the hearing impaired as needed.
- Cultural and linguistic advice
- Hearing screening in students
- Hearing aid user follow-up
- Hearing aids management and minor repairs
- Active participation to the HOP team visit
 - Appointments
 - Medical files
 - Participation in testing
 - Participation in public health activities (at school, FM radio, with hunters)

Table 3. Regional disparities in the composition of the HOP team between the Hudson and Ungava coasts of Nunavik.

	Hudson	Ungava
<i>Aaniasiurtiapit</i>	<ul style="list-style-type: none"> • One in each community except Puvirnitug • Part-time or full-time interpreter/health worker at the CLSC • Recognized as being part of the HOP team and can assume their HOP duties (screening a school, assist at the time of audio visit, etc.) while being replaced in their position. 	<ul style="list-style-type: none"> • None
<i>Siutilirjiit</i>	<ul style="list-style-type: none"> • 1 full time position + occasional replacement: travel to communities at time of audiologist's visit • Assume office services outside these periods 	<ul style="list-style-type: none"> • 1 full time position based in Kuujjuaq + 2 occasional replacements based in Kangirsuk • Travel to communities for screening sessions and at time of audiologist's visit
Audiologists	<ul style="list-style-type: none"> • 6 part time itinerant professionals employed by the Inuulitsivik Health Center • Each audiologist is assigned to one community • Two visits a year, one or two weeks/visit depending on community size 	<ul style="list-style-type: none"> • 1.4 full time position employed by the Tullatavik Health Center • Based in Kuujjuaq • Two visits a year to the six communities other than Kuujjuaq

Coordinator	<ul style="list-style-type: none"> • Audiologist employed by the Inuulitsivik Health Center 1 day/week • Based in Montreal at the Northern Quebec Module • Occasional visits to Puvirnituk (training or other coordination tasks) 	<ul style="list-style-type: none"> • None since there is on-going services
Hearing instrument Specialist	<ul style="list-style-type: none"> • Visits all communities once or twice a year 	<ul style="list-style-type: none"> • Visits all communities once or twice a year

Table 4. Evolution of audiological service delivery on Hudson and Ungava coasts of Nunavik.

Hudson Coast	Ungava Coast
Before 1985 no services up North	
Between 1985-1994: One audiologist based first at McGill School of Communication Disorders and at the Montreal Children Hospital (MCH); provided services to both coasts once a year	
In 1994, the Inuulitsivik Health Center decided to bring services up North; until 2003, one full-time audiologist was on contract for 8 months/yr based in Puvirnituk and travelling from there to the six other communities of the coast.	At the same time, the audiologist for Ungava remained based at the MCH on a 0.8 position with annual visits to the seven communities of the Ungava side
From 2003 to 2008, audiology services became more unstable; often temporarily transferred to Montreal; difficulty in recruitment brought reconsideration of the model of service provision.	In 2006, the audiologist moved to Kangirsujuak and the position became full-time.
Since 2008, there is a team of six audiologists, each of them enrolled as Inuulitsivik employees are assigned to one or two communities which they visit twice a year; when not up North, have established professional practice in either public or private setting; a coordinator of this team is based in Montreal at the MNQ office.	Since 2011, a second audiologist joined the team and both are now based in Kuujuaq for a total of 1.4 FTE.

Table 5. The content of basic training of the Inuit hearing specialists

- Information on the Hearing and Otitis Program
- CLSC Local Resources Job Description
- Anatomy and physiology of the ear
- Hearing
- Otoscopy and Otitis media
- Hearing evaluation
- Hearing loss
- Hearing screening
- Counselling on hearing loss and hearing aids
- Public education and prevention of hearing problems

Nunavik residents are known by more than one name, do not have phones or frequently change their phone number.

The audiologist

Audiologists are hired as part-time (Hudson) or full-time (Ungava) employees of the main hospitals. On the Ungava coast, the full-time audiology position has been maintained up North since 2006, while on the Hudson side, a team of six audiologists, all based in the South, offer services to the seven communities. Each audiologist visits one or two villages twice a year for one to three weeks at a time.

The delivery model of services provided by successive audiologists working for the program has evolved over the years (Table 4). Until 1994, one audiologist covered all 14 villages, but since that time, service provision has been organized separately on the two Nunavik coasts. Overall, efforts were made to guarantee the communities as much continuity as possible in regards to the professionals involved. The role of the audiologist is to bring specialized expertise within the different activities of the program and through direct services to the population. They are responsible of the completion and interpretation of hearing evaluations including patient's needs for rehabilitation services, amplification, and assistive listening devices. In collaboration with the *siutilirijiit*, the audiologists are involved in the choice and the orientations of community based actions and appropriate means of prevention and transmission of information. Audiologists are also advocates for patients' needs in terms of specialized services offered

outside the communities such as bone anchored hearing aids (BAHA) or cochlear implants (CI). They may get involved in research or data collection when needed.

Audiologists also give on-the-job training to the Inuit hearing specialists. In this way, audiologists ensure the maintenance of an adequate level of knowledge and skills so those workers can respond in an efficient manner to the community's needs.

The hearing instrument specialist

The only member of the team not hired by one of the Nunavik hospitals is the hearing instrument specialist (HIS) who is under contract with both hospitals for a period of 3 years. Based in the South his/her role is to sell hearing aids, to provide follow-up care to hearing aid users, and to make adjustments to hearing aids if necessary as well as to take ear impressions for molds. Also, in order to maintain the knowledge and skills of the Inuit hearing specialists, he/she allows time at each visit to give ongoing training. He/she visits all communities of Nunavik at least once a year.

The coordinator

On the Hudson coast, the position of HOP coordinator was created in 2008 to ensure continuity of audiology input to the program while the clinicians are not on the coast and to be the bridge between visiting audiologists, the *siutilirijik*, the *aaniasiurtiapiit*, the HIS, and other medical partners of the program in the communities or in the South. The tasks of the coordinator, apart from the basic organization of the

visits (reservation of planes tickets and lodging facilities) are to offer continuing education opportunities to Inuit partners as well as to the audiologists of the team. Also, because the audiological equipment travels continuously, the coordinator makes ongoing efforts to ensure the professionals have adequate and functioning tools to complete their work. Finally, he/she is responsible for the recruitment and orientation of new staff in the program. Occasionally, he/she provides assistance to Inuit hearing impaired patients in transit to Montreal for medical services. The coordinator is in a strategic position to facilitate the transition from ear and hearing interventions done in Montreal and the follow-up in the North.

Training Inuit hearing specialists

While *siutilirijiit* and *aaniasiurtiapiit* are mostly trained on-the-job, some more formal training sessions are organised, gathering workers from both coasts when there is a sufficient number of new participants in the program and when there is available funding. Usually all *aaniasiurtiapiit* and *siutilirijiit* are invited to these sessions, giving an opportunity for more experienced workers to share their knowledge and help the newer members of the team gain technical skills. These training sessions take place up North in one of the larger communities, where facilities like a conference room and lodging are more easily available. The basic training program is an updated version of the training manual described in Crago et al. (1990) (see Table 5).

Training is offered either by audiologists, senior Inuit hearing specialists, or other collaborators such as the hearing instrument specialist. More advanced training has been occasionally offered to senior *aaniasiurtiapiit* and *siutilirijiit* on specific topics such as noise-induced hearing loss or tinnitus management.

Challenges of service provision

Turnover of staff

The main challenge the HOP has faced in maintaining the services is the turnover of staff, Inuit and non-Inuit. Turnover has an important negative impact on the efforts dispensed and added expenses required for ongoing orientation and training. But most of all, turnover compromises the capacity to build relationships. As reported by Ball and Lewis (2011), it is essential to develop trust with members of the community, people who will be colleagues as well as patients.

Also, experience has shown that when a full time audiologist leaves the program, it is difficult to recruit a new

professional, hence leaving the population without any specialised services for sometimes one year or more.

Model of service delivery

Both coasts have experienced having audiologists based in the North and based in the South. The two situations offer advantages and challenges. A full-time position based in the North provides many opportunities to discover the culture of the Inuit and to more clearly understand the reality of the people the audiologist serves. It may also facilitate the building of closer working relationships with Inuit hearing specialists. On the other hand, while the job ideally requires experienced audiologists, it is often hard to find experienced professionals willing to leave an established practice, family, friends, and easy access to a diversity of products and services to live for extended periods in the North.

In the service delivery model on Hudson coast, when not travelling on community visits with the audiologist, the *siutilirijik* works mostly alone. However, this is not how Inuit typically like to work, preferring collaboration to working alone. It may have consequences on their motivation to attend work. Experience has shown that being in such a key position, on which the organisation relies, places a lot of pressure on the *siutilirijik*. This situation can be overwhelming for those who are more vulnerable or with competing family or personal priorities.

Training of Inuit and non-Inuit staff

Since more formal training of Inuit hearing specialists takes place up North and availability of trainers and trainees is limited, it is not possible to cover all the topics in the manual. Instead, the more essential aspects of the trainees' daily activities are focussed upon and other areas are not covered or are developed informally. At the moment, no systematic evaluations of the trainees have taken place and there is a need to ensure they meet a common standard. On the other hand, not all Inuit hearing specialists are familiar with writing exams in English or Inuktitut, so testing can be challenging for them.

Audiologists are trained in southern institutions, where, in most cases, little attention is given to community based practice, especially concerning the Inuit, First Nations, and Métis. As a result, they are trained to focus on individual services and to be task oriented instead of networking and building relationships as the priority of action when one enters the community based model of services.

As noted in the 2010 SAC survey published as *Speech, language and hearing services to First Nations, Inuit, and*

Métis Children in Canada, with a focus on children 0 to 6 Years of Age, many audiologists do not feel prepared by their university training to work with First Nation, Inuit, or Métis population (SAC, 2010a). At HOP, newly hired audiologists receive only a limited introduction to Inuit culture, traditions, and beliefs and most of it is delivered by a non-Inuit person.

The orientation of non-Inuit audiologist is mostly directed towards specific professional tasks and procedures. Because of frequent turnover of staff, orientation is frequent and newcomers are not systematically given the full context in which the HOP program was developed. It can therefore be a challenge to provide the broader vision of the work to be accomplished, and the cultural, linguistic, and social context in which they will work. Neither of the two Nunavik hospitals holds any orientation or training sessions to prepare new employees from the South to work with Inuit population. In some communities, Inuktitut courses have been made available to non-Inuit but there is no sustainable funding and no guarantee of the availability of an Inuktitut teacher.

Solutions

Training of non-Inuit staff

In the last few years, some Canadian universities have started to develop meaningful initiatives in order to expose students in audiology and speech pathology to the reality of First nations, Inuit, or Métis people. Special courses and opportunities to complete a practicum in a community (including the HOP) are examples that can inspire other universities to participate in better knowledge and understanding as well as in better preparation of professionals to engage in working with this population.

Model of service delivery

When the coordinator position was created on the Hudson coast in 2008 and the choice was made to have itinerant audiologists instead of a full time position based up North, the main reason was to maintain continuity of professional services. Having audiologists based in the South and travelling to Northern communities was thought to facilitate longer commitment to the program and therefore more stability of services. Since that changed occurred, all the communities of the coast have been visited at least once a year.

Inspired by the work of Zeidler (2011) it would be useful, at this point, to interview members of the Inuit communities, either patients and/or partners in order to find out how they view the two models of service delivery and what they think would be the best realistic option to better serve them.

In the report on the literature review completed by the SAC project on *Speech, language and hearing services to First Nations, Inuit, and Métis Children in Canada, with a focus on children 0 to 6 years of age* one of the alternatives to traditional models of service delivery discussed was the use of telehealth as a potential tool to provide access to specialized services in isolated communities (SAC, 2010b).

While distance videoconferencing or more specific interventions such as distant ABR (auditory brainstem responses) testing have not been used within the Hearing and Otitis Program consultation activities, collaboration with ENTs has been facilitated by the use of internet and video otoscopy, allowing audiologists to take pictures of eardrums and send them through email for consultations to ENT physicians based in Montreal. These consultations have not been used systematically but have allowed, in some cases, faster access to surgeries or further intervention that would otherwise have been delayed by long waiting periods before an ENT visit could be done.

Future plans and directions

Training issues

In order to harmonize the skills and knowledge of the Inuit hearing specialists, it would be useful to set up a well-defined sequence of topics to be covered. On each visit by the audiologist, a training session could take place and if the knowledge is already there, only an evaluation would take place. This suggestion aims at training sessions that are accessible, systematic, as well as easily executed within the activities of the program.

Concerning the orientation session for non-Inuit staff, it should involve getting to know the community members. It would certainly be interesting to discuss with the latter about the way they would prefer to introduce newcomers. Since the HOP wants to maintain the focus on community based activities, the first visit up North for new audiologists should also focus on introduction to the different local organizations they are most likely to meet within the activities of the program.

Follow-up of universal newborn hearing screening

Planned to be in effect by spring 2014, the Universal Neonatal Hearing Screening (UNHS) provincial program brings new challenges for hearing services up North. First, because, as discussed, there is a high turnover of Inuit and non-Inuit staff, maintaining experienced screeners in the region might be a challenge. There are four birth centers in Nunavik. Making sure the child completes the screening and receives the appropriate follow-up before 3

months of age will be challenging especially in communities that do not have a screener since parents might have to travel to another community. Also, looking for long term rehabilitation services when on-going services are actually non-existent in the North may put pressure on the HOP to develop services as well as expertise that are not part of the activities of the program.

All of the constraints mentioned above are issues that may reduce the accessibility of the Inuit population to a program that is intended to be universal. At the moment, medical staff on both coasts, paediatricians, ENTs, and audiologists are pre-emptively working to explore ways to facilitate the implementation of the protocol. However, the population concerned here should be part of the discussion as families need to be informed of the screening protocol and what is involved if not completed.

Conclusion

The main goal of this article was to give an overview of the Hearing and Otitis Program in Nunavik, its structure as an outreach program, as well of some of its challenges.

In 1990, Crago et al. already mentioned how challenging it is to develop a community based program for specific populations. However, almost 25 years after the HIINQ was created, the program remains active, overcoming obstacles to serve the best interests of the population. Solutions have shown the need to be flexible and creative, especially when it comes to maintaining the expertise of the trained personnel, either Inuit or non-Inuit, already in place. This is believed to be the key to maintaining relationships, mutual understanding, and for non-Inuit to get to know the northern reality.

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End Notes

¹For a better understanding, the words *siutilirijik* and *siutilirijiit* hold the same meaning, the first being the singular and the other the plural form. *Aaniasiurtiapik* is also the singular version of *aaniasiurtiapit*.

Authors' Note

Correspondence concerning this article should be addressed to Isabelle Billard, École d'orthophonie et d'audiologie, Faculté de médecine, C.P. 6128, succursale Centre-Ville, Montréal QC H3C 3J7 CANADA. Email: isabelle.billard@umontreal.ca.