



A Project Summary Report with Recommendations for Addressing Speech, Language and Hearing Issues

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INTRODUCTION

This report summarizes the findings of a project commissioned by the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) that included a review of the literature, key informant interviews and a survey of speech-language and hearing professionals. This project was carried out by consultants under the direction of an advisory committee and funded by Health Canada. Interested readers are encouraged to go to the full reports available through CASLPA.

The project's purpose was to increase understanding of the current accessibility and availability of speech-language pathology and audiology services for 0 to 6-year-old children of First Nations, Inuit and Métis heritage in Canada. Due to project limitations in funding and scope, First Nations, Inuit and Métis community members were not consulted regarding their perceptions of the speech-language and hearing needs and services provided to young children. The specific objectives of the project were to identify

- gaps in existing knowledge and service delivery;
- barriers to service use;
- existing needs and practices of service providers;
- recommendations for next steps to address the speech-language pathology and audiology needs of young First Nations, Inuit and Métis children.

Each of these areas is addressed in the following report.

To meet the goals of this project, literature from Canada, Australia, New Zealand and the United States was reviewed and key informant interviews conducted with 85 individuals in these countries. A survey was also completed by 1,194 speech-language and hearing professionals, 563 of whom indicated they provided services to 0 to 6-year-old First Nations, Inuit and Métis children between 2005 and 2010.

GAPS IN EXISTING KNOWLEDGE AND SERVICE DELIVERY

The research conducted in this project has identified gaps in existing service delivery for First Nations, Inuit or Métis children that fall into two main categories of 1) missing information, and 2) service delivery.

Missing Information

Three areas of missing information emerged from the reports. First, the percentage of First Nations, Inuit or Métis children who have speech-language or hearing disorders or delays is currently not known. Second, most speech-language and hearing professionals report a need for more information about First Nations, Inuit and Métis cultures, languages and communication development in order to feel prepared to work with these populations. Third, there is a scarcity of valid and reliable assessment tools and methods that professionals can use to deliver services to children with First Nations, Inuit or Métis heritage.

Prevalence/incidence information

Addressing population health needs requires reliable prevalence and incidence information for specific conditions. In practice, no robust data currently exist on the prevalence of speech, language and hearing conditions either in young First Nations, Inuit and Métis children in Canada or for the total Canadian population.

While some research suggests a higher prevalence of conditions related to hearing, such as otitis media (middle ear infections), among First Nations, Inuit and Métis children, the figures vary widely. The research states that because First Nations, Inuit and Métis children exhibit a pattern of early onset of otitis media, episodes of longer duration and lasting into later ages, they may be at higher risk for educational difficulties. A small number of studies in Australia and Canada have associated chronic ear disease and hearing loss among Aboriginal youth with lower academic performance, increased behavioural problems, lower rates of participation in sports activities and increased interactions with the criminal justice system (see, for example, Phoenix Consulting, 2009; Ayukawa, Bruneau, Proulx, Macarthur, & Baxter, 2004).

Practitioner awareness of cultural/linguistic/community-specific early child development

Demographic characteristics, such as high income, educational attainment, urban lifestyle and western heritage documented in the survey, can create barriers for speech-language pathologists and audiologists in understanding experiences and working with First Nations, Inuit and Métis peoples.

Almost 50% of the 563 survey target respondents who are currently providing services to 0 to 6-year-old First Nations, Inuit and/or Métis children estimated that they were unprepared or very unprepared to deliver services when they first started to practise with these populations. However, their assessment of their preparedness increased as a result of working with these populations. Survey respondents indicated a desire for more information about First Nations, Inuit and Métis cultural characteristics. Furthermore, two-thirds of respondents said they were unable to access or were unaware of professional development programs to assist them in working with First Nations, Inuit or Métis people. At least some of the difficulties that these practitioners reported can be attributed to a lack of available research on the specific languages, cultures or developmental patterns used in the communities they are serving.

Effective assessment and intervention tools

Insufficient knowledge about local cultures, languages and communication development leads to both under-reporting and over-diagnosis of speech-language and hearing conditions in young First Nations, Inuit and Métis children. Over-diagnosis may be due to cultural and/or linguistic biases in standardized assessment tools combined with a lack of culturally appropriate tools for the evaluation of communicative competency.

A body of literature demonstrates the limitations of standard intervention tools, methods and strategies. In contrast, there is little evidence that addresses specifically the best way to assess and support early speech, language and hearing development in First Nations, Inuit and Métis children. As well, developmental information for First Nations, Inuit and Métis children is lacking. Best practices borrowed from mainstream service delivery may not be effective for First Nations, Inuit and Métis families.

Service Delivery Gaps

Access to services could be expanded for First Nations, Inuit and Métis children. Two over-arching concerns with current services were apparent: 1) unequal distribution of services across the country, and 2) lack of community infrastructure.

Unequal distribution of services across the country

Compared to mainstream Canadians living in urban areas, First Nations, Inuit and Métis families living in their home communities have less access to speech-language and hearing services. Likewise, speech-language pathology and audiology services are unevenly distributed across provinces and territories.

Of the 563 survey target respondents currently providing services to young First Nations, Inuit and Métis children, only 21% of speech-language and hearing professionals stated they actually delivered services on a First Nation (n=84) or in an Inuit community (n=9).

Consequently, most families must travel to speech-language and hearing professionals outside of their communities to access services. In remote or isolated settings, travel expenses to see a speech-language pathologist or audiologist are generally not covered by Health Canada's non-insured health benefits program.

The survey also showed that only 5% of respondents provided services within Aboriginal Head Start facilities. If available, these would be ideal locations to support communication development of many First Nations, Inuit and Métis children. That being said, were services available, access is further weakened by the fact that early child development programming is disproportionately distributed. For example, according to Statistics Canada data, almost 21% of Canada's First Nation, Inuit and Métis population live in Ontario; however, only 5% of Aboriginal Head Start On Reserve and 9% of Aboriginal Head Start in Urban and Northern Communities programming is available in that province.

With the exception of the Yukon and Northwest Territories, it was difficult to determine how early years policy and programming were being implemented for First Nations, Inuit and Métis children. Access to speech-language pathology and audiology services varies with provincial and territorial jurisdiction and/or agency, sometimes intra-provincially by health authority or region and, at times, sub-regionally. Diagnostic and treatment services are

offered by different providers, and even by different systems. Services may be administered through schools or public health, mental health or social service systems.

Lastly, while there is an increased push for universal newborn hearing screening to identify permanent hearing loss across Canada, this initiative does not extend beyond the neonatal period. As well, audiological follow-up for First Nations and Inuit newborns living in remote communities is reported to be problematic.

Lack of community infrastructure

Remote and isolated settings require a variety of service options. However, poor communication infrastructure in remote and isolated settings restricts the use of alternative service delivery, such as telehealth, that could lead to more frequent and affordable service. The Assembly of First Nations has noted that almost 20% of First Nations report not having access to a telephone in their home, more than 50% report not having a computer and more than 70% report no internet access. These data reflect the challenges—high cost, uneven broadband access and limited or no technical support—that make services such as secure videoconferencing often impossible. Consistent with this picture, 95% of speech-language and hearing professionals reported never or only occasionally using videoconferencing to provide assessment and intervention with First Nations, Inuit and Métis clients.

An outreach service delivery model is often used in isolated or remote communities and is costly, time-limited and dependent upon the weather. Practitioners servicing remote communities report that they recognize the need to provide community-focused services. However, outreach service delivery models often result in reduced opportunities for practitioners to provide intensive and ongoing service, learn more about community-based culture, provide parent/caregiver/staff training or deliver prevention and promotion programs.

Practitioners report that the lack of adequate facilities and services restricts their capacity to offer speech-language and hearing services in communities. Inuit early childhood educators and administrators from childcare centres and Aboriginal Head Start Programs across Inuit Nunangat recently recommended investments in infrastructure to ensure that facilities “meet minimum building standards, to provide for more licensed spaces and safe and warm spaces within which the child can learn and play” (Inuit Tapiriit Kanatami, 2010).

BARRIERS TO SERVICE ACCESS AND USE

Three general barriers were identified that affect service access and use for First Nations, Inuit and Métis children: location, service coordination, and cultural and community fit of services. These barriers partially explain the service gaps described above.

Location

Location reduces access to speech-language and hearing services for First Nations, Inuit and Métis children due to an interplay between

- lack of, or insufficient funding for services;
- large geographical distances;
- low availability of practitioners;
- costliness of service delivery options;
- problems with the socio-cultural and linguistic suitability of services.

The overall effect of these barriers is inequitable access and reduced utilization of services that support young children's critical early communication development.

Service Coordination

Speech-language and hearing service coordination refers to the manner in which services are funded, delivered and sustained. The current system of funding federal, provincial and territorial programs that support early child development services for First Nations, Inuit and Métis children is complex. Jurisdictional boundaries among federal, provincial and territorial agencies regularly and profoundly influence the quality and continuity of care available to First Nations, Inuit and Métis children.

In 2007, Dr. Kellie Leitch, Advisor on Healthy Children and Canada's Youth, stated that health services for First Nations and Inuit children and youth cannot take place without comment on Jordan's Principle.¹ She highlighted the need for federal early intervention programming to reach even more children in order to affect health outcomes for First Nations, Inuit and Métis children. She noted that Aboriginal Head Start programming was

¹ The First Nations Child and Family Caring Society summarizes Jordan's Principle as a child-first principle intended to resolve jurisdictional disputes within and between federal and provincial/territorial governments and to apply to all government services available to children, youth and their families. Examples of services covered by Jordan's Principle include but are not limited to education, health, child care, recreation, and culture and language services (FNCFCS, n.d.).

available to only 10% of all First Nations, Inuit and Métis children and recommended that coverage be expanded to 25% of these children by 2012 (Leitch, 2007).

An audiologist serving remote and northern communities described the practical impact of funding disputes on children. “Beyond amplification there are no speech-language support services or hearing-habilitation services for these communities. We had tried to arrange the latter for a couple of the children on the coast this past fall with the help of [a home visiting program], but it fell apart mainly because of transportation issues and out of whose purse it was going to come.” Such cross-jurisdictional situations restrict opportunities for First Nations, Inuit and Métis children. There is a need to incorporate child health and developmental services into a more seamless system with multiple entry points.

Cultural and Community Fit of Services

A key consideration emerging from the project’s reports is the need for more culturally and linguistically appropriate services that are flexible to community needs and are provided in a culturally safe manner. British Columbia’s First Nations Health Council views cultural safety within the following continuum:

- 1) *Cultural awareness* is an acknowledgement of differences;
- 2) *Cultural sensitivity* is equated with understanding and appreciating the consequences of European contact;
- 3) *Cultural safety* focuses on practitioner awareness that they bring their own culture to the table and that it is important to allow the patients to contribute their culture to their intervention; and,
- 4) *Cultural competence* is achieved when systems and/or people are able to apply their knowledge about culture to changing or improving practices in ways that influence health outcomes (FNHC, 2009).

Researchers and community advocates in New Zealand have proposed that *cultural safety* is a key aspect of how services “fit”. At CASLPA’s 2010 annual conference in Whitehorse, presenters discussed how culturally unsafe service delivery could limit a family’s comfort with and utilization of available services (Ball, 2010).

As discussed previously, the literature shows that traditional speech-language and hearing service delivery models may not be well suited to the needs of First Nations, Inuit or Métis

populations. Discussions on how to improve the quality of speech-language and hearing services revolve around cultural fit, linguistic fit and respect for the need to build trusting relationships.

Cultural fit

To be culturally safe, services need to be culturally appropriate to the community being served. Currently, this does not always happen. For example, in a report on speech-language services, the Alberta Child and Youth Initiative referred to the lack of a multicultural approach. It stated that service delivery models and protocols are often not well suited to the needs of some populations, including Aboriginal populations (ACYI, 2005). Inappropriate application of majority normative assumptions devalues local stories, behaviours and relationships, particularly for Aboriginal people, and contributes to culturally unsafe environments (Inglebret, Jones, & Pavel, 2008). A lack of research on cultural differences across First Nations, Inuit and Métis communities exacerbates the problems arising from a lack of cultural fit.

Speech-language and hearing professionals tend to use a traditional approach to assessment and intervention. This approach involves assessing, diagnosing and treating individual children who have been identified and referred by concerned adults, such as parents, caregivers, daycare and preschool staff, and medical staff. It is described in the literature and by key informants as a less suitable, deficit-oriented model as opposed to a more strengths-based approach. The literature recommends the use of universal, strengths-based approaches, such as population-based approaches that build community capacity and support the development of all children, as more in keeping with the holistic view of wellness promoted by First Nations, Inuit and Métis organizations.² However, only 8% of practitioners reported using universal approaches to support First Nations, Inuit or Métis clients. One reason that so few practitioners reported using such approaches may be their limited familiarity with a community's culture, language and practices.

² A brief description of alternative wellness perspectives that focus on traditional knowledge and practices of Inuit, First Nations and Métis people, as promoted by Inuit Tapiriit Kanatami, the Assembly of First Nations and the Métis Centre of the National Aboriginal Health Organization, may be found, respectively, in the following resources: ITK, 2007; AFN, 2007; Métis Centre, 2008.

Linguistic fit

There is a critical lack of research on early language development of First Nations, Inuit and Métis children. In addition, little is known about the dialectal varieties of English and French used by First Nations, Inuit and Métis. And yet, research identifies the importance of having such information to avoid unnecessary pathologizing of language differences (see, for example, Peltier, 2009; Ball & Bernhardt, 2008; Sterzuk, 2008). As stated previously, few assessment tools exist that have been specifically developed for use with First Nations, Inuit and Métis children. Similarly, audiologists identify the need for tests within the audiology test battery that incorporate speech sounds specifically from the First Nations, Inuit and Métis languages of the clients they assess.

Trust relationships

Providing culturally safe practices would encourage trust relationships to develop. In addition, although few speech-language and hearing professionals provide services in First Nations, Inuit and Métis communities, doing so encourages cross-cultural understanding and trust building. As well, those who visit remote and isolated communities using an outreach model report that more time is needed to build relationships. These outreach visits are often infrequent and of short duration. Consequently, practitioners have insufficient time to engage with community, train local staff and talk with family members and children.

EXISTING NEEDS AND PRACTICES OF SERVICE PROVIDERS

This section describes needs and practices of the target group of respondents: speech-language pathologists, audiologists and supportive personnel who currently work with First Nations, Inuit and/or Métis children. Discussion is organized around five service delivery questions and concludes with a table of some current practices that are being used to provide services to First Nations, Inuit and/or Métis children.

Which services are being delivered where?

The majority of speech-language and hearing professionals said they worked under the authority of provincial/territorial (health, education, child, and family services) agencies rather than First Nations, Inuit or Métis agencies. About 20% of the speech-language and hearing professionals working with First Nations, Inuit or Métis children defined their service location as isolated. Fewer than 5% of survey respondents delivered services in Aboriginal Head Start facilities. Only 21% (n=93) of speech and hearing professionals reported delivering services on a First Nation or in an Inuit community.

What materials are being used for screening and assessment of speech-language and hearing disorders and what adaptations of these materials have been developed for different groups?

Slightly more than three-quarters of survey respondents said they used commercial standardized tests with First Nations, Inuit and Métis clients. Between 55% and 82% of respondents reported using less formal assessment approaches (e.g. dynamic assessment, questionnaires and observation) in addition to formal standardized assessment. These less formal approaches are often recommended in the literature as less biased alternatives to standardized instruments.

Twenty-five percent of audiologists and 11% of speech-language pathologists said they used interpreters in their practice. Almost one-half of the survey respondents said they have adapted their services when working with First Nations, Inuit or Métis clients. Respondents were not asked to report how they adapted speech-language or hearing services. However, almost one-half of survey respondents said they allowed more time as a support strategy.

How are speech-language and hearing services being delivered (i.e., telehealth, consultative, direct)?

The majority of survey respondents reported that they provided direct intervention services. Nearly one-third of survey respondents said they only offered a direct service model of intervention. In contrast, more than 50% of respondents said they used direct services in combination with prevention-promotion, collaboration and/or distant consults. Many speech and hearing professionals reported using play-based approaches in their interventions with children.

Speech-language and hearing professionals reported working with a wide variety of professional, community and family resources when identifying new First Nations, Inuit or Métis clients. While more than 20% of respondents said they collaborated with provincial/territorial ministries or agencies, fewer than 10% reported collaborating with Aboriginal Head Start programs. Over 90% of speech-language professionals who work in urban and rural settings reported never or only occasionally using videoconferencing to deliver services.

What education and training do speech-language and hearing professionals provide?

While most respondents to the survey provided training as part of their practice, few training opportunities were reported to be offered in First Nations or Inuit communities: 42% of professionals reported that they have never provided training to community members, community-based support staff or paraprofessionals.

How are speech-language and hearing professionals adapting services for First Nations, Inuit and Métis clients?

The diversity of First Nations, Inuit and Métis populations challenges speech-language and hearing professionals to develop effective and appropriate service delivery models. This challenge is being addressed by practitioners and within communities, professional bodies and institutions. Examples of these practices (Table 1) were found in the literature and shared by key informants; however, they cannot be viewed as best practices since no cost-benefit or effectiveness studies were found.

Table 1: Examples of current practices adapted for First Nations, Inuit and Métis service delivery

Professional Workforce Development	Promoting ongoing professional educational discussions; e.g., CASLPA’s First Nations, Inuit and Métis Interest Group.
	Providing community-level experiences for students; e.g., Iqaluit Clinical Practicum Placement.
	Increasing Aboriginal participation in academic program development and enhancing academic staff and students’ cultural awareness; e.g., UBC’s School of Audiology and Speech Sciences course, <i>An introduction to service delivery with people of First Nations, Métis and Inuit heritage</i> , and <i>The First Nations Speech and Language Assistant Program</i> offered at the Nicola Valley Institute of Technology in BC.
Service Delivery Options	Jurisdictional innovations; e.g., BC First Nations Health Council-Maternal and Child Health/PHSA Hearing Screening Partnership.
	Community-based services; e.g., Garden River First Nation Speech Assistant project.
	Telehealth access to speech-language and audiology services; e.g., Thunder Bay District Health Unit Tele-ABR Assessment.
	Inuit Hearing & Otitis Program (Nunavik).
	First Nations managed service coordination and delivery; e.g., Manitoba First Nations Education Resource Centre and BC’s First Nations Education Steering Committee, Special Education Program.
Screening and Assessment	Developing local norms; e.g., Iqaluit School Board’s Inuktitut and English Language Screening Tool.
	Promoting dynamic assessment as an appropriate tool.
Universal Strength-Based Programs	Several examples, such as Moe the Mouse; Talk, Learn and Grow Together; Quill to Quill; Tiga Talk.
Community Capacity Development	Aboriginal recruitment (speech-language pathologists, audiologists, speech assistants, Inuit interdisciplinary therapy assistants) and community empowerment (e.g., prenatal and parent speech-language development workshops)

RECOMMENDATIONS FOR NEXT STEPS

Data from the survey, the literature review and the key informant interviews all indicated a need for service gaps to be filled and changes to be made to speech-language and hearing service delivery. Of critical importance is the need for more research so that appropriate and culturally relevant assessment and interventions can be developed; improved access and distribution of services to remote or isolated communities across the country; coordination with other early child development services; and incorporation of more of the community's culture, language and characteristics into service delivery.

Four general principles guided selection of the following recommendations:

- 1) Service delivery models and tools should be based on collaboration with First Nations, Inuit or Métis people.
- 2) Practices should be culturally safe.
- 3) As much as possible, services should be provided where in First Nations, Inuit and Métis people live. In particular, more services need to be provided in First Nations, Inuit and Métis communities, to build relationships and develop community-based intervention approaches that respect local priorities, beliefs, cultural practices and capacities.
- 4) Collaboration with early child development programs for First Nations, Inuit and Métis children needs to be expanded.

CASLPA Recommendations

Recommendation 1: Research that incorporates First Nations, Inuit and Métis perspectives

The CASLPA 2009–2011 strategic plan includes an objective to advocate for human resources to meet system and population needs. Initial research efforts have documented academic, government and speech-language and hearing practitioner views of service delivery for 0 to 6-year-old First Nations, Inuit and Métis children.

It is recommended that the CASLPA Board support research initiatives that incorporate First Nations, Inuit and Métis perspectives to

- gather prevalence and incidence of speech-language and hearing conditions;
- validate and extend the research results from the member survey, literature review and key informant interviews of this current project;
- identify local service and support priorities;
- explore how audiologists and speech-language pathologists can best support community-identified needs;
- explore how community-led teaming and collaboration can better support children and families.

Recommendation 2: Cultural competency

CASLPA, representing more than 5,500 speech-language pathologists, audiologists and supportive personnel in Canada, supports and empowers its members to provide optimal services for all clients, which include culturally competent practices to support better outcomes with young First Nations, Inuit and Métis children. In the survey, many professionals reported that they initially felt unprepared to provide services for this client population. In addition, there were a very small number of respondents with First Nations, Inuit and/or Métis heritage which may, in part, reflect socio-economic barriers to pursuing the necessary graduate studies. Trust is developed over time and is often enabled by professionals who share the cultural and linguistic traditions of the client population.

It is recommended that CASLPA support the cultural competency and increasing diversity of its membership by

- including cultural competency content in the *Foundations* document for training and certification of audiologists, speech-language pathologists and supportive personnel;
- sponsoring an annual scholarship for a person of First Nation, Inuit or Métis ancestry who is a CASLPA member and enrolled in a Canadian speech-language, audiology or supportive personnel program;
- providing an opportunity for CASLPA members of First Nations, Inuit and Métis heritage to self-identify in the annual membership renewal process so that accurate numbers of practitioners can be obtained;
- providing an opportunity for members to act as mentors and advisors to other professionals and to community members who are considering a speech-language or hearing services career;
- exploring ways to attract individuals of First Nations, Inuit and Métis heritage to the professions and to collaborate with other institutions to support them in their studies;
- supporting practicum externships in rural/remote and isolated settings for speech-language and hearing students;
- encouraging organizations who have developed cultural competency training programs to make them available at no cost to CASLPA members.

General Recommendations

Recommendation 3: Environmental scan

First Nations, Inuit and Métis populations are widely distributed in Canada. Approximately 1.2 million First Nation, Inuit and Métis people live in remote/isolated, rural, urban and suburban communities (Statistics Canada, 2008). They access a range of programming and services for their 0 to 6-year-old children when and where available. Accessibility of provincial, territorial and federal speech-language, hearing and early childhood programming is highly variable. Likewise, the application of service provision guidelines are unevenly interpreted and applied. Research shows that the net result is that less service is accessible, available or suitable for First Nations, Inuit and Métis children.

It is recommended that an environmental scan of speech-language and hearing services for 0 to 6-year-old First Nations, Inuit and Métis children be conducted. The environmental scan should

- describe official federal, provincial and territorial policies for providing services to status and non-status First Nations, Inuit and Métis children;
- document how policies are applied by these departments;
- identify all points of care available for this client population;
- expand and effectively distribute culturally adapted materials that describe the scope of speech-language, hearing and supportive personnel services available, how to access services, and who pays for services, as well as general information on speech, language and hearing development.

Recommendation 4: Program flexibility

Although provincial and territorial governments have responsibility to provide universal speech-language and hearing services to First Nations, Inuit and Métis children, the availability, accessibility and suitability of services vary widely. Service reviews and practitioner observations highlight the degree to which government agencies and departments work in isolation from each other. Often, programs that identify and address speech-language and hearing difficulties in 0 to 6-year-old First Nations, Inuit and Métis children are unavailable to children who are not enrolled in provincial schools. Practitioners and community members require more flexibility in how funding is applied so that equal and reasonable access to services is available based on community priorities and regardless of location.

It is recommended that more flexibility in funding be provided to improve early access to speech-language and hearing professionals. On a specific level, the following issues should be addressed:

- Health Canada's non-insured health benefits program should provide travel benefits for children accessing speech-language and hearing services.
- Universal newborn hearing screening programs should include a second tier at 2 or 3 years of age to address later developing problems such as those caused by chronic middle ear infections.
- Where available, speech-language and audiology practitioners should be directly linked to the early child development team in all Aboriginal Head Start programs, in daycares with a high enrolment of First Nations, Inuit and/or Métis children and with community maternal child health workers.

Recommendation 5: Alternative service delivery models

The federal government has classified more than 30 percent of all First Nations and 100% of Inuit communities as remote/isolated. Many Métis communities are geographically distant from speech-language and hearing resources. There are few, if any, supports for children and families between visits. Many communities lack the infrastructure and human resources to adequately coordinate, host and deliver local services. A flexible approach to service delivery is needed to address geographical distances and affordability of service delivery while at the same time supporting culturally appropriate and context-sensitive preventative interventions closer to home. Adapting service delivery models to local cultures and communities requires committed and funded efforts on many levels.

It is recommended that alternative, strengths-based and preventative models of service delivery be supported to increase the accessibility and the availability of audiology and speech-language pathology services. Suggested adaptations may include

- purchasing portable audiology equipment for use by community staff to ensure that a full range of hearing screening services is available for all 0 to 6-year-old First Nations, Inuit and Métis children;
- supporting the delivery of universal hearing screening services by visiting audiologists via transportation or videoconferencing modalities;
- developing telehealth service assessment and treatment guidelines for audiology and speech-language pathology practice in First Nations, Inuit and Métis settings;
- increasing community capacity for supporting children with special needs, such as multi-disciplinary early childhood development therapy assistants.

CONCLUSION

Addressing basic access to speech-language pathology and audiology service delivery is essential, especially in the case of the rapidly growing First Nations, Inuit and Métis population in Canada. While 5.4% of the Canadian population is 4 years of age or younger, Inuit children in this age range comprise more than 11% of the Inuit population. More than 40% of First Nations are 20 years of age or younger, and one-third of the Métis population is under the age of 14 years. Thus, there is a growing need for services. This project confirmed that gaps exist in the knowledge base and the speech-language pathology and audiology services available to young First Nations, Inuit and Métis children in Canada. It also reaffirmed the need for reliable prevalence figures regarding communication disorders in these populations. In addition, culturally and linguistically appropriate tools and practices must be developed to better serve all First Nations, Inuit and Métis children in their home communities. It is hoped that everyone involved—families, practitioners, early childhood educators, community members, academics and many others—will recognize that a concerted effort is needed to fill the long-standing gaps and eliminate the barriers described in this report. First Nations, Inuit and Métis wellness models, with a holistic as opposed to symptomatic focus, can help guide us in these endeavours.

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