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

Speech, Language and Hearing Services to Indigenous People in Canada, Australia, New Zealand and the United States: A Literature Review and Report on Key Informant Interviews

October 2010

CASLPA-ACOA

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ABSTRACT

Little is understood about the availability and nature of speech-language and hearing services for First Nations, Inuit and Métis children, 0 to 6 years old, in Canada. This summary of a literature review and key informant interviews describes service accessibility issues, service providers and how service is delivered in Canada, the Australia, New Zealand and the United States. The authors identify common service barriers, such as location, service coordination and cultural and community fit, and highlight current practices that address the need for improved and appropriate services.

Keywords: speech-language pathology, audiology, First Nations, Inuit and Métis children.

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Funding for this report was provided by Health Canada's First Nations and Inuit Health Branch, Child and Youth Division. The work and any opinions therein are not those of Health Canada. Correspondence concerning this article should be addressed to Sharon Fotheringham, Director of Speech-Language Pathology and Standards, the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA), Ottawa, ON. E-mail: sharon@caslpa.ca.

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ACKNOWLEDGEMENTS

The authors wish to acknowledge the support and direction provided by members of the CASLPA project Advisory Committee: Dr. May B. Bernhardt, Isabelle Billard, Lori Davis-Hill, Kendra Dean, Sharon Fotheringham (Project Manager), Dr. Elizabeth Kay-Raining Bird (Chair), Melanie Morningstar, Assembly of First Nations (AFN), Monica Nahwegahbow, Anna Claire Ryan, Inuit Tapiriit Kanatami (ITK) and Deanne Zeidler. We appreciate the input of the CASLPA project Advisory Committee and the editing provided by May Bernhardt, Elizabeth Kay-Raining Bird and Sharon Fotheringham on early drafts of the literature review. Gratitude is also extended to numerous informants, who filled in information gaps and provided wider scopes of understanding to this project.

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EXECUTIVE SUMMARY

Speech-language pathologists and audiologists are voicing their concerns about gaps in the range and types of service delivery available for First Nations, Inuit and Métis children. In response to ongoing special interest group and conference panel discussions, CASLPA requested and received grant funding from Health Canada to develop a better understanding of the current availability of speech-language pathology and audiology services to First Nations, Inuit and Métis children (0 to 6 years old) through a quantitative and qualitative data collection process. An advisory committee, consisting of four speech-language pathologists and one audiologist who work with First Nations, Inuit and/or Métis children, one representative from the Assembly of First Nations (AFN) and one from Inuit Tapiriit Kanatami (ITK), two speech-language pathologists who are university professors (UBC, Dalhousie) and the CASLPA project manager, guided the development of the project. This current literature review and key informant summary document is followed by a CASLPA national survey report of practice in this area, to constitute the quantitative portion of the project.

This summary of relevant literature and key informant interviews represents a knowledge base for understanding the nature of speech-language pathology/audiology service delivery to First Nations, Inuit and Métis children, 0 to 6 years old. Specifically, the following questions were addressed: What services are being delivered? Who is delivering services? and How are they being delivered? To gain a fuller perspective of the unique aspects in this area of service delivery, a wider scope was drawn to include summaries of relevant literature and interviews with knowledgeable experts from Australia, New Zealand and the United States (USA) regarding services and intervention practices with different Aboriginal groups. In addition to describing what is known about service accessibility, provision and delivery, information was sought to describe the barriers to service delivery. Lastly, further inquiries were made to find current practices that address the need for improved and appropriate services.

The literature on the topic of speech-language pathology/audiology services for First Nations and Inuit children 0 to 6 years old is minimal. Métis-specific data are mostly non-existent. Accordingly, the structure of this literature review and key informant interview document takes a somewhat unorthodox approach. The introduction begins with a rationale for the literature review in conjunction with key informant interviews, given the growing questions about accessibility, availability, affordability and suitability of speech-language and hearing services.

The report's relevance is framed within the larger scope of the CASLPA project. Within the introduction, research methodology is described, including key search terms for publication research, how the status of current service delivery throughout Canada was obtained, and the key informant interview selection process. A list of key informants, nationally and internationally, is provided as Appendix I.

The next section, Population Health and Service Delivery, provides a contextual base for the report in terms of (a) general demographic information; (b) the health status of First Nations, Métis and Inuit peoples; and (c) descriptions of health services, such as early child and youth development programs that are specifically funded for First Nations, Inuit and Métis people. This background information serves to widen our views on how to address communication and hearing needs for these young children by showing how mainstream cultural interests shape research, policies and clinical practice concerning Aboriginal people (Reading, Kmetic & Gideon, 2007). The general overview is followed by a description of available data on the prevalence of speech-language and hearing conditions in young First Nations, Inuit and Métis children in Canada, with similar information reported for Indigenous children in Australia, New Zealand and the USA. The Population Health and Service Delivery section concludes with a description of speech-language pathology/audiology service delivery in Canada. A comprehensive comparison to international methods of service delivery was not possible since specific nations' data for this area were not readily available.

Next, barriers to service delivery are discussed based on the literature and key informant interviews. These are represented under three themes: location, service coordination and the cultural and community fit of services. Reports on service delivery in Australia, New Zealand and the USA show a similar range of barriers that encompass the geographic, socio-economic, political, cultural and linguistic experiences of Indigenous people.

The following section discusses efforts that are beginning to address many of the barriers that limit speech-language and hearing services. The assortment of "current practices" is discussed in terms of the specific needs raised by practitioners, community members and professional bodies and institutions. These areas are workforce development, service delivery options, screening and assessment, universal strengths-based programs and community capacity development. Similar current practices are occurring in Australia, New Zealand and the USA. In conclusion, we highlight the changes that are occurring to improve speech-language and hearing service delivery

to First Nations, Inuit and Métis children, 0 to 6 years old. Key areas in need of attention, such as appropriate assessment approaches and further service coordination, while recognizing and respecting the cultural and linguistic diversity of the environments in which young First Nations, Inuit and Métis children live, are summarized.

INTRODUCTION

In its 2009–2011 strategic plan, the CASLPA Board of Directors identified an objective to advocate for human resources to meet system and population needs. Based on member feedback, CASLPA developed a research project that will assist efforts to advocate for increased speech-language and hearing services for young First Nations, Inuit and Métis children. The goal of the project, titled Quantitative and Qualitative Study of Speech-Language and Hearing Services for First Nations, Métis and Inuit Communities in Canada, was to determine the current speech-language and hearing services provided to First Nations, Inuit and Métis children aged 0 to 6 years of age. A literature review and key informant interview summary was the first research outcome. The research process acknowledges and respects the language, culture and traditions of the First Nations, Inuit and Métis populations.

Terminology

First Nations, Inuit and Métis people have frequently been described as one group, using a single descriptive, Aboriginal or Indigenous. In this paper, with the guidance of the project's Advisory Committee, the distinct population terms, First Nations, Inuit and Métis are used. For Canadian contexts this report adopts the definitions supporting government standards for Aboriginal administrative data in the province of British Columbia. These definitions are included in Appendix 2. In New Zealand, the common usage is Māori and Pasifika; in Australia, it is Aboriginal and Torres Strait Islanders; and, in the USA, the general usage is Native American and Alaskan Natives. Original titles of organizations, articles, groups, references within texts, and so forth are preserved herein. On occasion, Indigenous and Aboriginal are used as a general descriptor.

Rationale and Goals of the Literature Review and Key Informant Interviews Summary

The literature review and key informant interview summary seeks to provide a brief and practical review of speech-language and hearing service information culled from national and international sources. This review is the first step in a needs study that endeavours to provide CASLPA members, early child development workers, families, community members, academics, and many others with fuller understanding of current service status across Canada. It will also highlight the unique needs for assessment and treatment tools and

materials to serve First Nations, Inuit and Métis children who are having difficulty with speech-language and hearing.

The rationale for this research is twofold. First, practitioners and community members are expressing frustration and concern about service availability and appropriate provision (Ball, 2009) and that speech-language and hearing services are less accessible for these children (Ball & Lewis, 2005a). Second, anecdotal evidence suggests that pre-school First Nations, Inuit and Métis children may have a high incidence of conditions affecting communication development, though there is little if any actual data to corroborate practitioner impressions. While some regional audiometric studies have been completed for First Nations and Inuit people—particularly prevalence of otitis media (middle ear infections) and hearing loss (Langan, Sockalingham, Caissie & Corster, 2007)—the lack of real data highlights the need for a systematic approach, consistent data definitions and measures, and a capacity to take cross-cultural methodological and sampling issues into account (Bowd, 2005). Undeniably, there is a need to see how much of a research gap exists in this area, and to gather further information on what is being done to address communication difficulties that young First Nations, Inuit and Métis children may be experiencing.

The goal of the literature review and key informant interviews summary is first to identify current service delivery practice, indicating who is delivering services and how they are being delivered. The summary begins with an overview of First Nations, Inuit and Métis population and health service contexts, then in turn describes (a) the current status of health and service delivery in Canada, (b) known barriers regarding speech-language and hearing service access for First Nations, Inuit and Métis children aged 0 to 6 years, and (c) examples of current practice that address speech-language and hearing service challenges.

Methodology

A research framework that included both primary and secondary sources was necessary to address the relatively unexplored area of speech-language and hearing service delivery among First Nations, Inuit and Métis people. This approach stems from the CASLPA project's original intention to address practitioners' concerns. It was anticipated that a combination of reading and talking with people would provide a fuller picture of the situation in Canada and other countries. In a recent paper on improving educational achievement

among Native Americans in the Washington State school system, the authors identify two interrelated gaps that make targeted action difficult: an *opportunity gap*—a structural reference to colonial history and practice and its encounter with forms of cultural resistance; and a *data gap*—an absence or generalized lack of empirical evidence about Native American achievement (CHiXapkaid et al., 2008). Similar gaps characterize the information available regarding speech-language and hearing services for 0 to 6 year old First Nations, Inuit and Métis children living in Canada.

In order to create a better understanding of the barriers to speech-language and hearing services and the current practices for addressing those barriers, the research context needed to foreground the unique population circumstances, conditions and history of First Nations, Inuit and Métis people living in Canada. Additionally, the search was situated in a larger early child development discourse, which assumes that investments in childhood development during the early years enables better outcomes for children and families and improves a child's life chances.

Literature review

The search for relevant scholarly articles, books, dissertations, or other resources included exploring World Wide Web search engines and personally requesting further sources from members of the project's Advisory Committee and key informants. The focus was on recent works pertinent to the present status of speech-language pathology/audiology services to First Nations, Inuit and Métis children living in Canada within an early childhood development context, and on similar works in Australia, New Zealand and the United States. Sources describing current demographic data were sought out to learn more about the particular populations, seen as a necessary component of appropriate service delivery.

Databases searched included Academic Search Complete, Academic Search Premier, Bibliography of Native North Americans, CINAHL with Full Text, Communication & Mass Media Complete, Consumer Health Complete – EBSCOhost, Education Research Complete, ERIC, Family & Society Studies Worldwide, Google Scholar, Humanities International Index, MEDLINE with Full Text, Mental Measurements Yearbook, Professional Development Collection, PsycARTICLES, PsycBOOKS, PsycEXTRA, PsycINFO, and SocINDEX with Full Text. The databases were searched using a combination of subject

terms and keywords: speech-language pathology, communication disorders/delays, audiology, hearing, speech-language pathology/audiology service delivery, children, dialect, disorder, First Nations, Inuit, Métis, Canada, Indigenous, Aboriginal and Torres Strait Islanders, Australia, Māori and Pasifika, New Zealand, Native American and Alaskan Natives, United States, multicultural, children's health, community wellness, school readiness, demographics, preliteracy development, and early child development.

Further published, in-print, and unpublished resources were obtained through personal requests to the project's Advisory Committee; during key informant interviews; through personal communication with community and provincial First Nations organizations that the authors have visited and are familiar with in their consultant roles; from a CASLPA e-mail invitation to solicit further information about current practices from more than 200 CASLPA members who expressed interest in a First Nations, Inuit and Métis Special Interest Group; and from responses received to date from the CASLPA survey currently in progress at the time of writing.

Additional relevant resources were obtained by searching websites of relevant professional organizations, such as those serving speech-language pathologists/audiologists in Canada (national and provincial), as well as those in Australia, New Zealand and the United States. E-mail requests were also made to personnel within these professional organizations. Further websites searched included those of specific First Nations, Inuit and Métis organizations, early intervention programs, as well as the Government publication lists provided in both provincial and federal health and education websites, including Health Canada's First Nations and Inuit Health Branch, Child and Youth Division.

All references obtained were then reviewed fully as to their relevance according to the literature review's goal of describing speech-language pathology/audiology service delivery, service barriers and current practices to young First Nations, Inuit and Métis children. Additional information was selected and recorded from these sources to add context regarding the unique population circumstances, conditions and history of First Nations, Inuit and Métis people. As part of this review, these documents' reference lists were scanned to identify other potentially relevant articles.

Key informant interviews

The project's research plan to include interviews with key informants was intended as a way to fill in current information not found in the literature. The selection process arose through various interactions: with the Advisory Committee, while reviewing the printed and electronic sources, via CASLPA's membership and international network, from the authors' consulting connections, and, subsequently, during communications with key informants. While many persons with specialized knowledge of First Nations, Inuit and Métis speech-language and hearing services live in Canada, counterparts in New Zealand, Australia, and the United States, who are working with this population or researching Indigenous speech-language and hearing issues were also contacted.

For the most part, interviews were conducted using a prepared set of interview questions that were designed by the authors and the Advisory Committee. (Questions are listed in Appendix 3.) Questions were composed to elicit open responses from participants. In some cases, only those questions relevant to the interviewee's area of expertise were raised. In other cases, key informants chose to respond to the questionnaire in print, via e-mail. The telephone interviews were conducted either by one or both of the authors. In seeking current status of service delivery in Canada, the key informants were chosen mostly through provincial health channels, and interviews were centred on availability of services. In pursuing more detailed information about current practices, the authors connected with key informants whose names arose via the communication channels mentioned above.

For key informant data collection, notes were taken during each conversation, e-mail responses were collected and additional printed sources that were forwarded by participants to supplement their interview comments were reviewed. These resources have provided valuable access to information about local, regional, national and international activities, research, programming, resources and emerging practices. The CASLPA project originally anticipated fewer than twenty interview participants; however, 85 informants were contacted, either for a full interview or for clarification of specific details about service delivery. (For a complete list of key informants, countries of residence, titles, content focus and dates contacted, see Appendix 1.)

The literature review and key informant summary was prepared at the request of CASLPA and funded by Health Canada's First Nations and Inuit Health Branch, Child and

Youth Division. The consultants have several decades of experience working in First Nations communities in the areas of speech-language pathology and First Nations and Inuit community development and communications/telehealth, respectively. At the time of writing, Ms. O'Hara is providing direct speech-language pathology services to four First Nations communities in BC, and Mr. Rowlandson is involved in telehealth implementation projects in BC and Ontario. Since only a small percentage of persons referenced and contacted are Indigenous, readers are cautioned that this summary report primarily conveys a non-Indigenous view of First Nations, Inuit, Métis, Aboriginal, Torres Strait Islander, Native American, Alaskan Native, Māori and Pasifika people, their experience of and access to services and systems and the hearing and speech-language health status of their children. It should be noted that the consultants have made a focused effort to temper the privilege of exogenous voice and accept responsibility for failure and/or success in this regard. All Indigenous perspectives obtained via key informant interviews are highlighted within this document.

National Aboriginal Organizations

There are three representational National Aboriginal Organizations (NAO) in Canada: the Assembly of First Nations (AFN), Inuit Tapiriit Kanatami (ITK) and the Métis National Council (MNC).

AFN is the national advocacy organization of First Nations in Canada. The AFN Secretariat is designed to present the views of the various First Nations through their leaders in areas such as Aboriginal and treaty rights, economic development, education, languages and literacy, health, housing, social development, justice, taxation, land claims, environment and an array of issues that are of common concern.

ITK is the national voice of the 55,000 Inuit living in 53 communities across Inuit Nunangat (Inuit homeland). Inuit Nunangat is made up of the four Inuit land claimed regions: Inuvialuit Settlement Region (Northwest Territories), Nunavut, Nunavik (Northern Quebec), and Nunatsiavut (Northern Labrador). ITK represents, promotes and advocates the interests of Inuit on a wide variety of environmental, social, cultural and political issues and challenges facing Inuit on the national level.

The MNC is a Métis specific representative body representing the Metis Nation nationally and internationally. The central goal is to secure a healthy space for the Métis Nation's on-going existence within the Canadian federation.

POPULATION HEALTH AND SERVICE DELIVERY

An underlying requirement for population-based research is to preface data collection with historical and social context. This approach is both reflected in many of the documents reviewed and reiterated by most of the key informants. The population base of this literature review summary is First Nations, Inuit and Métis children, aged 0 to 6 years. Specifically, these children are linked to concerns about accessibility, availability and suitability of speech-language and hearing services. In general, First Nations, Inuit and Métis people are reported to have poorer health relative to the Canadian population as a whole (Health Canada, 2001; Young, 2003; Minore & Katt, 2007).

In order to understand this health inequity, discussions of health services, particularly in early development areas such as speech-language and hearing, must consider a broad range of factors and conditions that influence health (World Health Organization, 2008; Public Health Agency of Canada [PHAC], 2010). Loppie Reading and Wien (2009), as such, refer to social determinants that include circumstances and environments as well as structures, systems and institutions that influence the development and maintenance of First Nations, Inuit and Métis health.

In day-to-day terms for First Nations, Inuit and Métis children and families, these social determinants reflect an interaction among multiple factors (Trumper, 2004; AFN, 2005; Aboriginal Children's Survey, 2006; Statistics Canada, 2006; Walker, 2008; Egeland 2010; R. Friedlander, personal communication, June 4, 2010), some of which are

- lower per capita income, elevated rates of food insecurity and the negative impacts of poverty/hunger,
- racism and residential school aftermath;
- lower high school graduation and educational achievement rates for First Nations, Inuit and Métis; and
- higher percentages of homes in need of major repair, household crowding and exposure to health hazards such as pest infestations, molds and industrial contaminants.

Colonizing influences that have been documented in Canadian territories as early as the sixteenth century continue to have a profound impact on First Nations, Inuit and Métis well-

being. In recent correspondence with a New Zealand speech-language therapist[1] and PhD candidate (K. McLellan, personal communication, June 20, 2010), reference was made to an article by Borell, Gregory, McCreanor, Jensen, & Moewaka Barnes (2009). McLellan stated that the article gave her a "hard-hitting" new perspective on the position of Indigenous people in a colonised society, particularly in her work on aphasia with Māori adults. Briefly, Borell et al. (2009) note how non-Indigenous privilege sustains inequity and discuss how adopting this perspective shows potential for changing public health and social relations by facilitating self-awareness in those with conferred advantages.

The following subsections provide currently available demographic information, beginning with a general overview of health status, followed by descriptions of mainstream health services, such as early child development programs and maternal health programs that are specifically funded for First Nations, Inuit and Métis people. Complementing these descriptions is a brief summary of First Nations, Inuit and Métis frameworks of health. These initial sections serve to frame a way to address communication and hearing needs for these young children. The section concludes with a description of available data on the prevalence of speech-language and hearing disorders in young First Nations, Inuit and Métis children and when and how they typically receive assessment and intervention services.

Demographics

The Aboriginal population in Canada totals approximately 1.2 million people. More than one-half of the individuals who identified themselves as Aboriginal people in the 2006 Census lived in urban areas (Walker, 2008). Together, Inuit and First Nations represent about 2.5% of the Canadian population and are growing at a rate that is 3.1 times (Inuit) to 3.9 times (First Nations) faster than the Canadian average (Statistics Canada, 2006). The Métis National Council estimates that there are 350,000–400,000 Métis Nation citizens in Canada, and that Métis now comprise 26% of the total Aboriginal population in Canada (Métis National Council, 2010).

[1]In Canada, the recognized professional label is speech-language pathologist; in Australia, it is speech pathologist; in New Zealand, it is speech-language therapist; and in the USA, it is speech language pathologist. For this report, the recognized labels are used when referring to clinicians in the respective countries; any general references will use the term speech-language pathologist.

Canada's Aboriginal population is widely distributed. The Department of Indian and Northern Affairs reports a total of 634 First Nations reserves, 54 Inuit communities and 65 Métis communities. In addition, 119 Friendship Centres provide a social and cultural meeting place for First Nations, Inuit and Métis people who live in non-Indigenous, rural municipal and urban settings (Aboriginal Canada Portal staff, personal communication, April 14, 2010).

First Nations is the largest of the three Aboriginal groups in Canada. More than 750,000 people are registered First Nations. The majority of First Nations reserves have a population of fewer than 1,000 and some less than 500. Almost 60% of all First Nations live in rural or remote settings. Ontario has the largest registered First Nations population, followed by British Columbia. Saskatchewan has the largest number of First Nations per capita (14%) and Quebec the lowest (1.4%). More than 40% of First Nations are 20 years of age or younger (Indian and Northern Affairs Canada, 2006).

There are more than 50,500 Inuit in Canada; most live in a rural/remote community (73%). The Inuit population primarily lives in one of the four Land Claim Regions of Inuit Nunangat (Inuit homeland): Nunavut (49%), Nunavik (19%), the Inuvialuit Regional Settlement (6%) and Nunatsiavuit (4%). The age distribution of Inuit is highly differentiated from the Canadian average. Greater than 11% of the Inuit population is 4 years of age or younger while only 5.4% of the general Canadian population is 4 years of age or younger (Statistics Canada, 2008).

Based on figures from the 2010 Census, the Métis National Council reports that one-third of the Métis population is under the age of 14 and two-thirds of the Métis population live in urban centers (Métis National Council, 2010).

More than 50 languages within 11 language families are Indigenous to First Nations and Inuit in Canada. Métis have their own recognized language, Michif. Among the Indigenous languages in Canada, Inuktitut, Cree and Anishnaabe (Ojibway) are most widely spoken. As noted in the *Universal Declaration of Linguistic Rights,* colonization in Canada imposed foreign languages and undermined the language loyalty of speakers (PEN International, 2006). Informal and formal assimilation policies and institutional actions have had a direct and longstanding impact on Indigenous language use and diversity (Royal Commission on Aboriginal Peoples, 1996).

Health Status

From a mainstream perspective, there are reported differences in the health status of Aboriginal people compared with that of Canadians in general. On virtually every health status indicator, Aboriginal Canadians, as a whole, are described as having more health issues compared to the general population (Health Canada, 2001; Young, 2003; Minore & Katt, 2007). Reports indicate that on average (a) the life expectancy of an Aboriginal person is seven years less than most Canadians, (b) the infant mortality rate is from two to four times higher, (c) the diabetes rate is triple, and (d) overall, children and adolescents are at a greater risk for health-related conditions (Vancouver Coastal Health, 2010; Trumper, 2004).

Nonetheless, readers are reminded that descriptions of the health status of Aboriginal people in Canada are still neither comprehensive nor adequate (Minore & Katt, 2007). In their 2007 report on Aboriginal health care in Northern Ontario, Minore and Katt state that little has been written about those who live off-reserve, the Métis and those who do not have registered status.

First Nations, Inuit and Métis health frameworks

Concerns have been raised that the focus in the health literature has been deficit-oriented as opposed to a more strengths-based perspective (Minore & Katt, 2007; Bowd, 2005). In his report on otitis media and the health and social consequences for Aboriginal youth, Bowd (2005) states that a more holistic view of health, linking individual, family, community and the environment, should inform public health and medical practice in the treatment of otitis media and other diseases (Bowd, 2005). Inuit Tapiriit Kanatami, the Assembly of First Nations and the Métis Centre of the National Aboriginal Health Organization (NAHO)[2] widely promote a wellness focus on traditional knowledge and practices of Inuit, First Nations and Métis people. A brief description of alternative perspectives to the mainstream model of service delivery is described here.

Inuit, through the Alianait Inuit-specific Mental Wellness Task Group, have identified mental wellness as an Inuit health priority and have created the Alianait Inuit Specific Mental

[2]The National Aboriginal Health Organization (NAHO) is a national not-for-profit organization dedicated to improving the physical, mental, emotional, social and spiritual health of First Nations, Inuit and Métis individuals, families and communities. NAHO states as its mission to advance and promote the health and well-being of all First Nations, Inuit and Métis through collaborative research, Indigenous Traditional Knowledge, building capacity, and community led initiatives.

Wellness Action Plan. This Inuit-specific national strategy reflects Inuit mental wellness priorities and is all-inclusive. This holistic action plan focuses on a positive program approach that builds on strength, empowerment with both preventative strategies and protective factors. In addition, this action plan promotes mental wellness programs based on the principles that start with people first (to include the family and the community) and the role of young people acknowledged and nurtured. The plan supports language and cultural capacity development, communication, collaboration and coordination with partners in order to develop seamless continuum of programs and services which are culturally and linguistically appropriate (A.C. Ryan, personal communication, October 29, 2010; ITK, 2007).

The Assembly of First Nations' cultural framework was used to guide the analysis and interpretation of their Regional Longitudinal Health Survey. Described as the "total person model," each of four elements are linked to aspects of everyday being: *body* (physical well-being, outward behaviour, activity); *mind* (learning, education, mental health, mental activity); *spirit* (spirituality, traditional culture, spiritual health, cultural and spiritual activity); and *heart* (extended family environment, continuity with living environment, family, social harmony and balance and emotional stability and well-being) (Reading, Kmetic & Gideon, 2007).

In 2007, the Métis Centre of NAHO identified the following "highly relevant" beliefs for their population that form the foundation of their health determinants framework: holistic, intertwined and fluid determinants, well-being driven, and culturally/contextually relevant. For example, in describing "fluid" determinants, they state that informal education and lifelong learning must be incorporated into typical variables of education to be adequate for Métis. Other components include themes of self-determination, colonization, spirituality, land, and culture and tradition (Métis Centre, 2008).

Understanding how Inuit, First Nations and Métis people, in general, view wellness is a more inclusive approach for thinking about service provision, such as audiology and speech-language pathology. Inherently, increased understanding of different perspectives embraces a common feature among the communities, to observe holistically as opposed to symptomatically. This theme resonates within other Indigenous cultures. Kerrie Gallagher, a Māori speech-language therapist living in a bi-cultural world, offers a holistic therapy

approach to families, *Te Whare Tapa Wha; taha wairua, taha tinana, taha whanau, taha hinengaro,* that highlights building relationships—*Whakawhanaungatangas,* inclusiveness—*Manaakitanga,* and genealogy and cultural identity—*Whakapapa.* Her model is underpinned by principles of protection, partnership and participation secured within the Treaty of Waitanga (Gallagher, 2010a).

Health Service Delivery

Traditional Indigenous approaches to healing are based on "an understanding and access to knowledge offered by both the physical and spiritual world through the use of ceremonies" (Weitzel, 2001). In her paper on the development of traditional Indigenous medicine in Canada, Mexico and Guatemala, prepared for the Canadian International Development Agency, Weitzel (2001) says that community practices, such as healing circles led by local Healers, are based on knowledge that has been developed and refined for thousands of years. The meaningful participation of Healers, says Weitzel, is a "critical component" for the development of Indigenous people, particularly for health and well-being. Across communities, demand is growing for adopting holistic wellness perspectives to healing (Weitzel, 2001; T. Laporte, personal communication, August 27, 2010). Likewise, examples of social capital, such as cultural activities (Migone and O'Neil, 2005), have demonstrated community capacity to positively contribute to health and well-being. For instance, Varcoe & Dick (2008) found that powwows and traditional dance play an important role in mental health and cultural and spiritual healing. Chandler and Lalonde (1998) have identified protective factors—land claims, self-government and education—that may explain differences in suicide rates among Aboriginal communities. McCarty (2008) links bottom-up language planning to student pride in native culture. Sharla Peltier, an Ojibwe First Nations speech-language pathologist, points practitioners to the grandmothers: "It's how you learn more about the spiritual development of the child and how it overlaps with communication development" (personal communication, August 20, 2010).

Partnerships between Indigenous populations in Australia, New Zealand and the United States have adopted similar positions, generating culturally-enriched service guidelines and models. Gould (2005) notes the critical "ice-breaking" and validation role of Aboriginal adults in accurate assessment and diagnosis of children. R. Friedlander (personal

communication, June 4, 2010) relates the importance of offering traditional foods as a measure of cultural competency and the value of engaging grandmothers in child assessment and follow-up. Similarly, Australia's Aboriginal Community Health Service has adopted an infant-to-aged care "life-cycle" approach, and the Australian Resource Centre for Healthcare Innovations has adopted a (3-day/2 night) "camp" style *Boomerangs* workshop to help parents foster their child's overall health (Australian Resource Centre for Healthcare Innovations, 2009).

The current federally-funded on-reserve health services system began in the 1920s, associated with the spread of tuberculosis (Lavoie & Williams, 2009). In their discussion on changes in current health care needs of First Nations, Lavoie and Williams point out that, initially, services were provided by nurses assisted by translators, then, beginning in the seventies, community health representatives and addictions workers joined in.

Access to health services for First Nations and Inuit is a fiduciary responsibility of Canada and is embedded in federal legislative and policy domains. Health Canada's First Nations and Inuit Health (FNIH) Branch is the primary federal mechanism for meeting federal health service obligations for First Nations and Inuit persons. Currently, the federal government provides health services to First Nations and Inuit living within their communities that include health promotion, disease prevention and primary care. Hadden-Jokiel (2008) has summarized health service eligibility and scope for First Nations, Inuit and Métis people in Canada. Table 1 provides a modified summary. No distinction is made for Métis health care.

Table 1: Service Eligibility by Program

Programs Targeting All Aboriginal People	Non-Insured Health Benefits Program for First Nations and Inuit	Programs Available on All First Nations Reserves	Programs Available Only in Isolated and Remote Communities
• Limited prevention and promotion programming	• Vision care • Dental treatment • Drugs • Crisis mental health • Medical transportation • Medical equipment and supplies • Provincial health premiums (BC & Alta)	• Prevention and promotion programs • Public health • Alcohol/Drug addiction treatment • Home and community care	• Nurse practitioners & physicians • Emergency services • Primary care (assessment, diagnosis, drugs for acute care & referral to other health care services)

In addition to FNIH's policy and program mandate, First Nations, Inuit and Métis health services are secured through contemporary legislative protocols. Specifically, the *Canada Health Act* outlines principles, objectives and criteria that must be met to secure the transfer of financial resources to the provinces/territories for the delivery of insured health services. Provincial and territorial requirements include five criteria: public administration, comprehensiveness, universality, portability and accessibility (Gideon, Nicholas, Rowlandson & Woolner, 2009).

A key component of FNIH programming is its non-insured health benefits (NIHB) program. "Non-insured" refers to those health benefits not provided for by provincial health plans. In 2007–2008, NIHB accounted for more than 40% of FNIH's $2.04 billion budget. NIHB medical transportation expenditures, which are funds that enable adults and children to travel out of their community to receive care, represent 29% of the total $898.2 million NIHB budget (Health Canada, 2009a). In some provinces, such as Quebec, Health Canada maintains agreements for the administration of some NIHB components, such as hearing aids (I. Billard, personal communication, October 28, 2010). For the purposes of this discussion, it is noted that ENT consults are eligible for medical transportation claims, while speech-language pathology/audiology assessments and treatment generally are not.

Children and youth services

Children and youth services for First Nations, Inuit and Métis are supported by a number of agencies. Métis eligibility is based on program criteria, such as Aboriginal Head Start in Urban and Northern Communities. See Table 2 for a brief description of these programs.

Table 2: Federally-Funded Child and Youth Development Programming

Program/Funder	Purpose and Scope
Child and Youth Cluster Programming - First Nations and Inuit Health Branch, Health Canada	Four programs are provided that focus on improved health status for First Nations and Inuit individuals, families and communities through strengthened maternal and child health services and supports [many of the 634 First Nations and 53 Inuit communities do not have access to all four programs]: • <u>Aboriginal Head Start On Reserve (AHSOR) Program</u> - operating for more than 10 years. - AHSOR combined with AHSUNC (see PHAC below) provide no-cost services to almost 14,000 0 to 6-year-old children. - most sites are small. - in 2005–2006, Aboriginal Head Start sites maintained an average staff to child ratio of 1:7 (ranging from 1:4 in Alberta to 1:9 in Manitoba. • <u>Canada Prenatal Nutrition Program</u>—First Nations and Inuit Component (CPNP-FNIC) Program - operating for more than 10 years • <u>Fetal Alcohol Spectrum Disorder (FASD) Program</u> - recently shifted focus from increasing awareness of FASD as a disability to community-based prevention activities such as mentoring, education and training of front line workers and health professionals, and to earlier diagnosis and intervention for preschool-aged children and their families • <u>Maternal Child Health (MCH) Program</u> - began community-level activity in 2006–2007 in some regions. The four Cluster programs share short- and mid-term objectives: - increased and improved collaboration and networking; - increased participation of First Nations and Inuit individuals, families and communities in maternal/child health programs and supports; - increased awareness of healthy behaviours; and - increased practice of behaviours such as breastfeeding, and eating a healthy diet (for infants, children and pregnant women). Five broad activity areas are identified: 1. Collaboration with First Nations and Inuit, federal, provincial and territorial authorities and organizations. 2. Delivery of maternal and child health priorities, programs and supports. 3. Leading and incorporating innovative, evidence-based practices in maternal and child health priorities, programs and supports. 4. Education and awareness of First Nations and Inuit maternal child health priorities, programs and supports. 5. Building capacity among First Nations and Inuit individuals, families and communities. (Health Canada, 2009b)

Brighter Futures - First Nations and Inuit Health, Health Canada	Provides assistance for culturally appropriate program development in these areas: • community mental health • child development • injury prevention • parenting and healthy babies In 2000–2001, the program reach was estimated at 45,000 children and families. The program recognizes that children's needs cannot be separated from those of their families and community. (Canada, 2003) Recently, further child development & parent support programming was identified: • enhancements to local Aboriginal Head Start programs • culture and heritage programs • school-based (anti-bullying and after school) programming (Health Canada, 2006).
Aboriginal Head Start (AHSUNC) in Urban and Northern Communities - Public Health Agency of Canada (PHAC)	Half-day preschool programs that address spiritual, emotional, intellectual and physical needs by providing programming in six core areas: • education and school readiness • Aboriginal culture and language • parental involvement • health promotion • nutrition • social support Project features include: • local design and control • administration by non-profit Aboriginal organizations • direct parent and community involvement in its management and operation • parent support in their role as the child's first and most influential teacher • valuing the wisdom of elders (PHAC, n.d.)
Special Education Program - Indian and Northern Affairs Canada	Quality of education programs and support services for students ordinarily resident on-reserve with identified “moderate to profound” special education needs who are between 4 and 21 years of age. Program objectives are: • to allow students to achieve their fullest potential and be contributing members of society • to increase the numbers of high cost special needs students acquiring a regular high school diploma The program supports: • access to quality, culturally sensitive special education programs and services, comparable to generally accepted provincial standards in that locality • some direct school-based services • indirect services, such as support for First Nations schools to design and implement special education programs • First Nations’ administration by a First Nations Regional Management Organization or some cases, by INAC regional offices (INAC, n.d.)

Canadian Action Program for Children (CAPC) - Public Health Agency of Canada	CAPC provides long-term funding to community coalitions to deliver programs that address the health and development of children (0 to 6 years) who are living in conditions of risk, specifically: • children living in low income families • children living in teenage-parent families • children experiencing developmental delays, social, emotional or behavioural problems • abused and neglected children Special consideration is given to: • Métis, Inuit and off-reserve First Nations children • children of recent immigrants and refugees • children in lone-parent families • children who live in remote and isolated communities In a 2007 evaluation, 15% of parents self-identified as Aboriginal. CPAC funds 494 projects, 148 of which provide services to Aboriginal clients. (PHAC, 2010)
First Nations and Inuit Child Care Initiative (FNICCI) - Human Resources Development Canada	As a component of the Aboriginal Human Resources Development Strategy, FNICCI supports: • approximately 7,000 First Nations and Inuit child care spaces • community development and implementation of child care programs designed to address their local and regional needs • increasing the supply of quality child care services in First Nations and Inuit communities • culturally appropriate Aboriginal child care programming, including relevant cultural and language components, in First Nations and Inuit communities • children under six; however, children up to age 12 years are also eligible for after-school care • a focus on parents who are working, actively seeking work, or in educational or training programs (Canada, 2003)
Alberta & Ontario Child/Daycare Program - Indian and Northern Affairs Canada	The Government of Canada has a financial and administrative agreement with the Governments of Alberta and Ontario whereby Canada will directly fund some First Nations child care spaces on-reserve, which provide early childhood development programming and learning services comparable to those offered by the provincial government to people living off-reserve. In Alberta, individual First Nations communities are responsible for setting the fee schedule for their program. Some families are eligible for subsidies, and subsidy rates vary from community to community. In 2002–2003, 812 spaces were being funded in 17 First Nations communities in Alberta. In Ontario, provincial child care subsidies are available for low-income families. Needs testing is applied in keeping with provincial legislation to determine eligibility for subsidies. The maximum subsidy available is up to 100%. In 2002–2003, 3,018 children were served by 57 programs in Ontario. There were 51 child care centers, five after-school programs and one private home child care program. (Canada, 2003)

Aboriginal Head Start

Investments in childhood development during the early years are generally accepted as leading to better outcomes for children and families and improving a child's life chances. Federally-funded health services in Canada, such as the early child and youth development programs described in Table 2 above, adopt this perspective. As Head Start programs support early intervention locally for First Nations, Inuit and Métis children aged 0 to 6 years old, a closer look at the history and current status of Head Start programs is warranted.

Aboriginal Head Start on Reserve and Aboriginal Head Start in Urban and Northern Communities are modeled on the U.S. Head Start program that was first implemented in the Chicago area in 1965. The U.S. program has demonstrated success in mitigating the effect of poverty and addressing special needs among pre-school children. U.S. Head Start reports that approximately 4.6% of their enrolment is Native American, Alaskan Native or Hawaiian and that approximately 11.5% of enrolled children have disabilities (U.S. Department of Health and Human Services, 2010). In Canada, the most prevalent disability identified is speech-language impairment, representing 61% of children with disabilities (Health Canada, 2005). U.S. Head Start conducts regular assessments of key development indicators; specialized project and program research is available through their website (U.S. Dept of Children and Families, n.d.).

Aboriginal Head Start was launched in Canada in 1998. Specialized and integrated facilities are located on First Nations, in Inuit communities and in urban and municipal settings. Like its U.S. counterpart, Aboriginal Head Start provides an early intervention strategy for First Nations, Inuit and Métis children and their families. The program is available at no cost. Structured preschool experiences are designed to prepare young Aboriginal children for their school years by adopting a holistic, community-based and intergenerational approach. Each site provides programming in the areas of culture and language, education and school readiness, health promotion, nutrition, social support and parental involvement (Health Canada, 2004). Aboriginal Head Start sites have been described as early child development hubs (Ball, 2008) and representing a step in the right direction (Gerlach, 2008) by enabling a range of integrated assessments and interventions. Program assessments conclude that a "hub" approach makes it easier for

children to gain access to programs and resources such as dental therapists, community nurses, speech-language pathologists and occupational therapists (Health Canada, 2005). They feature local capacity for enhancing child knowledge and use of Aboriginal languages and improving parenting skills and parent-child relationships (Health Canada, 2005; PHAC, 2010).

Currently, Aboriginal Head Start programming is serving approximately 10% of the Aboriginal pre-school population. The Report by the Advisor on Healthy Children and Youth in Canada has recommended that Aboriginal Head Start services be expanded to accommodate 25% of the Aboriginal pre-school population (Leitch, 2007). No explanation is provided as to why only 10% of Aboriginal pre-school children receive this program or why expansion is recommended for only 25% of these children. Table 3 shows the distribution of Aboriginal Head Start on Reserve and Aboriginal Head Start in Urban and Northern Communities sites in Canada (Health Canada, 2009b; J. Corbiere, personal communication, June 7, 2010).

Table 3: Aboriginal Head Start on Reserve (AHSOR) /Aboriginal Head Start in Urban and Northern Communities (AHSUNC) Sites by Region and Province

AHSOR by Region [FNIH]		**AHSUNC by Province [PHAC] & Inuit Nunangat [Inuit Homeland]**	
	Sites		**Sites**
Atlantic	31	Newfoundland & Labrador	2
		Nunatsiavut	1
		Prince Edward Island	1
		Nova Scotia	1
		New Brunswick	1
Quebec	42	Quebec	4
		Nunavik	17
Ontario	15	Ontario	11
Manitoba	32	Manitoba	20
Saskatchewan	79	Saskatchewan	15
Alberta	46	Alberta	22
British Columbia	83	British Columbia	12
		Nunavut	7
		Northwest Territories	6
		Inuvialuit	2
		Yukon Territory	4
Totals	**328**		**126**

As seen in Table 3, FNIH aggregates Aboriginal Head Start sites by region, PHAC aggregates Aboriginal Head Start sites by provinces, and Inuit AHSUNC sites reflect Inuit Nunangat (Inuit Regions of Canada).

Speech-Language and Hearing Health

Current and reliable information about the prevalence of speech-language and hearing disorders among young First Nations, Inuit and Métis children, ages 0 to 6, is difficult to obtain. As Bowd (2002) states, prevalence data for speech-language and hearing difficulties among First Nations, Inuit and Métis pre-school children may not be accurate. Potential under-reporting, says Bowd, may reflect one or more of 1) limited community-based access to speech-language pathology/audiology professionals, 2) an acute service focus among primary care clinicians, 3) lack of trained staff at referring points-of-care, and 4) lack of cultural knowledge and understanding by medical and allied health professionals. As Ball (2008) reports, many young Aboriginal children are never seen by developmental specialists, such as infant development consultants, pediatricians, speech-language pathologists or audiologists, due to multiple jurisdictional complications. Another possible cause for under-reporting may reflect alternate beliefs to the mainstream bias, which is to address language development concerns as early as possible; from the community's perspective, views of child development may place less emphasis on how a child is or is not responding or speaking. Cultural factors, reports Diana Elliott, a First Nations Provincial Advisor for BC's Aboriginal Infant Development program, may result in speech-language/hearing referrals at school-age rather than earlier (D. Elliott, personal communication, May 13, 2010).

The reliability of speech-language and hearing prevalence estimates in this population is increasingly being addressed, and will be discussed in more detail in later sections. In contrast to the problems related to under-reporting, concerns exist that practitioners may be over-diagnosing dialect and pragmatic differences as speech-language and hearing problems in young children. Over-diagnosis may be due to cultural/linguistic biases in standardized assessment tools, with concomitant lack of culturally relevant evaluation of communicative competency (Peltier, 2009; Ball & Bernhardt, 2008; Kay Raining-Bird & Vetter, 1994). Johnson (2007) describes three main challenges in accurately determining prevalence of speech and language difficulties in children: (1) the lack of clinical consensus on what

constitutes a "communication disorder," (2) the absence of large, representative, community samples, and (3) the changing nature of language-based difficulties as children mature (oral to written). She also points out that prevalence figures are not important in and of themselves, but provide starting points for addressing other important areas, such as family history of speech-language difficulties and known risk factors (2007).

Cappiello and Gahagan (2009) review early childhood development in Indigenous communities. They underscore the relationship between understanding Indigenous childhood development and meaningful assessment and care of children. They note, for instance, that lack of early developmental research makes it challenging for pediatricians to refer children to speech-language pathologists, despite the increased vulnerability due to known multiple-risk factors which increase the potential prevalence of developmental delay among Indigenous children.

While the Report by the Advisor on Healthy Children and Youth (Leitch, 2007) was unable to quantify speech or developmental disabilities for 0 to 4-year-old children in Canada, the report strongly suggests that social determinants, such as poverty, inadequate diet and housing, and overcrowding, place First Nations, Inuit and Métis children in a much higher category of health risk and that mainstream data do not reflect their circumstances, special needs and disabilities.

Prevalence of speech-language difficulties

Given the impact of social determinants and the oft-cited association between early onset, frequency, duration and severity of ear infections and speech-language difficulties among Indigenous children, the literature is very thin with regard to prevalence of speech-language conditions among 0 to 6-year-old First Nations, Inuit or Métis children and almost silent on incidence. The Aboriginal Children's Survey (ACS, 2006) collected an extensive set of data about Métis, Inuit, and off-reserve First Nations children less than six years of age in urban, rural, and northern locations across Canada, but not those living on First Nations. The ACS asked respondents if the child has "any of the following long term conditions [speech or language difficulties] that have lasted or are expected to last 6 months or more?" If the respondents answered yes, then they were asked if a diagnosis was obtained from a physician, nurse or other health professional. To date, reported

prevalence data have not been clinically validated (L. Findlay, personal communication, April 6, 2010).

Looking specifically at an Aboriginal early childhood development context, King (2009) relates concerns expressed by Head Start early childhood education staff that their communities have a significant number of children with special needs and speech-language delays. King's report then highlights the high demand stated by community Head Start staff for special needs training among front-line workers. He recommends that Aboriginal Head Start in Urban and Northern Communities develop a special needs training curriculum in a module laddering format which can be employed in communities relatively quickly.

Similarly, Health Canada reports in the FNIH Children and Youth Services Cluster Evaluation (2010) that the special needs of First Nations children living in their territories are largely unmet and that there is a lack of support and services for these children. In a survey of program participants, the evaluation states that parents who reported waiting for services most often identified medical and other specialists (including "language and speech therapists") as the services that they required. The First Nations of Quebec and Labrador Health and Social Services Commission's 2008 Regional Portrait of the Special Needs Situation for the First Nations of Quebec Clientele between the ages of 0 to 6 years identifies "language problems" as the top special need identified within services or programs (63% of respondents; n=59), followed by learning deficiency (51%), developmental delay (49%) and disruptive behaviour disorder (45%). Hearing loss ranks 17th (12%) (FNQLHSSC, 2008).

In contrast to FNIH feedback from parents and the Quebec/Labrador First Nations research, a survey of FNIH (n=23) and Community staff (n=118) failed to rank speech-language as one of their top five health needs in the early child development category (3–5 years), and ranked speech-language training as their last priority for children with special needs (Health Canada, 2010). Similarly, in 2003, the Government of Nunavut surveyed its nursing staff. When asked to report the most commonly perceived problems for infants and children, nurses identified respiratory illness (20% of respondents), nutrition (18%) and issues related to ear infection (16%) as the top three reported

problems, and ranked speech and language at 2% as one of the least common problems (Roberts & Gerber, 2003).

These varying estimates may also reflect inconsistent data collection, from multiple points of care inside and outside of the community by health professionals, educational staff and health workers. Additionally, health and early education personnel possess varying degrees of familiarity with speech-language and audiology services and knowledge of communication disorders (D. Elliott, personal communication, May 13, 2010). Low rates might also reflect the community members' familiarity with the dialect and the trajectory of language development in their communities. And, as mentioned, the need and ability to seek professional referral may be weighed against other priorities as well as accessibility issues.

Prevalence of conditions affecting hearing and hearing disabilities

While some regional hearing health data are available for this population, mostly on the prevalence of otitis media (middle ear infections) and hearing loss (Langan et al., 2007), a similar knowledge gap exists as for the speech-language pathology data. As Bowd (2005) has observed, moving forward requires a systematic approach, consistent data definitions and measures and a capacity to take cross-cultural methodological and sampling issues into account.

The association between early chronic ear infections and later speech-language difficulties is still debated. A recent study in Holland examined the possible consequences of early life otitis media (OM) and underlying hearing loss on language development and found that a positive relation between otitis media-related hearing loss and language development at 27 months "could no longer be discerned at school age" (Zumach, Gerrits, Chenault & Anteunis, 2010). Alternatively, in reviewing the impact of OM on early childhood development, Williams and Jacobs (2009) state that while links between OM and cognition and educational outcomes are equivocal, children less than 12 months of age who suffer from OM are at higher risk of developing long-term speech and language problems. Specifically, they note that Indigenous child populations, because they exhibit a pattern of early onset, higher prevalence and episodes of longer duration,

may be eat higher risk of cognitive and educational sequelae than non-Indigenous children (Williams & Jacobs, 2009).

The Canadian Institute of Health Research estimates that by age two years 70–90% of children have experienced at least one episode of middle ear disease and associated conductive hearing loss (ResearchNet, 2009). First Nations and Inuit children in Canada have a higher overall prevalence of otitis media (OM), comparable with that of international Indigenous populations. Similarly, a significantly higher proportion of these children is reported to have chronic middle ear disease and concomitant hearing loss that may negatively affect speech and language development (Ayukawa, Lejeune & Proulx, 2003; Guèvremont & Kohen, 2007). First Nations and Inuit organizations and audiology and medical professionals have documented regional and national prevalence of OM and hearing loss among First Nations and Inuit. The 2006 Aboriginal Children's Survey (ACS) (Inuit and Off-reserve First Nations and Métis) asked two hearing-related questions: "Since his/her birth, has__ had an ear infection or otitis media?" and "How many times in the past 12 months?" (Statistics Canada, 2007). Release of ACS speech-language and hearing data is pending approval.

Explanations for the high rate of hearing infections and hearing loss among Indigenous populations have been linked to

- social determinants: poverty, pre-existing health status, inadequate diet and housing, overcrowding, sanitation, education (Australia, 2010; Zubrick, Silburn, Lawrence, Mitrou, Dalby, Blair, Griffin, Milroy, DeMaio, Cox, & Li, 2005);
- geographic isolation: distance from or access to primary care providers (J. Boswell, personal communication, June 4, 2010; O'Connor, Perry, & Lannigan, 2009); and
- cultural safety regarding service provision in this area: lack of respect for or mistrust of service providers (Silburn, Zubrick, DeMaio, Shepherd, Griffin, Mirou, Dalby, Hayward, & Pearson, 2006).

Anecdotal evidence indicates that First Nations, Inuit and Métis children have a higher than expected participation rate in schools for the deaf programming in Alberta. A speech-language pathologist with 29 years of experience working at the Alberta School for the Deaf (for children in grades 1–12) estimates that Indigenous students annually

represent 30% to 35% of their student population. No reason was provided for this level of participation (M. DiMarco, personal communication, June 16, 2010).

Prevalence of conditions affecting hearing in First Nations children

There is little contemporary First Nations audiology research and none that specifically focuses on First Nations preschool populations in Canada. The research that has been conducted confirms a significantly higher prevalence of otitis media, particularly in older children, and corresponds with observed rates in other Indigenous populations (Bowd, 2002).

The 2002–03 First Nations Regional Longitudinal Health Survey (RHS) identified chronic ear infections as one of the three most common conditions among children aged 0–11 and 12–17 years. The RHS reports that 9.2% of First Nations children had "ear infections/problems" which the authors state, without clarification, is "probably" OM (AFN, 2007).

In an early comparative study of conditions affecting hearing among First Nations children in Ontario, Scaldwell and Frame (1985) tested 739 children, ages three to sixteen, attending school in four northern and two southern First Nations. Testing with an electroacoustic tympanometer showed that 24.3% presented with "serous or purulent otitis media." The research does not distinguish OM rates by age, although it does indicate that the highest rates of OM (> 30%) were present in the most remote interior communities (Fort Hope, today known as Eabamatoong and Webequie).

In their study of First Nations hearing loss in one Nova Scotia community, Langan et al. (2007) note that Mi'kmaq parents participating in the 2002/03 RHS identified ear problems to be the most common chronic health condition among 0 to 11-year-old children. Their study compares initial assessments of children in October (n=47) with retesting (n=41) in April. In this study, participants were selected from the community's Head Start program and from the K to 6 school population, and all testing was done in the community health centre. They report that roughly one in four was found to have a middle ear pathology in at least one ear in October (25.5%) and at the subsequent test in April (24.4%). Further, they found that one-half of the children who presented with middle ear pathology on the initial test presented with the same pathology on the

subsequent test date. Importantly, they provide a breakout of the preschool population which shows an elevated rate of middle ear pathology and conductive hearing loss in the younger age group. The researchers emphasize that their findings are in contrast to those found in the general population where rates of otitis media decline significantly after the first year of life, becoming relatively uncommon in children seven years and older (Langan et al., 2007).

Prevalence of conditions affecting hearing in Inuit children

In this section, all the Inuit data and information are from Nunavik. There is little or no data for Nunavut, Inuvialuit and Nunatsiavut. The report, *Qanuippitaa? How are we?*, on the 2004 Nunavik Inuit Health survey notes the high prevalence of hearing impairment among Inuit and traces its origin to contact with southern civilizations in the 1950s: conductive hearing loss is linked to otitis media and sensorineural hearing loss to noise exposure from rifles, shotguns, snowmobiles, power tools and motorized ice augers, for example. It is noted that this survey's focus was primarily on adults, aged 18 year and older. The authors conclude from early research findings that a conductive hearing loss trend begins in school years and increases with age (Ayukawa, Bélanger, & Rochette, 2007).

In his analysis of otitis media among Inuit, First Nations and Métis children and adolescents, Bowd (2002) adopts the World Health Organization (WHO) distinction between chronic otitis media (COM)—chronic suppurative otitis media and chronic perforation of the tympanic membrane—and validates WHO estimates that COM prevalence among Inuit is 12%–46%. Bowd also notes the emergence in the late 1980s of acute and severe otitis media among Inuit (in the Baffin zone) and cites a 1987 study showing up to 78% of Inuit children having "evidence of ear disease." In the early 1980s, research showed that more than 20% of Inuit children in one remote Nunavik community had conductive hearing loss (Baxter, Julien, Tewfik, Ilecki, & Crago, 1986). WHO considers a chronic supparative otitis media prevalence of greater than 1% to present an avoidable health burden; rates of greater than 4% indicate a massive public health problem. WHO noted that among Inuit and Australian Aboriginal populations, rates greater than 12% had been observed (WHO, 1996).

The Nunavik Hearing and Otitis program offers one of the few sources of longitudinal data on Inuit hearing loss, collected by Ayukawa and colleagues. Funded by the Quebec Ministry of Health, the Ungava and Hudson programs have been operating in Nunavik since 1986 in conjunction with McGill University. The programs are supported by itinerant audiologists and community-based *Siutiliriji*—specially trained Inuit staff who provide a wide range of audiology services: testing, hearing aid adjustment, interpretation, program promotion (I. Billard, personal communication, April 21, 2010).

Hannah Ayukawa—the audiology lead for the Ungava (eastern) program—has published numerous studies on hearing loss and impairment among Inuit youth and adults (Ayukawa, Bélanger, & Rochette, 2007; Ayukawa, Bruneau, Proulx, Macarthur, & Baxter, 2004; Ayukawa, Lejeune, & Proulx, 2003). Her work published with LeJeune and Proulx in 2003 reported on pure tone average (PTA) longitudinal data that have been collected for each ear of each child since 1995. Data were gathered from initial screenings, completed when the children were aged 5 or 6 (n=524), and compared with results of a subsequent test (n=515). The second test results were taken from the most recent test on each child, and were only reported as falling within an age range of 7–10 years; thus, no standard was set for elapsed test times. The authors report that 19% of children failed the screening at age 5 or 6, and 12% failed on the subsequent test. Of these 12% who failed the subsequent test, 85% of the hearing loss, described as "failed subsequent test, failed both, passed initial and failed subsequent," was due to otitis media (Ayukawa et al., 2003).

Isabelle Billard, an audiologist with the Hearing and Otitis Program at the University of Montreal, has noticed a trend in students who partake in alternative curriculum programs. With these students she has observed more bilateral hearing loss, due to otitis media, compared to those students participating in the standard curriculum. (I. Billard, personal communication, October 28, 2010).

In a separate study 12 to 16-year-old Inuit youth living in one Nunavik community, Ayukawa et al. (2004) examined the relationship between middle ear disease, hearing loss and the extent to which hearing loss might have an impact on academic performance. They stated that chronic otitis media prevalence is significantly higher among Inuit youth than for the Canadian 12 to 16-year-old population as a whole. Specifically, they note

that one in five in this age group had a hearing loss and reported an association between hearing loss and lower academic performance, as measured by grades for Inuttitut, Language (English or French) and Mathematics, recorded in school files, for the most recently completed school year.

Prevalence of conditions affecting hearing in Métis children

No Métis-specific population data were identified in the research for this report. This was also the case for Bowd (2002). In his study on health, the social and educational consequences of OM for Inuit, Métis and First Nations children and adolescents, he found only one 1990 study that referred to OM and hearing loss among Métis children, but notes that data were reported by four western Arctic health care regions rather than by ethnicity.

Speech-Language and Hearing Difficulties as Reported for Indigenous Children in Australia, New Zealand and the USA

Aboriginal and Torres Strait Islander children

In their summary of the health of Aboriginal children based on data from the 2000/2001 Western Australian Aboriginal Child Health Survey, Zubrick et al. (2004) report that 13.4 percent of 4 to 11-year-old children were reported by caregivers to have difficulty pronouncing certain sounds of English. In total, only 2.7 percent of these children had seen a speech pathologist[3] in the six months prior to the survey. This contact figure dropped to just 0.4 percent in areas of extreme isolation compared with 3.5 percent in the Perth metropolitan area. In a subsequent survey report, Zubrick et al. (2005) further report that speech difficulties are factors[4] significantly associated with risk of clinically significant emotional or behavioural difficulties, referred to as those which hinder the "emotional and psychological aspects of child and adult development as well as the importance and nature of social and community relationships supporting good health"

[3]The professional title used in Australia.
[4]Other factors are life stress events, quality of parenting, family functioning, physical health of the carer, family arrangements, residential mobility, carers' use of mental health services, children with "runny" ears, and children with vision problems (Zubrick et al., 2005, p. 101–102).

(Zubrick et al., 2005). Of those children reported by caregivers to have difficulty saying certain sounds, 44.7 percent were calculated to be at risk for "clinically significant" emotional or behavioural difficulties compared with a risk rate of 21.7 percent for other children. Approximately one in ten children had trouble saying certain sounds (9.8%; CI: 8.6%–11.0%). The authors conclude that findings from the survey support the association of both physical health and social and emotional well-being with speech and language functioning. They also state that although the survey did not directly address language development, the caregiver-reporting measure used in the survey generally can be taken as an indicator of both speech and language development. No mention was made of dialect and consideration of its influence on measurement.

National hearing policy and research partnerships in Australia have enabled rigorous documentation of hearing issues for the general population and among Aboriginal and Torres Strait Islander children. *Hear US*, a recently completed federal enquiry into hearing loss, credits its major impetus to a study of economic impact and cost of hearing loss in Australia (Australia, 2010). The 2006 study documents $11.75 billion in annual costs related to hearing loss and raises hearing issues particular to Australian Aboriginal populations. Specifically, it highlights substantial economic costs of OM among Aboriginal children, noting that 60% of people with hearing loss in the Northern Territory are Aboriginal and recommends an epidemiological study of hearing loss and associated risk factors for Aboriginal populations (Access Economics, 2006).

As early as 1979, Moran, Waterford, Hollows and Jones reported that severe OM was present among 30% of 0 to 9-year-old Aboriginals in Central Australia and in 20% of Aboriginal and Torres Strait Islander children in the Northern Territory. In 2004, researchers assessed 709 Aboriginal and Torres Strait Islander children living in 29 communities in Central and Northern Australia. They report that OM affected 90% of children tested and identified a perforation prevalence from 0 to 60% across communities and 19%–33% across four health regions (Morris, Leach, Silberberg, Mellon, Wilson, Hamilton, & Beissbarth, 2005). These estimates have been corroborated in other Australian regions. The Western Australia Aboriginal Child Health Survey reports that 25.6% of Aboriginal children aged 10 years or younger showed signs of otitis media compared with 3.2% among non-Aboriginal children of the same age (Zubrick et al.,

2004). Four years later, researchers conducting a birth cohort study comparing Aboriginal and non-Aboriginal children estimated that 33% of Aboriginal children in Western Australia suffer from moderate to severe hearing loss, as measured by a variety of methods at different ages (Lehmann et al., 2008).

In their report on complications of otitis media in Indigenous and non-Indigenous children in Australia, O'Connor, Perry and Lannigan (2009) estimate that up to 80% of Aboriginal children in Australia suffer chronic tympanic membrane perforation. Further, they propose cholesteatoma of up to 10% among Indigenous children and that chronic supparative otitis media occurs predominantly among Aboriginal children (WHO, 1996).

O'Connor et al. (2009) describe the real-life impacts of chronic otitis media as a health condition among Aboriginal and Torres Strait Islander children in Australia. They note that three to five children die annually from OM complications and a further 15 suffer permanent hearing loss as a result of OM.

Hearing loss among Aboriginal children in Australia has been described as an "invisible" handicap. In their study of ear disease and Aboriginal families, Howard and Hampton (2006) describe mild or moderate hearing loss as largely unidentified and find that problems arising from hearing loss are often discounted as "bad behaviour." Howard has extended these relationships in his studies of intercultural communications and hearing loss. He suggests that hearing loss is a critical factor in Aboriginal interactions with the school system (achievement, attendance), criminal justice system (arrest, conviction, incarceration), sport (participation, perceived skill by teachers) and notes that it is not an uncommon situation for 45% of a primary school's Indigenous population to have a hearing loss (Howard, 2007; Phoenix Consulting, 2009). During the Senate Hearings into Hearing Health one witness described the impact of hearing loss as a process of disengagement whereby hearing-impaired youth who experience language delays cannot "keep up" with what teachers say and simply "switch off" (Australia, 2010).

Hearing loss has also been shown to influence Aboriginal social position. Ryan, Johnson, Strange and Yonovitz (2006) have identified what they call a "hearing aid effect" among Indigenous Australian children. Although hearing loss is prevalent among Aboriginal and Torres Strait Islanders, the use of hearing aids is extremely low. Their

study, which included 5 to 12-year-old Indigenous children, revealed that social stigmatization of hearing aid wearers is constructed and reinforced at an early age. Ryan and colleagues demonstrated that raising awareness among peers can positively change children's attitude toward hearing aid use.

Māori and Pasifika children

In New Zealand, it is estimated that up to 18% of young school-aged Māori children warrant further investigation of their communication development by a speech-language therapist[5] due to their low scores on articulation, phonological and spoken language screening, albeit from a mainstream perspective. A higher incidence rate of language impairment is likely to be evident in Māori children compared with non-Māori. MacLagan, King, and Gillon (2008) cite studies that situate young Māori in lower socio-economic groupings that put them at a higher risk for literacy development than children from advantaged backgrounds. Furthermore, they refer to longitudinal research that demonstrates that this disadvantage appears to persist in school (Maclagan et al., 2008). Bevan-Brown (2004) found that Māori children were overrepresented in special education classes, and that the shortage of speech-language therapists was mentioned most frequently as a priority by 19 parents of Māori children diagnosed with autism spectrum disorders.

Kerrie Gallagher, a Māori speech-language therapist in New Zealand, has noted the paucity of literature specific to speech-language therapy and working with Māori, and linked this lack of information to Māori underutilization of speech-language services (2008).

New Zealand has identified "ethnic inequalities" in hearing loss and financial and geographical health access barriers specific to Māori populations. Their Ministry of Health notes that hearing loss is identified later in Māori children, and even more so in Pasifika children compared to non-Māori/non-Pasifika children. Hearing loss is also disproportionately experienced by Māori children, accounting for "nearly half of all deafness notifications" (NZMOH-MOE, 2009). The New Zealand Ministry of Health quantified the difference in its analysis of the 2006/07 New Zealand Health Survey

[5]The professional title used in New Zealand.

reporting a prevalence of permanent hearing problems, ("doctor-diagnosed...that has lasted, or is expected to last, for more than six months") among 0 to 14-year-old Māori children of 2.1% and 0.09% among non-Māori children (NZMOH, 2009).

Native American and Alaskan Indian children

In the United States, the National Institute on Deafness and Other Communication Disorders (NIDCD) estimates the prevalence of speech sound difficulties in young children to be about 8%–9%; by the first grade roughly 5% of children have noticeable pronunciation difficulties. During the preschool and early school years, the prevalence for specific language difficulties has been estimated to be between 2% and 8% with an overall median prevalence of 6% (NIDCD, 2010). No distinctions were reported for languages. By contrast, in the 1997–98 school year, the Bureau of Indian Affairs reported that 19% of students received special education services and that services for speech-language conditions had the second largest percentage of students enrolled (Allison & Vining, 1999). Indeterminate Native American and Alaskan Native prevalence information in a younger age group was found in a recent document, entitled the *Twenty-Eighth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (IDEA).* It reports that of all 3 to 5-year-old children (n=701,949) in the U.S. and outlying areas served under IDEA in 2004, 48% (333,290) received speech language pathology services. Of these children, only 1% (3,991) were reported to be Native Americans and/or Alaskan Natives. Similarly, the report found that of all the 0 to 2-year-old infants and toddlers (n=278,795) in this cohort in 2004, 49% (135,910) received speech language pathology services, of which 2% (2,764) were reported to be Native Americans and Alaskan Natives (U.S. Dept. of Education, 2009). As they stand, these prevalence rates are highly inconclusive, excluding those children with speech-language difficulties but not represented under IDEA.

In 1982, Bayles and Harris, in their evaluation of Native American speech language skills among Papago children, cited Bureau of Indian Affairs data from the late 1970s that indicated a total of 33% of the children were identified as having an impairment; hearing loss accounted for 13%, deafness 1% and speech difficulties 19%. They note

inconsistencies when compared with other reported data, which they attribute to differences in screening procedures and diagnostic criteria.

Current national hearing loss data for pre-school Alaskan Natives and Native Americans are difficult to obtain. The first national survey of tribal governments focusing on Native Americans and Alaskan Natives with disabilities was conducted in the late 1990s. Results show differences across various tribes. Responses by 143 tribal governments in the 48 contiguous states and Alaska indicate that 6% of Native Americans and 15% of Alaskan Natives are deaf or hard of hearing. The report notes that those with disabilities must use outreach or satellite programs, travel significant distances or go without services (Fowler, Seekins, Dwyer, Duffy, Brod, & Locust, 2000).

A 1996, study of 57 American Indian children (mean age = 24.7 months) living on a Minnesota reservation showed that tympanometry was abnormal in 26% of ears and 39% of children tested. One in three children (33%) had hearing loss in one or both ears. The authors note that children less than 24 months of age were significantly more likely to have hearing loss than older children (46% vs. 23%) (Daly, Hunter, Hill, Grant, Delong, & Satter, 1998).

Dr. Mindy Smeal, chief of audiology at the Indian Health Service Hospital on the Navajo reservation in northeastern Arizona confirms the high rate of hearing disorders among Native Americans in the southwest. Of the 1,500–1,700 clients she sees each year, she says that approximately 35%–50% of the pediatric population present with chronic or acute OM, many of whom have accompanying conductive hearing loss (M. Smeal, personal communication, May 27, 2010). In contrast, the *Twenty-Eighth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (IDEA)*, cited earlier, reported that in 2004 of all 3 to 5-year-old children (n=701,949) in the U.S. and outlying areas served under IDEA in 2004, only 1% (7,824) received audiology services. Of these children, only 0.99% (78) were reported to be Native Americans and/or Alaskan Natives (U.S. Dept. of Education, 2009).

Speech-Language and Hearing Service Delivery

In Canada, at the community-level, speech-language and hearing screening capacities for pre-school children are unevenly distributed. In any case, the majority of non-medical speech

and hearing services are not eligible for transportation subsidies under the non-insured health benefits plan for First Nations and Inuit children. Entry points for speech-language and hearing services for First Nations, Inuit and Métis children vary by provincial and territorial jurisdiction and sometimes intra-provincially by health authority or region. This report's attempt to summarize service delivery for the 13 provincial and territorial jurisdictions in Canada was unsuccessful. It was difficult to determine what is actually occurring in each provincial/territorial health region due to inconsistencies gathered from policy and program staff and practitioners about actual availability and delivery of services, particularly in remote and isolated areas. What is meant to occur is not always what is happening on the ground. Any future effort to describe the speech-language and audiology service picture for 0 to 6-year old First Nations, Inuit and Métis children in Canada requires a more comprehensive, locally-grounded validation process than was possible for this current report. Informants indicated that senior managers of sub-regional services exercise latitude in approving provincial practitioners to provide services on-reserve, and some provincial funding agencies consider telehealth delivery of provincial speech-language and hearing services on-reserve as acceptable.

Jurisdiction directly relates to service model design and the degree to which provincial/territorial policy enables funding for services for First Nations, Inuit and Métis people. Specifically, funding is embedded in a transportation-intensive approach to services and encompasses provincial/territorial capacity to address the unique demographic needs of First Nations, Inuit or Métis populations. In terms of efficiency, one service review describes it as filled with service inconsistencies, lack of coordination and fragmentation of speech-language services (Alberta, 2005).

In her report on the health of children and youth, Leitch (2007) states that Canada lags behind Europe and the United States where 86.5% of all newborns are now screened for hearing loss compared with just 41% in Canada. In the United States alone 95% of newborns are screened for hearing loss (Joint Committee on Infant Hearing, 2007). Currently, Ontario, New Brunswick, Prince Edward Island, the Yukon Territory, British Columbia, and Nova Scotia have implemented universal programs for infant hearing screening and Quebec is in progress. Programs in both Ontario and British Columbia are in the process of adapting universal neonatal hearing screenings for Aboriginal children (W. Campbell, personal

communication, April 15, 2010; S. Lane, personal communication, August 31, 2010). In Quebec, adaptations to the standard neonatal hearing screening protocol are also being developed at Montreal Children's Hospital to address increased rates of OM in First Nations and Inuit children (I. Billard, personal communication, October 28, 2010). CASLPA recently published a position paper supporting universal newborn hearing screening as a strategy for identifying children with permanent childhood hearing loss and initiating family-centred audiological and communication intervention (CASLPA, 2010).

First Nations' access to and participation in universal hearing screening requires a flexible approach. For example, audiology professionals in northern Ontario have identified important gaps in screening follow-up for First Nations newborns living in remote communities who were screened at birth in hospitals (W. Campbell, personal communication, April 15, 2010). The BC Early Hearing Program, managed by Provincial Health Services Authority (PHSA), was announced in 2005, with final screening sites in place in 2009 (S. Lane, personal communication, August 31, 2010). As part of the BC First Nations tripartite Health Plan, the First Nations Leadership Council specifically identified hearing screening as a priority for all First Nations children under age 6 living on- and off-reserve in BC (FNLC, 2006). Although no information is yet available on early hearing screening service delivery concerns for First Nations families, several culturally safe projects are currently being designed by PHSA, Health Canada's Aboriginal Maternal and Child Health group and the First Nations Health Council for use in service delivery (S. Lane, personal communication, August 31, 2010). These projects are discussed later in this report as current practices.

While the *Report by the Advisor on Healthy Children and Youth* was unable to quantify speech or developmental disabilities for 0 to 4-year-old children in Canada, the report strongly suggests that social determinants, such as inadequate housing and poverty, place First Nations, Inuit and Métis children in a much higher category of health risk and that mainstream data do not reflect their circumstances, special needs and disabilities (Leitch, 2007). With this caution in mind, it is especially important to address the concerns that are being raised about the current gaps in service delivery.

Speech-language and hearing service delivery for Indigenous children in Australia, New Zealand & the USA

No regional information was readily available that quantified speech-language service delivery for 0 to 6-year-old indigenous children in Australia, New Zealand and the USA; however, a small amount of useful information on universal hearing screenings in Australia, New Zealand and the USA was discovered. Universal hearing screening programs were announced in New Zealand in 2007 (New Zealand, n.d.) and in Australia in 2009 (Australia, 2010). They aim to be fully implemented in 2010 and 2011, respectively. In the United States, hearing screening is tracked by the Center for Disease Control's Early Hearing Detection and Intervention (EHDI) Program. The most recent data (2007) show that 95.9% of all newborns (in 47 states and 2 territories) were screened. Data include the 33 Indian Health Services (IHS) hospitals but may or may not include the 15 Tribal birthing hospitals (U.S. CDC, n.d.).

BARRIERS TO EFFECTIVE SERVICE DELIVERY

Three recurrent themes that summarize current barriers to speech-language and hearing service delivery for 0 to 6-year-old First Nation, Inuit and Métis children were pervasive throughout the literature and key informant interviews: location, service coordination and the cultural and community fit of services. These offer a thematic umbrella that encompasses the widely different geographic and cultural experiences of First Nations, Inuit and Métis children, their parents, caregivers and communities in Canada.

- Location refers to the experience of geographic, socio-economic and cultural isolation and its association to accessible, available, affordable and suitable services.
- Service coordination addresses the impact of prescriptive and ambiguous jurisdictional roles on the well-being of First Nations, Inuit and Métis children. Service coordination is key to figure in the ongoing negotiation of inter-agency cooperation by families, with communities and among providers.
- Cultural and community fit of services permeates every aspect of service delivery. Being able to provide services that are culturally and linguistically appropriate as well as flexible to community needs is a key consideration. Given historical and current experiences of First Nations, Inuit and Métis people, investing time in building trust is also key to effective service delivery.

International literature and key informants also referred frequently to location, service coordination and cultural and community fit of services as barriers that affect speech-language and hearing service delivery to Indigenous children. After describing each of the three barrier themes and their relevance for the First Nations, Inuit and Métis of Canada, we provide a brief summary of available information that highlights similarities between Canada and Australia, New Zealand, and the USA with regard to barriers that limit or prevent effective service delivery.

Location

The discussion of First Nations, Inuit and Métis peoples' reduced access to speech-language and hearing services due to location extends beyond the obvious reference to geographical distance to include the limitations of provider availability, affordability of alternative delivery options and suitability of services.

In Canada, all 54 Inuit communities and more than 200 First Nations are semi- or fully isolated—that is, not connected by roads (Gideon, 2007). Isolation is defined by the Government of Canada's Community Workload Increase System, a database used to estimate resource, funding and health program needs in First Nations communities. In 2002, researchers used this system to provide a breakdown of isolated First Nations by province. They found that Manitoba had the highest percentage of isolated communities at 55.6%, followed by Alberta at 44.3% and Ontario at 31.9% (Clark, Riben, & Nowgesic, 2002). Isolation can also be defined in terms of social inclusion. Migration of tens of thousands of Aboriginal people to Canadian urban settings within a single generation has highlighted an experience of cultural isolation and reinforced economic marginalization among Indigenous people (Heritz, 2010).

Experiences of geographic, socio-economic and cultural distance and their association to accessible, available, affordable and suitable services all figure in discussions of location, or "where people are at." In a British Columbia assessment of Aboriginal child and family programming, the authors conclude that both geographical and social distances continue to have an impact on the possibility and frequency of families accessing such programs in nearby, or not so near, urban centers (Gerlach, Gray Smith, & Schneider, 2008). Specifically, the literature demonstrates that the effect of these barriers is inequitable access to supports for optimal health and development (Ball, 2009).

Accessibility

Health service delivery to remote locations in Canada has traditionally been addressed by "parachuting" professionals into remote areas or moving patients and clients to far away and unfamiliar points-of-care. Speech-language pathology/audiology outreach service models predominate in remote Aboriginal communities. This model is typified as involving infrequent visits for assessments and distant consultation follow-up (Gerlach et al., 2008).

Outreach service availability for First Nations, Inuit and Métis children in Canada varies considerably. A report commissioned by the Assembly of Manitoba Chiefs and the Manitoba First Nations Education Resource Centre notes that occupational, physiotherapy, speech-language and audiology service availability for First Nations

children living with a disability on-reserve is limited and often non-existent (Demas, 2005). In a 2003 Ontario report by the Institute for Clinical and Evaluation Sciences, an analysis of First Nations' access to health services concluded that Ontario's northern, reserve-dwelling Aboriginal population had a lower utilization rate for referral care sensitive (specialist) procedures than that of the general population (Shah, Gunraj, & Hux, 2003). Closson's 2005 *Integrated Service Plan for Northwestern Ontario* identifies the isolated First Nations in the Sioux Lookout zone as having the highest rate of admission for potentially avoidable hospitalization conditions in the Local Health Integration Network. Closson concludes that the rate of avoidable hospitalizations for this population is over 250% the rate for residents of the rest of the province (Closson, 2005). This access issue reflects gaps in First Nation and Inuit Health's Non-Insured Health Benefits Medical Transportation (NIHB-MT) program, but for the most part, speech-language and hearing services are not NIHB eligible.

Researchers also underscore the need for culturally appropriate and context-sensitive preventative interventions closer to home. In a review of hearing health services in the central Arctic, Ennis and Clarke-Shippman (2004) describe the practical impacts of patient transportation and outreach models on the Inuit. These include restrictions on interpersonal communication and dietary adjustments that disregard culture and lifestyle standards.

Provider outreach and patient transportation service models reflect fundamental differences in resident locales that decrease First Nations, Inuit and Métis families' capacity to access specialist services for children in need. These models also highlight infrastructural limitations for community-based service provision.

Availability

Absent or infrequent service delivery also reflects a dependence on a shrinking supply of general practitioners, medical consultants, nurses and allied health professionals (Shah et al., 2003). Specific concerns include: a) shortages overall, mostly with physicians and nurses, but also licensed practical nurses; b) chronic problems recruiting and retaining physicians and nurses (Romanow, 2002); and, c) underrepresentation of Aboriginal people in health professions (National Aboriginal Health Organization, 2003).

Availability of speech-language and hearing professionals for First Nations, Inuit and Métis children in Canada is similarly positioned. The Canadian Institute for Health Information reports that in 2007 there were 6,989 speech-language pathologists and 1,344 audiologists—a ratio of one speech-language pathologist for every 5,000 and one audiologist for every 25,000 Canadians (CIHI, 2007; Statistics Canada, 2010). Until a reliable incidence and prevalence baseline is established, it is difficult to determine if workforce supply meets demand. As it stands, Aboriginal Head Start on Reserve reports that it is "often difficult to access the professionals who could accurately identify [at-risk] children largely due to community isolation and long waiting lists" (Health Canada, 2005). In isolated areas of Quebec, a high turnover rate of staff also affects availability of service delivery, which in turn increases wait list times (I. Billard, personal communication, October 28, 2010).

Like the majority of Canadians, lifestyle choices by speech-language pathologists and audiologists further reduce availability and increase dependence on outreach service models. The 2006 Census indicates that nearly one-half of the Aboriginal population lives on-reserve or in traditional communities with the remainder living in urban areas (Statistics Canada, 2006). CASLPA's membership survey, however, indicates that 86% of speech-language pathologists and 95% of audiologists live in cities with a population of 100,000 or more and that just 4% of speech-language pathologists and no audiologists live in remote settings (CASLPA, 2008).

Affordability of alternative service delivery options

Infrastructural gaps also increase dependence on outreach and transportation models. The 2003/04 Aboriginal Head Start on Reserve progress report identifies the inadequacy of local infrastructure, such as buildings and telecommunication technology, as a program challenge (Health Canada, 2005). This need was recently echoed by Inuit Early Childhood Education (ECE) and Aboriginal Head Start Program in Urban and Northern Communities teachers and staff in their call for 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 – ITK, 2010).

The 2002/03 RHS provides a more fundamental view of infrastructure. Almost 20% of First Nations report not having access to a telephone in their home, more than 50% report not having a computer in the household and more than 70% report no internet access (AFN, 2007).

Similarly, in its recent review of information and communication technology in remote and rural First Nations, the National Research Council suggests that about one-half of First Nations communities have no residential broadband or high-speed access, about 40% of First Nations have residential broadband access and about 10% have residential high-speed access. The authors also demonstrate that community-directed broadband access and capacity-building, such as lay person training, are fundamental to delivering and sustaining distributed health services in community settings (O'Donnell, Molyneaux, Gorman, Milliken, Chong, Gibson, Oakley, & Maitland, 2010).

Addressing infrastructure gaps is recognized as a key enabler of telehealth service delivery. However, after more than 30 years of pilot project investment, First Nations and Inuit Health has yet to introduce a telehealth services program. One result has been an uneven distribution of systems and a high degree of variability in service models and resource availability (Gideon, Nicholas, Rowlandsonm & Woolner, 2009).

Only a very small number of Canadian speech-language pathologists, and a much smaller number of audiologists, have used telehealth to provide clinical service. Speech-language pathologists who have tried telehealth identify a range of barriers including cost of equipment, difficulty of use, network access fees, lack of adequate materials (e.g., toys and books) at service endpoints, lack of local service and/or support personnel, complex security and privacy issues, and concerns with cultural appropriateness (J. Moore, D. Anderson, A. Bullock, R. Currie, N. MacDonald, personal communications, 2010).

There is near unanimous agreement among the speech-language pathology/audiology telehealth service deliverers contacted for this review that telehealth is not an appropriate mode of communication for first assessments. Furthermore, in an analysis of videoconferencing as a service medium, researchers identify the possibility of examiner bias that they describe as a potential step backwards for speech-language pathology services in Indigenous settings (Eriks-Brophy, Quittenbaum, Anderson, & Nelson, 2008). They suggest that a distributed services model could increase the cultural distance

between the speech-language pathologist and the community. The resulting limitations in direct contact, exposure to local values and features of village dialect could negatively affect all levels of the assessment process including test administration, interpretation of results, and eventual treatment decisions (Eriks-Brophy et al., 2008). Consistent with this position, the audiologist who provides services through the Thunder Bay District Health Unit's ABR telehealth service notes that they have determined that telehealth is not an appropriate medium for real-time delivery of diagnostic results. Instead, the now-established protocol is to involve a community member to provide such information (W. Campbell, personal communication, April 15, 2010).

Suitability of services

Few speech-language pathologists and audiologists share the social, economic or cultural experiences of First Nations, Inuit and Métis people. Preliminary results of the survey (*n*=1,194) component of this project indicate that of those who responded to the ancestry question, about 1.4% of respondents identified with an Indigenous (Métis (n=7) or North American Indian/First Nations (n=8)) ancestry (CASLPA, 2010). As a caveat, the survey was targeted at service delivery for First Nations, Inuit and Métis children; as a result, this figure may reflect an over-sampling of the total proportion of CASLPA's membership identifying an Aboriginal heritage. In other words, Indigenous respondents may be more likely to self-select.

In the 2010 CASLPA survey, 91.5% of respondents indicated that they had earned a graduate or higher degree, placing speech-language pathology/audiology educational attainment within the top 3% of the Canadian population. Speech-language pathologists/audiologists earn significantly more than the Canadian average. Statistics Canada reports that, in May 2010, the average hourly wage for health and education occupations was $27.50. In 2008, CASLPA reported average hourly wages in the public service sector of $22.00 for supportive personnel, $41.75 for speech-language pathologists and $45.00 for audiologists (CASLPA, 2008). In a recent report commissioned by the British Columbia Association of Speech-Language Pathologists and Audiologists (BCASLPA) of private practice fee guidelines for speech-language pathologists, the ad-hoc committee rejected proposing a fee range of $80–$200/hour,

recommending instead that fees be discussed on a case-by-case basis between the client and clinician, a situation which best addresses the wide diversity of service delivery in the profession (BCASLPA, 2010).

These indicators highlight affordability issues for First Nations, Inuit and Métis communities and place speech-language and hearing service providers in sharp contrast to the socio-economic realities of most First Nations, Inuit and Métis people.[6] One province-wide initiative has commented on the service impact of socio-economic and cultural isolation. The Alberta Child and Youth Initiative notes insufficient education of speech-language pathologists to work with students who are multi-cultural and concludes that service delivery models are often "not well suited" to the needs of Aboriginal populations (Alberta, 2005).

Accordingly, mainstream heritage, privileged socio-economic position and a largely urban base of practice isolate speech-language pathologists and audiologists from Aboriginal everyday life. In addition, as Ball and Lewis note in their study of speech-language pathologist's experiences working with First Nations, Inuit and Métis children, this position may place speech-language pathologists/ audiologists in a position where they feel ill-prepared for delivering services and that the training they received on cultural values has been inadequate (2005).

Service Coordination

Service coordination for First Nations, Inuit and Métis is complex and challenging. There are, however, few examples where complexity has had such a direct impact on vulnerable populations for such a length of time. Service coordination encompasses provincial-federal jurisdictional disputes for health care provision. Inevitable planning and communication gaps may have an impact on First Nations, Inuit and Métis children. Collectively, speech-language

[6]Statistics Canada reports that 40% of First Nations aged 25–64 years and living on-reserve have an annual income of less than $10,000 and estimates that only 29% of the Aboriginal (off-reserve) workforce earns $20.00 or more per hour (Luffman & Sussman, 2007). Earning potential is more constrained in remote conditions. In 2001, the average personal Inuit income was only 66% of that of the average Canadian's though food may cost from two to three times more than in Southern Canada (Ajjunnginiq Centre, 2007). A communiqué drafted by Inuit Head Start teachers and staff indicates that the cost of a jug of milk ($13.00) is higher than hourly wages for most ECE workers (ITK, 2010). Similarly, the *Canadian Medical Association Journal* notes that 25% of Inuit report extreme food insecurity, the times in the past year that their children skipped meals, went hungry or did not eat for a whole day (Egeland, Pacey & Zirong, 2010).

and hearing service coordination issues are a matter of how services are delivered, paid for and sustained. In recent communications with an audiologist who provides outreach services in Ontario's northern First Nations coastal communities, follow-up hearing intervention services in one situation came to a standstill due in part to jurisdictional reasons: "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 the Sir James Whitney Home Visiting Program, but it fell apart mainly because of transportation issues and out of whose purse it was going to come" (P. Stevenson, personal communication, June 15, 2010).

A tragic example of the problems with delivery of existing services is the fate of Jordan, a First Nations child with multiple special needs who passed away in 2005 in Manitoba in the midst of ongoing federal/provincial jurisdictional and funding disputes about his care (Lavallee, 2005). In a joint statement by the Ministers of Health and Indian and Northern Affairs, the government proposed a motion, known as Jordan's Principle, that would initiate the necessary steps to ensure that this tragedy "never happens again" (Indian Affairs and Health Canada, 2007).

The First Nations Child and Family Caring Society (FNCCS, n.d.) 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.

Jordan's Principle assumed its legislative identity as Bill C249, the *First Nations Children's Health Protection Act*. The act notes that the Government of Canada has an obligation to pay for health care services that have been provided to a First Nations child whose ordinary residence is on a reserve and that payment for those services will be made within 30 days by the department that is first presented with a claim for payment in respect of those services (Canada, 2008). Bill C249 was first introduced in June 2008 and reintroduced during the 40th Session of Parliament in December 2008. To date, the *Act* has not been passed into law. It is also noted here that this proposed bill does not address Inuit, Métis or off-reserve First Nations children. The Federal Advisor on Healthy Children and Youth has

stated that no discussion of enhancements or additions to health services for First Nations and Inuit children and youth can take place without comment on Jordan's Principle (Leitch, 2007).

Functionally, the service coordination theme addresses the impact of prescriptive jurisdictional roles on services for First Nations, Inuit and Métis children and the "essential nature of inter- and intra-agency collaboration in sustaining these services" (E. Inglebret, personal communication, June 18, 2010). Health Canada's Children and Youth (CY) cluster identifies collaboration as a key outcome and defines it as "the process by which FNIHB works together with key stakeholders and other federal/provincial/territorial partners, involving them in decision-making in the design, development, and/or implementation of programs to take account of Aboriginal perspectives." An internal survey of FNIH CY staff showed that 73% of respondents rated the levels of collaboration among the CY programs as "very good/good" and 91% responded that they feel that there are "opportunities to further improve collaboration among the CY programs over the next 5 years." When asked to identify primary barriers to collaboration, one respondent replied, "The main barrier is that silos have occurred for so long that the mentality is difficult to break through" (Health Canada, 2009b).

Cultural and Community Fit

Some speech-language pathologists who work with First Nations, Inuit and Métis children are calling for a significant shift in their approach to service delivery (Ball 2009). Discussions on how to improve the quality of speech-language and hearing services revolve around four main topics: (1) cultural appropriateness, (2) linguistic appropriateness, (3) respect for the need to build trusting relationships, and (4) flexibility to community needs.

Cultural appropriateness

This section discusses how mainstream service delivery approaches carry assumptions that detract from community-held beliefs and values, thereby creating culturally unsafe interactions. This point is illustrated, for example, with community reactions to the mainstream focus on school readiness that, some say, perpetuates dominant cultural perspectives of early child development and disregards holistic beliefs.

When addressing the gap in services in remote communities, Sharla Peltier, a First Nations speech-language pathologist, cautions funders to provide service "the right way, or don't go there." Peltier advises against the Western clinical model of service, saying that clinicians should find out first what the community wants. "Maybe they just want to learn how to more actively facilitate communication within the families/day cares. … Nine times out of ten, communities don't want more assessments" (S. Peltier, personal communication, August 20, 2010).

Unlike most analyses of culturally-based gaps in health services, Borell and her colleagues in the Whariki Research Group at New Zealand's Massey University, in their study of Mãori health disparities, discuss the nature of privileges or advantages that have led to the normalization of the dominant culture through political and social systems (Borell et al., 2009). In their view, such normative assumptions abstract and devalue place-based stories, behaviours and relationships, particularly with Indigenous people. This is the context within which Irihapeti Merenia Ramsden gave birth to the term "cultural safety" and developed her approach to interpreting power relationships between health professionals and the people they serve (Ramsden, 2001).[7]

Symptoms of culturally unsafe environments are low utilization rates of available services, denial of suggestions that there is a problem, non-compliance with referrals or prescribed interventions, reticence in interactions with practitioners, anger, low self-worth, and expressions of lack of cultural appropriateness of tools and interventions (Ball, 2010). Many of these situations and behaviours have been documented in the literature concerning Indigenous speech-language and hearing services and conveyed by key informants. Gardner, for instance, has noted that standard speech-language pathology practice of formal testing, filling out forms and writing in files is a concern of community members (A. Gardner, personal communication, May 20, 2010). Similarly, Elliott has highlighted educational and emotional barriers unique to First Nations, Inuit or Métis parents who are seeking out speech-language support for their children (personal

[7]In British Columbia, safety is viewed within a cultural continuum: *cultural awareness* is an acknowledgement of differences; *cultural sensitivity* is equated with understanding and appreciating the consequences of European contact; *cultural safety* focuses on practitioner awareness that they bring their own culture to the table and that it is important to allow the patient to contribute their culture to their intervention; and, *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).

communication, May 13, 2010). In her practice with Inuit children, Kit Dench points out how the absence of local norms works against teacher understanding of the speech-language health status of bilingual Inuktitut and English speaking children (personal communication, May 31, 2010).

Ball (2008) describes how community-based initiatives in Canada are finding themselves in conflict with the provincial focus on measuring "school readiness." [Noting how this process tends to "reproduce dominant cultural understandings" of child behaviour and parental support, Ball links institutional capacity to set developmental agendas with concerns expressed by community-based staff that pressure to instill pre-literacy and pre-numeracy skills will pre-empt the holistic objectives of Aboriginal Head Start.] This conflict is highlighted in Guhn, Gadermann, and Zumbo's (2007) analysis of the Early Development Instrument (EDI) tool for gauging school readiness. The authors caution that in spite of the large size of the sample, results may not be representative of Aboriginal children and note that a collaboration is underway to develop an early childhood development tool that more clearly integrates "Aboriginal values and their cultural diversity."

Linguistic appropriateness

A brief description is provided here of the potential multi-layered language environments that young First Nations, Inuit and Métis children may experience, and the importance of recognizing local norms to avoid unnecessary pathologizing of language differences.

The early language environment of young First Nations, Inuit and Métis children is multi-layered. Children may be hearing and developing the language of their ancestors, either with or without English, which, in turn, may or may not be "Standard English." In some situations, English may be the language they predominantly hear but it may be from speakers of a dialect of English, common to their community (Ball & Bernhardt, 2008; Peltier, 2009; Sterzuk, 2008). As well, many Aboriginal people are learning French. These speakers may also have distinct French dialects, influenced also by heritage languages.

In an early study of communicative interactions between four Inuit children and their families, Crago (1990) reminded practitioners when assessing children from culturally and linguistically diverse settings of the need to define language disorders according to the norms of their community. Research in this area is still lacking on how to distinguish between "language difference (dialect) and language impairment in order to provide culturally relevant service where it is needed" (Ball & Bernhardt, 2008).

Sharla Peltier (2009), a First Nations speech-language pathologist, has made links between knowledge of local norms, appropriate assessment tools and the potential for pathologizing children speaking home languages and/or dialects. For Peltier, practitioners are constrained by narrow views of normal. As a consequence, their work with children who speak non-standard English may lead them to widely variable conclusions: learning disability, communication deficit, or healthy language acquisition and development.

Practical research in this area underscores the need to understand more about the community-specific dialects of English (I. Genee, personal communication, June 26, 2010; Campbell Wood, personal communication, June 18, 2010). To date, few screening and assessment tools exist that have been normed on First Nations, Inuit and Métis children (Dench, Cleave, Tagak, & Beddard, submitted; J. Johnston, personal communication, February 5, 2010). In her recent thesis, *Valuing children's storytelling from an Anishinaabe orality perspective*, Peltier (2010a) states that First Nations dialect is "an integral component of an individual's identity and represents a culturally relevant link to the home community and land base." In her research, she found no studies that evaluated Aboriginal narratives from an Aboriginal orality perspective.

Similar references to cultural and linguistic barriers in the practice of audiology were difficult to find. In a recent article, Siu (2009) notes that speech audiometry has no bilingual norms, and refers to an assessment bias against clients whose first language is not English. Specifically, non-native English speakers demonstrate a mismatch between speech reception threshold (SRT) and pure tone audiometry (PTA) and disproportionately poorer word recognitions scores (WRS). In addition, Siu points out that speech perception in noise in a second language can be significantly poorer than in the first language. Recent correspondence with an audiology professor at UBC's School of Audiology and Speech Sciences revealed that several audiologists have made inquiries to

the school about needing speech audiograms that have speech sounds specifically from the First Nations languages of the clients they assess. These professionals also say that it would be useful to have visual references with both English and First Nations languages, in this case, Chilcotin, Shuswap and Carrier languages. Although they recognize the "fair amount of work to develop this and that the application would be limited" it is "worth asking" and would make a good research project (L. Jenstad, personal communication, August 27, 2010).

Building trusting relationships

This discussion acknowledges local concepts of time and relationship-building and how mainstream outreach models of service delivery are unsuitable for these settings. The day-to-day expanse of speech-language and audiology workload also creates conflicts with culturally-bound concepts of time. Smeal and Dench have remarked that relationships are built over time. For some Indigenous caregivers it may take years before they are comfortable enough to inquire publicly about their grandchild or daughter (W. Smeal, May 31, 2010; K. Dench, personal communication, May 27, 2010). Service models that compress time may further erode relationships of trust between providers, clients and community members. A Cree elder, Debbie Jette, quoted in Ball (2010), explains: "My grandparents taught me that to truly understand the importance of something you must look back seven generations and you must look forward seven generations."

Mainstream outreach service models underscore a dependency on external expert advice[8] and, yet, parachuting into a community is frequently affected by unstable weather conditions, tight time schedules and a high turnover of itinerant professionals. Practitioners, as Hill, Leidwinger, and Pal (2008) note, have little time to train local health staff, talk to family members and engage children "because of the clinical load." Similarly, the short time that clinicians are able to stay in a community highlights case volume and acuity and may focus attention on the clinical rather than the cultural character of a community. Rosalee Shenker, a speech-language pathologist who provides

[8]Ball and Lewis (2005), summarizing parent and elder responses in a survey, remark about the title Speech-Language Pathologist, which "reflects an individual dysfunction focus that respondents identified as problematic and rejected."

outreach services in northern Quebec communities, has related the tension she feels between the need to deliver services while present in the community and the need to make time "to sit down and understand the community she is visiting." (R. Shenker, personal communication, June 18, 2010). As a First Nations speech-language pathologist, Peltier says that connecting with families is vital, and provides two suggestions: "daycare...at the end of the day the parents are there to pick up. The clinician can be more active then. Those little short interactions can be so helpful, just short chats, to know more about what the families are involved in. . . . Grandmothers . . . get to know one or two of the grandmothers. . . . They know the community, what is happening . . . the meat and potatoes of what we need to know as speech-language pathologists. . . . [Your] need for learning has to be so strong that it has to outweigh those fears [of discomfort]" (S. Peltier, personal communication, August 20, 2010).

Flexibility to community needs

The literature on speech-language and hearing services for Indigenous pre-school children in Canada largely makes two unstated assumptions. The first is that communities and providers equally understand the role and impact of speech-language and hearing services and programming on First Nations, Inuit and Métis children. The second assumption is that these services are or should be important to parents, families and caregivers. Researchers and practitioners are challenging these assumptions. As illustrated below, evidence is showing that community-based and provider-based knowledge and priorities are divided.

Gerlach et al.'s (2008) review of programs available for Aboriginal children and families on- and off-reserve in British Columbia found that in many cases "decision-making and strategic planning is controlled by the few and Aboriginal families and communities are expected to fit into" a mainstream model that inevitably does not work for them. On the other side, one of the few Aboriginal speech-language pathologists in Canada has declared that "most communities are simply uninformed about what language support specialists can do" (cited in Ball & Lewis, 2005). Kit Dench, a speech-language pathologist who has worked in Inuit communities for the past seven years, reinforces and extends this position by emphasizing the relationships between poverty and disruptive

social practice. Local crises, driven by chronic economic and social upheaval, "make it hard to understand how speech-language could even rate as a priority" (K. Dench, personal communication, May 31, 2010). For Monica Nahwegahbow, an Anishnaabe speech-language pathologist who lives on the White River First Nation in northeastern Ontario, service delivery has to be practical and flexible: "There are still so many health-related issues in communities, for example, children in Kindergarten, Grade 1 and 2 who have lost all their teeth, that learning how to make a stop is not really up there as a priority" (M. Nahwegahbow, personal communication, June 17, 2010).

This section on cultural and community fit of services highlights the need for more research overall on Aboriginal early child development and on evaluation of what is working in the communities. There is a research gap recognized by academics, policy makers and providers who are trying to extend knowledge for speech-language pathology/audiology service delivery with First Nations, Inuit and Métis children. Alan Bowd, for example, has made repeated calls for "systematic and uniform studies" of First Nations, Inuit and Métis hearing health. Specifically, he states that systematically collected regional or territorial information is key to government planning in the delivery of public health and educational services (Bowd, 2002; 2005). In her review of needs and promising practices for Indigenous language development, Ball (2009) found only small scale studies of children's Indigenous language acquisition and no systematic empirical studies evaluating outcomes of early language facilitation or intervention programs. These absences, she writes, underscore the enormous gaps in knowledge about what Indigenous children and families need in order to ensure optimal language development and effective approaches to meeting their needs (Ball, 2009).

Barriers in Service Delivery to Indigenous Children in Australia, New Zealand and the USA

The search for information on speech-language and hearing service delivery in Australia, New Zealand and the USA yielded similar barriers to the situation in Canada. These are briefly presented below.

Australia

In Australia, the National Aboriginal Community Controlled Health Organization (NACCHO) is working with Aboriginal and Torres Strait Islander people to understand isolation within a remote to urban continuum. Domains to be explored include "isolation from culture or cultural detachment, isolation from family or family disconnection as a result of policy and family function and expectations, isolation from place/land and community, the physical and emotion[al] impact of isolation and loneliness, intergenerational trauma and the impact on the individual" (NACCHO, 2006, p.5).

The 2000/2001 Western Australian Aboriginal Children's Health Survey (WAACHS) reports that in areas of extreme isolation only 0.04% of Aboriginal children had contact with a speech-language pathologist compared with 3.5% in the Perth area (Zubrick et al., 2004). Not unexpectedly, the proportion of Aboriginal primary caregivers who said they were happy with access to community services and facilities was, in most cases, significantly below that reported by caregivers of non-Aboriginal children in the 1993 Western Australia Child Health Survey (Silburn et al., 2006). In a recent report of overall health care for Aboriginal people in New South Wales, clinicians estimate that Aboriginal people are twice as likely as non-Aboriginals to be hospitalized for conditions in which hospitalizations could be prevented by upstream investments in intervention and primary care (NSW, 2008a).

Audiology access for young Australian Aborigines and Torres Strait Islanders was recently explored in a survey of Aboriginal Medical Service physicians. They note that 20% of children wait longer than recommended for audiology testing and 1 in 8 wait more than six months to see an ENT (Gunasekera, Morris, Daniels, Couzos, & O'Connor, 2009).

Issues of availability of services are comparable in Canada and Australia. Regarding distribution of speech pathologists in Australia, 2002 survey data indicate that 4.5% of respondents were employed in moderately accessible, remote or very remote regions and 94% of the workforce employed in accessible or highly accessible areas. Researchers conclude that 4.5% of the speech pathology workforce is providing services for 30% of the population in more than 3,700 locales (O'Callaghan, McCallister, & Wilson 2005). It is unknown if there are any Aboriginal speech pathologists in Australia; Speech

Pathology Australia (SPA) does not ask members to provide ethnicity or heritage information (SPA staff, personal communication, June 17, 2010).

Australia's use of telehealth as a service delivery option is identified in recent research. A 2006 survey of speech-language pathologists working in regional, rural and remote settings found that, where available, telehealth is rarely used. Researchers suggest that this may, in part, be due to the lack of training in the use of telehealth coupled with the lack of evidence for the effectiveness of service delivery using this method (Zabiela, Williams, & Leitäo, 2007).

Flexibility in service delivery to address culturally safe situations for Aboriginal children has received much discussion in Australian contexts. Half a decade ago, Judy Gould established the facilitative role of Aboriginal adults in speech assessments by pointing to the importance of what she calls the "ethnography of learning and communication and the subtle interactions which occur between culture, environment and communication to contribute to the Aboriginal sense of well-being" (2005). Highlighting the impact of cultural factors on speech-language service delivery in the Northern Territory of Australia, Baildon and Bourke (2003) note that 50% of the inpatient population in the Royal Darwin hospital is Aboriginal and that language and cultural barriers override all aspects of their service provision.

Gould's work with Australian Aborigines and Torres Strait Islanders creates international linkages between non-standard speech-language environments, the fundamental value of "normative assessment" instruments and cultural safety. She observes how particular languages and unique cultural situations require the development of new assessment methodologies. For Gould, speech-language pathologists need a language assessment model that simultaneously links with the cultural nature of language development and redesigns ethnocentric approaches of communication assessment itself (Gould, 2008a; 2008b).

While Gould acknowledges that information is available in the cross-cultural assessment literature for speech pathologists, she cautions that 'there are a number of factors which make assessment with Indigenous populations unique and in need of assessment methodologies specifically designed to suit their particular language and cultural situations (Gould, 2008b). Her paper reflects some of these concerns: (1) the

linguistic and cultural mismatch between the child, the assessor and the language assessments used; (2) the reduced understanding of Aboriginal English (AE) and Aboriginal communication styles by non-Aboriginal language assessors; (3) the influence of 'Shame' within an assessment setting; and (4) the vastly differing world views between Aboriginal and non-Aboriginal Australians, which are reflected in the way language is used and interpreted by the different speech communities (Gould, 2008b).

New Zealand

New Zealand's newborn hearing screening and early intervention program links "financial and geographical" access barriers with the need to address ethnic inequalities, such as higher rates of hearing loss among Māori, in its service model (NZ MOH, 2009). Otherwise, location barriers are less acute for language, cultural and community-based fit.

The New Zealand Ministry of Education's ten-year strategic plan indicates that Māori children do not currently participate in early childhood education (ECE) services at the same rate as other New Zealand children and relates this access barrier to renewed efforts to develop suitable ECE programming with Māori. Specifically, the Ministry identifies a critical need to narrow the distance between program developers and service providers and Māori people (NZ MOE, 2006): that is, to share development of programs.

Researchers, including the New Zealand Ministry of Education, are highlighting language acquisition as a key research area, particularly in the areas of bilingual and immersion development and the sharing of knowledge of Māori and Pasifika immersion and bilingual education (Bevan-Brown, 2004; New Zealand Ministry of Education *He Whàriki Màtaurangamò ngà Mokopuna o Aotearoa*, 2006; NZ Ministry of Education, 2003; NZ Ministry of Education *Te Whäriki*, 1996; Rau, 2005; Maclagan, King, & Gillon, 2008*;* May & Hill, 2005; Gallagher, 2008). Gallagher notes how little is known about how "kids acquire their Māori language" and suggests that distinctive cultural and linguistic traditions make it difficult to determine what is a specific language impairment and what is second language learning (K. Gallagher, personal communication, June 6, 2010).

The latent privilege of English and its impact on "normative" language development is documented from a New Zealand perspective. In a study of literacy acquisition, achievement and assessment, Rau (2005) highlights the conflict between stemming Māori language loss and a de facto use of English in early literacy instruction. In their overview of Māori English, Maclagan, King and Gillon (2008) identify the value of cultural understanding. They cite a potentially high number of Māori children who may be experiencing a language difficulty and remark that the profession seems "unready to weigh in" on the issue. Compared with the establishment of effective speech and language intervention practices for monolingual speakers of standard English, the evaluation of effective practices for children with communication impairment who are raised in a bilingual or non-standard language dialect environment, they lament, is in its infancy (2008). Neurolinguistic researchers looking at code-switching and code-mixing among bilingual children have called for more research on the nature of bilingualism as well as alternative approaches to speech-language assessment and intervention (Lew & Hand, 2009).

Historical attempts to extinguish Indigenous worldviews and languages are a primary challenge to the safety of traditional speech-language and hearing service models, materials and approaches. Kerrie Gallagher, a Māori speech-language pathologist, has said that the primary service barrier is engagement; for the most part, people do not trust the service because "it's not connected to Māori culture and way of thinking." For Gallagher, the Māori view of the child as a treasure is in conflict with static models that focus on diagnosis and treatment of a disorder. Rather, family and extended family members value interactions based on their ability to access the child's world (K. Gallagher, personal communication, June 6, 2010). In Bevan-Brown's discussion of Māori perspectives of autism, a Māori informant relayed her personal experience with a speech-language therapist: "She sent us six pages of things about play. I phoned her up and asked her, 'Did you not listen to anything we said? Did you not notice anything he did? Nothing in these forms are [*sic*] appropriate.' She said, 'Yes, they are, they are standard [information] about play for a normal child' " (Bevan-Brown, 2004). In Borell et al.'s 2009 study, this type of disengagement is cited by one New Zealand participant as "surfing in kind of white film."

USA

Health researchers in the United States have documented the relationships between the accessibility of primary and preventive health and wellness services for Indigenous populations and health status. In the mid-1990s, Alaskan research demonstrated a positive association between the geographic isolation of North American Indian and Alaskan Native populations and higher hospitalization rates and potentially higher avoidable admission rates (Cunningham & Altman, 1993).

When asked to describe the primary barriers to services for Indigenous clients, Rhonda Friedlander, a Native American speech language pathologist, plainly states "poverty." For her, economics has a direct and fundamental impact on service delivery. "If a child has a delay," she says, "that is probably the least of the parent's concerns—where is the next meal coming from?" (R. Friedlander, personal communication, June 4, 2010). A study on Native American participation in U.S. federal disabilities legislation conducted ten years ago concludes that "many tribes are poor and cannot afford the investment needed for disability planning and programs" (Fowler et al., 2000).

Recent research with Samoan children highlights the fundamental role of provider availability in reducing speech-language and hearing risk among K-3 populations. The authors note that whereas American Samoa has a speech language pathologist to student ratio of 1:19,000, the Sacramento Unified School District maintains a ratio of 1:909 (Boles, Hess, Woll, & Musso, 2008). In 1999, the U.S. General Accounting Office reported speech-language as the pre-dominant shortage area for "disabled" Native American preschoolers (US GAO, 1999).

The impact of location, infrastructure and community capacity are demonstrated in a mid-1990s Indian Health Service project that sought to use computer-mediated techniques to train and support Native American paraprofessionals to deliver speech language services under the license of a certified professional. In addition to daily monsoons— a seasonal staple in the community unanticipated by the university project team—the project was eventually brought down by basic problems such as the lack of appropriate electrical connections and general unfamiliarity with technology by local participants (Culbertson & Tanner, 1998).

Hoping to address the audiology needs in "Indian Country" (a phrase in common usage in the United States) with health information and communication technology, the Director of the Indian Health Service has indicated that many basic problems still exist. Specifically, he notes how "connectivity and system access" issues relate to slowed implementation and clinician acceptance (Grim, 2006).

The disparate social, economic or cultural experiences of speech language pathologists/audiologists in the United States are also being raised as a concern. In the U.S., fewer than 10% of speech language pathologists are from racial or ethnic minorities and fewer than 6% are bilingual (Lubinski & Matteliano, 2008). American audiologists have been described as the least ethnically-diverse health care profession in the United States (Bush & Windmill, 2008). The results of the 2009 ASHA membership survey estimate that approximately one-half of one percent of the total membership share an Indigenous heritage: 0.3% Native American or Alaskan Native and 0.2% Native Hawaiian or other Pacific Islander (ASHA, 2009). This suitability gap was anticipated in the United States more than a decade ago. Described then as a "critical need," advocates argued for an increase in the quantity and quality of personnel providing speech-language and hearing services to Native American infants and children (Inglebret, 1997).

A recent survey of U.S. practitioners emphasizes the institutionalized gaps that speech language pathologists encounter. While noting an overwhelming lack of diversity among speech language pathologists the researchers report that speech language pathologists rate the lack of "nonbiased appropriate assessment instruments" as one of their most frequently encountered service delivery problems and indicate that their greatest area of training interest is "less biased methods and materials for distinguishing language differences from language disorders" (Roseberry-McKibbin & O'Hanlon, 2005).

Speaking to a changing U.S. service landscape, Lubinski and Matteliano's (2008) assessment of diversity among speech language professionals highlights a growing divide between the demographic characteristics of speech language pathologists and the U.S. population. Noting the more than 300 languages currently spoken in that country, they conclude that speech language pathologists "must acquire increased cultural competence

if they are to serve their [clients] . . . appropriately and sensitively across clinical delivery settings."

Verlee Neha situates herself in a distinctive cross-cultural world: as born into two clans, as the granddaughter of a well-known medicine person, as a stutterer, as a child who received services and, eventually, as a Navajo speech-language pathologist whose traditional beliefs often "conflicted with the content of the lectures in [her] classes." Her 2003 reflection on her first year as a speech-language pathologist on her reservation provides personal insights about her communication disorder and cultural lessons learned. She writes, for instance, that she was raised to believe that her stuttering was due to "imitating or making fun of my grandmother, who also stuttered," and that family members still attribute her stuttering to being "disrespectful." In her practice, Neha concludes that earlier studies were helpful to recognize how Navajo worldview enables characteristic speech-language performance, such as more silence and quieter voices. She cautions speech-language pathologists that standard expectations of time will produce poor outcomes. During treatment she encourages speech-language pathologists to pause and allow for a long response time. Otherwise, she observes, rushing a response only frustrates children and, more than likely, they will shut down (Neha, 2003).

The U.S. literature also addresses culturally and linguistically appropriate assessments for Indigenous children. Writing more than 25 years ago, on assessing English language performance among Native Americans, Gail Harris (1985) catalogues two types of errors that speech-language professionals might make. The first is assuming that a child has a speech or language handicap when, in fact, she or he is using a dialect of English that is appropriate to her or his culture and community. Harris also notes that the child probably has greater proficiency in a language that is not tested during assessment. She also observes that speech-language pathologists assume that non-verbal behaviour by a child is culturally-based. Speech-language pathologists' lack of awareness of aberrant versus dialectical linguistic forms contributes to the second kind of error, whereby they erroneously may conclude that there is no disorder.

Ten years later, there is evidence that Harris' assessment concerns have been largely unheeded. Banks and Neitsworth (1995) writing about the potential role of dynamic strategies in early intervention, document a growing unease with status quo approaches

among tribal and community-based populations. They report that continued use of norm-referenced assessment instruments with American Indian/Alaskan Native infants and young children is a concern to the Nations' leaders, family members, educational leaders and service providers, as is the lack of research in this area. Similar to Canada's situation, concern in the U.S. has been growing about the lack of appropriate tools for distinguishing language differences from language disorders (Allison & Vining, 1999; Harris 1985; Long & Christensen, 1998; Pedersen & Vining, 2009; Roseberry-McKibbin & O'Hanlon, 2005).

Tagoilelagi-Leota, McNaughton, MacDonald and Farry's (2005) study of children from bilingual Samoan/Tongan families reflects on the price of mainstream literacy for Indigenous learners. They observe that five-year-olds rapidly gained literacy and comprehension knowledge in English in their transition year to English-medium schools, and suggest that these same children had now become "at-risk bilinguals." Alternatively, McCarty's overview (2008) of bottom-up approaches to revitalize Indigenous languages highlights the efforts of Hawaiian-medium instruction to create a culturally-safe environment and successful program both by judging the school on Hawaiian language and culture achievement and rejecting the measure of success used by the dominant society—speaking English.

Taking time to share information and build trust is also echoed by people with an invested interest in improving service delivery for Indigenous people in the United States. These practices represent the cornerstone of successful service delivery (Allison & Vining, 1999). For audiology, Smeal describes how past treatment of Native Americans by the health system contributes to reluctance to consult audiologists when children and grandchildren have ear problems (personal communication, May 27, 2010). A Native American speech language pathologist, Rhonda Friedlander relates how the location of service delivery impacts participation along with the historical context of government interactions. She remembers when she first began work as a speech language pathologist with the Bureau of Indian Affairs fifteen years ago: "People wouldn't open their door to me . . . if you're in a government car you're no good. So I wrote a letter to all the mothers telling them who I was and about my tribe. Things got better after that." (R. Friedlander, personal communication, June 4, 2010). As in Canada, negative educational experiences,

such as boarding school attempts to eradicate Native culture and language in the U.S., relate to mistrust of educational institutions and institutional interactions today (E. Inglebret, personal communication, June 15, 2010).

CURRENT PRACTICES THAT ADDRESS BARRIERS

The unique geographical, historical, socio-economic, political, cultural and linguistic environments of First Nations, Inuit and Métis people offer many challenges to effective and appropriate health service delivery by speech-language pathologists and audiologists. Yet efforts are increasing within communities, professional bodies and institutions, and by practitioners, to address many of the barriers that limit speech-language and hearing services. Some of these current practices are found in the literature, but most of them were discovered by word of mouth. The majority of them are pilot initiatives lacking ongoing resource commitments or documentation. Despite an intensive search with the help of others, these current practices constitute an incomplete list. For the most part, no cost-benefit or service evaluation studies were found. A partial listing of Canadian current practices is included as Appendix 4.

Many of the current practices are multi-layered and address more than one of the barrier themes, namely location, service coordination and cultural and community fit of services. To account for this overlap, the current practices were sorted into five categories that broadly represent the needs expressed in the literature and by the key informants. These five areas of need exemplify the types of solutions that communities, practitioners, professional organizations and institutions are undertaking in their search for sustainable current practices. The five categories are 1) workforce development, 2) service delivery models, 3) screening and assessment, 4) universal strengths-based programs, and 5) community capacity development. This section concludes with a brief comparative look at a selection of current practices used in Australia, New Zealand and the United States.

Workforce Development

Concerns about availability and suitability of speech-language pathology and audiology services are addressed in several ways, a few of which are described in this section. Specifically, these approaches involve a) promoting ongoing professional educational discussions, b) providing community-level experiences for students, c) increasing Aboriginal participation in academic program development, and d) enhancing academic staff and students' cultural awareness and knowledge.

Professional associations and academic institutions are beginning to respond to concerns about practitioner availability and suitability of practitioners when working with First

Nations, Inuit and Métis children. The formation of a First Nation, Inuit and Métis [Aboriginal] special interest group within CASLPA became a subject of formal discussion at the annual 2008 CASLPA conference held in Alberta. The following May, more than 40 practitioners met during the London conference to share ideas and discuss aims and objectives. An internet chat facility was created for their use and, although presently inactive, is being revived and renewed through the development of this current CASLPA project (T. Moosa, personal communication, June 20, 2010; S. Fotheringham, personal communication, June 14, 2010). Currently in production is a special issue of the *Canadian Journal of Speech-Language Pathology and Audiology* (CJSLPA) addressing speech-language service delivery to First Nation, Inuit and Métis populations, co-edited by Elizabeth Kay-Raining Bird and Alice Ericks-Brophy.

In addition to this growing coalition of professionals providing educational development opportunities, academic institutions are making headway in providing speech-language pathology/audiology students with practical experience working in First Nations, Inuit and Métis settings. Michael Chappell, the Baffin Region speech-language pathologist in Iqaluit, Nunavut, annually hosts second-year speech-language pathology/audiology graduate students for a unique clinical practicum placement. His practice covers a wide range of speech-language and audiology areas, including swallowing/feeding, alternative communication, hearing screening (pure tone, impedance and otoacoustic emissions), aural rehabilitation and free field classroom consultations. Services are provided at several facilities in Iqaluit, during community home visits or via televideo conferencing (Michael Chappell, personal communication, May 18, 2010).

The Northern Initiative Placement program offered for the past three years at the University of Western Ontario addresses the availability of speech-language pathologists/audiologists in remote communities to supervise student placements. Faculty clinical supervisors accompany graduate students to three remote Cree communities on western James Bay to ensure that students get placements that help them develop skills that will allow them to work with diverse populations. These annual one-week visits represent an attempt to fill a complete absence of speech-language pathology/audiology school-based services in some isolated First Nations communities (T. Moosa, personal communication, June 21, 2010; Moosa & Schurr, 2008).

The University of British Columbia (UBC) has made strategic commitments to increase First Nation, Inuit and Métis participation in their program development and to optimize student understanding of speech-language and hearing services in Indigenous settings. In 2009, UBC offered Canada's first collaborative model of curriculum development concerning provision of culturally safe and relevant health care in speech-language pathology and audiology for Aboriginal people. Course development and implementation involve partnerships with people of Aboriginal heritage and invite both staff and student participation. The course also provides students with opportunities for placement in Aboriginal programs, agencies or community settings. Currently, the course is in its second iteration. Student, faculty and community feedback is being applied as part of the course development and enrichment process. Students who have taken the course indicate that they feel better equipped for working with Aboriginal people than if they had not had the course, and a need for more practical learning opportunities has been identified (M. Bernhardt, personal communication, June 14, 2010; Bernhardt, 2009; Green, Bernhardt, & Wood, 2010; UBC, 2010). Peltier, a First Nations speech-language pathologist, reminds us that in addition to recommending that this type of cultural training be implemented in all Canadian university programs, another crucial tier exists—that of program management and clinical supervisors (S. Peltier, personal communication, August 20, 2010).

Service Delivery Options

The lack of ongoing speech-language and hearing services for First Nations, Inuit and Métis people, particularly in rural and remote settings, has led to more flexibility in service delivery options. Jurisdictional concerns are being addressed in BC, for example, through more partnerships among First Nations, provincial and federal programs. At the community-level, access to on-site services is increasing in many ways, such as increased collaboration between professionals and pre-existing programs at Aboriginal Head Start sites and local urban health centres. In many settings where services were non-existent, private contracts are being established with speech-language and hearing professionals. Other adaptations to service delivery include the introduction of telehealth-based services to provide direct service, follow-up, staff training/support and parent learning opportunities. At the end of this section, a unique tele-audiology automated brainstem response protocol is described that

addresses remote communities' concerns about how to follow-up with infant hearing screening retests.

Jurisdictional innovations

Several sector- and community-specific tri-partite (First Nation-federal-provincial) processes are underway. Currently, British Columbia is the only provincial jurisdiction that has established agreements with First Nations education and health groups (First Nations School Association, n.d.; First Nations Health Council, n.d.). This process of integration has the potential to address unmet speech-language and hearing needs for 0 to 6-year-old First Nations children in BC For a more detailed discussion of the agreements, visit the organizations' websites, as noted at the end of this report.

Also in BC, the First Nations Schools Association (FNSA) and the First Nations Education Steering Committee (FNESC) jointly deliver an integrated speech-language service within their special education program. This service has been operating since 2001, using a multi-pronged coordinated approach for 4 to 21-year-olds that increases access to services: a) a toll-free First Nations speech and language resource line for teachers, administrators, parents, and service providers who need information to support First Nations students with speech-language needs; b) a partnership with Special Education Technology-BC to facilitate access to alternative augmentative communication devices; and c) a coordinated speech-language pathology outreach model that deploys speech-language pathologists to between 35 and 40 First Nations pre-school and elementary school environments. The speech-language pathology service component includes two full-time and 10–12 contracted speech-language pathologists, depending on community-based demand for services. Some First Nations augment FNESC funding to increase speech-language pathology visits. This year, speech-language pathologists provided assessment and direct or indirect (counselling/training) treatment for a total of 1,485 school-aged children. Of these, 18% or 266 children seen were six years of age or younger. FNSA/FNESC have also partnered with the Nicola Valley Institute of Technology to develop a First Nations speech-language assistants program (C. Mallett, personal communication, June 25, 2010; FNSA, n.d.; FNESC, n.d.).

The Provincial Health Authority Services (PHSA), which directs BC's Early Hearing Program, is currently part of a tri-partite group that is adapting aspects of the screening program to meet the needs of Aboriginal families. PHSA, Health Canada's Aboriginal Maternal and Child Health and the First Nations Health Council are currently producing several culturally safe projects, including:

- Production of a DVD for First Nations families that describes the process of newborn hearing screening, diagnostics and early intervention services and that features a First Nations screener, audiologist, interventionist, and First Nations families.
- Development of a survey to determine if Aboriginal parents would prefer to talk with a parent who has similar heritage, as part of the Guide By Your Side *program*, which lists parent guides who are "veteran" parents of children with hearing loss.
- Assessment training offered by PHSA in November 2010 to early interventionists on the use of early language assessments with Aboriginal families, based on Aboriginal Maternal and Child Health's recommendation from a review and acceptance of the assessment protocol being used by the BC Early Hearing Program.
- Fall 2010 implementation of a survey of families who have self-identified as being of First Nations heritage. Questions relate to service access, cultural safety issues and parental awareness of benefits available to First Nations families, such as funding to cover travel to audiology appointments (S. Lane, personal communication, August 31, 2010).

Community-based services

Margaret Chesterman, a veteran speech-language pathologist practicing in British Columbia, has noted that understanding workflow and service strengths is a staple of coordinated service delivery at the community level. For her, effective use of speech-language materials directly relates to ease-of-use, staff comfort and the degree to which it fits into pre-existing routines (M. Chesterman, personal communication, May 27, 2010). From her perspective as a First Nations speech-language pathologist, Peltier says that it is

only from the community "grassroots level" that service providers can then ask: "Ok, how do we get our service on track with this? . . . What does the community already have that we can support?" (S. Peltier, personal communication, August 20, 2010).

Health Canada has adopted a cluster approach to its First Nations, Inuit and Métis child and youth programming. This service orientation establishes links between related program areas such as child nutrition, fetal alcohol spectrum disorder, maternal and child health, Aboriginal Head Start and education, thereby creating opportunities for collaboration, coordination and integration (Health Canada 2009b). Located in some of Canada's most remote as well as highly urbanized settings, Aboriginal Head Start programming is recognized as a current practice for service coordination. Local management and direction supports a culturally safe environment where multiple service providers can collaborate on the child and family's home ground and interact with culturally competent staff and parent volunteers (King, 2009; Health Canada, 2005). In her analysis of steps in the right direction for early intervention with Aboriginal families and communities in Canada, Gerlach (2008), an occupational therapist, identifies the value of this approach at the service level. She notes that co-location of services and a single point-of-entry are important characteristics of collaborative approaches and interdisciplinary engagement. Ball (2008) singles out Aboriginal Head Start on Reserve and Aboriginal Head Start in Urban and Northern Communities as valued community-level investments. As stated previously, she reports that in many places they have become community hubs that provide a culturally safe environment that could "streamline" children's access to specialists . . . including speech-language pathologists. However, as mentioned earlier, Aboriginal Head Start programming reaches approximately 10% of the 0 to 6-year-old Aboriginal population; recommendations highlight expansion of the program to accommodate 25% of Aboriginal children in this age group (Ball, 2008; Leitch, 2007).

The BC Aboriginal Infant Development Program (AIDP) supports Aboriginal child development activities. The focus is on children aged 0 to 3 years of age, although support is provided to other age ranges (0–6) in communities with no preschool or Aboriginal Head Start programming. Aboriginal staff help situate parents' roles in child development within traditional teachings. They provide a wide range of services and

supports such as language screenings (e.g. ASQs, Gesell [with adaptations]), parent advocacy, speech-language pathologist and other health professional appointment facilitation (driving, day-before reminders, child watching), and parent early child development training). Currently, there are 46 AIDP sites. Diana Elliott, the AIDP Provincial Advisor indicates that while language development is the highest priority in communities, she senses that there may be many over-referrals and over-diagnoses (AIDP, 2010; D. Elliott, personal communication, May13, 2010).

The Four Directions Community Health Centre and the Wascana Rehabilitation Centre in Regina have undertaken a speech-language service project that builds on the Health Centre's position as a local resource centre. The service was initiated by staff who noted how transportation, mobility, literacy and other barriers were limiting client access to speech-language services. A speech-language pathologist position was created in September, 2008, and based out of the well-known and trusted local health centre located in the community. The program links families with local health centre supports such as the addiction services, fathers' group, Healthiest Babies Possible Program, public health nursing, parenting programs, primary care services, elder counselling, and prenatal programs. The service model is flexible, providing direct intervention for families, preventative services focusing on attachment, early language and literacy development groups and drop-in services (C. Bakker, personal communication, June 15, 2010).

The Nitam Giigidowin (A Child's First Words) pilot project in northern Ontario is a partnership between the Thunder Bay District Health Unit, Health Canada and the Fort William, Longlake #58 and Ginoogaming First Nations. Proposed outcomes are to increase the cultural appropriateness of services provided to preschool Aboriginal children, to increase the understanding among community members of the importance of communication to healthy child development and to increase access to service for preschool children living on these three First Nations. A speech-language pathologist travels to each First Nations site once per month and a communication disorders assistant will spend one day in each community each week (C. Farrell, personal communication, April 15, 2010; S. Coulter, personal communication, June 16, 2010).

Weeneebayko Health Ahtuskaywin—a Cree-directed Health Board that coordinates services for approximately 11,000 First Nations living along the western shore of James

Bay and the southern shore of Hudson's Bay—contracts an audiologist to provide services in coastal communities on a monthly basis. Visits include Moose Factory (Weeneebayko Hospital), Moosonee (James Bay General Hospital Clinic), Attawapiskat, Fort Albany, Kashechewan and, at times, Peawanuck First Nations (P. Stevenson, personal communication, June 15, 2010).

Indian and Northern Affairs Canada initiated special education funding in 2000 to band-operated schools. Two province-wide First Nations education organizations, in BC and Manitoba, have applied these funds to address speech-language service priorities in First Nations schools. The FNESC initiative in BC, described earlier in this report, represents jurisdictional changes. The program in Manitoba, also a jurisdictional innovation, is briefly described here to illustrate a First Nations-managed community-based service provision model. In Manitoba, the Manitoba First Nations Education Resource Centre (MFNERC) maintains four full-time speech-language pathologists and one contract speech-language pathologist who provide services in approximately 40 Manitoba First Nations. Using an outreach model, each speech-language pathologist travels to eight to ten First Nations up to four times each year. Speech-language pathologist caseloads are high, in some instances exceeding 125 children (MFNERC, n.d.; S. Misko, personal communication, June 28, 2010; C. Mallett, personal communication, June 25, 2010).

Telehealth

Most provincial telehealth networks support speech-language and hearing services. These networks are publicly-funded and provide secure, private and coordinated access to services within provincial and territorial health facilities. First Nations, Inuit and Métis access to community-based telehealth services presently is available in the Yukon, Northwest Territories and Nunavut, Alberta, Northwestern Ontario (Keewaytinook Okimakanak Telemedicine), Métis Nation of Ontario sites (Ontario Telemedicine Network) and Manitoba. Telehealth has the potential to provide services in remote communities, and more frequently than outreach models. Early research emphasizes the need for close community-based links to ensure culturally competent practice (Eriks-Brophy et al., 2008). Others have pointed to the need for service delivery redesign prior

to using telehealth for underserved communities (S. Peltier, personal communication, August 20, 2010).

In 2011, the Government of the Northwest Territories will enable telepractice delivery at 59 health centers and schools. Currently, these services are being delivered by regional health authorities. The basic service model places speech-language pathologists in each community two to four times each year. Videoconference access is used to provide follow-up, staff training and support, and parent learning (S. Mann, personal communication, April 15, 2010; A. Geraghty, personal communication, April 5, 2010; W. MacDonald, personal communication, June 7, 2010; K. Scozzafava, personal communication, June 14, 2010).

Since 2008, a speech-language pathologist employed by the Society for Manitobans with Disabilities has used Manitoba Telehealth to provide services to a caseload of about 40 First Nations children living in Norway House, Pukatawagan, The Pas and Thompson. The speech-language pathologist conducts all first assessments face-to-face. Services are provided in health facilities (J. Moore, personal communication, April 16, 2010).

Children enrolled in the Kikino Aboriginal Head Start program, on the Kikino Métis Settlement in Alberta, travel one block to the local provincial school where they meet via videoconference with Edmonton-based speech-language pathologists, supported by a local speech assistant. In 2009, a speech-language pathologist developed and delivered a speech-language training session for Aboriginal Head Start staff and parents (K. Manchur, personal communication, June 14, 2010).

Privately contracted speech-language pathologists are using information and communication technologies such as Skype and standards-based videoconferencing to provide assessments, consultations, direct service and parent/teacher education to specific under-served First Nations communities, such as Sandy Lake First Nation (Ontario), Ehattesaht and Kyuquot (BC). Some of these services are supported by special education teachers and learning assistants and others are not (A. Bullock, personal communication, May 20, 2010; D. Anderson, personal communication, June 3, 2010; K. Manchur, personal communication, June 14, 2010). In Sandy Lake First Nation, for example, the speech-language pathologist travels from southern Ontario once per year to conduct assessments and improve his/her understanding of local cultural and language norms.

Currently, the caseload includes more than 50 children, aged 4–14. Weekly sessions are scheduled by the speech-language pathologist and faxed to the school. Local assistants bring children to a dedicated videoconference room and facilitate during the session. (C. Meekis & V. Thomas, personal communication, April 16, 2010).

Tele-Audiology

In 2005, the audiologist at the Thunder Bay District Health Unit noted that a large number of First Nations children who had failed their infant hearing test in hospital were not being re-tested. He developed North America's first telemedicine-enabled Automated Brainstem Response (ABR) protocol which is now available at seven regional hospitals. The service began in 2008 and of the approximately 60 cases it is estimated that 85% are First Nations (William Campbell, personal communication, April 15, 2010).

Screening and Assessment

Efforts to develop more culturally and linguistically appropriate screening and assessment approaches are described in this section. Two general approaches are being promoted by professionals: local-norms procedures and dynamic assessment. In both cases, the objective is to provide a non-biased procedure for distinguishing cultural and dialect differences from speech-language and hearing concerns.

In their review of cross-cultural literature, Carter, Lees, Murira, Gona, Neville and Newton (2005) identify five major issues in the development and adaptation of speech and language assessments for children who are not fairly represented by mainstream assessment methods: a) the influence of culture on performance, b) familiarity with the testing situation, c) the effect of formal education, d) language issues, and e) picture recognition. They conclude their literature summary with a list of ten guidelines that include, among others, the importance of collaboration with mother-tongue speakers and familiar assessment materials (Carter et al., 2005). These issues are partly addressed in current efforts by researchers and practitioners to collect local norms and to promote dynamic assessment as appropriate assessment approaches for young First Nations, Inuit and Métis children in Canada.

Local norms

While emphasizing the importance of local norms in reliable assessment of Native American populations, Harris (1985) described the task as both "awesome and perhaps impossible." In Canada, First Nations community-based norms have been a focus of attention since the early 1990s (Crago, 1990). Most recently, work by Ball and Bernhardt (2008) and Peltier (2010) emphasize the need for more detailed knowledge of community-based speech-language characteristics to eliminate the possibility of speech-language pathologist over-diagnoses.

A bilingual Inuktitut and English language screening tool has been developed from a partnership between the Qikiqtani School Board teachers/staff, Catherine Dench, a speech-language pathologist who has worked with Inuit organizations and clients for the last seven years, Pat Cleave, Associate Professor in the School of Human Communication Disorders at Dalhousie University and graduate students. The focus was to create a tool based on cultural norms that worked equally well in both languages, was easy for teachers/teaching aides to learn and administer and helped in identifying students for whom language difficulties might be a factor in learning difficulties, those who might need extra support or immersion educational approaches, and/or those who might benefit from follow up with speech-language services, a very limited resource in the region (C. Dench, personal communication, May 31, 2010; Dench et al., 2010).

In BC, Judith Johnston, Professor Emeritus in the UBC School of Audiology and Speech Sciences, and Professor May Bernhardt are conducting a project to generate new knowledge about speech-language development among First Nations children. The project formed a partnership with UBC, community speech-language pathologists and First Nations community-based service providers. Community members, such as preschool/daycare and school staff and cultural teachers, are collecting normative language samples for typically developing 4 to 5-year-olds in these communities. Once complete, should the communities wish, this process could be presented as a model for other communities (J. Johnston, personal communication, March 14, 2010).

Dynamic assessment

In addition to introductory research in collecting local norms, a number of studies in Canada and other countries are identifying dynamic assessment (mediated learning/test-teach-retest) as an appropriate non-biased procedure for distinguishing cultural and dialect differences from possible language acquisition difficulties in young Indigenous children (Kramer, Mallett, Schneider & Hayward, 2009; Peltier, 2009; Banks & Neisworth, 1995; Peter & Hirata-Edds, 2006; Robinson-Zanartu, 1996; Roseberry-McKibbin & O'Hanlon, 2005).

In a recent research project, Kramer, Mallet, Schneider and Hayward (2009) applied a dynamic assessment instrument (DAI) with 17 elementary school children in a First Nation community. Their study recognized that children's ability to tell stories is a skill, albeit differently portrayed, that crosses cultural boundaries. Their test-teach-re-test protocol with different language learning cohorts showed that the DAI was a more culturally-sensitive tool. While both groups benefited from direct teaching, children in the normal language learning (NLL) group benefited to a greater extent. They conclude that DAI shows promise as a tool for distinguishing difference from disorder.

Universal Strength-Based Programs

Universal service delivery approaches to early childhood development, including speech-language and hearing, facilitate and promote developmental skills in a group setting, without individual pull-outs. This practice is deemed more culturally appropriate for its focus on the group, its elimination of the unfamiliar deficit-oriented pull-out model, and its ability to share language facilitation strategies and knowledge with all onlookers and participants. Universal or strengths-based approaches can also be adapted to include cultural materials and ancestral language use, thereby re-articulating cultural values within a stimulating and innovative service model. A variety of specialized resource materials are being developed to support speech-language development.

On a national basis, TigaTalk is a television program distributed by the Aboriginal People's Television Network (APTN). Now in its third season, this series is aimed at 2 to 5-year-olds and provides a culturally-referenced world for general speech-language development. Tiga, a wolf pup, interacts with two Aboriginal friends (aged 5 and 8) and goes

on journeys with Gokum (grandmother), a storyteller. Video crews travel to Aboriginal communities throughout Canada and establish a place-based context for each episode. Content focuses on speech sounds: Words in English and a variety of Indigenous languages are used to reinforce the sounds (May Street Productions, 2010; A. Gardner, personal communication, May 20, 2010).

In northwestern Ontario, Peltier (2010a) is "revaluating" First Nations oral narrative skills in light of reduced classroom participation and engagement of Aboriginal children. She adopts a strengths-based approach in her speech-language practice with school-age children. Her use of "Storytelling Circles" focuses on the child's knowledge that they bring with them to school and promotes cultural awareness among students and staff. She adopts the approach that "no part of this traditional process has anything to do with looking at deficits or problem areas of those participating." Peltier says supporting oral storytelling "taps into some of those values that Aboriginal people have, whether First Nations, Inuit or Métis" (S. Peltier, personal communication, August 20, 2010).

The Moe the Mouse™ concept was developed by two speech-language pathologists in BC, Margaret Chesterman and Ann Gardner. This concept addresses early language development in children ages 3–5 by offering a speech and language curriculum box filled with Aboriginal toys, stories and suggested activities to help parents and early childhood educators provide opportunities for children to practise language skills in natural settings. The idea took shape in 2002 following a discussion between Chesterman and a First Nations person about their shared frustration and concerns about the lack of culturally relevant materials. In response to child care workers who had identified speech-language as a major area of concern. The BC's Aboriginal Child Care Society contacted Chesterman and asked her and fellow speech-language pathologist, Anne Gardner, to develop Moe. The speech-language tool was piloted in the Sechelt First Nation, in Head Start programs and at BCACCS. A further two years of testing has led to additional revisions and improvements. Moe workshops have been delivered in Manitoba and Saskatchewan (BCACCS, 2010; M. Chesterman, personal communication, May 27, 2010; A. Gardner, personal communication, May 20, 2010). Recently, Moe was adopted for a First Nations service pilot with three Vancouver Island First Nations, the Vancouver Island Health Authority and the Ministry of Children and Family Development (Gardner & McCrick, 2008). In Quebec, Kahnawake has

adapted Moe the Mouse™ to reflect local knowledge. Called “Fly with Akweks” and based on a well-known local story about Three Sisters, the first of three packages has been developed and introduced to teaching and cultural staff for feedback (R. Schenker, personal communication, June 23, 2010).

The Granny and Grampa Connections Box is an interactive cultural resource for parents-caregivers of young children, distributed by the B.C. Ministry of Children and Family Development’s (MCFD) Success By 6 program. The tool kit includes grandparent puppets and cultural items, such as a drum, paddle and stuffed animals, to promote the use of storytelling and play as a way for parents, grandparents and caregivers to interact with young children. This communication-based early intervention approach was developed in collaboration with elders, community members and representatives from major Aboriginal services organizations such as the Aboriginal Infant Development Program, Aboriginal Head Start Association of BC, Métis Nation BC, BC Aboriginal Child Care Society and First Peoples Heritage Language and Culture Council (British Columbia, 2009).

Quill-to-Quill is a preschool pilot project that supports tri-cultural language development using preschool songs that incorporate key vocabulary in three languages: Ojibwe, French and English. Further support includes cultural activities, such as storytelling and dramatic replay that is linked with images (flashcards) of grandmother's quillwork. The flashcards represent native themes found in accompanying children’s books (B. Gale, personal communication, June 15, 2010).

A current practice that adopts a non-deficit approach as well as empowering local community capacity (discussed further in the next section) is a pilot project involving three Nuu-Chah-Nulth First Nations, the Vancouver Island Health Authority (VIHA), the Ministry of Children and Family Development (MCFD) and the Office of the BC Pediatric Therapy Assistant (OBCPTC). The project trained a First Nations speech therapy assistant to adopt a universal approach, as opposed to individual therapy follow-up. During her weekly visits to the three First Nations communities, she incorporates Moe the Mouse™ activities in a group setting for the benefit of all children. In order to weave cultural sensitivity throughout this project and to ensure a feeling of safety, the “Five F’s” were used as a guiding principle: no formal testing, no forms to fill out, no files to be written in, make it fun and funny. Assessment, intervention planning, training and supervision were provided by a VIHA

speech-language pathologist who currently provides outreach services to these communities (Gardner & McCrick 2009; A. Gardner, personal communication, May 20, 2010).

Community Capacity Development

Current practices that demonstrate community capacity development share two traits. First, they re-distribute knowledge and skills previously held by speech-language and hearing professionals to community-based staff, families and community members. For example, among the ten-year performance indicators identified in the tri-partite memorandum of understanding of the First Nations Health Plan in British Columbia is the number of practising and certified First Nation health care professionals (FNLC, 2006). Second, they engage local people and providers in a community development process where values such as self-determination, social justice, working and learning together, reflective practice, and sustainability and participation are used to promote the availability, affordability and suitability of service provision. While many of the current practices discussed previously may have a positive impact on community capacity, the practices discussed in this section seek to do so as one of their primary goals. These initiatives focus on building the relationships and capacities required to narrow the social, economic and cultural distances that distinguish colonized from dominant societies. Specifically, these initiatives address a) First Nations, Inuit and Métis representativeness in the profession through active recruitment efforts and b) local empowerment for practical sustainability and implementation of services.

Recruitment

Among its recommendations to address socio-economic issues around income, employment and the future of Aboriginal youth, the *Wen: De Report* includes "work[ing] towards a long-term goal of training youth in various professions, such as . . . speech therapy" (First Nations Child and Family Caring Society of Canada, 2005). Training of First Nations speech-language pathologists and supportive personnel is a feature of several education programs in British Columbia and Manitoba.

In 2002–2003, the Manitoba First Nations Education Resource Committee (MFNERC) identified five community-based First Nations candidates and sponsored their enrollment in the University of North Dakota Communication Disorders Program.

Although two candidates left the program, three graduates returned in 2007 to complete their practicum with MFNERC. MFNERC has also established a partnership with the Continuing Education division of the University of Manitoba to train speech assistants. Currently, 19 speech assistants have completed coursework and are working with speech-language pathologists in First Nations. The status of the program is unknown (MFNERC, n.d.; S. Misko, personal communication, June 28, 2010; C. Mallett, personal communication, June 25, 2010).

The First Nations School Association (FNSA) and the First Nations Education Steering Committee (FNESC) are partnering with the Nicola Valley Institute of Technology in BC to train First Nations speech-language ssistants (SLAs) who will work in their home communities to support speech-language service delivery. The first group of SLAs will graduate in May 2011 (C. Mallett, personal communication, June 25, 2010).

All of the speech-language and audiology programs in Canada have affirmative action policies that prioritize First Nations, Inuit and Métis applicants (E. Kay Raining-Bird, personal communication, August 27, 2010). The UBC Speech Sciences and Audiology program is one example of a university program that applies equal opportunity principles and actively recruits First Nations, Inuit and Métis students into its program. The program has actively recruited Indigenous students since 2006. In 2009, two students with Aboriginal heritage were accepted into the audiology stream and, in 2010, two Aboriginal students also entered the program: one in speech-language and one in audiology (M. Bernhardt, personal communication, June 16, 2010).

The Hearing and Otitis program began in 1986 as a McGill initiative based out of Montreal Children's Hospital serving 14 communities in Nunavik. The original program had an interdisciplinary focus in which a physician, audiologist and nurse traveled to each location. It is now an audiologist-specific service. In 1994, the program split into two distinct and complementary services: the Hudson Program (west) and the Ungava Program (east). At the community level, the program supports a local resource person who provides translation, coordinates local screening (mostly school-based), coordinates hearing aid issues and refers community people for further testing. Audiologists train local staff. There is no certification or credential for successful completion of the training (I. Billard, personal communication, April 21, 2010).

In response to critical rehabilitation service needs in Inuit communities, the Government of Nunavut partnered with Arctic College to develop an 18-month Community Therapy Assistant program. The course adopts a cross-training approach to introduce students to physiotherapy, occupational therapy, speech-language therapy and audiology practice. At the completion of the course, paraprofessionals are qualified to carry out treatment programs as directed by a supervising health professional in the regional centre. Remote supervision is achieved through a variety of technologies, including email, fax, telephone and telehealth videoconferencing. Examples of a community therapy assistant's duties include performing hearing screenings, leading a children's literacy group and repairing wheelchairs. Community therapy assistants also have an important and highly respected role to play as the community, culture and language experts on the rehabilitation team (Miller Mifflin, 2008; C. Dench, personal communication, May 31, 2010).

Empowerment

The Lil'wat of the Mount Currie First Nation adopted a community development perspective in their implementation of the Talk, Learn and Grow Together (TLGT) program. It is a family-enrichment approach for families with children 0 to 6 years old. The program is designed to promote parent participation in developing awareness of child development and highlights positives in their interactions with their children, the speech-language pathologist and community staff. TLGT is a dynamic, holistic process that enables community-specific goals to be integrated into a strengths-based universal program that supports positive parent/child interaction and increases knowledge of child development. A seven-session program is offered in cycles two times a year. The Lil'wat version was developed with input from cultural centre staff, participants in the program, a speech-language therapist and an occupational therapist. Session activities include watching and listening, joining in, using routines, drumming and dance, storytelling, and celebrating learning. The program shares speech-language pathologist awareness of how children develop with speech-language and general skills. Topics and activities change and reflect parent and community input. The program incorporates local traditional

stories, language and traditional activities (D. Zeidler, personal communication, June 11, 2010).

Garden River First Nation, near Sault Ste. Marie, Ontario, has augmented the traditional speech-language pathologist/supportive personnel model with a holistic, community-wide approach. This pilot project is funded by Health Canada and utilizes a community member with a speech assistant designation to work with preschool children under the supervision of a speech-language pathologist who lives in Sault St. Marie. In addition to working directly with children and consulting with the speech-language pathologist to update plans and refer children at risk, the Garden River Model also engages the speech assistant to promote speech-language awareness among clinical and educational staff and with community and family members during local cultural and service events (P. Nolan, personal communication, March 26, 2010).

International Current Practices

In Australia, New Zealand and the USA, efforts are similarly expanding to address major barriers to speech-language and hearing service delivery for young Indigenous children. For the purposes of this report, a brief selection of current practices is presented from each country that collectively address the five areas of need: professional workforce development, increased service delivery options, alternative screening and assessment approaches, increased universal strengths-based programs, and community capacity development. In Australia, speech pathologists are using telehealth and hub-site approaches, while both speech pathologists and audiologists are building capacity in Aboriginal communities through further training opportunities. In New Zealand, national bicultural policy is driving many changes in the profession, such as step-by-step commitments within the professional association to address improved service delivery with Māori people, promotion of a more holistic service delivery approach, and assessment changes in terms of local norms, plus a national implementation of universal newborn hearing screening. In the USA, much attention has been given to workforce development in actively recruiting SLP/AUD candidates. In addition, many studies have supported dynamic and local norms-based assessment approaches as well as promoting hub-type service coordination and locally crafted intervention materials.

Australia

In their follow-up to the 2000/2001 *Western Australian Aboriginal Child Health Survey*, the authors recommend an organized approach to workforce development as a precursor to the design and delivery of suitable services for Aboriginal children (Silburn et al., 2006). These authors state that the profession requires a workforce better trained to distinguish, select and implement developmental prevention programmes. In order to improve the delivery of these programmes to families and communities, academics and professional bodies need to adopt a more pro-active role in designing appropriate professional development curricula with a specific focus on the Aboriginal population. Unlike the other countries viewed here, Speech Pathology Australia has yet to develop an Aboriginal or Torres Strait Islander special interest group (SPA staff, personal communication, June 17, 2010). The speech pathology program at Charles Sturt University in Bathurst, NSW, has focussed on remote service delivery since 2002. It incorporates a social wellness model of health in preparing students for rural and remote workplaces (Charles Sturt University, 2010).

The use of telehealth to address geographic barriers is on the rise in Australia. In their 2006 survey of speech-language pathologists in rural, regional and remote settings, Zabiela, Williams, and Leitäo (2007) describe an approach that involves community training via telehealth. They note how speech pathologists are training therapy assistants to provide services to specific clients and how access to information and communication technologies is enabling this process. Speech pathologists also watch therapy sessions via telehealth to provide trainer feedback as well as follow-up on children's progress. There is no indication whether speech pathologists are providing these services in Aboriginal settings.

The broad service delivery perspective in Australia is similar to that in Canada. The need to address service coordination issues is faced with the equally voiced need to incorporate an alternative, less western perspective to children's overall well-being. In Australia's Far West Aboriginal Child Development and Well-being Management Group's framework document to improve child development and well-being for Aboriginal children, the author mentions the challenge of creating sustainable systems

that support multi-sectoral collaboration over long periods of time within an Aboriginal definition of well-being. He defines this as the social, emotional, spiritual and cultural well-being of the whole community in terms of a whole life view that includes the cyclical concept of life-death-life (Alperstein, Burke, & Kennedy, 2009).

Rosemary Simpson, principal of an urban language development centre in Western Australia, is applying lessons learned from their hub-site approach in Perth to the remote Kimberly area. The urban centre model integrates speech language goals with school-based activities for up to 200 children at a time. In consideration of limited speech pathology resources in rural Australia and the lack of dedicated early child development infrastructure, Simpson has developed a hub model at community-based schools that provides a service focus for Kindergarten, pre-primary and Grade 1 learners. The centre's speech pathologists provide training to teachers and work with them to set goals at four support offices throughout Western Australia. Unlike clinic-based models, this service provides what Simpson calls a captive audience. It focuses on building early literacy skills as a way to increase teacher understanding of oral language skills development (R. Simpson, personal communication, May 18, 2010).

Audiology service in the Kimberley region is also focused on community capacity development. Hill et al. (2008) describe how a population health perspective in audiology service delivery is re-distributing skills and knowledge among Aboriginal Health Workers (AHWs) and community members. Instead of using an additional audiologist for aural rehabilitation issues in chronic OM cases, the project provides workshops that focus on sharing an understanding of behavioural, social emotional wellbeing, language development, educational and employment issues that can result from hearing loss.

Silburn et al.'s review (2006) of the Western Australia Aboriginal Children's Health Survey concludes that improved Aboriginal health outcomes are contingent on the participation of Aboriginal people at every stage of the development, implementation and assessment of programs and service delivery (2006). Furthermore, Cappon (2008) addresses information ownership, control, access and possession issues. He highlights the value of Aboriginal-led research initiatives, examples in Canada being the Assembly of First Nations Regional Longitudinal Health Survey, and points to it as a demonstration of viable and culturally relevant data collection and analysis processes.

The Western Australia Aboriginal Community Health Services situates cultural safety within an advancing and broadly-based cultural agenda. They advocate that teaching and learning of Aboriginal languages is a key strategy for cultural preservation and promotion of cultural identification and intercultural understanding and respect (Silburn et al., 2006). Almost a decade ago in Australia, research pointed to the central role of cultural "wayfinders" to support culturally rich and reliable service delivery. Wayfinders is a term used by Wade Davis in his description of the capacity of Indigenous peoples (Polynesian voyagers, Arctic hunters, Andean runners, Amazonian canoeists and Aboriginal outback walkers) to navigate vast open reaches of the planet without the aid of western tools such as the compass, sextant or GPS (Davis, 2009). Gould's Australian research highlights a similar guidance role for Aboriginal adults to be present during the assessment process of children's speech-language and hearing health (Gould, 2005).

Universal programs that use culturally appropriate materials have been developed in Australia. Speech Pathology Australia has identified materials that specifically address Aboriginal rural and urban experience, such as, *Time for Talk*, *Do You Hear What I See*, *Growing Up Children* and *Poopajyn Boori Norta Boa* as resources for family and community members (SPA, 2000). Additionally, specific efforts to empower local support for speech-language and hearing health are increasing. For example, Can't Hear? Hard to Learn is an innovative program in New South Wales that provides regular ear health screening for Aboriginal children, education for parents and caregivers and ongoing hearing health training for Aboriginal health workers (Nye & Russell, 2010).

New Zealand

New Zealand's national bi-cultural policies, such as the *Māori Language Act of 1987* that declares Māori to be an official language; the Ministry of Education's 2004 policy, *Te Huinga Raukura. Te Whanganui-a-Tara:Täuhu o te Mätauranga*; and its strategic framework, *Nga Huarahi Arataki* (Pathways to the Future), are key enablers of Māori program renewal.

In 2008, the New Zealand Speech Therapy Association's (NZSTA) multi-cultural special interest group was renamed the New Zealand Cultural and Linguistic Diversity Special Interest Group (Lee, 2008). This year, NZSTA opened a new portfolio with a

focus on cross-cultural issues: to develop relationships with Māori health and education organizations, to increase cultural awareness in members and to encourage more Māori into the profession (K. Gallagher, personal communication, June 6, 2010). A one-page draft copy of parameters for the NZSTA Maori and Cultural Development Portfolio was provided by Gallagher and is replicated here (Gallagher, 2010):

- Model bicultural partnership to professionals in all areas including on the website, written material and for our association to be visibly bicultural.
- Offer professional development in services to Māori, best practice and incorporating Māori models of practice into speech language therapy practice.
- Develop relationships with iwi, kura, kohanga, wananga and Māori health providers.
- Support the universities to incorporate tikanga Māori, te reo and culturally relevant knowledge and integrate this into courses.
- Engage the services of a kaumatua to advise NZSTA and lead tikanga practice within the organisation.
- Encourage research and sharing through special interest groups and best practice/case reviews by speech-language therapists working with Māori and other linguistically diverse populations.
- Develop and share resources.
- Promote the profession to entice more Māori, other ethnic minority groups, and men into speech language therapy.

Recently, New Zealand implemented its universal newborn hearing screening and early intervention program (UNHSEIP). Like other infant hearing screening initiatives, this service aims to ensure that all children are screened for hearing loss at birth and that appropriate early intervention services are available. These services include follow-up audiology services, ENTs, pediatricians, regionally-based advisors on deaf children and speech-language therapists. The program augments its highly coordinated service model with specific obligations to Māori people, such as supporting service providers to travel to families and whänau (extended family) as necessary, facilitating the involvement of Māori throughout service design, development and delivery, increasing access to UNHSEIP for Māori, developing relationships with Māori health providers and

developing staff competencies to meet the specific needs of Māori (NZMOH & MOE, 2009).

For Kerrie Gallagher (2008; 2010a), a Māori speech-language therapist, engaging Indigenous service providers and creating linkages with Māori child development support staff is an important way of promoting a holistic and sustainable approach. This strategy augments existing capacity building models by directly engaging the Māori language, Māori pedagogy and the Māori world view. Though limited in some ways by a fractionally small cohort of speech-language therapy graduates, it is further enhanced within school settings by policy that makes funding available for *Kaitakawaenga.* Gallagher describes these support staff as fantastic resources who support speech-language therapy services from the first by providing the initial contact with children & families, introducing the speech-language therapist and asking families which approach they would prefer: traditional or "full-on Māori" (K. Gallagher, personal communication, June 6, 2010).

Concerns about literacy performance of Māori children and the unfamiliar environment of school learning are being acknowledged through a more appropriate cultural lens. One study in particular focused on the long-term effects of this struggle in later school years and found that a more culturally inclusive approach overall improved performance. To illustrate, Glynn, Berryman, Loader, & Cavanaugh (2005) describe a successful community-based initiative for addressing literacy problems for strong Māori speakers when they entered secondary school with significant delays in age-appropriate reading and writing performances. A ten-week program was designed to include affirmation of local cultural values and practices. This specialized home and school package is now part of the school's regular practice.

Two decades earlier, in the U.S., Harris (1985) argued for a culturally sensitive approach to speech-language instruments—specifically, developing, administering and interpreting tools against local norms. This kind of place-based tool development has assumed a variety of forms in Indigenous settings in New Zealand. Maclagan, King, and Gillon (2008), for instance, describe the development of an assessment tool at New Zealand's Poutama Pounamu Education Resource Centre. Designed for sensitivity to Māori speakers, the Ki Tere Tonu or "be quick" test consists of a rapid naming task, an

oral narrative task using sequencing photographs of common childhood experiences and a personal oral narrative task using photo prompts. A short language sample of the child speaking Māori is also collected.

USA

By all accounts, the American Speech-Language-Hearing Association (ASHA) was the first national speech, language and audiology professional association to form an Aboriginal special interest group. Established at the Detroit convention in 1986 as a multi-cultural constituency group, the Native American Caucus provides an advocacy framework for Native American and Alaskan Native issues. Currently, the Native American Caucus is coordinated by a six-member leadership council (M. Nahwegahbow, personal communication, June 21, 2010). Annual meetings during ASHA conferences are described as formative and empowering experiences for Native Americans (R. Friedlander, personal communication, June 4, 2010).

Specifically, the Native American Caucus enables Native American access to suitable and appropriate services by sharing respectful and relevant practices, increasing provider cultural understanding, sensitivity and competence, supporting Native American and Alaskan Natives interested in speech-language and hearing careers, and promoting opportunities for Indigenous speech and hearing service leadership and administration (WSU, n.d.; ASHA, 2010).

In the U.S., professional and academic leadership coincide. ASHA's statement on Minority Student Recruitment, Retention and Career Transition Practices underscores the role of system-wide commitment to workforce diversity and notes the importance of accessible entry and bridging points to improve minority participation in professional workforces (ASHA, 2010). Principles articulated by the Native American Caucus to actively engage, encourage and enable Native American and Alaskan Natives speech language and audiology professionals have been transitioned to university programming.

In the early 1980s, the Division of Personnel Preparation Office of Special Education Programs in the U.S. Department of Education made specific funds available to advance Native American participation in speech language and audiology professions. The University of Arizona's American Indian Professional Training in Speech Language

Pathology and Audiology Project is recognized as the first such program. Others include the Diné Special Education Personnel Preparation Project which trained Navajos as educational diagnosticians and speech language pathologists and the Inservice Training for Native American Paraprofessionals in Communication Disorders, which trained paraprofessional personnel from the Navajo Child Development Program and was targeted toward teacher-aides but also involved social service and community health personnel (Gajar, 1985).

Washington State University is in its third decade of providing programs that have been designed to recruit, retain and graduate Native Americans who are prepared for professional careers in speech language pathology and audiology (Inglebret, 2005). Inglebret identifies the program's relationship to local and regional leadership as its unique aspect. She describes the process of signing memorandums of understanding between the most senior levels of university administration and tribal leadership and the positive outcomes and relationships they foster. On average, the undergraduate and graduate programs at Washington State University recruit two to three Native American students each year. The U.S. Education Department training grants that previously supported teaching assistantships, tuition waivers and partial tuition waivers and some awards have expired. Currently, the program offers three scholarships (E. Inglebret, personal communication, June 18, 2010).

Both Northern Arizona University and the University of Kansas demonstrate leadership in Native American student recruitment and support in speech language and communications disorders programs (E. Inglebret, personal communication, June 18, 2010). Native American enrolment in all University of Northern Arizona undergraduate programs at the Flagstaff campus accounts for 10% of the total student population. The University of Kansas, in partnership with the U.S. Department of Education, established a speech language pathology Circle program for Native American and Alaskan Natives. Its four goals are 1) recruitment, 2) academic and practicum experiences that focus on Native American children, 3) interdisciplinary collaboration experiences, and 4) specific activities for graduates beginning work. The program also addresses socio-economic reality by providing a grant that students can repay in cash or by working in Native

American settings as speech language or audiology professionals (Frome Loeb, Banks, & Cuny, 2007; University of Kansas, 2010).

Para-professionalization of practice is a long-held strategy in remote and underserved Indigenous settings in the USA. Boles et al. (2008), for instance, describe how failed attempts to recruit sufficient numbers of speech language pathologists in American Samoa resulted in the certification of 15 American Samoan teachers in speech and language and motivated the development of a speech language partnership with California State University.

At the Center for International Rehabilitation Research Information and Exchange, Lubinski and Matteliano (2008) discuss competency issues in speech language pathology curriculum and situate cultural safety within the framework of professional education. Among the curriculum-based changes they foresee is speech language pathology student practicum exposure to multi-cultural populations, including Head Start screening and appropriate service delivery to Native Americans.

Information is limited in the area of linguistic characteristics of children from American Indian and Alaskan Native backgrounds (McCarty, 2008; Inglebret, personal communication, June 18, 2010). A growing body of U.S. research points to the need to know more about language development in Native American children; these discussions tend to state that developmental courses typically vary among cultures (Bayles & Harris, 1982; Kay Raining-Bird & Vetter, 1994; Lindstedt, 2000; Inglebret, Eagle & CHiXapkaid (Pavel), 2007; Inglebret, Jones & Pavel, 2008).

A fairly recent U.S. study explored the use of a test battery of tasks for evaluating language variation in young children. Seven case studies are profiled (4 to 9-year-olds) using a number of test items, which eventually constituted a published assessment approach: the Diagnostic Evaluation of Language Variation (DELV) assessments, the DELV Screening Test, DELV Criterion-Referenced and Norm-Referenced editions, and the DELV edition. The authors conclude that variations in children's language can be explained by typical developmental patterns, dialectal patterns that reflect a child's cultural and linguistic community, and, in some cases, patterns that indicate slow, delayed or disordered development (Pearson & Ciolli, 2004). Earlier, Robinson-Zanartu's (1996) consideration of cultural variables in Native American service environments

highlights distinctive communication patterns, such as the use of silence, and recommends dynamic methodologies and whole system approaches to improve provider understanding. Likewise, following their application of dynamic assessment in an Arapahoe/Shoshone kindergarten, Ukrainetz, Harpell, Walsh and Coyle (2000) were able to differentiate strong and weak language learners. They conclude that dynamic assessment shows strong potential as a language evaluation approach for distinguishing differences from disorders in these children.

Peter and Hirata-Edds (2006) report on the use of local normative information in the development of the Cherokee Preschool Immersion Language Assessment (C-PILA). Using expertise from the Cherokee Nation Cultural Resource Center, they designed a tool to provide teachers with feedback about learner language needs and inform instruction. Test items, chosen to reflect regular classroom vocabulary and expressions, were intended to measure communicative competence in Cherokee. Workshops were offered for teachers to learn strategies for Cherokee language sampling.

Recently, Pedersen and Vining (2009) described the role of local and cultural norms in the development of Family Infant Toddler programming among a diverse (Pueblo, Navajo and Apache) and geographically distributed Native American population in the State of New Mexico. They note that this approach to early intervention services directly engages Native American leadership and scrutiny of early assessment and evaluation in a culturally appropriate manner. They report that the model places speech language services in the context of family-centred philosophy and culturally competent service delivery.

Personal service delivery stories demonstrate success and create bridges to systemic approaches to speech language and hearing services for Native American children. Susan Pavel, for instance, documents the efforts of individual family members and clinicians to address system-wide gaps for her deaf son. Kaid'dub, in his mother’s words, was destined to be a leader among the Skokomish people in Washington State. When he was 2½ years old, however, he was diagnosed with bilateral severe to profound hearing loss. At the system-level, the absence of an infant hearing screening program delayed identification of Kaid’dub’s hearing deficit costing him “critical language learning time.” At a program level, no services were available in the family’s rural/remote location; however, this

changed when the family connected with a teacher of the Deaf at Seattle's Children's Hospital who drove 200-mile round trips each week to provide help. The family extended this connection to the school district and the tribal Head Start program to form the first Deaf Education team in the area (Pavel, 2008).

This hub-type approach is being applied successfully in the U.S. as a programmatic response to developmental disadvantages among high-risk populations. For example, the Indian Health Service (IHS) tribal clinic partners have adopted a literacy-based hub approach to early child language development. IHS estimates that IHS and Tribal clinics provide services to 75% of Native American and Alaskan Native children (Klass, 2009). Accordingly, in 2007, IHS joined with the American Association of Pediatricians to extend the existing Reach Out and Read program to IHS and tribal health clinics. In this model, volunteers read to children in waiting rooms, age-appropriate books are distributed at no cost and clinical staff reinforce pre-literacy and early language learning principles with parents during appointments. To date, Reach Out and Read has been implemented at 176 sites and reaches an estimated 49,000 children aged 6 months to 5 years (Klass, 2009; American Association of Pediatrics, 2010).

At the community-level, practitioners are having success connecting their services with community members and traditions. Rhonda Friedlander, a speech language pathologist and member of the Flathead Nation in Montana, stresses the importance of connecting with Elders and traditions to understand contemporary issues and develop meaningful local solutions. Friedlander underscores the importance for speech language pathology practices to incorporate "native traditions, culture and language specific to the people we work with" (Friedlander, personal communication, June 4, 2010).

Linkages with community-based traditions and stories are central to Inglebret's work with students at Washington State University. As part of an oral language enrichment (OLE!) program, for example, students created intervention materials based on components of children's Skokomish cultural backgrounds. Reading these stories particularly increased speech sound awareness in Native American children with hearing aids, assistive listening devices or cochlear implants. These materials have been welcomed and recognized by American Indian educators for their ability to bring "culture into the therapeutic process" (Inglebret, Eagle & CHiXapKaid, 2007, & E. Inglebret,

personal communication, June 18, 2010). Likewise, Frome Loeb and Burns Daniels (2007) tested the function of culturally-based stories with at-risk (low SES) Native American children. Using readers such as *Jingle Dancer*, *First Strawberries*, and *Grandmother's Dreamcatcher*, they demonstrated that, in conjunction with focussed activities, children in a group setting easily learned new words. Vocabulary activities included hearing words during story reading, one-per-day focus for each target word, two 30-minute semantic activities for each word, focus on all three words on fourth day, and "child's choice" review day on the fifth day. They concluded that rich instruction within a culturally-relevant literacy-based language intervention approach is an effective method for helping at-risk Native American children learn new vocabulary words.

CONCLUSION

The literature review and key informant interviews summarized in this document provide a broad picture of the current state of speech-language and hearing needs and service delivery for young First Nations, Inuit and Métis children in Canada, compared with Indigenous children in Australia, New Zealand and the USA. Within various and multifaceted contexts of geography, history, socio-economics, politics, culture and languages, the ability to respond effectively to the high need for service delivery is challenged. Specifically, location, service coordination, and cultural and community fit of service represent the range of barriers to effective service for most Indigenous populations. The main areas of need that address these barriers are professional workforce development, increased service delivery options, alternative screening and assessment approaches, increased universal strengths-based programs, and community capacity development.

Some of these needs are being acknowledged in a growing collection of current practices in Canada and elsewhere. Efforts to better prepare professionals for working with First Nations, Inuit and Métis children, such as the newly designed Aboriginal cultural speech-language pathology/audiology course at UBC, are on the rise. Also, service delivery is branching out to include long-term cost effective approaches such as the use of telehealth, though not without its difficulties. Without exception, the need for new screening and assessment approaches is strongly expressed; at the practical level, however, very little material exists for actual use. Key informants were consistently enthusiastic about programs such as Moe the Mouse™ and other locally crafted materials that incorporate cultural and linguistic traditions into speech-language and hearing intervention efforts. And at the community level, more Aboriginal people are stepping directly into the professions as supportive personnel, but less so as speech-language pathologists and audiologists.

Recommendations

Considering the diverse and widely distributed demographic, geographic and cultural profile of First Nations, Inuit and Métis people, the following recommendations for improved speech-language and audiology services reflect strengths-based approaches that are intended to be grounded in community-based capacity development and respect local cultural and linguistic behaviours and traditions. The following 12 recommendations stem from this literature review and key informant interviews. The recommendations are organized into three themes: research, service delivery options and professional development.

Research

These recommendations address gaps and inconsistencies in knowledge about how best to provide effective services to First Nations, Inuit and Métis children. In particular, the reliability of current speech-language and hearing prevalence data is questioned and may be under-representing or over-representing portions of the population due to linguistic misunderstandings. Particular note is made concerning the absence of Métis data.

1. Information represented in this report on service delivery status, barriers and current practices found in the literature and provided by key informants should be investigated further to represent the views of First Nations, Inuit and Métis people and communities.
2. The unevenness of current and historical speech-language and hearing prevalence data should be addressed in a programmatic and comprehensive manner and cultural and linguistic baselines established.
3. The issue of appropriate screening and assessment tools is a priority. Given the scope of different linguistic profiles across the country and within communities, consideration should first be directed at encouraging adaptation of tools, use of narrative-based and dynamic methods, and development of a practical process for collecting local norms—a process that involves the local community and accommodates the diverse and holistic nature of First Nations, Inuit and Métis communities and people.

4. For the current practices that are identified, cost-benefit and effectiveness evaluations should be completed to determine what is beneficial for community members, practitioners and policy makers.

Service delivery options

Improving access to speech-language pathology and audiology services in rural and remote communities is a challenge that requires flexible, creative and sustainable solutions, including increased funding for more professionals and supportive personnel overall. For existing service, agency-supported flexibility is needed in current mainstream service delivery models to accommodate individual communities.

5. Alternative options for service delivery should be explored in more depth and their usefulness evaluated. Using telehealth and establishing more formal connections to community early intervention sites, such as daycares/child care centres, Aboriginal Head Starts and local clinics are promising possibilities.
6. In preparation for ongoing service delivery in a community, it is important first to consider community needs in order to find an appropriate balance between direct service and community capacity building. Taking time to set a community-directed path is advisable.
7. Speech-language pathologists and audiologists should be encouraged and supported in their efforts to engage with community for their own cultural awareness growth, for sharing more knowledge in less formal ways and for building new and culturally competent relationships with the children, families and communities that they serve.
8. More inter-professional connections should be established and sustained among health, education, social, cultural and other community supports, leading to increased knowledge and understanding to better understand and support, if necessary, the needs of First Nations, Inuit and Métis children.

Professional development

Recruiting First Nations, Inuit and Métis candidates into the profession and better preparing all future and current speech-language pathologists, audiologists and supportive personnel for working in linguistically and culturally diverse settings reflect positive directions for the profession.

9. Active recruitment efforts and support of speech-language pathology/audiology candidates who are also of First Nations, Inuit or Métis ancestry should be expanded.
10. More open and accessible avenues for professionals and supportive personnel who serve First Nations, Inuit and Métis populations to have ongoing discussions and share resources should be explored and implemented.
11. Current and future speech-language pathology, audiology and supportive personnel should be respectful and mindful of Aboriginal perspectives of health, healing and learning in their formal training, professional development activities and interactions with community healers and family members.
12. Training and professional development opportunities should be developed that address speech-language pathology/audiology practice issues in First Nations, Inuit and Métis settings and provide an opportunity for community-based services staff to share concerns, priorities and solutions.

Speech-language and hearing abilities are essential communicative capacities for human development. Families should rest assured that their children's speech-language and hearing abilities are developing typically according to their community environment. In some children, communicative capacities may be compromised, regardless of linguistic or cultural experiences. Knowing when to address such concerns and, if necessary, being able to access speech-language and hearing services should be an easy and timely first step in the process of getting some help with communicating and hearing. This summary report highlights the value of services and materials that are culturally and linguistically appropriate and are flexible to alternative perspectives of wellness in which the child is supported from a more universal, strengths-based approach within a wider community.

REFERENCES CITED

Canada

Aboriginal Infant Development Program. (2010). *Aboriginal infant development programs of BC*. Retrieved from http://www.aidp.bc.ca/

Aboriginal Children's Survey [ACS]. (2006). *Inuit health and social conditions.* Retrieved from http://dsp-psd.pwgsc.gc.ca/...2008/.../89-637-x2008001-eng.pdf

Ajjunnginiq Centre. (2007). *Backgrounder on World Suicide Prevention Day*. Retrieved from www.naho.ca/inuit/english/.../SuicideBackgrounder_000.pdf

Alberta. (2005). *Alberta Children and Youth Initiative: Towards sustainable speech-language services for Alberta's children and youth: A review of speech-language services in Alberta – final report for the Deputy Ministers*. Retrieved from http://www.child.alberta.ca/home/documents/youthprograms/Speech-Language_Final_Report1.pdf

Assembly of First Nations. (2005). *First Nations Housing Action Plan*. Ottawa, ON. Retrieved from www.afn.ca/cmslib/general/Housing-Action-Plan.pdf

Assembly of First Nations. (2007). *Regional Longitudinal Health Survey (RHS) 2002/03: Results for adults, youth and children living in First Nations communities*. (Rev. 2nd ed.) Ottawa, ON. Retrieved from http://www.rhs-ers.ca/english/phase1.asp

Ayukawa, H., Bélanger, R., & Rochette, L. (2007). *Hearing loss and dental health. Nunavik Inuit Health Survey 2004, Qanuippitaa? How are we?* Quebec: Institut national de santé publique du Québec (INSPQ) and Nunavik Regional Board of Health and Social Services (NRBHSS). Retrieved from http://www.inspq.qc.ca/pdf/publications/nunavik.asp

Ayukawa, H., Bruneau, S., Proulx, J.F., Macarthur, J., & Baxter, J. (2004). Otitis media and hearing loss among 12–16 year old Inuit of Inukjuak, Quebec, Canada. *Circumpolar Health*, 63(Suppl 2), 312–314.

Ayukawa, H., Lejeune, P., & Proulx, J.F. (2003). Hearing screening outcomes in Inuit children in Nunavik, Quebec, Canada. *Circumpolar Health, 63(*Suppl 2), 309–311.

Ball, J. (2008). Promoting equity and dignity for Aboriginal children in Canada. *Institute for Research on Public Policy (IRPP) Choices, 14*(7).

Ball, J. (2009). Supporting young Indigenous children's language development in Canada: A review of research on needs and promising practices. *Canadian Modern Language Review, 66*(1), 19–47.

Ball J. (2010). Cultural safety in practice with children, families and communities. *Proceedings of the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) Conference, May 19–22, 2010*. Whitehorse, YT.

Ball, J., & Bernhardt, B.M. (2008). First Nations English dialects in Canada: Implications for speech-language pathology. *Clinical Linguistics and Phonetics, 22*, 570–588.

Ball, J., & Lewis, M. (2005). First Nations elders' and parents' views on supporting young children's language development. *Proceedings of the Canadian Association of Speech-Language Pathologists and Audiologists Conference, May 6, 2010.* Regina, SK. Retrieved from www.ecdip.org/reports

Ball, J. & Lewis, M. (2005a). Talking points: What can speech-language partners contribute to Aboriginal early childhood development? *Research Connections Canada: Supporting Children and Families, 12*, 21–40.

Baxter, J.D., Julien, G., Tewfik, T.L., Ilecki, H.J., & Crago, M. (1986). Observations on the prevalence of ear disease in the Inuit and Cree Indian school population of Kuujjuaraapik. *The Journal of Otolaryngology*, *15*(1), 25–30.

BC Aboriginal Child Care Society. (2010). *Moe-the-Mouse.* Retrieved from http://www.acc-society.bc.ca/files_new/moe-the-mouse-TM.html

BCASLPA. (2010). *S-LP Private Practice Fee Guidelines Committee final report*. Vancouver, BC: British Columbia Association of Speech-Language Pathologists and Audiologists.

Bernhardt, M. B. (2009). *Progress report: TLEF grant to school of audiology and speech sciences 2009*. Vancouver, BC: UBC School of Speech Sciences and Audiology.

Birch, J. (2007). Occurrence of otitis media and hearing loss among First Nations elementary school children. *Canadian Journal of Speech-Language Pathology and Audiology, 31*(4) 178–185.

Bowd, A. (2002). *Otitis media: Its health, social and educational consequences particularly for Canadian Inuit, Métis and First Nations children and adolescents. Learning and Communication Task Force, Lakehead University*. Centre of Excellence for Children and Adolescent with Special Needs. Retrieved from http://www.coespecialneeds.ca/?display=page&pid=11&mn=14

Bowd, A. (2005). Otitis media: Health and social consequences for Aboriginal youth in Canada's north. *International Journal of Circumpolar Health, 64*(1), 5–15.

British Columbia. (2007). Ministry of Aboriginal Relations and Reconciliation. *Government standard for Aboriginal administrative data, version 1*. Victoria, BC. Retrieved from http://www.cio.gov.bc.ca/local/cio/standards/documents/standards/aboriginal_administrative_data_standards.pdf

British Columbia. (2009). Ministry of Child and Family Development. *New community-based resources highlight the strength of Aboriginal teachings as the foundation for early childhood development*. *Success By Six newsletter, February 12, 2009*. Retrieved from www.fphlcc.ca/downloads/success-by-six.pdf

Canada. (2003). Early childhood development activities and expenditures: Baseline report 2002–2003 multilateral framework on early learning and child care. Ottawa: ON. Retrieved from: http://www.socialunion.gc.ca/ecd/2003/report1_e/te.html

Canada. (2008). *Bill C-239: The First Nations Children's Health Protection Act.* Ottawa, ON: House of Commons.

Canadian Association of Speech-Language Pathologists and Audiologists. (2008). *Highlights of the 2008 salary survey*. Ottawa, ON. Retrieved from http://www.caslpa.ca

Canadian Association of Speech-Language Pathologists and Audiologists. (2010). Draft findings of the survey of speech-language pathologists/audiologists on speech-language and hearing services for First Nations, Inuit and Métis children. Ottawa, ON.

Canadian Association of Speech-Language Pathologists and Audiologists. (2010). Position paper on universal newborn hearing screening in Canada. Retrieved from http://www.caslpa.ca/PDF/position%20papers/Universal_Newborn_Hearing_Screening_Position_Paper_2010.pdf

Canadian Institute for Health Information. (2007). *Health personnel professional profiles*. Ottawa, ON. Retrieved from http://www.caslpa.ca/PDF/CIHI_breakdown_province_2006.pdf

Cappon, P. (2008). *Measuring success in First Nations, Inuit, and Métis learning. Policy options*. Ottawa, ON: Canadian Council on Learning. Retrieved from http://www.ccl-cca.ca

Chandler, J.J., & Lalonde, C. (1998). Cultural continuity as a hedge against suicide in Canada's First Nations. *Transcultural Psychiatry, 35*(2), 191–219.

Clark, M., Riben P., & Nowgesic, E. (2002). The association of housing density, isolation and tuberculosis in Canadian First Nations Communities. *International Journal of Epidemiology. 31,* 940–945.

Closson T. (2005. *The integrated service plan for Northwestern Ontario, report of the Special Advisor. MOHLTC.* Retrieved from http://www.health.gov.on.ca/english/public/pub/ministry_reports/closson05/closson05.html

Commission on the Future of Health Care in Canada. (2002). *Building on values: The future of health care in Canada.* Retrieved from http://publications.gc.ca/pub?id=237274&sl=0

Crago, M. (1990). Development of communicative competence in Inuit children: Implications for speech-language pathology. *Communication Disorders Quarterly, 13,* 73.

Crago, M., & Westernoff, F. (1997). Canadian Association of Speech-Language Pathologists and Audiologists position paper on speech-language pathology and audiology in the multi-cultural, multilingual context. *Journal of Speech and Language Pathology and Audiology, 21,* 35–44.

Davis, W. (2009). *The wayfinders: Why ancient wisdom matters in the modern world*. Toronto, ON: CBC Massey Lectures.

Demas, D. (2005). Addressing gaps in services for on reserve First Nations children with disabilities and their families: A service delivery model. Ottawa, ON: Assembly of Manitoba Chiefs and First Nations Education Resource Center.

Dench, C., Cleave, P., Tagak, J., & Beddard, J. (2010). The development of an Inuktitut and English language screening tool in Nunavut. Manuscript submitted for publication.

Egeland, G., Pacey A., Zirong C. (2010). Food insecurity among Inuit pre-schoolers: Nunavut Inuit Child Health Survey, 2007–2008. *Canadian Medical Association Journal, 182*(3), 243–248.

Ennis, J., & Clarke-Shippam, N. (2004). Hearing the scoop on the north. *HearSay, 21*(2), 5. Retrieved from http://www.msha.ca/

Eriks-Brophy, A., Quittenbaum, J., Anderson, D., & Nelson, T. (2008). Part of the problem or part of the solution? Communication assessments of Aboriginal children residing in remote communities using videoconferencing. *Clinical Linguistics and Phonetics, 22*(8), 589–609.

First Nations Centre. (2005). *Preliminary findings of the First Nations Regional Longitudinal Health Survey (Rhs) 2002–03 Children's Survey.* Ottawa, ON: National Aboriginal Health Organization. Retrieved from http://www.rhs-ers.ca

First Nations Child and Family Caring Society (FNCFCSC). (2005). *Wen: De – We are coming to the light of day.* Ottawa, ON. Retrieved from http://www.fncfcs.com/jordans-principle/index.php

First Nations Child and Family Caring Society. (n.d.). *Jordan's Principle fact sheet*. Retrieved from http://www.fncfcs.com/jordans-principle/index.php

First Nations Education Steering Committee. (n.d.) Jurisdictional agreements. Retrieved from http://www.fnesc.ca/jurisdiction/

First Nations Health Council. (2009). *British Columbia Tri-partite First Nations Health Plan – Year in Review, 2008–2009.* Retrieved from www.fnhc.ca/pdf/Year_in_Review_Report_2009-web.pdf

First Nations Health Council. (n.d.) First Nations Health Plan timeline of events. Retrieved from http://www.fnhc.ca/pdf/FNHC_TIMELINE_v6.png

First Nations Leadership Council (FNLC). (2006). *The Transformative Change Accord: First Nations Health Plan.* Retrieved from http://www.afn.ca/article.asp?id=1586

First Nations of Quebec and Labrador Health and Social Services Commission. (2008). Regional portrait of the special needs situation for First Nations clientele between the ages of 0–6 years. Wendake: QC. Retrieved from: http://www.cssspnql.com/eng/petite-enfance/publications.htm

First Nations School Association. (n.d.). *Special education.* Retrieved from http://www.fnsa.ca/specialed.htm

Gardener A., & McCrick H. (2010). *A speech-language pathology support personnel pilot project for Aboriginal communities on the West Coast of Vancouver Island*. Retrieved from www.therapybc.ca/pdf/TA_docs/WCVIACSM.pdf

Gerlach, A. (2008). S*teps in the right direction: connecting & collaborating in early intervention therapy with Aboriginal families & communities in British Columbia.* Vancouver, BC: BC Aboriginal Child Care Society. Retrieved from http://www.acc-society.bc.ca/files_new/resources.html

Gerlach, A., Gray Smith, M., & Schneider, J. (2008). *Initial Aboriginal early years strategic framework.* Victoria, BC: BC Ministry of Children and Family Development. Retrieved from www.littledrum.com/pdf/Initial_Aboriginal_EY_Framework_Outline.pdf

Gideon, V. (2007). Keynote Address. *Proceedings of the Canadian Health Informatics Association Conference, October 3, 2007, Toronto, ON.* Retrieved from http://www.cnia.ca/Conference2007/VGideon.html

Gideon, V., Nicholas E., Rowlandson J., & Woolner F. (2009). Enabling and accelerating First Nations telehealth development in Canada. *Community Informatics Journal, 5*(2).

Green, E., Bernhardt, B.M., & Wood, H. (2010). Course development concerning service delivery to Aboriginal people: the student perspective. *Proceedings of the CASLPA Conference, Whitehorse, YT, May, 2010*.

Guèvremont, A., & Kohen, D. (2007) Inuit children's health: A report using the 2001 Aboriginal Peoples Survey (Children and Youth Component). Statistics Canada, Ottawa. Retrieved from www.statcan.gc.ca/pub/89-627-x/89-627-x2007003-eng.htm

Guhn M., Gadermann A., Zumbo B. (2007). Does the EDI measure school readiness in the same way across different groups of children? *Early Education and Development, 18*(3), 453–472.

Hadden-Jokiel, P. (2008). *Program description*. [Slide presentation]. Ottawa, ON: Health Canada, First Nations and Inuit Health Branch. Retrieved from www.fnhealthmanagers.ca/.../How%20FNIHB%20Works%20-%20Hadden-Jokiel%20EN.pdf

Health Canada. (2001). Certain circumstances: Issues in equality and responsiveness in access to health care in Canada. Ottawa, ON: Health Canada. Retrieved from http://www.hc-sc.gc.ca/hcs-sss/pubs/acces/2001-certain-equit-acces/part1-doc1-sec2-eng.php

Health Canada. (2004). *Aboriginal Head Start: program overview*. Retrieved from http://www.phac-aspc.gc.ca/dca-dea/programs-mes/ahs_overview-eng.php

Health Canada (2005). *Aboriginal Head Start on Reserve Program 2003–2004 progress report.* Ottawa, ON: Children and Youth Cluster, First Nations and Inuit Health Branch.

Health Canada. (2006). Brighter futures and building healthy communities evaluation summary. Ottawa: ON. Retrieved from: http://www.hc-sc.gc.ca/fniah-spnia/pubs/promotion/_mental/2006-sum-rpt/index-eng.php

Health Canada. (2007). *FNIHCC program: environmental scan of the unmet home care needs of First Nations and Inuit children and youth*. Retrieved from http://www.rhs-ers.ca

Health Canada. (2009a). *Non-insured health benefits program annual report*. Ottawa, ON: First Nations and Inuit Health Branch. Non-Insured Health Benefits Directorate. Retrieved from http://dsp-psd.pwgsc.gc.ca/collection_**2009**/sc-hc/H33-1-2-2008E.pdf

Health Canada. (2009b). *Performance Report 2004–2005 to 2006–2007*. Ottawa, ON: Children and Youth Cluster, First Nations and Inuit Health Branch.

Health Canada. (2009c). *A statistical profile on the health of First Nations in Canada: Determinants of health, 1999 to 2003*. Ottawa, ON. Retrieved from http://www.hc-sc.gc.ca/fniah-spnia/pubs/aborig-autoch/index-eng.php

Health Canada. (2010). *Cluster evaluation: final evaluation report*. Ottawa, ON: Children and Youth Cluster, First Nations and Inuit Health Branch.

Heritz, J. (2010). Urban Aboriginal peoples in Canada: beyond statistics. *Proceedings of the Canadian Political Science Association, Conference, June 1-3, 2010*. Montréal, QC. Retrieved from www.cpsa-acsp.ca/papers-2010/Heritz.pdf

Indian and Northern Affairs Canada. (2006). *Fact sheet: 2006 census Aboriginal demographics.* Retrieved from http://www.ainc-inac.gc.ca/ai/mr/is/cad-eng.asp

Indian and Northern Affairs Canada and Health Canada. (2007). Joint Statement on Jordan's Principle by the Ministers of Health and Indian and Northern Affairs, 12 December 2007. Retrieved from: http://www.ainc-inac.gc.ca/ai/mr/nr/s-d2007/2-2981-eng.asp

Indian and Northern Affairs Canada. (n.d.) SEP Website: Retrieved from: http://www.ainc-inac.gc.ca/edu/ep/sep-eng.asp

Inuit Tapiriit Kanatami. (2007). *Alianait Inuit mental wellness action plan.* Retrieved from http://www.itk.ca/sites/default/files/alainait_action_plan_english.pdf

Inuit Tapiriit Kanatami. (2010). *Inuit speak of frustration, hope at national early-childhood education gathering.* Retrieved from http://www.itk.ca/media-centre/media-releases/inuit-speak-frustration-hope-national-early-childhood-education-gathering

Joint Committee on Infant Hearing (JCIH), American Academy of Audiology, American Academy of Pediatrics, American Speech-Language-Hearing Association, and Directors of Speech and Hearing Programs in State Health and Welfare Agencies. (2007). Year 2007 position statement: Principles and guidelines for early hearing detection and intervention programs. *American Academy of Pediatrics, 120,* 898–921. Retrieved November1, 2010 from http://pediatrics.aappublications.org/cgi/content/extract/120/4/898

King, E. (2009). *A training curriculum for early childhood educators in the Aboriginal Head Start in Urban and Northern Communities program working with Aboriginal children with special needs.* Centre of Excellence for Children & Adolescents with Special Needs. Thunder Bay, ON. Retrieved from www.coespecialneeds.ca

Kramer, K., Mallett, P., Schneider, P., & Hayward, D. (2009). Dynamic assessment of narratives with grade 3 children in a First Nations community. *Canadian Journal of Speech-Language Pathology and Audiology, 33*(3), 119–128.

Langan, L., Sockalingham, R., Caissie, R., & Corsten, G. (2007). Occurrence of otitis media and hearing loss among First Nations elementary school children. *Canadian Journal of Speech-Language Pathology and Audiology, 31*(4), 178–185.

Lavallee, T. (2005). Honouring Jordan: putting First Nations children first and funding fights second. *Paediatric Child Health, 10*(9), 527–529.

Lavoie, J., & Williams, D. (2009). Managing changes in First Nations' health care needs: Is telehealth the answer? *Journal of Community Informatics, 5*(2). Retrieved from: http://www.ci-journal.net/index.php/ciej/article/view/368/445

Leitch, K. (2007). R*eaching for the top: A report by the Advisor on Healthy Children and Youth.* Ottawa, ON: Health Canada. Retrieved from www.hc-sc.gc.ca/hl-vs/pubs/child-enfant/advisor-conseillere/index-eng.php

Loppie Reading, C., & Wien F. (2009). Health inequalities and social determinants of Aboriginal people's health. National Collaborating Centre for Aboriginal Health. Prince George, BC. Retrieved from http://www.nccah-ccnsa.ca/40/Social_Determinants.nccah

Luffman, J., & Sussman, D. (2007*). Perspectives on labour and income. The Aboriginal labour force in Western Canada*. Ottawa, ON: Statistics Canada, 8(1), Retrieved from http://www.statcan.gc.ca/pub/75-001-x/10107/9570-eng.htm

Manitoba First Nations Education Resource Centre. (n.d.). *Manitoba First Nations Education Resource Centre Special Education Services*. Retrieved from http://www.mfnerc.org/index.php?option=com_content&task=category&sectionid=4&id=10&Itemid=56

May Street Productions Limited, & Hummingbird Take Two Productions Ltd. (2010). *TIGA TALK!* Victoria, BC: Aboriginal Peoples Television Network (APTN). Retrieved from http://www.maystreet.ca/prjcts_Tiga.html

Métis Centre, National Aboriginal Health Organization. (2008). *Social determinants of Métis Health.* Ottawa, ON: National Aboriginal Health Organization. Retrieved from http://www.naho.ca/metiscentre/english/documents/Research_SocialDeterminantsofHealth.pdf

Métis National Council. (2010). *The Métis Population in Canada.* Retrieved from http://www.metisnation.ca

Migone, J., & O'Neil J. (2005). Social Capital as a health determinant in First Nations: an exploratory study in three communities. *Journal of Aboriginal Health, 2*(1), 26–33.

Miller Mifflin, T. (2008). Community therapy assistant (CTA) program. *The Caribou Heard, 1*(6). 7. Retrieved from: http://umanitoba.ca/faculties/medicine/units/northern_medical_unit/pages/caribou_heard.shtml

Minore, B., & Katt M. (2007). Aboriginal health care in Northern Ontario: Impacts of self-determination and culture. *Choices, 13*(6).

Moosa, T., & Schurr, S. (2008). Integrating community needs with clinical education opportunities. *Communiqué, 32*(2), 9.

National Aboriginal Health Organization. (2003). *Aboriginal health human resources: A pillar for the Future. Retrieved from www.naho.ca/english/pdf/pillar_for_future.pdf*

Nunavut. (2005). *Inuit Qaujimajatuqangit education framework for Nunavut curriculum development.* Iqaluit, NU: Department of Education.

O'Donnell, S., Molyneaux, H., Gorman, E., Milliken, M., Chong, G.C., Oakley, K., & Maitland, J. (2010). *Literature review of information and communication technologies to support*

health and wellness in remote and rural First Nations communities. Fredericton, NB: National Research Council.

Peltier, S. (2009). First Nations English dialects in young children: assessment issues and supportive interventions. *Encyclopedia of Language and Literacy Development*. London, ON: Canadian Language and Literacy Research Network. Retrieved from http://www.literacyencyclopedia.ca/pdfs/topic.php?topId=276

Peltier, S. (2010). Providing culturally and linguistically relevant speech language pathology services in First Nations. *Proceedings of the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) Conference, May 19-22, 2010*. Whitehorse, YT.

Peltier, S. (2010a). Valuing children's storytelling from an Anishinaabe orality perspective. [M. Ed. thesis.] North Bay, ON: Nipissing University. Retrieved from http://www.collectionscanada.gc.ca/index-e.html

Public Health Agency of Canada. (2008). *The Chief Public Health Officer's report on the state of public health in Canada 2008.* Retrieved from http://www.phac-aspc.gc.ca/dca-dea/programs-mes/Aboriginal-autochtones-eng.php

Public Health Agency of Canada. (2010). Retrieved from http://www.phac-aspc.gc.ca/ph-sp/approach-approche/index-eng.php and http://www.phac-aspc.gc.ca/dca-dea/programs-mes/ahs_main-eng.php

Public Health Agency of Canada. (n.d.). Aboriginal Head Start in Urban and Northern Communities website. Retrieved from: http://www.phac-aspc.gc.ca/dca-dea/programs-mes/ahs_main-eng.php

Public Health Agency of Canada. (n.d.) Community Action Program for Children (CAPC) program evaluation. Retrieved from: http://www.phac-aspc.gc.ca/dca-dea/programs-mes/comm-eval/index-eng.php; on-line project search tool at: http://capc-pace.phac-aspc.gc.ca/results-resultats-eng.php?category[]=ABORG&province=&btnSubmit=Search

Reading, J., Kmetic, A., & Gideon, V. (2007). *First Nations wholistic policy & planning model: Discussion paper for the WHO Commission on Social Determinants of Health.* Ottawa, ON: Assembly of First Nations (AFN). Retrieved from http://www.afn.ca/cmslib/general/07-05-28_AFN_Paper_to_WHO_Commission_on_Social_Determinants

ResearchNet. (2009). Canadian Institute of Health Research. *Team grant: Vision, hearing and communication disorders*. Retrieved from: http://www.researchnet-recherchenet.ca/rnr16/vwOpprtntyDtls.do?prog=635&view=search&org=CIHR&type=AND&resultCount=25

Roberts, A., & Gerber L. (2003). *Nursing perspectives on public health programming in Nunavut*. Iqaluit, NU: Government of Nunavut. Department of Health and Social Services. Retrieved from http://74.125.155.132/scholar?q=cache:-wzDfuMhTkIJ:scholar.google.com/&hl=en&as_sdt=2000

Romanow, R. (2002). *Building on values: The future of health care in Canada:* Ottawa, ON: Privy Council. Retrieved from http://www.collectionscanada.gc.ca/webarchives/20071115024341/www.hc-sc.gc.ca/english/care/romanow/index1.html

Royal Commission on Aboriginal Peoples. (1996). *Chapter 3: Health and Healing* (3). Retrieved from http://www.collectionscanada.gc.ca/webarchives/20071207000711/http://www.ainc-inac.gc.ca/ch/rcap/sg/si16_e.html#1.3%20Social%20and%20Emotional%20Health

Scaldwell, W., & Frame, J. (1985). Prevalence of otitis media in Cree and Ojibway school-children in six Ontario communities. *Journal of American Indian Education, 25*(1).

Shah, B.R., Gunraj, N., & Hux, J. (2003). Markers of access to and quality primary care for Aboriginal people in Ontario, Canada. *American Journal of Public Health, 93*(5), 798–802.

Siu, C. (2009). Focus on assessing and treating diverse populations (First Nations, ethnic, bilingual): Integrating a culturally sensitive approach in the practice of audiology. *Communiqué, 23*(3), 4–5.

Statistics Canada. (2006). *Aboriginal identity (8), age groups (8), area of residence (6), sex (3) and selected demographic, cultural, labour force, educational and income characteristics (233), for the total population of Canada, provinces and territories, 2006 census – 20% sample data*. Retrieved from http://www.statcan.gc.ca/subject-sujet/result-resultat.action?pid=10000&id=10008&lang=eng&type=CENSUSTBL&pageNum=1&more=0

Statistics Canada. (2007). *Aboriginal children's survey 2006 questionnaire: Speech-language and hearing questions.10 & 16.* Retrieved from http://www.statcan.gc.ca/imdb-bmdi/instrument/5108_Q2_V1-eng.pdf

Statistics Canada. (2008). *Inuit statistical profile*. Retrieved from www.itk.ca/sites/default/files/InuitStatisticalProfile2008_0.pdf

Statistics Canada. (2009). *Population by sex and age group.* Retrieved from http://www40.statcan.gc.ca/l01/cst01/DEMO10A-eng.htm

Statistics Canada. (2010). *Average hourly wages of employees by selected characteristics and profession, unadjusted data, by province (monthly) (Canada).* Retrieved from http://www40.statcan.ca/l01/cst01/labr69a-eng.htm

Sterzuk, A. (2008). Whose English counts? Indigenous English in Saskatchewan schools. *McGill Journal of Education, 43*(1) 9–19.

Trumper, R. (2004). *Health status and health needs of Aboriginal children and youth literature review*. Southern Alberta Child & Youth Network. Retrieved from http://sacyhn.ca/sphider/search.php?query=trumper&x=0&y=0&search=1

University of British Columbia. (2010). *School of speech science & audiology course descriptions.* Retrieved from http://www.courses.audiospeech.ubc.ca/coursedetails.asp?ID=126

Vancouver Coastal Health Authority. (2010). *Aboriginal health facts*. Retrieved from http://Aboriginalhealth.vch.ca/facts.htm

Varcoe, C., & Dick, S. (2008). The intersecting risks of violence and HIV for rural Aboriginal women in a neo-colonial Canadian context. *Journal of Aboriginal Health, 4*(1), 42–52.

Walker, R. (2008). Social housing and the role of Aboriginal organizations. *Choices 14*(4), 1–18.

Weitzel, R. (2001). *Development implications for traditional indigenous medicine in the Americas*. Ottawa, ON. Manuscript prepared for the Canadian International Development Agency.

Young, T.K. (2003). Review of research on Aboriginal populations in Canada: Relevance to their health needs. *British Medical Journal, 327,* 419–422.

Australia

Access Economics. (2006). *Listen hear! The economic impact and cost of hearing loss in Australia*. Retrieved from http://www.accesseconomics.com.au/publicationsreports/showreport.php?id=71

Alperstein, G., Burke H., & Kennedy, C. on behalf of the Far West Aboriginal Child Development and Well-Being Management Group. (2009). Strategic framework document to improve child development and well-being for Aboriginal Children in the far West. Maari Ma Health Aboriginal Corporation. Retrieved from http://www.archi.net.au/documents/e-library/awards/Aboriginal-health09/strategic.framework.pdf

Australia. (2010). *Hear us: Inquiry into hearing health in Australia*. Canberra, ACT: Senate Community Affairs References Committee. Retrieved from http://www.aph.gov.au/SENATE/COMMITTEE/CLAC_CTTE/hearing_health/report/index.htm

Australian Resource Centre for Healthcare Innovations. (2009). *Innovation in Aboriginal health: Boomerangs Parenting Program.* Retrieved from http://www.archi.net.au/e-library/awards/2009-nsw-Aboriginal-awards/boomerangs-parenting

Baildon, G., & Bourke, N. (2003). Cross-cultural challenges: Northern Territory Experiences. *ACQuiring Knowledge in Speech, Language and Hearing, 5*(1), 28–30.

Charles Sturt University. (2010). *Speech pathology program.* Retrieved from http://www.csu.edu.au/faculty/educat/teached/staff/mcleod_sharynne.htm

Gould, J. (2005). Joint assessments for Koori children: Working with Aboriginal people to improve outcomes for Aboriginal English (lingo) speaking children in the speech pathology assessment situation. *Australian Communication Quarterly, 3*, 136–138.

Gould, J. (2008). Language difference or language disorder: Discourse sampling in speech pathology assessments for Indigenous children. In J. Simpson & G. Wigglesworth (Eds.). *Children's language and multilingualism: Indigenous language use at home and school* (pp. 194–215). New York: Continuum.

Gould, J. (2008a). Non-standard assessment practices in the evaluation of communication in Australian Aboriginal children. *Clinical linguistics and phonetics, 22*(8), 643–657.

Gould, J. (2008b). The effects of language assessment policies in speech-language pathology on the educational experiences of Indigenous students. *Current Issues in Language Planning, 9*(3), 299–316.

Gunasekera, H., Morris, P., Daniels, J., Couzos, S., & Craig, J.C. (2009). Otitis media in Aboriginal children: The discordance between burden of illness and access to services in rural/remote and urban Australia. *Journal of Paediatrics & Child Health, 45*(7/8), 425–430.

Hill, D., Leidwinger, L., & Pal, P. (2008). Tackling hearing health in the remote Kimberley region of Western Australia. *Services for Australian Rural and Remote Allied Health.* Retrieved from www.sarrah.org.au/client_images/749902.pdf

Howard, D. (2007). Intercultural communications and conductive hearing loss. *First Peoples Child & Family Review, 3*(4), 96–105.

Howard, D., & Hampton, D. (2006). Ear disease and Aboriginal families. *Aboriginal and Islander Health Worker Journal, 30*(3), 9–11.

Lehmann, D., Weeks, S., Jacoby, P., Elsbury, D., Finucane, J., Stokes, A., Monck, R., & Coates, H. (2008). Absent otoacoustic emissions predict otitis media in young Aboriginal

children: A birth cohort study in Aboriginal and non-Aboriginal children in an arid zone of Western Australia. *BMC Paediatrics, 8*(32).

Lew, J., & Hand, L. (2009). Monolingual and bilingual child: Do we think in terms of "two monolingualisms"? *ACQuiring Knowledge in Speech, Language and Hearing, 11*(1), 10–16.

Moran, D.J., Waterford, J.E., Hollows F., & Jones, D.L. (1979). Ear Disease in rural Australia. *Medical Journal of Australia, 2*(4), 210–212.

Morris, P.S., Leach, A.J., Silberberg, P., Mellon, G., Wilson, C., Hamilton, E., & Beissbarth J. (2005). Otitis media in young Aboriginal children from remote communities in Northern and Central Australia: a cross-sectional survey. *BMC Pediatrics 5*(27). Retrieved from: http://www.biomedcentral.com/1471-2431/5/27

NACCHO (National Aboriginal Community Controlled Health Organisation). (2006). *Understanding isolation and loneliness in Aboriginal communities.* Retrieved from http://www.aihw.gov.au/Indigenous/seww06/presentations/index.cfm

NSW Department of Health. (2008). *Evaluation of the Aboriginal otitis media screening program: Final report.* North Sydney, NSW: ARTD Consultants. Retrieved from http://www.health.nsw.gov.au/pubs/2008/pdf/otitis_report.pdf

NSW Department of Health (2008a). The Walgan Tilly Project: Chronic care for Aboriginal people. Retrieved from http://www.archi.net.au/e-library/delivery/Indigenous/walgan-tilly

Nye, A., & Russell, P. (2010). *Aboriginal Can't Hear? Hard to Learn. Greater Southern Area health service final report* [Slide presentation]. Retrieved from http://www.archi.net.au/documents/e-library/primary/community/cant-hear/Aboriginal.canthear.pdf

O'Callaghan, A., McCallister, L., & Wilson, L. (2005). Consumers' proposed solutions to barriers to access of rural & remote speech pathology services. *Advances in Speech-Language Pathology 7*(2), 58–64.

O'Connor, T.E., Perry C.F, & Lannigan F.J. (2009). Complications of otitis media in Indigenous and non-Indigenous children. *Medical Journal of Australia, 191*(9 Suppl), S60–64.

Phoenix Consulting. (2009). S*ubmission to the senate committee: Hearing us - Inquiry into hearing health in Australia*. Item 19. Retrieved from http://www.aph.gov.au/SENATE/COMMITTEE/CLAC_CTTE/hearing_health/report/e01.htm

Ryan, B., Johnson, A., Strange, A., & Yonovitz, A. (2006). The 'hearing aid effect' in Northern Territory Indigenous Australian children as perceived by their peers. *The Australian and New Zealand Journal of Audiology, 28*(1), 55–74.

Silburn, S.R. Zubrick, S.R., De Maio, J.A., Shepherd, C., Griffin, J.A., Mitrou, F.G., Dalby, R.B., Hayward, C., & Pearson, G. (2006). *The Western Australian Aboriginal child health survey: Strengthening the capacity of Aboriginal children, families and communities.* Perth: Curtin University of Technology and Telethon Institute for Child Health Research. Retrieved from http://espace.lis.curtin.edu.au/archive/00002456/

Speech Pathology Association of Australia. (2000). *Fact sheet 2.4: Speech pathologists working in early intervention programs with Aboriginal Australians*. Melbourne, Victoria: Speech Pathology Australia.

Speech Pathology Association of Australia. (2007). *Working with Aboriginal people in rural and remote northern territory: A resource guide for speech-language pathologists*. Katherine

Region Aboriginal Health & Related Services (KRAHRS) Allied Health Team. Retrieved from http://spacms.com/library/Working_With_Aboriginal_People_in_Rural_and_Remote_NT.pdf

Williams, C.J., & Jacobs, A.M. (2009). The impact of otitis media on cognitive and educational outcomes. *Medical Journal of Australia, 2*;191(9 Suppl):S69–72.

Zabiela, C., Williams, C., & Leitão, S. (2007). Service delivery in rural, remote and regional speech pathology, part 1: Current approaches. *ACQuiring knowledge in speech, language & hearing, 9* (3) 39–43.

Zubrick, S.R., Lawrence, D.M., Silburn, S.R., Blair, E., Milroy, H., Wilkes, T., . . ., & Doyle, S. (2004). The Western Australian Aboriginal child health survey: The health of Aboriginal children and young people. Perth: Telethon Institute for Child Health Research. Retrieved from http://espace.library.curtin.edu.au:80/R/?func=dbin-jump-full&object_id=116886

Zubrick, S.R., Silburn, S.R., Lawrence, D.M., Mitrou, F.G., Dalby, R.B., Blair, E.M., . . ., & Li, J. (2005). The Western Australian Aboriginal child health survey: The social and emotional wellbeing of Aboriginal children and young people. Perth: Curtin University of Technology and Telethon Institute for Child Health Research. Retrieved from http://www.ichr.uwa.edu.au/waachs/publications/volume_two.lasso

New Zealand

Bevan-Brown, C. (2004). *Māori Perspectives of autistic spectrum disorder*. Wellington, WR: New Zealand Ministry of Education. Retrieved from http://www.educationcounts.govt.nz/publications/special_education/5479

Borell, B., Gregory, A., McCreanor T., Jensen V., & Moewaka Barnes, H. (2009). It's hard at the top but it's a whole lot easier than being at the bottom: The role of privilege in understanding disparities in Aotearoa New Zealand. *Race/Ethnicity, 3*(1) [Autumn], 29–50.

Gallagher, K. (2008). *An intervention approach to target vocabulary development in Te Reo Mãori in Mãori immersion settings* (MSLT Thesis). Retrieved from http://hdl.handle.net/10092/1879

Gallagher, K. (2010). *Draft parameters for the NZSTA Maori and Cultural Development Portfolio*. Wellington, WR: New Zealand Speech Therapy Association. Manuscript prepared for the New Zealand Cultural And Linguistic Diversity Special Interest Group.

Gallagher, K. (2010a). Working with Māori: A practical guide to implementing Māori models of practice and reporting. *Proceedings of the New Zealand Speech Therapy Association Conference, April 22-23, 2010.* Wellington, WR.

Glynn, T., Berryman, M., Loader, K., & Cavanaugh, T. (2005). From literacy in Māori to biliteracy in Māori and English: A community and school transition programme. *The International Journal of Bilingual Education and Bilingualism, 8*(5), 433–454.

Lee, T. (2008). SIG: NZ Cultural and Linguistic Diversity. *Communications Matters, 08–09*, 11.

Maclagan, M., King, J., & Gillon, G. (2008). Māori English. *Clinical Phonetics and Linguistics, 22*(8), 658-670.

May, S., & Hill, R. (2005). Māori-medium education: Current issues and challenges. *International Journal of Bilingual Education and Bilingualism, 8*(5), 377–403.

New Zealand. (n.d.) Hearing screening program information: Retrieved from: http://www.nsu.govt.nz/current-nsu-programmes/newborn-hearing-screening.asp

New Zealand Ministry of Education. (1996). *Te Whäriki*. Retrieved from http://www.educate.ece.govt.nz/learning/curriculumAndLearning/TeWhariki.aspx

New Zealand Ministry of Education. (2003). *Language acquisition research.* Retrieved from http://www.educationcounts.govt.nz/publications/pasifika_education/5171

New Zealand Ministry of Education. (2006). *He Whàriki Màtauranga mò ngà Mokopuna o Aotearoa: early childhood curriculum*. Retrieved from http://www.educate.ece.govt.nz/learning/curriculumAndLearning/TeWhariki.aspx

New Zealand Ministry of Health. (2009). *A focus on the health of Māori and Pacific children: key findings of the 2006/07 New Zealand health survey*. Retrieved from http://www.moh.govt.nz

New Zealand Ministries of Health and Education. (2009). *Universal Newborn Hearing Screening and Early Intervention Programme (UNHSEIP)*. Retrieved from http://www.nsu.govt.nz/Health-Professionals/2940.asp

Ramsden, I.M. (2002). *Cultural safety and nursing education in Aotearoa and Te Waipounamu* (PhD thesis). Victoria University of Wellington. Retrieved from http://culturalsafety.massey.ac.nz/thesis.htm

Rau, C. (2005). Literacy acquisition, assessment and achievement of year two students in total immersion in Māori programmes. *The International Journal of Bilingual Education and Bilingualism, 8*(5), 404–429.

Tagoilelagi-Leota, F., McNaughton, S., MacDonald, S., & Farry, S. (2005). Bilingual and biliteracy development over the transition to school. *The International Journal of Bilingual Education and Bilingualism, 8*(5), 455–479.

United States

Allison, S.R., & Vining, C.B. (1999). Native American culture and language. *Bilingual Review, 24*, 193–207.

American Association of Pediatrics. (2010). *reach out and read*. Retrieved from http://www.aap.org/ror/AboutUs.htm

American Speech-Language-Hearing Association. (2009). *2009 Membership survey summary report: Number and type of responses.* Rockville, MD: Janota, J. Retrieved from http://www.asha.org/research/.

American Speech-Language-Hearing Association. (2010). *Multicultural constituency groups.* Retrieved from http://www.asha.org/practice/multicultural/opportunities/constituency.htm

Banks, S.R., & Neisworth, J.T. (1995). Dynamic assessment in early intervention: Implications for serving American Indian/ Alaska Native families. *Journal of American Indian Education, 34*(2), 27–43.

Bayles, K.A. & Harris, G.A. (1982). Evaluating speech-language skills in Papago Indian Children. *Journal of American Indian Education, 21*(2), 11–20.

Boles, L., Hess, G., & Woll, E., Musso, S. (2008). Speech, language, and hearing risk of Samoan Children K-3. *Proceedings of the American Speech-Language-Hearing Association Convention, November 19-21, 2008.* Chicago, IL. Retrieved from http://www.hhs.csus.edu/Boles/documents/ASHA%20Samoa%20Handout.pdf

Bush, D.F., & Windmill, I.M. (2008). Diversity in the audiology profession. *Audiology Today*. 20(6), 40–51.

Cappiello, M., & Gahagan, S. (2009). Early child development and developmental delay in Indigenous communities. *Paediatric Clinics of North America, 56*(6), 1501–1517.

CHiXapkaid [Michael Pavel], Banks-Joseph, S.R., Inglebret E., McCubbin L., Sievers J., Bruna L., . . ., Sanyal, N. (2008). *Where the sun also rises - addressing the educational achievement of Native Americans in Washington State*. Pullman, WA: Clearinghouse on Native Teaching and Learning. Retrieved from http://education.wsu.edu/nativeclearinghouse/achievementgap/.

Culbertson, W.R., & Tanner, D.C. (1998). The power of the internet: Training speech pathology assistants on Indian reservations. *Proceedings of the California State University Northridge Conference on Technology and Persons with Disabilities, March 1998*. Los Angeles, CA.

Cunningham, P.J., & Altman, B.M. (1993). The use of ambulatory health care services by American Indians with disabilities. *Medical Care, 31*(7), 600–616.

Daly K.A., Hunter, L.L., Hill, G.L., Grant, S.M., Delong, A.J. & Satter, D.E. (1998). Otitis media and hearing loss in Native American Children (Poster). *Proceedings of The Association for Research in Otolaryngology*. Retrieved from http://www.aro.org/archives/1998/489.html

Fowler, L. Seekins, T., Dwyer, K., Duffy, S.W., Brod, R.L. & Locust, C. (2000). American Indian disability legislation and programs: Findings of the first national survey of tribal governments. *Journal of Disability Policy Studies, 10*(2), 166–185.

Frome Loeb, D., Banks, C., & Cuny L. (2006). Project Circle: A path for Native Americans to become speech-language pathologists. Retrieved from http://www2.ku.edu/~splh/project_circle/poster.pdf

Frome Loeb, D., & Burns Daniels, D. (2007). Literacy-based language intervention with at-risk Native American and at- risk Hispanic American school-age children. *Proceedings of the ASHA Conference, November 15-17, 2007*. Boston, MA.

Gajar, A. (1985). American Indian personnel preparation in special education: Needs, program components, programs. *Journal of American Indian Education*, **(**24)2. Retrieved from: http://jaie.asu.edu/v24/V24S2ame.html

Grim, C. (2006). Addressing the audiology needs in Indian Country. Albequerque Area Indian Health Board Audiology Meeting. 25 April. Albequerque: NM. Retrieved from: http://www.ihs.gov/PublicInfo/PublicAffairs/Director/2006-Statements/ABQ_audiology-Meeting-April_25-Web_version.pdf

Harris, G. (1985). Considerations in assessing English language performance of Native American children. *Topics in Language Disorders, 5*(4), 42–52.

Inglebret, E. (1997). *Significance of the Native American Program at WSU Department of Speech & Hearing Sciences*. Retrieved from http://libarts.wsu.edu/speechhearing/overview/nap-significance.asp

Inglebret, E. (2005). Connecting culture and community: Washington State University builds partnerships with Northwest tribes. *ASHA Leader, 10*(16:1), 20–21.

Inglebret, E., Eagle, D., & CHiXapkaid (Pavel, D.M.). (2007). American Indian stories enrich intervention. *ASHA Leader, 12*(1), 1.

Inglebret, E., Jones, C., & Pavel, D.M. (2008). Integrating American Indian/Alaska Native culture into shared storybook intervention. *Language, Speech, and Hearing Services in Schools, 39*, 521–527.

Inglebret E., McCubbin L., & Banks-Joseph, S.R. (2010). Infusing tribal culture in Washington schools: State-funded study notes factors that increase Native student success. *ASHA Leader, 15*(1), 24–25.

Kay-Raining Bird, E., & Vetter, D. K. (1994). Storytelling in Chippewa-Cree children. *Journal of Speech & Hearing Research, 37*(6), 1354–1368.

Klass, P. (2009). Pediatrics by the book: Reach Out and Read's American Indian/Alaskan Native Initiative. [Slide presentation]. *Proceedings of the 3rd International Meeting on Indigenous Children's Health, March 2009*. Albequerque, NM. Retrieved from http://www.aap.org/nach/3InternationalMeeting.html.

Lindstedt, D.E. (2000). Eyewitness reporting by Navajo and mainstream-culture children. *Communication Disorders Quarterly, 21*(3), 166–175.

Long, E., & Christensen, J.M. (1998). Indirect language assessment tool for English-speaking Cherokee Indian children. *Journal of American Indian Education, 38*(1) 1–22.

Lubinski, R., & Matteliano, M.A. (2008). Competence in the curriculum: Speech-language pathology. Buffalo, NY: Center for International Rehabilitation Research Information and Exchange (CIRRIE). Retrieved from http://cirrie.buffalo.edu/curriculum/index.php

McCarty, T.L. (2008) Native American languages as heritage mother tongues. *Language, Culture, and Curriculum, 21*(3), 201–225.

National Institute on Deafness and Other Communication Disorders (NIDCD). (2010). Retrieved from http://www.nidcd.nih.gov/health/statistics/vsl.asp#2

Neha, V. (2003). Home again: A Native American slp's experiences teaching in a Navajo reservation school. *The ASHA Leader online*, February 18. Retrieved from http://www.asha.org/publications/leader/archives/2003/q1/030218fa.htm

Pavel, S. (2008). Crossing boundaries: Accessibility for children in rural areas. *The ASHA Leader*. Retrieved from http://www.asha.org/publications/leader/2008/080617/080617f.htm

Pearson, B.Z., & Ciolli, L. (2004). Distinguishing dialect and development from disorder: case studies, *Seminars in Speech & Language, 25*(1) 101–12.

Pedersen, M., & Vining, C. (2009). Early intervention services with American Indian tribes in New Mexico. *Perspectives on Communication Disorders and Sciences in Culturally and Linguistically Diverse Populations, 16*(3), 86–94.

Peter, L., & Hirata-Edds, T.E. (2006). Using assessment to inform instruction in Cherokee language revitalisation. *International Journal of Bilingual Education & Bilingualism, 9*(5), 643–658.

Robinson-Zanartu, C. (1996). Serving Native American children and families: Considering cultural variables. *Language, Speech, and Hearing Services in Schools, 27*(4), 373–384.

Roseberry-McKibbin, C. & O'Hanlon, L.S. (2005). Nonbiased assessment of English language learners: a tutorial. *Communication Disorders Quarterly, 26*, 178–185.

Ukrainetz, T.A., Harpell, S., Walsh, C., & Coyle, C. (2000). A preliminary investigation of dynamic assessment with Native American kindergarteners. *Language, Speech, and Hearing Services in Schools, 31* (2), 142–154.

University of Kansas. (2010). *Creating Native American resources to facilitate communication skills in learning environments*. Retrieved from http://www2.ku.edu/~splh/project_circle/

U.S. Centre for Disease Control. (n.d.) Early Hearing Detection and Intervention Program. Retrieved from: http://www.cdc.gov/ncbddd/ehdi/data.htm

U.S. Department of Children and Families, (n.d.). Head Start research website. Retrieved from: http://www.acf.hhs.gov/programs/opre/project/headStartProjects.jsp

U.S. Department of Education, Office of Special Education and Rehabilitative Services, Office of Special Education Programs, (2009). *28th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, 2006*, vol. 2. , Washington, DC. Retrieved from http://www2.ed.gov/about/reports/annual/osep/2006/parts-b-c/index.html

U.S. Department of Health and Human Services (2010). Head Start Program fact sheet, fiscal year 2010. Retrieved from: http://eclkc.ohs.acf.hhs.gov/hslc/About_Head_Start/fHeadStartProgr.htm

U.S. General Accounting Office. (1999). *Special education: Estimates of handicapped Indian preschoolers and sufficiency of services.* Washington, DC. Retrieved from http://handle.dtic.mil/100.2/ADA280775

Washington State University. (n.d.). *Native American Caucus.* Pullman, WA. Retrieved from http://libarts.wsu.edu/speechhearing/overview/nap-caucus.asp

Other Countries

Carter, J.A., Lees, J.A., Murira, G.M., Gona, J., Neville, B.G., & Newton, C.R. (2005). Issues in the development of cross-cultural assessments of speech and language for children. *International Journal of Language and Communication Disorders*, *40*(4), 385–401.

Johnson, C. (2007). Prevalence of speech and language disorders in children. Retrieved from http://literacyencyclopedia.ca/index.php?fa=items.show&topicId=24

PEN International. (2006). *Universal Declaration of Linguistic Rights*. Barcelona: Translation and Linguistic Rights Committee. Retrieved from http://www.linguistic-declaration.org/main-gb.htm

World Health Organization. (2008). Closing the gap in a generation: Health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health. Geneva: Commission on Social Determinants of Health. Retrieved from http://www.who.int/social_determinants/publications/en/index.html

World Health Organization. (1996). Prevention of hearing impairment from chronic otitis media – Report of a WHO/CIBA foundation workshop. London, UK. Retrieved from www.who.int/pbd/deafness/en/chronic_otitis_media.pdf

Zumach, A., Gerrits, E., Chenault, M., & Anteunis, L. (2010). Long-term effects of early-life otitis media on language development. *Journal of Speech, Language, and Hearing Research*, *53*, 34–43.

ADDITIONAL RESOURCES

Aboriginal ECD Roundtable. (2004). Many voices, common cause: A report on the aboriginal leadership forum on early childhood development. *Proceedings of Addressing Aboriginal Early Childhood Development Education and Training Needs Strategic Planning Session – April 27/28, 2004, Follow-Up Session II.* Vancouver, BC: British Columbia Aboriginal Child Care Society (BCACCS). Retrieved from http://www.acc-society.bc.ca/files_new/resources.html

Aithal, S. (2009). Identification and management of middle ear pathology in infants referred from the Universal Newborn Hearing Screening (UNHS) Program [Abstract]. *Proceedings of the Australian Newborn Hearing Screening Conference, May 22–23, 2009*. Brisbane, Australia.

Aithal, V., Yonovitz, A. & Aithal, S. (2006). Tonal masking level differences in Aboriginal Children: Implications for binaural interaction, Audiology Processing Disorders and Education. *Australian and New Zealand Journal of Audiology, 28*(1), 31–40.

American Speech-Language-Hearing Association. (2004). *Knowledge and skills needed by speech-language pathologists and audiologists to provide culturally and linguistically appropriate services*. Retrieved from www.asha.org/policy.

American Speech-Language-Hearing Association. (2005). *Audiologists providing clinical services via telepractice: Position statement.* Retrieved from http://www.asha.org/docs/html/PS2005-00029.html

Australian Indigenous HealthInfoNet. (2004). *Review of ear health and hearing among Indigenous peoples*. Retrieved from http://www.healthinfonet.ecu.edu.au/other-health-conditions/ear/reviews/our-review

Australian Resource Centre for Healthcare Innovations [ARCHI]. (2009). *Excellence in program and service delivery: La Perouse Aboriginal Community Health Centre*. Retrieved from http://www.archi.net.au/e-library/awards/2009-nsw-Aboriginal-awards/la-perouse-achc

Australian Resource Centre for Healthcare Innovations (2009). *Strengthen primary health and continuing care in the community: Speech pathology in schools (SPinS)*. Retrieved from http://www.archi.net.au/e-library/awards/nsw-awards08/primary-health/schools_spins

Ball, J. (2005).*Talking points: Exploring needs and concepts for aboriginal early childhood language facilitation and supports.* Concept discussion paper prepared for the Public Health Agency of Canada, Aboriginal Head Start in Urban and Northern Communities. Retrieved December 3, 2008, http://www.ecdip.org/earlylanguage/

Ball, J. (2007). *Aboriginal young children's language and literacy development: Research evaluating progress, promising practices, and needs*. Manuscript prepared for the Canadian Language and Literacy Networked Centre of Excellence, National Literacy Strategy. Retrieved from http://www.ecdip.org

Ball, J. (2010a). *The politics of comparison and the proliferation of "best-practices" in early childhood education*. Manuscript prepared for the Encyclopedia on Early Childhood Development, Centre of Excellence for Early Childhood Development, Canada. Retrieved from http://www.ecdip.org

Baxter J., & Crago M. (1987). Chronic otitis media and hearing deficit among Native Children of Kuujuarapik (Northern Quebec): A pilot project. *Canadian Journal of Public Health, 78*, 57–61.

BC Aboriginal Child Care Society. (2007). *Environmental scan of Aboriginal early childhood development programs in BC: The winds of change*. Retrieved from http://www.acc-society.bc.ca/files_new/resources.html

BC Aboriginal Child Care Society. (2007a). *Initial response to Ministry of Education Early Learning Framework, June 1st, 2007.* Retrieved from http://www.acc-society.bc.ca/files_new/resources.html

BC Ministry of Education. (2008). *British Columbia Early Learning Framework*. Victoria, BC: Co-published by the Ministry of Health and the Ministry of Children and Family Development.

Bellon-Harn, M.L., & Garrett, M.T. (2008). Vision: A model of cultural responsiveness for speech-language pathologists working in family partnerships. *Communication Disorders Quarterly, 29*(3), 141–148.

Bernhardt, M.B. (2008) Acknowledgements, questions, and additional resources. *Clinical Linguistics & Phonetics, 22*(8), 671–677.

Birch, J. (2007). Occurrence of otitis media and hearing loss among First Nations elementary school children. *Canadian Journal of Speech-Language Pathology and audiologistiology,31*(4) 178–185.

Blackstock, C., Bruyere, D., & Moreau. E. (2006). Many hands, one dream: Principles for a new perspective on the health of First Nations, Inuit and Métis children and youth. *Proceedings of the Canadian Paediatric Society Conference, December 3, 2005*. Victoria, B.C. Retrieved from www.manyhandsonedream.ca

Bowd, A. (2003). *A video workshop to assist in community-based identification and prevention of otitis media and associated disabilities in Ontario's north: A report to the Children with Special Needs Branch, Ministry of Health and Long Term Care, Government of Ontario*. Retrieved from http://www.coespecialneeds.ca/?display=page&pid=11&mn=14

Bowen, C. (2009). Webwords: Multiculturism in communication sciences and disorders. *ACQuiring Knowledge in Speech, Language and Hearing, 11*(1), 29–30.

Canada. (2008a). *The well-being of Canada's young children*. Ottawa, ON. Retrieved from: http://www.socialunion.gc.ca/well_being/2008/en/page00.shtml

Canadian Association of Speech-Language Pathologists and Audiologists. (2006). *Position paper: The use of telepractice for CASLPA speech-language pathologists and audiologists.* Ottawa, ON. Retrieved from http://www.caslpa.ca

Canadian Association of Speech-Language Pathologists and Audiologists. (n.d.). *Speech, Language and Hearing Fact Sheet.* Ottawa, ON. Retrieved from http://www.caslpa.ca

Canadian Home Care Association (2006). *Home Care for children with special needs: An environmental scan across Canadian provinces and territories.* Mississauga, ON. Retrieved from www.cdnhomecare.ca

Centre for Suicide Prevention. (2003). *Alert #52: Suicide among Canada's Aboriginal Peoples.* Retrieved from http://www.suicideinfo.ca

Charles, G., Bainbridge, L., Copeman-Stewart, K., Tiffin Art, S., & Kassam, R. (2006). The Interprofessional Rural Program of British Columbia (IRPbc). *Journal of Interprofessional Care, 20*(1), 40–50.

Connor, C.M., & Morrison F.J. (2006). Services or programs that influence young children's academic success and school completion. In R. Tremblay, R. Barr, & R. Peters (Eds.), Encyclopaedia on Early Childhood Development. Montreal, QC: Centre of Excellence

for Early Childhood Development, 1-12. Retrieved from http://www.child-encyclopedia.com/Pages/PDF/Connor-MorrisonANGxp_rev.pdf .

Cunningham C. (2010). Focus Inuit research agenda on best outcomes. *CMAJ, 182*(3), 228–229.

Demmert, W.G., Grissmer, G, & Towner, J. (2006). A review and analysis of the research on Native American students. *Journal of American Indian Education, 45*(3), Special Issue, 5–23.

Demmert, W.G., McCardle, P., Mele-McCarthy, J., & Leos, K. (2006). Preparing Native American children for academic success: A blueprint for research. *Journal of American Indian Education, 45*(3), Special Issue, 92–106.

Dubray, W. & Sanders, A. (1999). Interactions between American Indian ethnicity and health care. *Journal of Health & Social Policy, 10*(4), 67–84.

Ducharme, C., Muskegoa, D., Muswagona, A., Paupanekisa, C., Muswagona, M., Spencea, W., & Ramdattb, J. (2007). Kinosao Sipi Minisowin Agency: Creating a community response for special needs children. *First Peoples Child & Family Review, 3*(3), 12–20.

Durieux-Smith, A., Seewald, R., & Hyde, M. (1999). *CASLPA position paper on universal newborn and infant hearing screening.* Ottawa, ON: CASLPA.

Dyson, L.E., Hendriks, M. & Grant, S. (Eds.). (2007). *Information technology and Indigenous people*. Hershey, PA: Information Science Publishing.

Eikelboom, R, & Atlas, M. (2005). Tele-otology for children with chronic ear desease. In R. Wootton, & J. Batch (Eds.). *Telepediatrics: Telemedicine and child health*. 166-173. London: Royal Society of Medicine Press.

Eriks-Brophy, A., & Ayukawa, H. (2000). The benefits of sound field amplification in classrooms of Inuit students of Nunavik: A pilot project. *Language, Speech, and Hearing Services in Schools, 31* (4), 324–335.

First Nations Centre *(*2007). *OCAP: Ownership, control, access and possession.* Sanctioned by the First Nations Information Governance Committee, Assembly of First Nations. Ottawa: National Aboriginal Health Organization. Retrieved from http://www.rhs-ers.ca

Forst, K., & Morrical, D. (2009). Telehealth: Perspectives from a speech-language pathologist and supportive personnel. *Communiqué, 22*(2), 9.

Gerlach, A., & Zeidler, D. (2004*). A guide for culturally-focused early intervention therapy programs for Aboriginal children & families in British Columbia*. Vancouver, BC: BC Aboriginal Child Care Society. Retrieved from http://www.acc-society.bc.ca/files_new/resources.html

Gould, J. (2007). Ear health and Aboriginal education: Examining the impact of non-Aboriginal interventions upon child outcomes [Slide presentation]. *Proceedings of the Hear, Speak, Live Conference, September 4-7, 2007*, Gold Coast, QLD. Retrieved from http://archive.healthinfonet.ecu.edu.au/html/html_community/ear_health_community/ear_news_events.htm

Government of British Columbia. (2008). *Aboriginal act now: Aboriginal health promotion: A literature review and environmental scan.* Victoria, BC.

Government of Nunavut. (2008). *Nunavut early childhood development update report 2004–2007 & early learning and child care update report 2004–2007*. Iqaluit, NU: Dept. of Education.

Government of Western Australia (2008). *Medical research boost to help country kids fight ear disease.* East Perth, WA: Department of Health. Retrieved from http://www.health.wa.gov.au/press/view_press.cfm?id=803

Greenwood, M., de Leeuw, S., & Ngaroimata Fraser, T. (2007). Aboriginal children and early childhood development and education in Canada: Linking the past and the present to the future. *Canadian Journal of Native Education, 30*(1), 1–16.

Hamilton, E., & Gillon, G. (2005). Phoneme awareness intervention for Samoan children: Linguistic transfer effects from English to Samoan. *New Zealand Journal of Speech-Language Therapy, 13*, 48–60.

Health Canada (2010). *Improving the delivery of health care services and programs to First Nations people and Inuit.* Ottawa, ON. Retrieved from http://www.hc-sc.gc.ca/fniah-spnia/services/acces/index-eng.php#hii-iis

Hendryx-Bedalov, P. (1998). Ethnography: An introduction to method and application. *Communication Disorders Quarterly, 20*, 19–25.

Hertzman, C., Frank, J., & Evans, R.G. (1994). Heterogeneities in health status and the determinants of population heath. In R.G. Evans, M.L. Bare, & T.R. Marmor (Eds). *Why are some people healthy and others not?* New York, NY: Adline de Gruyter.

Hicks, J. (2007). The social determinants of elevated rates of suicide among Inuit youth. *Indigenous Affairs 4*, 30–7.

Hinton R. (2010). Shadow report on progress towards closing the gap in life expectancy between Indigenous and non-Indigenous Australians. Steering Committee for Indigenous Health Equality. Oxfam.

Hodge, T., & Downie, J. (2004). Together we are heard: Effectiveness of daily "language" groups in a community preschool. *Nursing and Health Sciences, 6*, 101–107.

Howard, D. (2006). Classroom case study: Cross cultural obstacles to the referral of Aboriginal children for hearing tests. *Australian and New Zealand Journal of Audiology, 28*(1), 41–46.

Huer, M.B. (1997). Culturally inclusive assessments for children using augmentative and alternative communication (AAC). *Communication Disorders Quarterly, 19*, 23–34.

Inglebret, E., sa'hLa mitSa (Pavel, S.), & CHiXapkaid (Pavel, D.M.) (2008). Our circle widens. *ASHA Leader, 13*(8), 6.

Jonk, L.B. (2009). Using a western-based survey to assess cultural perspectives of Dene mothers in Northern Manitoba. *First Peoples Child & Family Review, 4*(2), 71–84.

Jonk, L.B., & Enns, C. (2009). Using culturally appropriate methodology to explore Dene mothers' views on language facilitation. *Canadian Journal of Speech-Language Pathology and audiologistiology, 33*(1), 34–44.

Lafargue, A. (2010). Focus on early hearing detection & intervention: Evolution and advances – New Brunswick universal newborn and infant hearing screening program. *Communiqué*, 24(1), 6.

Lalonde, M. (1974) A new perspective on the health of Canadians: A working document. Government of Canada. Ottawa, ON. Retrieved from http://www.hc-sc.gc.ca/hcs-sss/com/fed/lalonde-eng.php

Langan, L.A., Sockalingham, R., Caissie, R., & Kreisman, B.M. (2009). The benefit of sound-field amplification in First Nations elementary school children in Nova Scotia, Canada. *Australian & New Zealand Journal of Audiology, 31*(2), 55–71.

Latimer, K., & Pan, H. (2009). *Literature review and analysis of discussion group: National Aboriginal Head Start Council and National Working Group meeting*. Centre of Excellence for Children & Adolescents with Special Needs. Retrieved from www.coespecialneeds.ca/uploads/docs/literaturereviewandanalysis.pdf

Lehmann, D., Arumugaswamy, A., Elsbury, D., Finucane, J., Stokes, A., Monck, R., . . ., & Stanley, F.J. (2008). The Kalgoorlie otitis media research project: Rationale, methods, population characteristics and ethical considerations. *Paediatric and Perinatal Epidemiology, 22*, 60–71.

Leung, C. (2009). Updates from the Multicultural Interest Group-NSW. *ACQuiring Knowledge in Speech, Language and Hearing, 11*(1), 23.

Lewis, A.N., Barry, M., & Stuart, J.E. (1974). Screening procedures for the identification of hearing and ear disorders in Australian Aboriginal children. *The Journal of Laryngology & Otology, 88*(04), 335–347.

Lomay, V.T., & Hinkebein, J.H. (2006). Cultural considerations when providing rehabilitation services to American Indians. *Rehabilitation Psychology, 51*(1), 36–42.

Long, E. (1998). Native American children's performance on the Preschool Language Scale-3. *Communication Disorders Quarterly, 19*, 43 –47.

Loughery, S., Macaulay, A., Fricke, M., Durcan, A., & Cooper, J. (2004). Speech language pathology services in Kivalliq Region of Nunavut, Canada. *International Journal of Circumpolar Health, 63*(Suppl2), 120–123.

Manna, A., Wurtzburg, S.J., Huckabee, M.L., & Blake, T.K. (2003). Cultural issues influencing dysphagia management practices in the New Zealand Maori population: A descriptive study. *New Zealand Journal of Speech-Language Therapy, 58*(12), 35–46.

Manuel-Dupont, S., & Yoakum, S. (1997). Training interpreter paraprofessionals to assist in the language assessment of English language learners in Utah. *Communication Disorders Quarterly, 18*, 91–102.

Māori Language Commission. (2010). *Language issues.* Retrieved from http://www.tetaurawhiri.govt.nz/english/

Māori Language Information. (2009). *He Korero mo Te reo Maori* . Retrieved from http://www.maorilanguage.info/index.html

Martens, P. J., Sanderson, D., & Jebamani, L. (2005). Health services use of Manitoba First Nations people: Is it related to underlying need? *Canadian Journal of Public Health, 96*(1), S39–S44.

May, S. (2005). Introduction: Bilingual/immersion education in Aotearoa/New Zealand: Setting the context. *The International Journal of Bilingual Education and Bilingualism, 8*(5), 365–376.

McDonald, R.A. (2006). *First Nations children and special needs programs: Assessment tools and early learning training requirements: A literature review*. Ottawa, ON: Assembly of First Nations. Retrieved from http://www.coespecialneeds.ca/?display=page&pid=11&mn=14

McKeever, W.F., Hunt, L., Wells, S., & Yazzie, C. (1989). Language laterality in Navajo reservation children: Dichotic test results depend on the language context of the testing. *Brain and Language, 36*(1), 148–158.

McLeod, S., & McKinnon, D. (2007). Prevalence of communication disorders compared with other learning needs in 14500 primary and secondary school students. *International J of Language and Communication Disorders. 42*(S1), 37–59.

Millett, P. (2008). *Sound field amplification research summary*. Toronto, ON: York University, Faculty of Education. Retrieved from http://74.125.155.132/scholar?q=cache:w0HyaFTKCc4J:scholar.google.com/+Sound+field+Amplification+Research+Summary&hl=en&as_sdt=2000.

Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (2000). *National statement of principles and standards for more culturally inclusive schooling in the 21st Century*. Retrieved from www.curriculum.edu.au/verve/_resources/principl_file.pdf.

Moyle, J. (2005). The New Zealand Articulation Test Norms Project. *New Zealand Journal of Speech-Language Therapy, 60*, 61–74.

National Center for Education Statistics. (2005). Status and trends in the education of American Indians and Alaska Natives. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005108

New Zealand Ministry of Education. (2001). *Much more than words – monitoring and encouraging communication development in early childhood.* Retrieved from http://www.minedu.govt.nz/Parents/YourChild/SupportForYourChild/ExtraSupport/EarlyInterventionServicesAndSupport.aspx

New Zealand Ministry of Education. (2008) *Pathways to the future: Nga Huarahi Arataki - A 10-year strategic plan for early childhood education 2002-2012.* Retrieved from http://www.minedu.govt.nz/NZEducation/EducationPolicies/EarlyChildhood/ECEStrategicPlan/PathwaysToTheFutureEnglishPlanAndTranslations.aspx

New Zealand Ministry of Education. (2010). *Ngā Whanaketanga Rumaki Māori: Māori-medium education.* Retrieved from http://www.minedu.govt.nz/theMinistry/Consultation/NgaWhanaketangaRumakiMaori/AboutMaoriMediumEducation.aspx

New Zealand Ministry of Education (2010). *Te Kete Ipurangi* (TKI) *– the online learning centre.* Retrieved from http://www.tki.org.nz

New Zealand Ministry of Health. (2010). *Ko¯rero Ma¯rama: Health Literacy and Māori: Results from the 2006 adult literacy and life skills survey.* Retrieved from http://www.moh.govt.nz

NSW Department of Health (2009). *Newsroom: Communicate to participate in Wagga*. Greater Southern Area Health Service. Retrieved from http://www.gsahs.nsw.gov.au/page.asp?t=mr&p=1333

New Zealand Speech Therapists Association. (2009). *Annual Report.* Retrieved from http://www.speechtherapy.org.nz/information-for-speech-and-language-therapists/NZSTA%20Annual%20Reports%202009.pdf

Papillon, M. (2008). Aboriginal quality of life under a modern treaty: Lessons from the experience of the Cree Nation of Eeyou Istchee and the Inuit of Nunavik. *Choices, 14* (9).

Paq'tnkek First Nation Health. (2008). Developing sustainable early intervention services in CMM communities in Nova Scotia. Manuscript submitted to Funding Arrangements and Capacity Development, First Nations and Inuit Health Branch. Retrieved from http://www.coespecialneeds.ca/?display=page&pid=11&mn=14.

Peltier, S. (2008). Preface. *Clinical Linguistics & Phonetics, 22*(8) 567–569.

Perry, B., Dockett, S., Gilbert, S., Howard, P., Mason, T., Simpson, T., . . ., & Woodrow, C. (2006). Successful transition programs from prior-to-school to school for Aboriginal and Torres Strait Islander children: Methodological considerations. *Refereed Proceedings of the Australian Association for Research in Education Annual Conference, November 27-30, 2006.* Adelaide, Australia. Retrieved from www.aare.edu.au/05pap/per05571.pdf

Philpott. M. (2003). The Revised Kimberley Early Language Scales. Retrieved from www.speechpathologyaustralia.org.au/library/Kimberley_Scales.pdf

Population Resource Centre. *Executive summary – American Indians and Alaska Natives: A demographic perspective.* Retrieved from http://www.prcdc.org/files/American_Indians_and_Alaska_Natives.pdf

Rescorla, L., & Achenbach, T.M. (2002). Use of the language development survey (LDS) in a national probability sample of children 18 to 35 months old. *Journal of Speech, Language & Hearing Research, 45*(4), 733–743.

Roppolo, K., & Chelleye, C.L.(2007). Native American education vs. Indian learning: Still battling Pratt after all these years. *Studies in American Indian Literatures, 19*(1), 3–31.

Rosa-Lugo, L., & Fradd, S.H. (2000). Preparing professionals to serve English-Language learners with communication disorders. *Communication Disorders Quarterly, 22*, 29–42.

Rosen, N. (2008). French-Algonquian interaction in Canada: A Michif case study. *Clinical Linguistics & Phonetics, 22*(8), 610–624.

Rowicka, J., & Eijk, J.V. (2008). A review of "When I was small--I wan kwikws: A grammatical analysis of St'át'imc oral narratives." *International Journal of American Linguistics, 74*(1), 147–150.

Shaw, E., Goode, S., Ringwalt, S., & Ayankoya, B. (2004). Minibibliography: early identification of culturally and linguistically diverse children (aged 0—5). *Communication Disorders Quarterly, 26*, 49–54.

Snider, W.C., Potter, R.E., & Kennedy, K.B. (1982). Language comprehension differences exhibited by kindergarten and second grade Nez Perce Indian and Caucasian children. *Communication Disorders Quarterly, 6*, 110–116.

Special Needs Information Service Online. (2010). Ottawa, ON: Public Health Agency of Canada (PHAC). Retrieved from http://www.snis.ca/

Sumsion, J., Cheeseman, S., Kennedy, A., Barnes, S., Harrison, L., & Stonehouse, A. (2009). Insider perspectives on developing "Belonging, Being & Becoming": The Early Years Learning Framework for Australia. *Australasian Journal of Early Childhood, 34*(4), 4–13.

Sutherland, D. (2008). Review: In my shoes: An everyday look at autism spectrum disorders. *Communication Matters*, Autumn 09. Retrieved from www.inmyshoes.co.nz www.moh.govt.nz/autismspectrumdisorder

Taylor, D.M., & Wright, S.C. (2003). Do Aboriginal students benefit from education in their heritage language? Results from a ten-year program of research in Nunavik. *The Canadian Journal of Native Studies, 23*(1), 1–24.

Thielke, H.M., & Shriberg, L.D. (1990). Effects of recurrent otitis media on language, speech, and educational achievement in Menominee Indian Children. *Journal of American Indian Education, 29*(2).

Tuafuti, P., & McCaffery, J. (2005). Family and community empowerment through bilingual education. *International Journal of Bilingual Education & Bilingualism, 8*(5) 480–503.

U.S. Department of Education (2005). *Status and trends in the education of American Indians and Alaska Natives*. Washington, DC: Institute of Education Sciences, National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005108

Weiss, A.L., & Van Haren, M.S. (2003). What pediatricians should know about normal language development: Ensuring cultural differences are not diagnosed as disorders. *Pediatric Annals, 32*(7), 446–52.

Westby, C. (1990). Ethnographic interviewing: Asking the right questions to the right people in the right ways. *Communication Disorders Quarterly, 13*, 101–111.

While, J., & Maxim P. (2007). Community well-being: a comparable communities analysis. Indian and Northern Affairs Canada. Ottawa, ON. Retrieved from http://www.ainc-inac.gc.ca/ai/rs/pubs/re/cca/cca-eng.asp

White, F. (2006). Rethinking Native American language revitalization. *American Indian Quarterly, 30*(1/2), 91–109 .

Zabiela, C., Leitão, S., & Williams, C. (2007). Service delivery in rural, remote and regional speech pathology part 2: The influence of context and philosophy. *ACQuiring knowledge in speech, language & hearing*, 9(3) 44–47.

Zens, N., & Gillon, G. (2006). Word learning in SLI: Implications for bilingual children with SLI. *New Zealand Journal of Speech-Language Therapy, 61*, 19-30.

APPENDIX 1: Key Informants

Name	Country	Title	Content Focus	Date(s) Contacted
Aboriginal Canada Portal Staff	Canada	Technical Help Desk Google Maps	First Nations, Inuit, Métis mapping	April 14, 2010
Anderson, Deborah	Canada	Speech-language pathologist, Anderson Consulting	Telepractice	June 3, 2010
Ashworth, Valerie	Canada	Provincial Telehealth Manager, PHSA	BC Telepractice	April 5, 2010
Bakker, Cynthia	Canada	Speech-language pathologist, Regina 4 Directions community health centre,	Current practice	June 15, 2010
Ball, Jessica	Canada	Professor, UVIC Dept of Child & Youth Care	ECD/speech-language pathology & Culture interface	March 27 & April 17, 2010
Bernhardt, B. May	Canada	Professor, UBC School of Speech Sciences and Audiology	Current Practice	February 10 & June 13, 2010
Billard, Isabelle	Canada	Audiologist, Hearing and Otitis Program, Univ of Montreal, QUE	Nunavik OM Program	April 21, 2010
Bolen, Christine	Canada	Speech-language pathologist, Consultant Student Support Services Branch Ministry of Education, SK	SK speech-language pathology service	April 15, 2010
Borchardt, Dagmar	Canada	Telehealth Coordinator, HSS, Whitehorse, YT	YT Telepractice	April 16, 2010
Bosch, Marla	Canada	Speech-language pathologist, Southern Alberta Piikani and Kainai Blackfoot Communities, AB	Current Practice	June 22, 2010
Boswell, Judith	Australia	Audiologist, Adelaide Hearing Consultants	Australia audiology	June 3, 2010
Brown, Janet	USA	ASHA, Telepractice lead	US Telepractice	April 4, 2010
Bullock, Alison	Canada	Speech-language pathologist, SD 61, Victoria, BC	Telepractice	May 20, 2010
Burnaby, Barbara	Canada	Professor, Faculty of Education, Memorial University	Lang/Culture	May 13, 2010
Campbell, Bill	Canada	Chief Audiologist, Thunder Bay District Health Unit	Telepractice	April 15, 2010
Campbell Wood, Heather	Canada	Speech-language pathologist, Masters Student, UBC	Current practice	June 18 & 20, 2010
Chappell, Michael	Canada	Speech-language pathologist, Baffin Region, NU	Nunavut speech-language pathology services	May 18, 2010
Chesterman, Margaret	Canada	Speech-language pathologist, Vancouver Coastal Health Sechelt, BC	Current practice	May 27, 2010
Corbiere, Jennifer	Canada	Manager, Aboriginal Head Start, PHAC	AHSUNC	April 20 & June 7, 2010
Cormiere, Judy	Canada	Policy Analyst, Education, Govt of Saskatchewan	SK speech-language pathology services	April 19, 2010

Name	Country	Title	Content Focus	Date(s) Contacted
Coulter, Susan	Canada	Speech-language pathologist, Thunder Bay District Health Unit	Current Practice	June 15, 2010
Davis Hill, Lori	Canada	First Nations speech-language pathologist	Current Practice	October 25, 2010
Dawson, Vickie	Australia	Senior Advisor, Prof Standards, SPA	Current Practice	May 20, 2010
Dench, Catherine (Kit)	Canada	Speech-language pathologist, Private, Montréal, PQ	Current Practice	May 31, 2010
Derochers, Johanne	Canada	Telehealth; Administrator of the Pediatric Network & Northern and Native Health Program, McGill University Health Centre	Québec Telepractice	April 30, 2010
DiMarco, Meluccia	Canada	Speech-language pathologist, Alberta School for the Deaf	Aboriginal Deaf Service issues	June 16, 2010
Elliott, Diana	Canada	Provincial Advisor for Aboriginal Infant Development in BC	Aboriginal speech-language pathology Service issues	May 13, 2010
Ellis, Anneliese	Canada	Speech-language pathologist, Nfld/Lab	Nfld/Labrador speech-language pathology services	May 7, 2010
Erdos, Caroline	Canada	Speech-language pathologist, Montreal Children's Hospital	Québec speech-language pathology services	May 11, 2010
Farrell, Cathy	Canada	Manager, Children's Clinical Programs, Thunder Bay Health Unit	Current Practice	April 16, 2010
Findlay, Leanne	Canada	Health Analysis Division Statistics Canada	ACS	April 6, 2010
Friedlander, Rhonda	USA	Native American speech-language pathologist	US AI/AN SLP services & issues	June 4, 2010
Gale, Barbara	Canada	Speech-language pathologist, Barrie, ON	Current Practice	June 15, 2010
Gallagher, Kerrie	New Zealand	Māori speech-language therapist	Māori SLT	June 6, 2010
Gardner, Anne	Canada	Speech-language pathologist, VIHA, MTM co-creator, consultant on TigaTalk	Current Practice	May 20, 2010
Genee, Inge	Canada	Associate Prof of Linguistics Dept of ML, Univ of Lethbridge	Dialect vs Disorder	June 15 & 19, 2010
Geraghty, Ashley	Canada	CHI Project Manager	Current practice	April 5, 2010
Hagerman, Valerie	Canada	Regional Lead, Clinical Transformation and Telehealth	NB Telepractice	April 7, 2010
Harse, Charlene	Canada	Aboriginal Infant Development Program, Supervisor, North Island, Vancouver Island	Current practice	June 11, 2010
Inglebret, Ella	USA	Associate Professor Department of Speech & Hearing Sciences, Washington State University	S-L Services in US, Affirmative Action for AI/AN	June 18, 2010
Ingram, ChrisAnne	Canada	Pediatric telemedicine lead at IWK. Halifax, Nova Scotia	Atlantic Telepractice	April 6, 2010
Jenstad, Lorienne	Canada	Assistant Professor, Aud(C), UBC,	Audiology	August 27, 2010

Name	Country	Title	Content Focus	Date(s) Contacted
		School of Audiology and Speech Sciences	Assessment	
Johnston, Judith	Canada	Professor Emerita, UBC, School of Audiology and Speech Sciences	Current Practice – local norms	February 8 & March 14, 2010
Kelly, Diana	Canada	Speech-language pathologist, Child Development Centre, Kenora, ON	Current Practice	June 7, 2010
Kroening, Carole	Canada	Speech-language pathologist & Audiology Services, YT	Telepractice, service delivery	June 4, 2010
LaFarge, Andre	Canada	Audiologist, Mgr speech-language pathology and audiology services, Region 3, NB	FN speech-language pathology & audiology services	June 4, 2010
Lane, Susan	Canada	Provincial Intervention Coordinator BC Early Hearing Program Provincial Health Services Authority	BC Early Hearing Program	August 31, 2010
LaPorte, Tiare	Canada	Aboriginal project coordinator – Aboriginal community visit program; UBC, School of Audiology and Speech Sciences	Indigenous healing practices	August 27, 2010
Lewis, Marlene	Canada	Speech-language pathologist, Victoria, BC; Coauthor with Ball – Elder, parent and S-LP survey	Current Practice	March 10, 2010
MacDonald, Wendy	Canada	Speech-language pathologist, Communication Care Speech and Language Services	Current Practice	June 7, 2010
Mallett, Curtis	Canada	Director, Special Education, First Nations Education Steering Committee	Current Practice	June 25, 2010
Manchur, Karen	Canada	Speech-language pathologist, Khan Communication Services, Edmonton, AB	Alberta Telepractice	June 14, 2010
Mann, Sandra	Canada	Health Planner - Rehabilitation Services Population Health Division, GNWT Department of Health and Social Services	Current Practice	April 15, 2010
McAuliffe, Megan	New Zealand	Senior Lecturer Department of Communication Disorders University of Canterbury	Māori S-LT	March 16, 2010
McLellan, Karen	New Zealand	PhD candidate, S-L	Cultural Approach	June 20, 2010
McDougall, Nadine	Canada	Speech-language pathologist, Manitoba First Nations Education Resource Centre	Current practice	April 15, 2010
Meaning, Shirley	Canada	CYSN Therapy Manager, Children and Youth with Special Needs Policy, BC Ministry of Children and Family Development	Current Practice	April 1, 2010
Meekis, Christina	Canada	Education Director, Sandy Lake First Nation	Current Practice	April 16, 2010

Name	Country	Title	Content Focus	Date(s) Contacted
Misko, Stacey	Canada	Speech-language pathologist, Manitoba First Nations Education Resource Committee	Current Practice	June 28, 2010
Moore, Jill	Canada	Speech-language pathologist, pediatric services on reserve, MB	Current Practice	April 16, 2010
Moosa, Taslim	Canada	Clinical Supervisor and Lecturer School of Communication Sciences and Disorders, The University of Western Ontario	Current Practice	June 21, 2010
Nahwegahbow, Monica	Canada	First Nations speech-language pathologist	Current Practice	June 17 & 21, 2010
Nolan, Pam	Canada	Manager, Garden River First Nations Wellness Centre	Current Practice	March 26, 2010
O'Donnell, Jennifer	Canada	Speech-language pathologist, Bathurst	NB speech-language pathology services	June 4, 2010
Peltier, Sharla	Canada	First Nations speech-language pathologist	Dialect/Disorder Current Practice	June 12 & August 20, 2010
Purves, Barb	Canada	UBC, School of Audiology and Speech Sciences - Admissions	Affirmative Action	June 17, 2010
Reid, Joanne [& Viva Pittman]	Canada	Telehealth Managers	Nfld/Labrador Telepractice	April 7, 2010
Ryan, Anna Claire	Canada	Health Project Coordinator, Department of Health and Environment, Inuit Tapiriit Kanatami (ITK)	Inuit specific information	October 29, 2010
Ryan, Elizabeth	Canada	Acting/Telehealth Manager, Nunavut	Nunavut Telepractice	April 15, 2010
Sadorra, Candace	USA	UC Davis, Program Manager Pediatric Telemedicine.	Infant ABR	April 4, 2010
Sanderson, Brenda	Canada	Telehealth Coordinator, Clinical, Aboriginal Program, MBTelehealth	Manitoba Telepractice	April 7, 2010
Scozzafava, Katie	Canada	Speech-language pathologist, NWT	Current practice	June 14, 2010
Sharpe, Dianne	Canada	Speech-language pathologist, NB	Current practice	June 8, 2010
Shenker, Rosalee	Canada	Speech-language pathologist, Montreal Fluency Centre	Current practice	June 18, 2010
Simpson, Rosemary	Australia	Consultant Principal, Speech & Language, Swan, Midlands & Kimberley Education Districts, Perth, WA	Speech-language pathologist in WA	May 18, 2010
Smeal, Mindy	USA	Chief of Audiology Chinle Comprehensive Health Care Facility	US NA/AN audiology	May 27, 2010
Smith, Arlene	Canada	Speech-language pathologist, Child & Family Services, Squamish Nation, North Vancouver, BC	Current Practice	June 17, 2010

Speech Pathology Australia	Australia	SPA Inquiries	Current Practice	June 17, 2010
Stevenson, Paul	Canada	Audiologist, Kingston, ON	James Bay Coast Hearing Services	June 16, 2010
Thierry, Dr. Judith	USA	Maternal and Child Health Coordinator, IHS, HC HHS Liaison with CYS	US Indian Health Service – S-L & audiology Programming	May 6, 2010
Thomas, Viola	Canada	Special Ed Teacher, Sandy Lake First Nation	Current Practice	April 16, 2010
Wigglesworth, Carol	Canada	Ardivision Videoconferencing, NWT.	NWT Telepractice	April 4, 2010
Williams, Cori	Australia	Professor, Speech-language pathologist Curtin University	Current Practice	April 9, 2010
Williams, Donna	Canada	eHealth Coordinator, Assembly of First Nations	FN Telehealth	April 15, 2010
Zeidler, Deanne	Canada	Speech-language pathologist, First Nations Education Steering Committee	Current practice	June 11, 2010

APPENDIX 2: Purpose and Definitions Excerpts from the Government of British Columbia's Standard for Aboriginal Administrative Data, Version 1

Purpose

The Province of British Columbia is committed to reporting progress in closing the socioeconomic gap between Aboriginal and non-Aboriginal British Columbians (British Columbia, 2007). Additionally, the province recognizes the importance of culturally appropriate programs and services in meeting the needs of Aboriginal people. Many provincial ministries and government agencies deliver programs and services that are intended to support improved outcomes for Aboriginal clients. Others, such as Vital Statistics, collect data that can be used to measure the socio-economic outcomes of citizens. Accurate, good quality data supports the ability to measure the effectiveness of programs and services and to monitor outcomes. The purpose of implementing a provincial government data standard for the collection of data specific to Aboriginal persons is to support improved provincial government administrative data. This in turn will support the following goals:

- culturally appropriate, effective and efficient policy , program and service development
- performance management and measurement
- socio-economic research, analysis and reporting

Definitions

Aboriginal*:* An Aboriginal person is identified in accordance to the *Constitution Act* of 1982, Part II, Section 35(2), as "the Indian, Inuit and Métis peoples of Canada". Canada's Aboriginal population is distinct and diverse. The *Constitution Act* recognizes the Aboriginal peoples of Canada as the Indian, Inuit and Métis peoples of Canada. "First Nation" is the generally preferred term for Indian peoples of Canada. The term "Indian" is still used where referring to legislation or government statistics.

Aboriginal Identity*:* Aboriginal identity refers to a person reporting that he or she identifies with, or is a member of, an organic political or cultural entity that stems historically from the original persons of North America. The term includes the Indian, Inuit and Métis peoples of Canada.

***Indian Act**:* The *Indian Act* is federal legislation which dates from 1876. There have been over twenty major changes to the original act since then. The act is administered by the Minister of Indian Affairs and Northern Development. The act deals with registered Indians, their bands, and the system of Indian reserves.

***First Nations**:* Officially called Indians in the *Indian Act*, this term refers to the Indigenous peoples of North America located in what is now Canada, and their descendents, who are not Inuit or Métis. For the purposes of Aboriginal identification within British Columbia, the term "First Nation(s)" is the generally preferred term in place of "Indian". For statistical and analytical purposes, these terms are considered interchangeable and representative of the same population.

Status: First Nations (Indian) people may be "status" (registered) or non-status Indians as defined under the *Indian Act.* Status Indians are eligible to receive benefits under the provisions of the *Indian Act.*

Non-Status: First Nations people who claim Aboriginal identity, but do not meet the criteria for registration, or have chosen not to be registered, under the *Indian Act.*

***Métis**:* Métis means a person who self-identifies as Métis, is of historic Métis Nation Ancestry, is distinct from other Aboriginal Peoples and is accepted by the Métis Nation *(Definition adopted by the Métis National Council at their 2002 Annual General Assembly).* Métis people identify themselves, and are recognized as, distinct from First Nations (Indian), Inuit or European descendants. The distinct Métis culture arose after contact with the first European explorer/settlers but prior to colonialism *(general definition).*

Inuit: The Inuit are the Aboriginal inhabitants of the North American Arctic. They are united by a common cultural heritage and a common language. Formerly, the Inuit were referred to as "Eskimo." Now they prefer their own term, "Inuit," meaning simply "people" (British Columbia, 2007).

APPENDIX 3: Key Informant Questions

Q1: BARRIERS
What barriers influence the development of new speech-language and hearing services for Aboriginal children?

Q2: GOOD OR CURRENT PRACTICE IN ABORIGINAL COMMUNITIES
What successes have there been in developing and providing speech-language & hearing services for young Aboriginal children?

Q3: PARTNERSHIPS
What factors could practitioners and communities consider when establishing partnerships?

Q4: PROFESSIONAL/ACADEMIC LEADERSHIP
From your perspective, are there roles that speech-language and audiology professional organizations and/or academic institutions play in improving the delivery of services for 0-6 year old children in Aboriginal communities?

Q5: COMMUNITY CAPACITY DEVELOPMENT
What training initiatives are you aware of for community members who are in a position to support communication and hearing needs of children in Aboriginal communities?

Q6: SUSTAINING COMMUNITY-GENERATED SOLUTIONS
What can we learn from program failure? What ideas do you have for promoting success?

Q7: APPROACHES
In your experience, what approaches increase services in Aboriginal communities?

Q8: ABORIGINAL LEADERSHIP
Which Aboriginal individuals or organizations in [name of country] do you consider to be at the forefront of developing and applying good service models?

Q9: PRACTITIONER CONTRIBUTIONS
What leads you to be interested in speech-language or hearing services for Aboriginal children?

Q10: OTHER
Is there anything that you would like to add that would contribute to CASLPA's understanding of service barriers or strategies for improving service access, acceptance and/or effectiveness of speech-language and hearing services for Aboriginal children?

APPENDIX 4: Current Practices in Speech-Language and Hearing Services for 0 to 6-year-old First Nations, Inuit and Métis Children

No.	Name/Location	Focus	Problem or Need Addressed	Description
WORKFORCE DEVELOPMENT: SPEECH-LANGUAGE PATHOLOGISTS & SLA/SP				
1	UBC, Aboriginal programs or agencies for student community visits **(BRITISH COLUMBIA)**	Education of speech-language pathologists and audiologists during their Master's program	An introduction to service delivery with people of First Nations, Métis and Inuit heritage. Students graduating from speech-language pathology/audiology programs are unfamiliar with the conditions, circumstances and requirements for service delivery for Aboriginal people.	Currently in the second iteration of the course; seeing benefits from active student, faculty and community feedback during the course development process. Students feel more equipped to work with people of First Nations, Métis or Inuit heritage than if they did not have the course, although more practical opportunities are still required. ✓ Canada's first collaborative model of curriculum development concerning provision of culturally safe and relevant health care in speech-language pathology and audiology for Aboriginal people. ✓ Partnerships with people of Aboriginal heritage and student training ✓ Resource compilation ✓ Spin-offs including dissemination in (networking above & beyond)
2	Iqaluit Clinical Practicum Placement (**NUNAVUT**)	Speech-language pathologist/audiologist practicum opportunity	On-location speech-language pathologist & audiologist training in remote Inuit communities.	Speech-language pathologist for Baffin Region - full time for Baffin Region Rehabilitation Services, which is affiliated with Qikitani General Hospital, the Government of Nunavut Health and Social Services (main office is in Iqaluit). Services offered: inpatient, outpatient, acute (swallowing assessment) and long-term care (stroke) interventions. Services are provided either directly by appointment in Iqaluit, community health care centres clinics, home visits during community duty travel, or via televideo conferencing. There is also a significant daycare, pre-school and school care program. The speech-language pathologist receives 2–300 referrals a year with the referrals being 85% Inuit. Of these referrals, the large majority is preschool (0–6yrs). Articulation delay and disorder, language delay and disorder, swallowing/feeding and alternative communication is the scope of practice. The majority of the practice is currently language delay by referral and programming support. However, swallowing issues take up a considerable amount of total time.

No.	Name/Location	Focus	Problem or Need Addressed	Description
				The speech-language pathologist works with developmental teams (chronic needs children, complex care children and developmental delay assessment). The speech-language pathologist completes hearing screening (Pure Tone, Impedance and Otoacoustic Emissions). He also works with aural rehab kids (AVT), free field classroom consultations and with alternative gestural/visual communication programs. **2nd graduate student clinical placements are offered.** They are building wider research partnerships.
3	The Northern Initiative Placement **(ONTARIO)**	Speech-language pathologist/audiologist supervised clinical practicum opportunity	On location speech-language pathologist & audiologist training in remote Inuit communities - to ensure that students get placements that help them to develop skills that will allow them to work with diverse populations. Since there are no speech-language pathologists to provide student placements in these communities, faculty clinical supervisors accompanied students to fill this need, as clinical supervisors.	Supervised placements of speech-language pathology students to provide service to low-resourced communities and to make the training of speech-language pathology graduates more relevant to a multicultural society. It has to be in a complete supervision model for these populations. See short article in CASLPA newsletter that provides some background—special feature on page 8 of the attachment, "Integrating Community Needs with Clinical Education Opportunities." (MooseFactory, Attawapiskat, and Kashechewan.) Speech-language pathology students and supervisors provide speech-language assessment, intervention and training. The audiology student and supervisor only went to Attawapiskat this year (this is the first audiology placement)

No.	Name/Location	Focus	Problem or Need Addressed	Description
SERVICE DELIVERY OPTIONS: TELEHEALTH, COMMUNITY-BASED SERVICES, OUTREACH				
4	First Nations Telehealth Access to Speech-Language Services **(MANITOBA)**	Overcoming jurisdictional issues and remoteness	Children living on First Nations in Manitoba have no access to provincial speech-language services. It is difficult to have NIHB medical transportation cover the cost of the child and an escort to travel to Winnipeg for treatment. This model is also not very effective.	A speech-language pathologist working with the Society for Manitobans with Disabilities is using Manitoba Telehealth (secure videoconferencing) to provide services to forty 0 to 6 year old First Nations children in Norway House, Pukatawagan, The Pas and Thompson.
5	Kikino Métis Settlement **(ALBERTA)**	Telepractice Access	Aboriginal Head Start has no access to local speech-language services.	Khan Communications is a private speech-language pathology company that provides public services to communities in the former Aspen Health Region (Lac LaBiche area). Under contract to Alberta Health Services (*Aboriginal Head Start*), Khan has been providing telepractice to schools since 2005. *Aboriginal Head Start* funds a speech assistant who uses a dedicated telepractice room to consult with an Edmonton-based speech-language pathologist. Children enrolled in Aboriginal Head Start program with a speech-language need come to the school for services. Otherwise, pre-school children may receive services from the provincial speech-language pathologist, a 20–40 minute drive. In 2009, a Khan staff member developed and delivered a speech-language primer for Aboriginal Head Start staff and parents.
6	Vancouver Island First Nations schools **(BC)**	Skype Access	Under-served remote communities	Speech-language pathology service delivery by Skype to two Nuu Chah Nulth communities.

No.	Name/Location	Focus	Problem or Need Addressed	Description
7	Various NWT communities: Yellowknife, Fort Smith, Wha'Ti, Hay River **(NWT)**	Telepractice Access	Under-served—high cost—remote communities	GNWT has adopted a telepractice standard (2–4 trips face-to-face visits to communities with all follow-up by videoconference). Points of care include schools and health centres. Learning assistants support service delivery. Yellowknife: articulation therapy for children who have not been able to make it to the clinic to participate in therapy. Going into Aboriginal Head Start program to deliver services. Wha'Ti Articulation (Same as above, for remote location). Monthly follow-up for articulation clients over telespeech with SL assistant in the room.
8	First Nations Infant Hearing Screening – followup **(ONTARIO)**	Improving First Nations access to universal programs	First Nations children who are born at the Thunder Bay Regional Hospital and fail their hearing test frequently do not receive ABR follow-up because of the home location (isolated northern communities).	An audiologist at the Thunder Bay District Health Unit partnered with the Ontario Telemedicine Network to couple live videoconferencing with an in-band data stream to provide ABR services at seven hospital locations in northwestern Ontario: Fort Frances, Kenora, Sioux Lookout, Geraldton, Marathon, Dryden and Red Lake. He has seen approximately fifty 0 to 9 month-old clients, 85% of whom he estimates to be First Nations.
9	Nitam Giigidowin (First Words) Fort William, Ginoogamming and Long Lake#58 First Nations **(ONTARIO)**	Addressing jurisdictional barriers & school readiness	Public Health Units do not provide speech-language pathology services on First Nations. Long driving distances and cultural barriers limit the number of First Nations children seen. Accessibility to services and higher referral rates for children entering senior kindergarten year. Goal: offering services on the reserves will result in earlier dates of referral and access to	Health Canada has funded a pilot project for 3 school years 2009–10, 2010–11 and 2011–12. Two speech-language pathologists from the TBDHU will travel to 3 First Nations sites: Fort William (urban); Ginoogamming and Long Lake (3 to 3.5hrs from TBay) once per month. A Communication Disorder Assistant will spend one day in each community each week. In Long Lake the Health Centre has made a consult space available. In Ginoogamming a space is available in the basement of the *Aboriginal Head Start on Reserve* facility. Program supports assessments, intervention activities, follow-ups and "check-ups" with *Aboriginal Head Start* children. Update received (15 June) → "*In the 6 months that we have been on reserves, we have had over 30 referrals and most of them were initiated by the parent. Connecting with community partners has been a real key to our success. Our community partners have been a strong supporter of the service and have helped ease our way into the community so that we have been embraced by community members. Our attendance has been good due to regular problem solving with our community partner. Our partners have also provided us with important opportunities to discuss the relevance of new*

No.	Name/Location	Focus	Problem or Need Addressed	Description
			services.	*programming/presentations/material development to their communities. It has been crucial to determine the individual needs of our communities as each community has been unique in our approach. Community Elders were asked to provide us with a name for our project to reflect the goal of the programming*."
10	Inuit Hearing & Otitis Media Program **(NUNAVIK)**	Improving access to hearing services, building Inuit capacity	Quebec has a universal hearing screening policy. Inuit children living in Nunavik have highly restrictive access to audiology services and a high prevalence of otitis media and conductive hearing loss.	The Hearing and Otitis program began in 1986 as a McGill initiative based out of Montreal Children's Hospital serving 14 communities in Nunavik. The original program had an interdisciplinary focus: physician, audiologist, nurse, who all travelled to each location. It is now an audiology-specific service. In 1994, the program split into two distinct and complementary services: the Hudson Program (west) and the Ungava Program (east). The service hub for the west is in Povungnituk (POV). The POV hospital supports 6 other communities. Since 2008, the Hudson program has been supported by a team of 5 audiologists. At the community level there is a local resource who provides translation, coordinates local screening (mostly school-based), coordinates hearing aid issues and refers community people for further testing. Experience of community resources varies. Audiologists train these resources but there is no certification or credential for successful completion of the training. Turnover is high in some communities. In POV the program also maintains 1.5 FTEs for audiology assistants who live in the community and possess a higher level of skills and knowledge. These are called the Siutiliriji (Inuktitut for "person with ear knowledge"). Audiologists sometime use digital otoscopes to capture and forward images to ENTs for consults. The program is funded by the Quebec Ministry of Health.
11	Coordinated Delivery of Speech-language Services by a First Nation organization **(BRITISH COLUMBIA)**	First Nations managed service coordination and delivery	Many small First Nations in BC are unable to support speech-language pathology services in their community.	The First Nations Education Steering committee and the First Nations School Association in BC have established a Special Education Program that supports children. Speech-language pathology is one of the services provided for school age, kindergarten and pre-school children. Toll-free speech help line, SET-BC partnership for augmentative communication and 10–12 contracted speech-language pathologists and two FTEs for direct delivery – cover 35–40 schools per year based on community demand. Speech-language pathologists meet annually to share current practice and service delivery issues.

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12	Coordinated Delivery of Speech-Language Services by a First Nation organization **(MANITOBA)**	First Nations managed service coordination and delivery	Many small First Nations in BC are unable to support speech-language pathology services in their community and build community capacity (train SLAs).	The Manitoba First Nations Education Resource Centre – Coordinates delivery of speech-language pathologist services in approximately 40 Manitoba Band schools environments in Manitoba First Nations. A complement of 4 FTE and 1 contracted speech-language pathologist travel to each community up to 4 times per year. They have a partnership with U of Manitoba to train SAs (19 working in communities)
13	Four Directions Community Health Centre & Outreach from Wascana Rehabilitation Centre Children's Program **(SASKATCHEWAN)**	Improved coordination & access to services for urban Aboriginal population in Regina.	Clients in at-risk neighbourhood (primarily urban Aboriginal) were not consistently accessing speech and language services for their families due to transportation, location, literacy, and many other social issues. Referral response rates are very low. The speech-language pathologist services were not within walking distance or easily accessible in the neighbourhood.	- Staff at the local community health centre in partnership with Wascana Rehabilitation Centre Children's Program wrote a proposal to fund a speech-language pathologist to be located in the neighbourhood. - Position was funded and began in September of 2008 - position is now permanently funded. - Position is supported and managed by Children's Program, but based out of local health centre that is well known and trusted in the community. Local health centre supports addictions services, father's group, Healthiest Babies Possible Program, public health nursing, parenting programs, support groups, primary care services, elder counselling, and prenatal programs. - Speech-language pathology focus was to offer direct intervention for families who wished it within the neighbourhood, as well as to offer preventative services focusing on attachment, early language and literacy development. - Services are offered on a drop-in basis if families wish. - Speech-language pathologist partnered with already existing, successful and well attended local parenting, prenatal, daycare and family support programs to offer services. - Speech-language pathologist available to attend local programs and groups to form partnerships and relationships with families. - Results: Increased referral response rate, improved access to therapy services within core neighbourhood, daycare partnerships increased in community, prenatal family literacy trial program completed, and drop in play group created.

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14	Sandy Lake First Nations Tele-speech **(ONTARIO)**	Improved service delivery	The community is fly-in only. There is a 2-year wait list to see children. Health Canada will not pay for speech-language pathologist service through Non-Insured Health Benefits. High number of children with speech-language issues.	Sandy Lake First Nation (Ontario): a speech-language pathologist travels from southern Ontario once per year to conduct assessments and improve understanding of local cultural and language norms. Currently, the caseload includes more than 50 children aged 4–14. Weekly sessions are scheduled by the speech-language pathologist and faxed to the school. Local assistants go to classrooms and bring children to a dedicated videoconference room and facilitate during the session. During the school year, Special Education teachers will refer additional students to the speech-language pathologist on an as-needed basis.
SCREENING & ASSESSMENT: COMMUNITY-BASED SERVICES, LOCAL NORMS				
16	First Nations language sample project on four First Nations **(BRITISH COLUMBIA)**	Normative language samples for typically developing 4 to 5–year-olds on four First Nations	Standardized speech & language assessments do not accurately reflect local speech and language profiles. May result in mis- or over-diagnoses of children in the community.	
17	Michael Chappell, speech-language pathologist in Iqaluit, in coordination with ENT, audiologists from across Canada and with an Ontario University. **(NUNAVUT)**	Audiology screenings in pre-school Inuit Population	Funding provided recently for audiology assessment of pre-school Inuit population	The speech-language pathologist receives 2–300 referrals a year, with the referrals being 85% Inuit. Of these referrals, the large majority are preschool (0–6 yrs). The speech-language pathologist works with developmental teams (chronic needs kids, complex care kids and developmental delay assessment). He also completes hearing screening (Pure Tone, Impedance and Otoacoustic Emissions), and he works with Aural Rehab kids (AVT), free field classroom consultations and with alternative gestural/visual communication programs. He was currently awarded the funding to provide a pre-school aural surveillance program with the pre-school Inuit Population in coordination with ENT, audiologists from across Canada and with an Ontario University. There is ongoing development of local screening/assessment protocols and

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				community based capacity building for speech, aural and language development.
18	Standard English as a Second Dialect programs in BC school districts **(BRITISH COLUMBIA)**	SESD programs, First Nations dialects	No information is currently available on the practices being used, yet there is some general agreement that there are FN English dialects that are perhaps being used by a number of children and that these may differ from mainstream education standards.	Master's student doing a qualitative study on Standard English as a Second Dialect programs in four districts in BC. One or more of those speech-language pathologist/teacher interviewee sets might also be interested in participating. Many school districts are seeing improvement in assessment results and FSA exam results in the students receiving SESD support. Practices vary from district to district but there is an awareness of the need to teach code-switching and teach the difference between "home talk" and "school talk." There is an effort to get teachers on board with SESD, to raise the profile and understanding of the need for the program. There is talk of having a consistent screening/assessment process across the province but for now, each school district does it a bit differently. There is also an awareness of the need to know the phonology, syntax etc. of the local Aboriginal languages and dialects in order to distinguish difference from disorder, but this is "easier said than done!" Data are from school-aged children, not preschool. Interviews are with speech-language pathologists who work with English as a Second Dialect (ESD) programs in their school districts. They work with Aboriginal children but are not necessarily in Aboriginal communities. Heather has been asking about how to identify a dialect, any challenges and successes they are having, what kinds of methods and materials they use...
19	Dialect Description Inge Genee, PhD Dept of ML, U. of Lethbridge **(ALBERTA)**	Indigenous Dialect Data Collection	Increasing knowledge in the area of dialect description, with the goal of providing a base line for applied work on assessment & treatment issues.	Current work is in the area of dialect description, with the goal of providing a base line for applied work on assessment and treatment issues. Part of a special issue of Canadian Journal of Native Education is in preparation devoted to various aspects of Indigenous English: Inge Genee and Shelley Stigter (2010): *Not Just "Broken English": Some Grammatical Characteristics of Blackfoot English*. Forthcoming in Canadian Journal of Native Education.

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UNIVERSAL STRENGTH-BASED PROGRAMS: MATERIALS, CAMPS….				
20	First Nations Summer Language Booster Camp **(NEW BRUNSWICK)**	Language enrichment opportunity for children and local community	Lack of speech-language pathology service for young preschoolers on a First Nations	Although speech-language pathology services are available at an urban hospital, families face many barriers in keeping appointments as well as a lengthy wait list for intervention services. The band contracted a speech-language pathologist to provide ongoing services in its First Nations preschool/school. However, younger preschoolers are not included, and the "at risk" children in the school environment require more enhanced language enrichment over the summer months. This is an on-going and expanded summer program that was initiated and developed by the First Nation and the contracted school speech-language pathologist. Discussions between teachers, principal and speech-language pathologist identified a need to provide speech-language programming (phonological awareness activities, language facilitation strategies). The focus is on fun and also provides food for children. Activities include cooking, art, reading, drama and field trips. Program runs four days/wk for four summer weeks. Age range is flexible (3–10 years). This year Aboriginal teachers will participate.
21	Speech-Language Pathology Support Personnel Pilot Project: Hitatsoo, Esowista, and Opitsaht First Nations (NuuChahNulth), Vancouver Island Health Authority, Ministry of Children & Family Development, Office of the Provincial Pediatric Therapy Consultant **(BRITISH COLUMBIA)**	First Nations capacity building and use of culturally appropriate therapy materials	Lack of culturally relevant materials and programs specifically addressing speech and language development for use by trained community persons.	Speech-language pathology services to First Nations on the west coast of Vancouver Island - use of ***Moe the Mouse*** as a tool. Focus - An alternate model of delivering speech-language pathology services, specifically training a community member to support the delivery of speech-language pathology services in remote settings. Aim - To build capacity within the community for the speech and language development of pre-school children. The qualifications for this position included personality characteristics such as dynamic, outgoing, fun, energetic, creative and knowledgeable of Aboriginal culture. In order to weave cultural sensitivity throughout this project and to ensure a feeling of safety, the "***Five F's***" were used as a guiding principle: No Formal testing, No Forms to fill out, No Files to be written in, Make it Fun and Funny. A speech-language pathologist support personnel training included delivery of the "Articulation" and "Early Language" Training Modules of the Partnerships in Communication course, presented by two speech-language pathologists. One

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				speech-language pathologist also provided mentorship and on-the-job training on a bimonthly basis: e.g. observation of the program in use; consultation surrounding individual children and their speech and language needs (i.e. working on specific sounds, building single word vocabulary, using prepositions, etc...); discussion and modeling of language facilitation principles and strategies such as following the child's lead, interactive book reading, building imaginary play skills, introducing vocabulary and modeling language at the child's level; and weekly phone calls to discuss progress, brainstorm new ideas, and cooperatively problem solve barriers.
22	*Fly with Akweks* (Moe the Mouse in a Mohawk Community) **(QUÉBEC)**	First Nations capacity building and use of culturally appropriate therapy materials	Building community pride in local adaptation of a culturally relevant program	In developing the Moe the Mouse Concept for the Mohawk community, Kahnawke is developing three packages: P*ackage* one, which focuses on the topic of the Three Sisters, a well-known legend in the community; P*ackage two,* which is focused on Akweks in the Community and his search for the best nesting place. This package will eventually be considered the *first package*, the one that introduces the character of Akweks who will then continue to lead the children through the rest of the activities. They have identified the community places that Akweks will visit and a variety of activities the children will engage in that link to speech-language goals. They have also considered the nature of the DVD and animated features that would accompany; the script for Akweks and Ainsley (a little girl who will accompany him on his journeys), and have adapted traditional stories related to the theme and incorporating speech-language goals. An outline for a board game related to the topic has also been created.
23	Exploring How to Use Cree Culture to Improve Children's Communication Skills **(QUÉBEC)**	Community-designed culturally relevant material in conjunction with language development training	Lack of community knowledge about how to apply cultural materials in language development activities	In August and September 2009, the Montreal Fluency Centre held a Cree Communication Aide Workshop. Participants included Cree teachers, educators, and Special Needs Department Heads from each of the nine communities. Learning objectives included developing an understanding of the role of the speech-language pathologist as well as language comprehension, expressive language, social language and literacy. After learning to identify children who are at risk for language and literacy difficulties, the participants identified characteristics of children who would benefit from communication intervention as well as goals for intervention. The Speech-Language Pathologists then guided

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				the participants in brainstorming ways to use the arts (oral stories, books, songs) to improve communication skills in children. Everyone explored ways to use song to supplement literacy development. The participants then created their own culturally-relevant stories with props and other visuals to support language understanding and expression. Each of the professionals was able to bring back to their respective community these completed stories to share with the other teachers.
24	Nookmis MIshoomis, Rama & Beausoleil First Nations & Orillia Native Women's Group, Barrie Native Friendship Centre, Georgian Bay Native Women's Group, Georgian Bay Friendship Centre, Midland, Enaahtig Healing Lodge **(ONTARIO)**	Developmental storytelling, community bonding, speech and language-focused, honouring native language and culture, parenting, rhyme and chime, song and storytelling	Early Intervention, speech language, storytelling Parenting, Community Support, Bonding & Use of Native Language, (rhyme and chime in Ojibwe)	Program began in 2002, and has been offered since. Each location received support, one day per week, over seven weeks. Mornings: Grandparents, parents with children, circle activities: rhyme, chime, songs, stories, Ojibwe and English Feast/lunch: provided for parents and children. Afternoons: childcare provided for children, while parents are engaged as active participants in stories designed for healing.
25	Quill-to-Quill (0 to 6 years) Pilot Project, [Grade 1 Classrooms] Simcoe County School Board, Midland & Barrie, Urban Aboriginal Pilot Project. Orillia Central Preschool (0–6) **(ONTARIO)**	Cultural materials	Preschool songs braid key vocabulary: three-words, three languages, Trilogy Song (Ojibwe, French, English). In Ontario, this appeals to parents who share both French and native language backgrounds, {Métis}. Parents do not want a forced choice between native or French in early preschool	Tri-cultural materials to support pre-school. Initiatives include language, cultural activities, pre-literacy, numeracy, rhyme, chime, art, songs and storytelling/ dramatic replay, linked with images (flashcards) of Grandmother's Quillwork. Flashcards link theme, native literacy, with children's books/stories, available from www.goodminds.com (one-stop shopping, native bookstore). Example: How the Chipmunk got its stripes.

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			programs. By Gr. 4, the school system insists that they choose between Native & French.	
26	So Sah Latch Family Program Ayas Men Men Child & Family Services, Squamish Nation, North Vancouver, B.C. **(BRITISH COLUMBIA)**	To develop cultural materials using photos of the Squamish People, culture and language	To develop a sense of identity as Squamish People; involve elders; teach a healthy way of bonding and attachment; teach patience; create early literacy experiences that are fun for families; provide opportunities for story telling; and develop language skills in both English and Squamish language.	Partnership with staff at the So Sah Latch Family Program staff (includes program coordinator, ECE teachers, child minders, pre-post natal coordinator, infant development, nurse, speech-language pathologist). Families and children ages birth to 6 months attend the program. Make books using photos of the Squamish People, culture and language. (e.g. animals, yearbook, songs, field trips) Text in English, Squamish Language with pronunciation guides and accompanying CD Adapt children's books by taking some words and adding Squamish Language for beginning learners (e.g. colors, counting, animals) • Families make felt stories to accompany books and legends
27	APTN – *Tiga Talk* **(CANADA)**	Culturally-defined S-L programming for pre-school children	Provision of more cultural content in child-focused media, with a focus on speech-language development.	Television program that aims to support speech-language development goals by placing speech sounds within culturally appropriate languages and place-based activities. http://www.maystreet.ca/prjcts_Tiga.html
COMMUNITY CAPACITY DEVELOPMENT: RECRUITMENT, EMPOWERMENT				
28	UBC School of Audiology and Speech Sciences	Recruitment of FNIM people for speech-language pathology/ audiology program	Lack of Indigenous speech-language pathologists/audiologists	Active Recruitment of First Nation, Inuit and Métis students into the speech-language and audiology programs based on affirmative action principle

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29	Talk, Learn and Grow Together – Lil'wat [Mt Currie] **(BRITISH COLUMBIA)**	Healthy Child and Family Development	Strengths-based family enrichment for families with children 0– 6. Promotes parent participation in developing awareness of child development and highlights positives in their interactions with their children [w/ speech-language pathologist & Community Partner (CHR, CW, ECE,..)]	A dynamic, holistic process that enables community-specific goals to be integrated into a strengths-based universal program that supports positive parent /child interaction and increases knowledge of child development. The seven-session program is offered in cycles two times a year. The Lil'wat version was developed with input from cultural centre staff, participants in the program, speech language therapist and occupational therapist. Session topics include *Watch and Listen, Join in, Routines, Drumming and Dance, Storytelling, Celebrating Learning*. The program incorporates speech-language pathologist awareness of how children learn not only communication but general child development. Topics and activities change and reflect parent and community input. The program incorporates local traditional stories, language and traditional activities. TLGT is a universal strengths-based program and acknowledges the strengths that parents bring in terms of • their community knowledge • their levels of connection to the topics • their creativity and ability to adapt terminology to their setting (e.g. animals as parenting styles; their seasonal identification with "what is a routine", ...) • their sharing of their language • their ability to share traditional stories with the other parents, some of whom may not have heard them before Many families participate in the program more than once which enhances learning.
30	First Nations Speech Assistant **(ONTARIO)**	First Nations capacity building, service coordination	Pre-school children were only receiving services during the summer months (when the speech-language pathologist had time to visit). There was no capacity in the community to provide follow-up or referrals.	**Need Identification: G**arden River children attend school off-reserve. Feedback from school officials indicated that some were not "school-ready." Children would be referred and be placed on a wait list. Service delays increased impact on children and school system. There was no capacity to systematically address speech-language difficulties at the community-level. A speech-language pathologist has been on contract for approximately eight years. Until last year, the speech-language pathologist would come into the daycare during the summer months to assess and work with children. **Limitations of Current Model:** Insufficient time for the speech-language pathologist to connect with parents or other community members about the

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				child's care and no capacity for follow-up outside of the summer months. Child would arrive in school and still have "readiness" issues. Lengthy wait times to see school speech-language pathologists in Sault Ste. Marie. **Holistic Service Model** • A community person trained and certified as a speech assistant (SA) and working under the license of a contracted speech-language pathologist provides follow-up and works with children, parents and other care givers at home to follow-up on goals developed by the speech-language pathologist. • The speech-language pathologist assesses & develops a therapy plan & the SA follows-up with the plan. • The SA refers children to the speech-language pathologist, meets with the speech-language pathologist to discuss children's progress, goals and provides a link to community health service providers. • The SA collaborates with local health service providers (community and clinical programming supervisors and staff) to promote the role of speech-language services in child development (part of health programming: moms & tots, parent info sessions). SA meets with community groups and attends school and community events (e.g. get set for school, family literacy nights) to answer questions about speech-language services in child development and increase awareness of availability of local SA services.
31	Inuit Interdisciplinary therapy assistants – speech-language pathologist/AUD/PT/OT **(NUNAVUT)**	Building Inuit capacity	Disability rates among Inuit have been reported at nearly twice the national average, although the per capita rehabilitation staffing levels in Nunavut remain significantly lower than the rest of Canada.	18-month course; eight graduates. Arctic College: Community Therapy Assistants (CTA) augment the quality, quantity and continuity of rehabilitation services in Nunavut. These skilled paraprofessionals are qualified to carry out treatment programs as directed by supervising health professional in the regional centre. Remote supervision is achieved through a variety of technologies, including email, fax, telephone and Telehealth videoconferencing. Examples of a CTA's duties includes performing hearing screenings, leading a children's literacy group, performing wheelchair repairs, and assisting an elder with a home exercise program. CTAs also have an important and highly respected role to play as the community, culture and language experts on the rehabilitation team. Their knowledge of their communities and culture will help

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				to ensure that treatment plans and assessment methods are appropriate and relevant to clients. Contact: Arctic College
32	First Nations Speech-Language Pathologist M'Chigeeng First Nation Sagamok Anishnawbek Sheshegwaning First Nation Whitefish River First Nation **(ONTARIO)**	Workforce development, cultural competence, FN language services	The CASLPA membership has few members of Aboriginal ancestry.	Monica Nahwegahbow, M.S., CCC-speech-language pathologist; Anishnaabe Speech & Language Services Monica is from the Whitefish River First Nation, and has been in practice there and in the surrounding area for more than six years now, in four different First Nation schools, which include young children (and forthcoming Junior Kindergarten classes). Relationship building has been key to her practice. The people know her and her family and her connection to the community. She is an integral part of the community now. The people trust her and respect her honesty. Monica knows that standardized testing is inappropriate given the vastly different environment of First Nation life versus middle class North America. She works a lot on clinical instinct in looking for the truth. She is upfront and very honest with families because they want to trust her. People are happy with her work; they recognize that what she recommends shows results. Even though she is from the area, she has had to work to build trust. "*Recruitment of Indigenous First Nations speech-language pathologist students is a great idea, but not an easy task. It is a difficult field to get into. And you have to be a different kind of thinker—one who looks for the unseen. The strong academic component is a barrier for those with less opportunities and for those who are still struggling with the generational effects of the residential schools. It is very important to recognize that non-native clinicians may have unconscious biases towards Indigenous people. They may not realize that they have preconceived notions of native communities and families. They have to go back and understand the domino effect [of colonialism and residential schools] that has led to the current situation. Cultural awareness courses may help. Basically, people all want the same things: for their kids to be happy, sleep well, be safe, to find their passion—it's just harder for some people to get these things. There are still so many health-related issues in communities (e.g. young children who have issues with dentition . . . that learning how to make a stop is not really up there*

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				as a priority. *Keep an open mind. You have to take a lot of things into consideration – be flexible and nonjudgmental. Remind yourselves of how fortunate you've been, and that a lot of people have not had the same opportunities.*" Community development – Lately. Monica has been developing plans to put more of her efforts into community development. She is looking at what parents need to effect changes at a community level. She believes that one of the most important things for children is to find out what drives them, to be in a position to find their passion. To build the community in this way. The schools are growing and changing as they are embracing and integrating more tradition and culture.
33	First Nations Speech-Language Pathologist, Nipissing **(ONTARIO)**	Workforce development, cultural competence, FN language services	The CASLPA membership has few members of Aboriginal ancestry	Sharla Peltier: ***"Storytelling Circles*** are definitely *a strengths-based approach* that focuses on the child's knowledge that they bring with them to school, and it promotes cultural awareness among students and staff. No part of this process traditionally used by Aboriginal people has anything to do with looking at deficits or problem areas of those participating. Listening is key! When I researched this it demonstrated that children can listen, sometimes for 1 hour when engaged in the storytelling circle. They listened to every story told by their peers. It could partly be because they were older (8–10 years), but the respect factor is there—they know that everything shared mattered. The process was so naturally facilitative for them. It taps into some of those values that Aboriginal people have whether First Nations, Inuit or Métis. Listening is an important life skill. If you can't listen, you can't learn."
34	First Nations Speech-Language Pathologist, Six Nations of the Grand River Territory **(ONTARIO)**	Workforce development, cultural competence, FN language services	The CASLPA membership has few members of Aboriginal ancestry.	Lori Davis Hill works as a speech-language pathologist on her First Nation, Six Nations of the Grand River Territory. She was the first First Nation, Inuit or Metis person in Canada to complete a Masters graduate degree at the University of Toronto in 1990. This year marks the second time—a Métis woman at U of T is doing a similar degree. "It's been difficult to recruit anyone else in the last 20 years." Currently, Lori works on a team with two Communication Assistants that she

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				says are "highly skilled in engaging the clients and families. Teamwork makes the dreamwork!" Lori bridges her teachings between two worlds – "with one foot in the canoe and the other in the ship." For the past 10 years she has been practicing in her heritage community. She feels she has become a bridge between both worlds—to bring the mainstream skills she learned back to the community and then make changes in those skills to fit and to promote the potential in the community. She recognizes that many haven't "walked in that other world successfully" and has thought a lot about what made her succeed. She thinks it was when she was able to connect the teaching to the context of her own reality that learning became more meaningful. She connects this to her practice with families. "Facts and figures are meaningless—parents/caregivers have to be in the room with you to see how therapy works." Her total communication approach is a holistic approach—to "offer all the possible ways to communicate and watch the frustrations decrease. Behaviour is communication...Communication is behaviour." Also, she cautions that people sometimes don't make the connections as quickly as you have. "You forget the depth and breadth of your knowledge as an SLP." She is aware of other First Nations' models of wellness, such as the Medicine Wheel, and she incorporates aspects of her culture's Tree of Peace (four root directions) in her fuller understanding of where a child is at. It's about building a relationship, knowing the interests, relations, familiar vocabulary and characters, and experiences: "They [the families] are the experts; we need to listen to them first, and build from there." She invites commitment by families by including them in the assessment process: "They take time out of school or off work and come to the appointment. If we get that far, they've shown commitment." Also, she ensures that therapy starts the following week after the assessment: "They get served right away . . . and no matter what, you can show some kind of progress in the assessment—it is the best time to model . . . some parents have tears in their eyes then." Lori also

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				requires signed commitment from families to acknowledge the relationship that they are starting. “It’s all about trust and building relationships.” Lori also offers student placements to let other future grads see what’s important in her setting. She lets them know that it’s okay to take time to establish relationships. “It’s half the battle. The parent/caregivers will trust you, especially if you take the time to show them how it works.”
35	Southern Alberta Piikani and Kainai Blackfoot Communities **(ALBERTA)**	Prenatal and Parent Speech-Language Development Workshops	Re-teaching traditional parenting skills of how to talk to your baby and how to use oral language in the home.	A ground-up community-based approach beginning in the high schools and prenatal classes. 1. "Language in Life"- program addresses the issue of lack of language in First Nations Homes. The major objective is to have program taught in every health centre/ prenatal class. 2. Baby Play and Learn Classes – Bosch has taught these classes to groups of parents on-reserve. The focus is on creating a community around your baby, learning songs and traditional chants, and modelling oral language at all times.
36	First Nation SLA Training **(BRITISH COLUMBIA)**	Capacity Development	Many First Nations are unable to adequately support service delivery.	The First Nations Education Steering committee and the First Nations School Association in BC have established a relationship with the Nicola Valley Institute of Technology (a First Nations-run degree-granting institution) to train community SLAs. The first intake of 40 students will complete their study and placements in May 2011.
37	First Nation SA Training **(MANITOBA)**	Capacity Development	Many First Nations are unable to adequately support service delivery.	The Manitoba First Nations Education Resource Centre has established a partnership with University of Manitoba to train SAs. Approximately 40 have entered the program and 19 are now working in FN communities. MFNERC speech-language pathologists also provide informal training to Education Assistants to provide service support.