

Dr. Michael Routledge, Chief Provincial Public Health Officer, MHSAL

Dr. Darren Leitao, Clinical Director, Pediatric Cochlear Implant Program; Section Head, Pediatric Otolaryngology, WRHA
Diana Dinon, Clinical Service Lead, Audiology, WRHA, on behalf of the Provincial Audiology Working Group

Colleagues:

Beginning in June 2016, Universal Newborn Hearing Screening (UNHS) services will be commencing throughout Manitoba in preparation for *The Universal Newborn Hearing Screening Act* (Bill 208) coming into force as of September 1, 2016. The UNHS Act requires that all parents/legal guardians of Manitoba newborns be offered hearing screening within 48 hours of birth and/or prior to discharge from a birthing facility.

UNHS services will be delivered by newborn hearing screeners / audiology assistants under the direction and supervision of regional audiologists in facilities with more than 75 births per annum (appendix A) based on provincially standardized newborn hearing screening protocols (appendix B). In facilities with less than 75 births per annum and/ or community based births, newborns and their families should be referred to a regional audiology centre(s) (appendix C) to undergo newborn hearing screening. Referrals should be accompanied by identification of any applicable risks for hearing loss (appendix D).

It is anticipated that 95% of newborns born in Manitoba birthing facilities will undergo hearing screening prior to hospital discharge. Parents / guardians will be advised of the newborn hearing screening outcome at the time of the screening. Newborns determined to require subsequent hearing screening and audiology consultation will be scheduled for community based audiology services at the time of screening or shortly thereafter by the newborn hearing screener. Parents/guardians will be provided with information pamphlets on UNHS which includes an outline of the milestones for speech and language development in infants and toddlers. To access information pamphlets for prenatal clients or new parents/guardians, please contact your regional audiology centre.

Newborns up to the age of 6 months are eligible for UNHS services through referral to regional audiology centres (appendix C). Infants over 6 months of age should be referred to your local Children's Therapy Initiative (CTI) office (appendix E) along with identification of the risk factors for congenital hearing loss. Should your patient's parent/guardian be uncertain as to whether they received UNHS services, screening status and outcomes can be determined by contacting your regional audiology centre.

The incidence of congenital sensorineural hearing loss in the newborn population is between 1 and 6 children per 1000; greater than the combined incidence of all the metabolic conditions screened for with blood tests in most jurisdictions. Of the approximately 17,000 births per year in Manitoba, it is anticipated that between 17 to 102 newborns will be diagnosed with a congenital hearing deficit. Reports to primary care providers will be provided only for those newborns determined to have hearing deficit at the time of audiology diagnosis. While screening and subsequent intervention services can be performed in all regional audiology centres, to ensure maintenance of clinical competencies, audiology diagnostic assessments will be performed only in Thompson, Brandon, and Winnipeg.

UNHS will only enable the identification and earlier diagnosis of congenital hearing impairments. Acquired hearing impairments will occur additionally in approximately 7 of 100 000 infants and 1 to 3 of 10 000 school aged children. Regular hearing surveillance is encouraged. Infants/children diagnosed with congenital CMV infection or meningitis should be referred to your regional audiology centre for assessment as soon as practical.

The largest gains for hearing impaired children come with detections prior to one month of age and confirmation or diagnosis by three months of age. When newborns with hearing loss are not identified shortly after birth, the disorder typically remains undiagnosed for years, only to be identified once cognitive, speech processing and or learning deficits are evident in school aged children (World Health Organization, Geneva, 2009). Your support in ensuring the best outcomes for Manitoba children is appreciated.

If you have any questions about the UNHS services, please contact your regional audiology centre or Manitoba Health, Seniors and Active Living at atsc@gov.mb.ca.

Original signed by:

Dr. Michael Routledge, MHSAL
Chief Provincial Public Health Officer

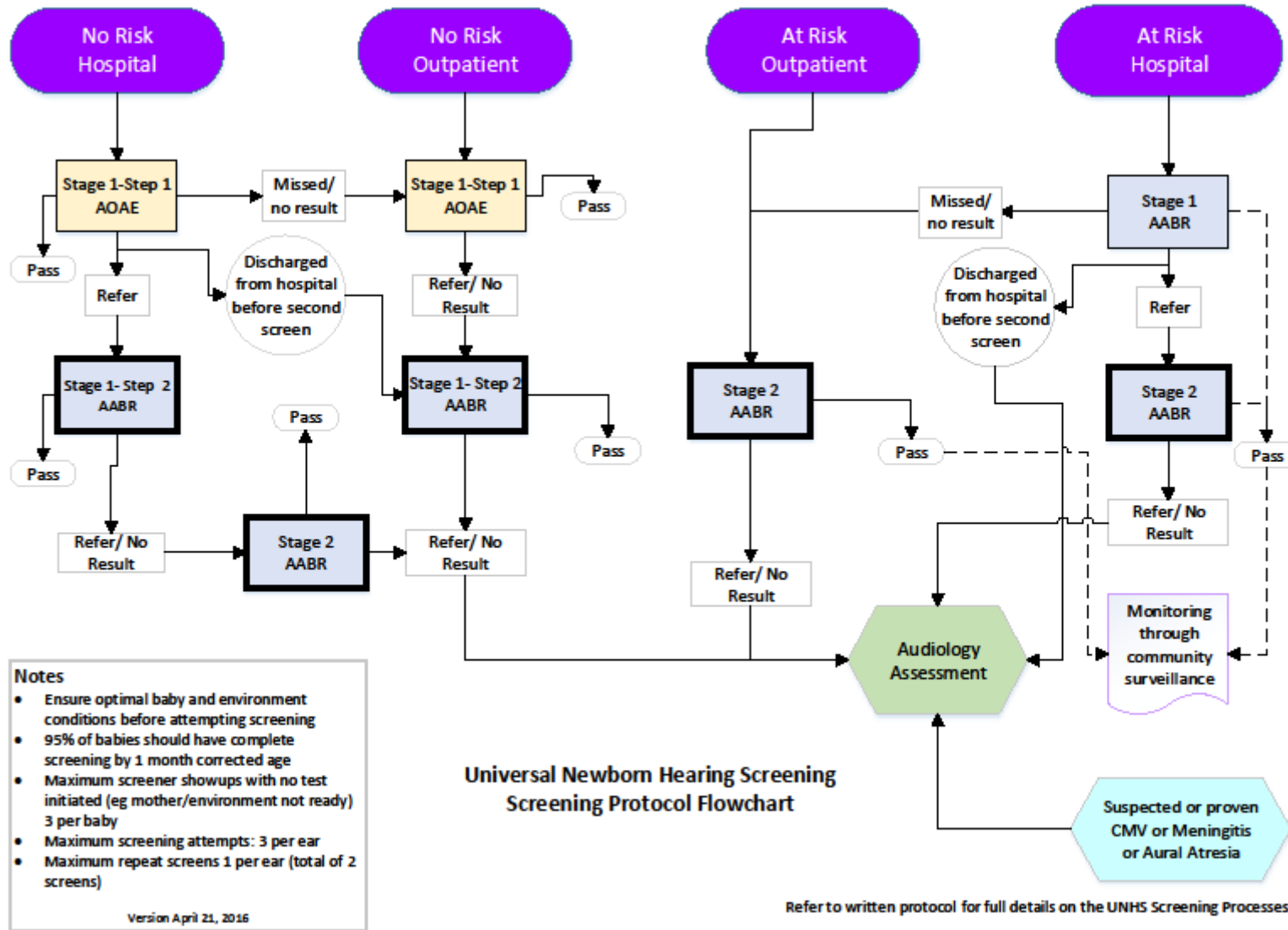
Dr. Darren Leitao, WRHA
Clinical Director, Pediatric Cochlear
Implant Program
Section Head, Pediatric Otolaryngology

Diana Dinon, WRHA
Clinical Services Lead, Audiology
on behalf of Provincial Audiology
Working Group

Appendix A: Manitoba facilities with more than 75 births per annum

Winnipeg RHA	Southern Health-Sante Sud RHA	Prairie Mountain Health RHA	Interlake-Eastern RHA	Northern RHA
St Boniface General Hospital	Portage District General Hospital	Brandon General Hospital	Selkirk & District General Hospital	Thompson General Hospital
Health Sciences Centre	Bethesda (Steinbach)	Dauphin General Hospital		The Pas Health Complex
Winnipeg Birthing Centre	Ste Anne Hospital	Neepawa Hospital		Flin Flon General Hospital
	Boundary Trails Health Centre (Morden/Winkler)			

Appendix B: Manitoba Universal Newborn Hearing Screening Protocol – At a Glance



Appendix C: Regional Audiology Centres

Interlake-Eastern RHA	Northern RHA	Prairie Mountain Health RHA	Southern Health-Santé Sud RHA	Winnipeg RHA
<p>Selkirk Hearing Clinic Box 5000 100 Easton Drive Selkirk, MB Canada, R1A 2M2 Ph: (204) 482-5800 Fax: (204) 785-9113</p>	<p>The Pas and Flin Flon Hearing Clinics Box 240 111 Cook Ave The Pas, MB Canada, R9A 1K4 Ph: (204) 623-9697 Fax: (204) 627-8285</p>	<p>Brandon Hearing Centre Town Centre- Public Health Services A5-800 Rosser Ave. Brandon, MB Canada, R7A 6N5 Ph: (204) 578-2393 Fax: (204) 578-2823</p>	<p>Audiology Boundary Trails Box 2000 Station Main Winkler, MB Canada, R6W 1H8 Ph: (204) 331-8828 Fax: (204) 331-8913</p>	<p>Specialized Services for Children and Youth (SSCY) Centre 1155 Notre Dame Ave Winnipeg, MB Canada, R3E 3G1 Ph: (204) 258-6550 Fax: (204) 258-6799</p>
	<p>Thompson Hearing Centre 867Thompson Dr Thompson, MB Canada, R8N 1Z4 Ph: (204) 677-5385 Fax: (204) 778- 1453</p>		<p>Audiology Portage la Prairie 25 Tupper Street North Portage La Prairie, MB Canada, R1N 3K1 Ph: (204) 239-3117 Fax: (204) 239-2443</p>	
			<p>Audiology Steinbach 365 Reimer Avenue Steinbach, MB Canada, R5G 0R9 Ph: (204) 346-7009 Fax: (204) 346-7023</p>	

Appendix D: Risk Factors for Hearing Loss

Below is a short List of risk factors which put an infant at risk of having a permanent childhood hearing loss.

- Family history (permanent hearing loss before 10 years of age; parent or siblings only)
- Obvious craniofacial abnormalities (absent or malformed pinna, absent or tiny ear canal opening, preauricular pits, skin tags)
- Birth weight < 1000 g (2lb 3oz)
- Gestational age \leq 30 weeks at birth
- APGAR 5 minutes \leq 3
- NICU stay \geq 5 days
- Congenital CMV infection;
- Meningitis: viral, bacterial, fungal
- Head trauma indicated positive on imaging
- Ventilatory support (ECMO, ECLS, HFV, HFO, HFOV, HFJ, HFJV, NO, INO)
- IVH grade III or IV: intraventricular hemorrhage (severe bleeding in brain)
- Hypoxic Ischemic Encephalopathy (brain injury) (HIE) Moderate (Sarnat 2) or Severe (Sarnat 3)
- Peri-ventricular leukomalacia (PVL)
- Congenital diaphragmatic hernia
- Persistent pulmonary hypertension of the newborn
- Other proven TORCHES infection (toxoplasmosis, rubella [German measles], cytomegalovirus, herpes, syphilis)
- HIV, measles or mumps infection
- Severe neonatal sepsis
- Severe hyperbilirubinemia (HBR) (peak total serum bilirubin \geq 400 μ mol/l or exchange transfusion) / Kernicterus
- Severe neonatal asphyxia / hypoxia / respiratory failure / cardiopulmonary failure
- Clinical report of cleft lip and/or palate
- Neonatal cancer treatment with cisplatin
- Syndromes: Down (Trisomy 21), Stickler, CHARGE, Pendred, Enlarged Vestibular Aqueduct (EVA), Waardenburg, Usher, Branchio-Oto-Renal (BOR), Treacher Collins, Osteogenesis Imperfecta (OI), Neurofibromatosis II (NF2), Alport, Crouzon, Hunter

Appendix E: Children’s Therapy Initiative (CTI) Regional Office Contact Information

Interlake-Eastern RHA	Northern RHA	Prairie Mountain Health RHA	Southern Health-Santé Sud RHA	Winnipeg RHA
<p>Interlake CTI 200 – 237 Manitoba Ave Selkirk, MB Canada, R1A 0Y4 Ph: (204) 785-7730 Fax: (204) 785-7749</p>	<p>CTI – Burntwood Central Intake 303 – 83 Churchill Drive Thompson, MB Canada, R8N 0L6 Toll Free: 1-888-367-0268 Ph: (204) 778-4277 Fax: (204) 778-4461</p>	<p>Brandon Children’s Therapy Team 150 McTavish Avenue East Brandon MB Canada, R7A 2B3 Ph: (204) 578-4504 Fax: (204) 578-4871</p>	<p>Central Region CTI Box 2000, Station Main Winkler, MB Canada, R6W 1H8 Toll Free: 1(800)958-3076 Ph: (204) 331-8833 Fax: (204) 331-8913</p>	<p>Specialized Services for Children and Youth (SSCY) Centre 1155 Notre Dame Ave Winnipeg, MB Canada, R3E 3G1 Ph: (204) 258-6550 Fax: (204) 258-6799</p>
	<p>CTI – Nor-Man Region Box 4700 The Pas, Manitoba Canada, R9A 1R9 Ph: (204) 623-7780 Fax: (204) 623-1309</p>	<p>CTI - Parkland Regional Therapy Service Dauphin Regional Health Centre 625 3rd Street S.W. Dauphin, MB R7N 1R7 Ph: (204) 638-2164 ext.2 Fax: (204) 629-3430</p>	<p>South Eastman CTI 365 Reimer Ave Steinbach, MB Canada, R5G 0R9 Ph: (204) 326-6411 ext.2109 Fax: (204) 320-4176</p>	
		<p>Intake Coordinator Assiniboine North – CTI Box 1240 Neepawa, MB Canada, R0J 1H0 Ph: (204) 476-2341 ext.409 Fax: (204) 476-3552</p>		