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Clinic Based Hearing Screening Protocols: The Feasibility of Implementing the Health Professions Council of South Africa Year 2007 Guidelines

A dissertation submitted to

The Department of Speech Pathology and Audiology

School of Human and Community Development

Faculty of Humanities

University of the Witwatersrand

In fulfilment of the requirements of the degree

Master of Arts in Audiology

by

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Declaration

I, Luisa Petrocchi-Bartal, hereby declare that this dissertation is my own unaided work. I alone am responsible for the content of this study and the conclusions presented. No part of this dissertation has been previously submitted for a degree at any other University.

Signature: _____ Date: _____

Luisa Petrocchi-Bartal

In loving memory of my grandmother, Nadia (nee Bethlehem) Koz, whose light shines eternally.

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List of Abbreviations

AABR:	Automated Auditory Brainstem Response
AAP:	American Academy of Paediatrics
ANC:	African National Congress
ASHA:	American Speech-Language-Hearing Association
BCG:	Bacille Colmette-Guerin
BFHI:	Baby Friendly Hospital Initiative
CDC:	Centre for Disease Control
DoH:	Department of Health
DPOAE:	Distortion Product Otoacoustic Emissions
DPT1	Diptheria-Pertussis-Tetanus
EHDI:	Early Hearing Detection and Intervention
ENT:	Ear Nose and Throat
EPI:	Expanded Programme on Immunisation
GP:	Gauteng Province
GP-COJ:	Gauteng Province - City of Johannesburg
GP-R/M:	Gauteng Province - Randfontein/Mogale
HPCSA:	Health Professions Council of South Africa
HIV/AIDS:	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
HR:	Human Resources
IGCH:	International Working Group on Infant Hearing
IMCI:	Integrated Management on Childhood Illnesses
JCIH:	Joint Committee on Infant Hearing
MCWH:	Mother Woman and Child Health
NECP:	National Ear Care Programme
NHS:	Newborn Hearing Screening
NICU:	Neonatal Intensive Care Unit
NIH:	National Institute of Health
N/IHS:	Newborn or Infant Hearing Screening
NW:	North West Province
NW-M:	North West - Merafong
NW-P:	North West - Potchefstroom
OAE:	Otoacoustic Emission
PCEHL:	Permanent Early Onset Hearing Loss
PHC:	Primary Health Care
RtHC:	Road to Health Chart
TEOAE:	Transient Otoacoustic Emissions
UHS:	Universal Hearing Screening
UNHS:	Universal Newborn Hearing Screening
UNICEF:	United Nations Children's Fund
URTI:	Upper Respiratory Tract Infection
WHO:	World Health Organisation

Abstract

Purpose: This study aimed to assess the feasibility of implementation of the Health Professions Council of South Africa's (HPCSA) clinic-based hearing screening subsection of its 2007 Position Statement on Early Hearing Detection and Intervention (EHDI) programmes in South Africa. Specific sub-aims included (a) establishing the prevalence of hearing screening conducted at Maternal Child Woman's Health (MCWH) immunisation clinics; (b) determining the hearing screening procedures and protocols in use at MCWH immunisation clinics; (c) determining and exploring the possible concomitant personnel-associated factors which may influence the implementation of newborn and infant hearing screening programmes; (d) determining and exploring other factors that may have influenced implementation of newborn and infant hearing screening; and lastly, (e) comparing any hearing screening procedures and protocols in use to the HPCSA (2007) EHDI position statement clinic guidelines and associated clinic benchmarks

Participants: Thirty primary healthcare immunisation clinic managers/acting managers were interviewed in two South African sample groups, in the North West province (NW) and Gauteng (GP).

Design: An exploratory, non-experimental, qualitative research design was employed incorporating both quantitative and qualitative information within the two sample groups.

Methods and Materials: An interview using a questionnaire was administered with primary health care (PHC) clinic nursing manager/acting manager, placed within the identified sites. The questionnaire encompassed areas such as work contexts, hearing screening contexts and information management systems, as well as quality control measures in place at these clinics.

Data Analysis: Content analysis was used to code emergent themes into specific categories. Frequency calculations of the emergent themes were calculated and results described qualitatively.

Results: No PHC clinics placed within the identified sites offered or provided formalised newborn/infant hearing screening and none of these facilities had equipment to do so. Most sites attributed the lack of formalised hearing screening to budgetary and human resource issues, staff training in particular. Non-formalised hearing screening protocols in place demonstrated inconsistencies in application across districts and none complied with HPCSA (2007) clinic

guidelines. Most respondents were willing to implement formalised hearing screening to coincide with their immunisation schedules. The immunisation context was considered favourable for implementation of formalised hearing screening. Other factors such as reduced parental awareness of the importance of hearing screening, and caregiver cultural issues were considered surmountable by respondents.

Conclusions: HPCSA (2007) implementation of clinic hearing screening protocols at PHC immunization clinics (level one) does not appear to be feasible based on current evidence. Results from the current study have assisted in identifying procedural and logistical assets and barriers to implementation of HPCSA (2007) clinic guidelines for EHDI at immunisation clinics in South Africa. Future research implications include formal investigations of central directorate versus district differences in PHC Package Integrated Management of Childhood Illnesses (IMCI); Otitis Media, and Road to Health Chart (RtHC) protocols; provincial and district inequities in funding as they impinge on hearing health care service delivery; costing of rudimentary protocols in place versus formalised HPCSA (2007) EHDI service delivery; research into parental awareness, education and willingness in specific reference to certain procedures such as otoacoustic emissions; and replication of the current study throughout the country for quantitave data with increased ability to draw causal inferences and generalize findings.

Keywords: Health Professions Council of South Africa; early hearing detection and intervention; primary healthcare immunisation clinics; interview