



Effectiveness of a clinic-based NHS hearing screening programme in rural South Africa: Parental perspectives

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I have no relevant financial or nonfinancial
relationships to disclose

Newborn hearing screening (NHS) in South Africa

- Guidelines for NHS published in 2007
- Three early identification platforms proposed:
 - Hospital: Well-baby nurseries and neonatal intensive care units (NICUs)
 - PHC Clinic: 6-week immunisation visits
- Limited NHS programmes exist
 - Private hospitals: Some form of NHS – 53% & UNHS – 5%
 - Public hospitals: > 1% offered NHS
- Very limited clinic-based UNHS programmes

NHS services: Ndlovu Wits Audiology clinic and outreach programme

	Clinic A	Clinic B	Clinic C
Population served (number)	170 778	13 326	31 612
Number of infants immunized between July 2014 to June 2015 (6 weeks of age)	783	149	515
Distance (in km) from district hospital	0 km	11.2 km	17.8 km
Distance (in km) from community-based audiology services	5 km	5 km	17 km
Average one-way taxi fare to district hospital (in ZAR)	None	R 20 (2 taxis)	R 20 (2 taxis)
Average one-way taxi fare to community-based audiology services (in ZAR)	R 10	R 10	R 10

Programme evaluation

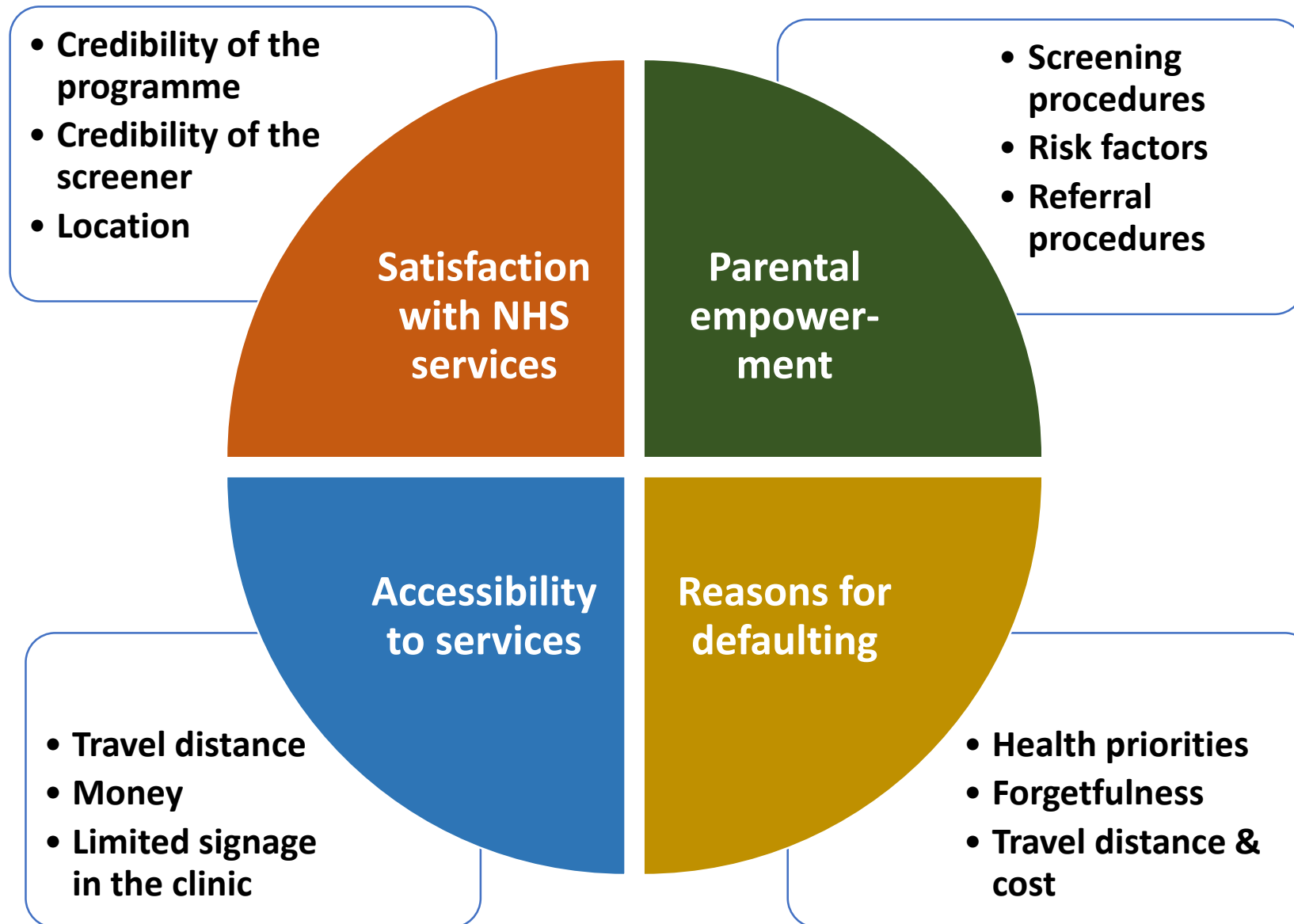
- Efficacy of the rural clinic-based NHS programme as measured against national and international benchmarks
- Factors that, according to parents, contribute to and hamper the effectiveness of the hearing screening programme

Efficacy of the NHS programme: July 2014 – June 2015

Benchmarks	Guidelines		NWA NHS Programme
	JCIH (2007)	HPCSA (2007)	
Average at age initial screening	≤ 1 month of age	≤ 3 months of age	8 weeks
Coverage rate	95%	95%	87%
Referral rate	4%	< 5%	7%
Follow-up return rate	> 70%	> 70%	32%
% of infants who fail initial screening & any subsequent rescreening who complete a comprehensive audiological evaluation by 3 months of age	95%	90%	15%

The overall prevalence of rate for significant sensorineural hearing loss was 0.4/1000 and 7.8/1000 for middle ear effusion

Parental perceptions of the NHS programme



Theme 1: Satisfaction with NHS services

- **Credibility of the screening programme**

- *“...because she gave me the confidence that she was sent by Ndlovu” (P 17)*
- *“...I trust her because she was at the clinic” (P 7)*

- **Credibility of the screener**

- *“I trust her because she was able to see that the baby’s ear had a problem. Even when I went to the doctor, the doctor said the same thing as what the screener said” (P 9)*
- *P 6: “She handled the baby’s head well, she didn’t move her head in a hostile manner” (P 6)*

Theme 1: Satisfaction with NHS services

- **Communication of information**

- *“She is patient that sister, she explains until you understand...” (P 11)*
- *“...she explained well that the child had no problem. She said if there was a problem, she was going to tell me immediately that I should go for further testing” (P 14)*
- *“Have you ever been in a situation where someone is explaining something and you just understand them?” (P 11)*

Theme 2: Parental empowerment

- **Screening procedures**

- *“...she explained that they check the babies’ ears, they check the baby’s ears while still young is important and then so that if there’s a problem with the ears, there’s a possibility that they can help us; help the child with the ears.” (P 6)*

- **Awareness of risk factors for hearing loss**

- *“They say I must observe the baby to see if s/he can hear” (P 10)*
- *“I didn’t see the child scratching his ears or crying and scratching or holding one side to show that she’s feeling pain” (P 7)*
- *“...I saw that it is very important to check the baby’s ears. I realized that it is a good thing because you might stay with a child who has problems with her ears and not know” (P 3)*

Theme 3: Accessibility

- **Challenges: Money and transport**

- *“...I only returned to her now after I found a job.” (P 17)*
- *“It is distance but we walk. With transport we must pay so we just walk for our children’s health. We walk for our children because we don’t have money” (P 6)*

- **Limited signage to screening room**

- *“It is not easy to find the office but that sister walks around and then she comes and calls us to take us with her” (P 9)*

Theme 4: Reasons for defaulting

- **Other health priorities**

- *“I didn’t manage to go there because I was waiting for them to do a heart operation on the child, so they did it in April” (P 13)*

- **Forgetfulness**

- *“Her mother is lazy, yesterday when I asked her she said she forgot” (P 14)*

- **Travel distance and cost**

- *“The reason why I didn’t take her is because I’m married, I was staying with my in-laws, so I left and I took her with me to my in-laws. I only returned her now after I found a job.” (P 17)*

Key findings

- Parents reported that the NHS programme is effective
- Credibility of the services was confirmed
- Importance of providing patient education and information in the home language of patients was reiterated
- Most significant barriers to follow-up services were:
 - Access (Distance to the clinic and travelling costs)
 - Parents forgetting the appointments
- Evidence of the feasibility and effectiveness of clinic-based screening at PHC clinics in under-resourced rural areas of South Africa.

The outcomes

- Facilitators and barriers identified provided signposts for improvement of access to services
 - Sending text messages/phone calls to increase follow-up
 - Outreach with mobile booth (diagnostic assessments)
 - Increased the signage in the clinics



Call to action

- Routine evaluation of screening programmes
- Parental satisfaction should be one of the key elements evaluated

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