



Earlier Identification of infant hearing loss through “Mother Suspicion”

A Longitudinal study of Newborn Hearing Screening,
Maternal Suspicion & Age of Identification

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The developing world





Developing Countries

- Poverty (extreme)
- Resource limitations
- Hunger
- Illness
- Lack of housing
- Sanitation
- Survival
- Humility
- 'Ubuntu'
- Innovation
-
- Strong mothers

South African Situation



Early Hearing Detection and Intervention

International

- Universal Newborn Hearing Screening
- Time frame/Gold standard
 - Screening (1 month)
 - Diagnosis (3 months)
 - Intervention (6 months)

South Africa

- Random screening (with high risk if it is done)
- Time frame
 - Screening (75% Ø)
 - Diagnosis (25.8 months, STDev 19 Mnths (0-120))
 - Intervention (95% Ø)
- Significant delays in development & Language



What did we do? → HI HOPES

- Started a full service Early Intervention prgm– Sept'06
- Home-based & Family-centred
- Urban & Rural
- Unbiased, Informed Choice
- Multilingual & Multicultural
- Free at the point of need
- Dual empowerment & Job creation
- 5/9 provinces
- Over 2000 families and infants



The Evidence Base (HH Dataset 1)

- Longitudinal (5 years)
- 532 infants and their families (0-6yrs)
- 3/9 Provinces
- 54% Population
- Verified data
- Dataset
 - Socio-economic data
 - Audiological
 - Linguistic
 - Developmental trajectories

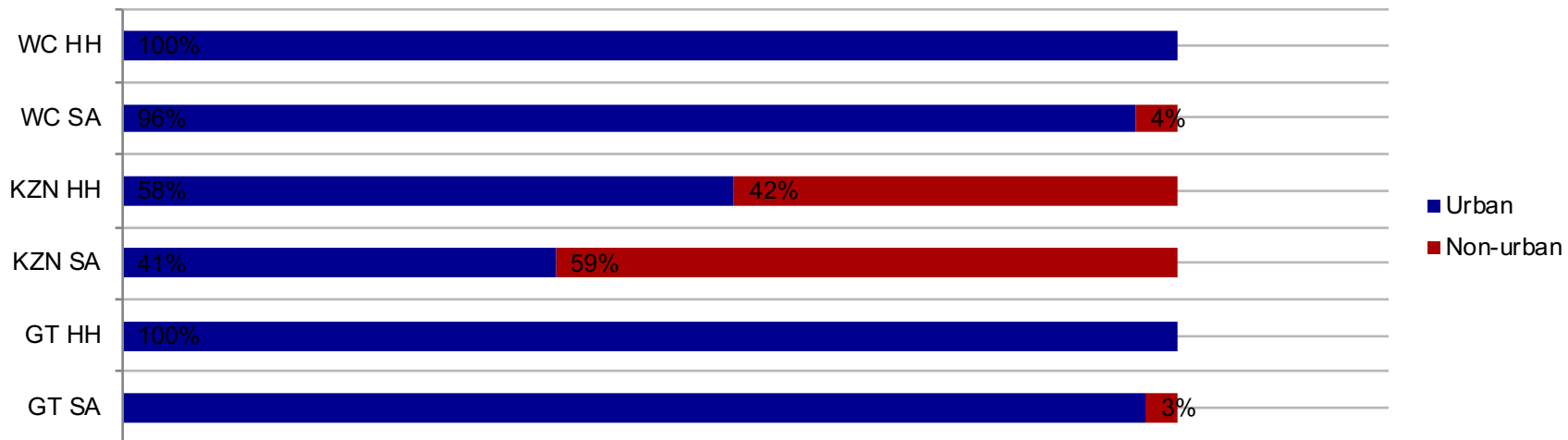
Representivity

Public Health = Private Health

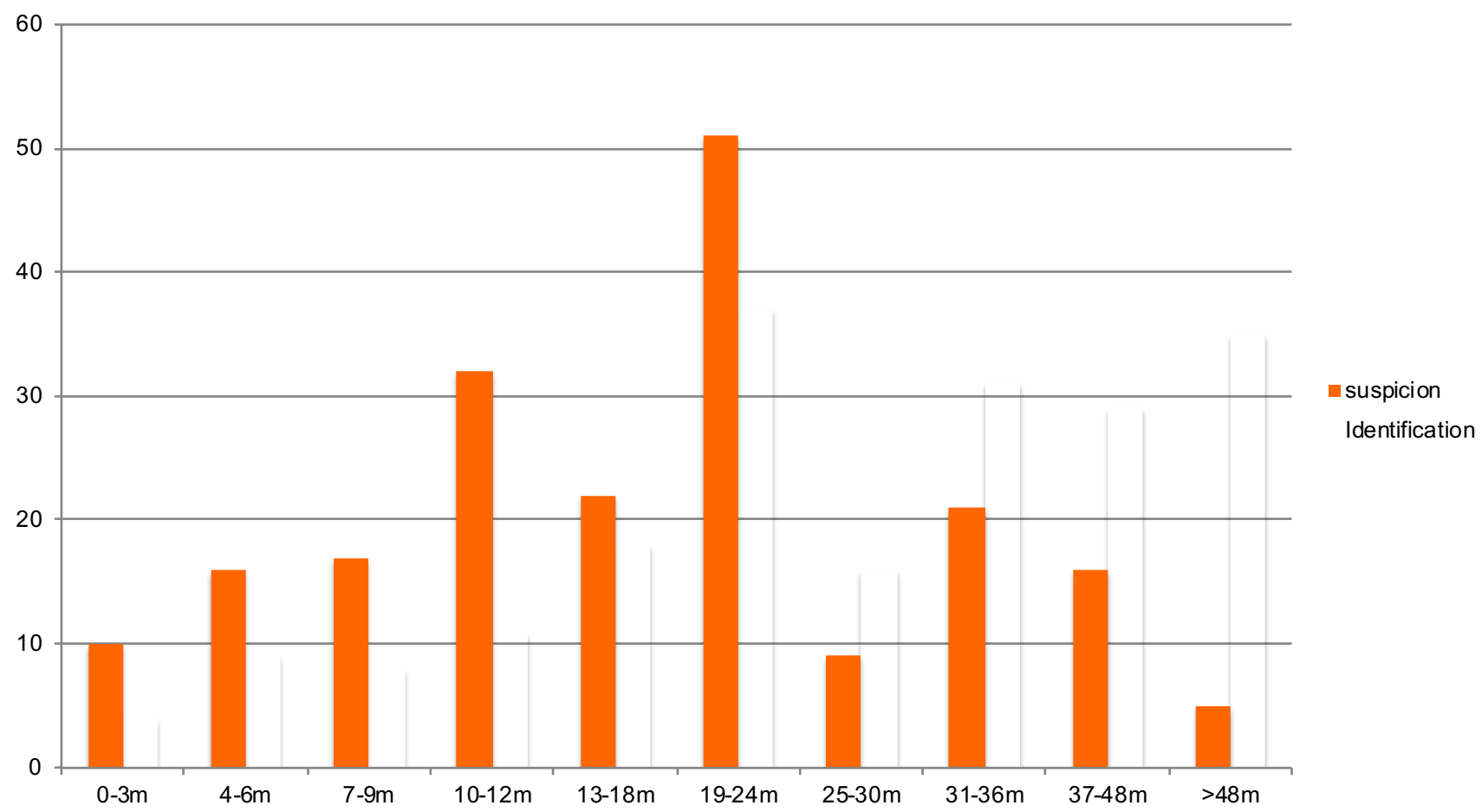
Racial demographic

Black 74% (80%)
White 9% (8.7%)

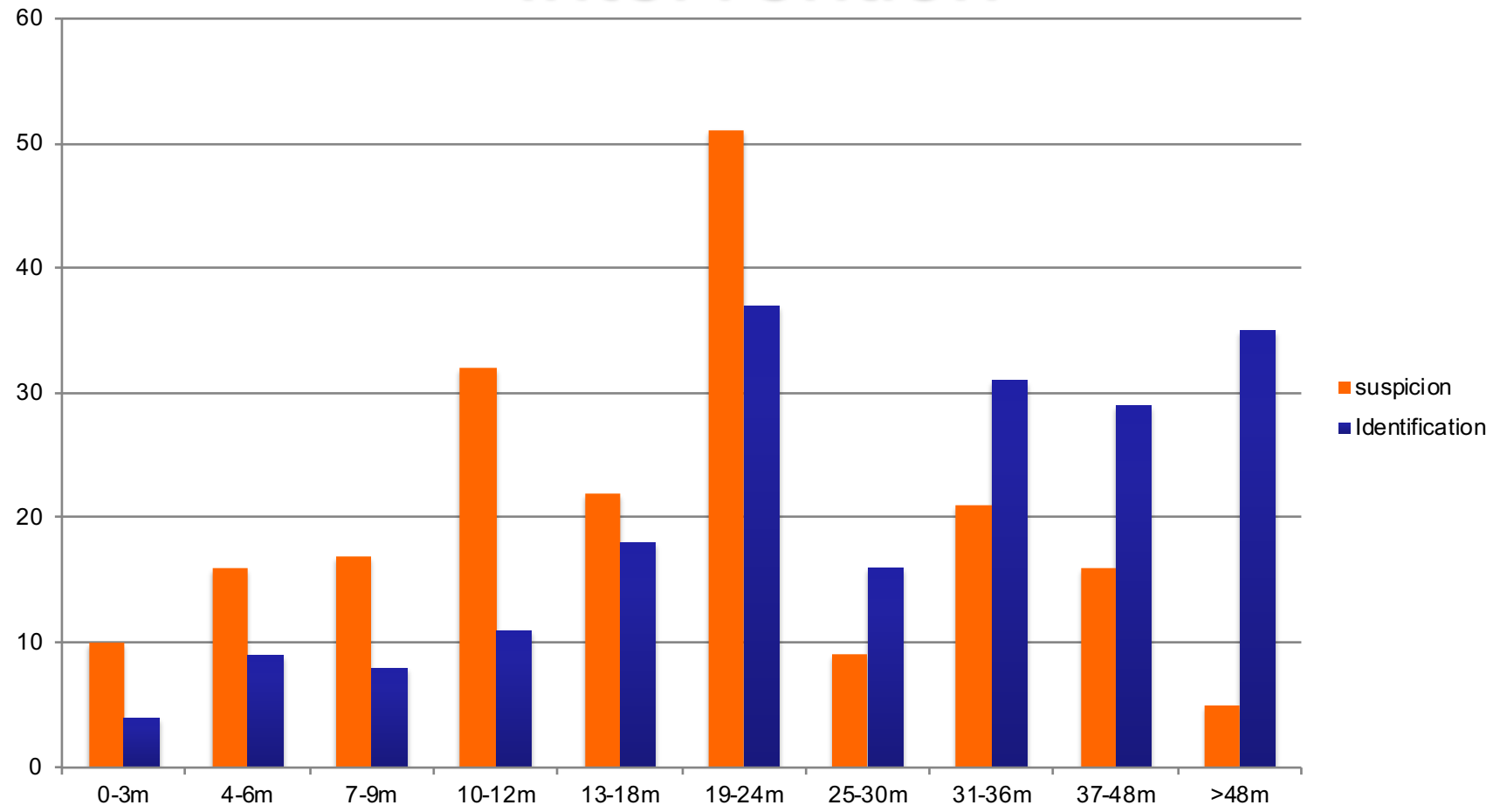
Coloured 11% (9%)
Indian 6% (2.5%)



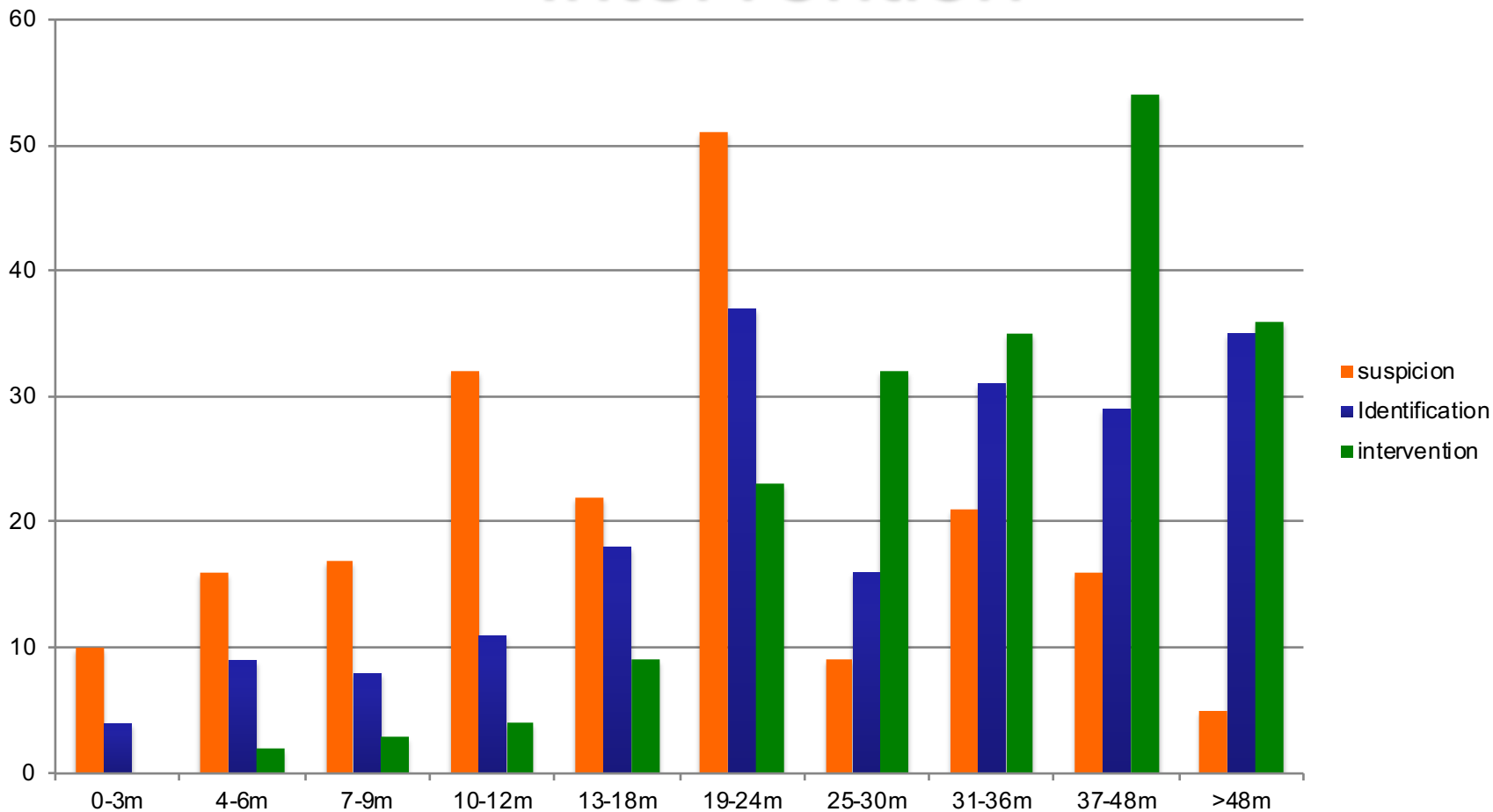
Suspicion & Identification



Suspicion & Identification Intervention

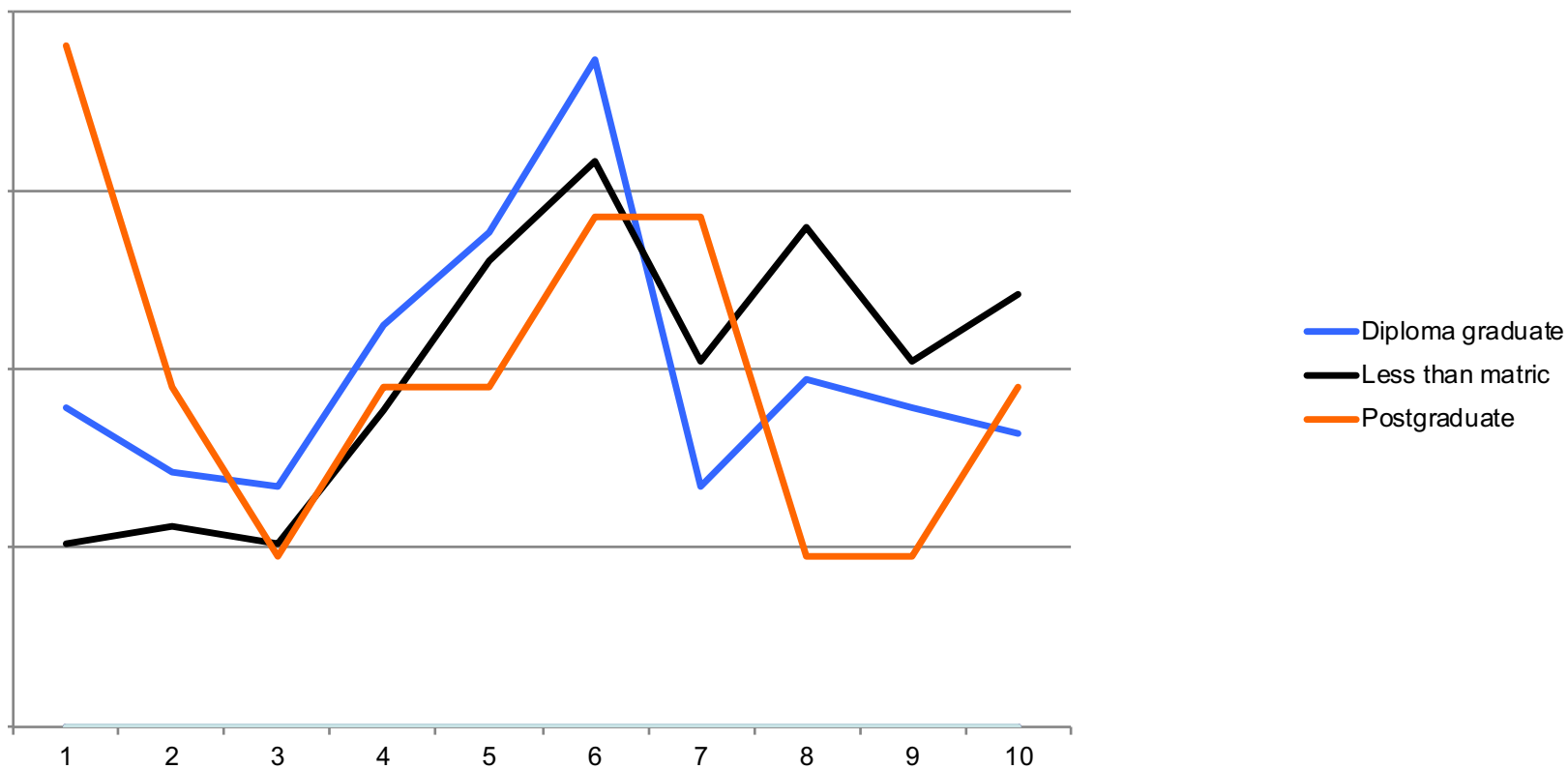


Suspicion & Identification Intervention

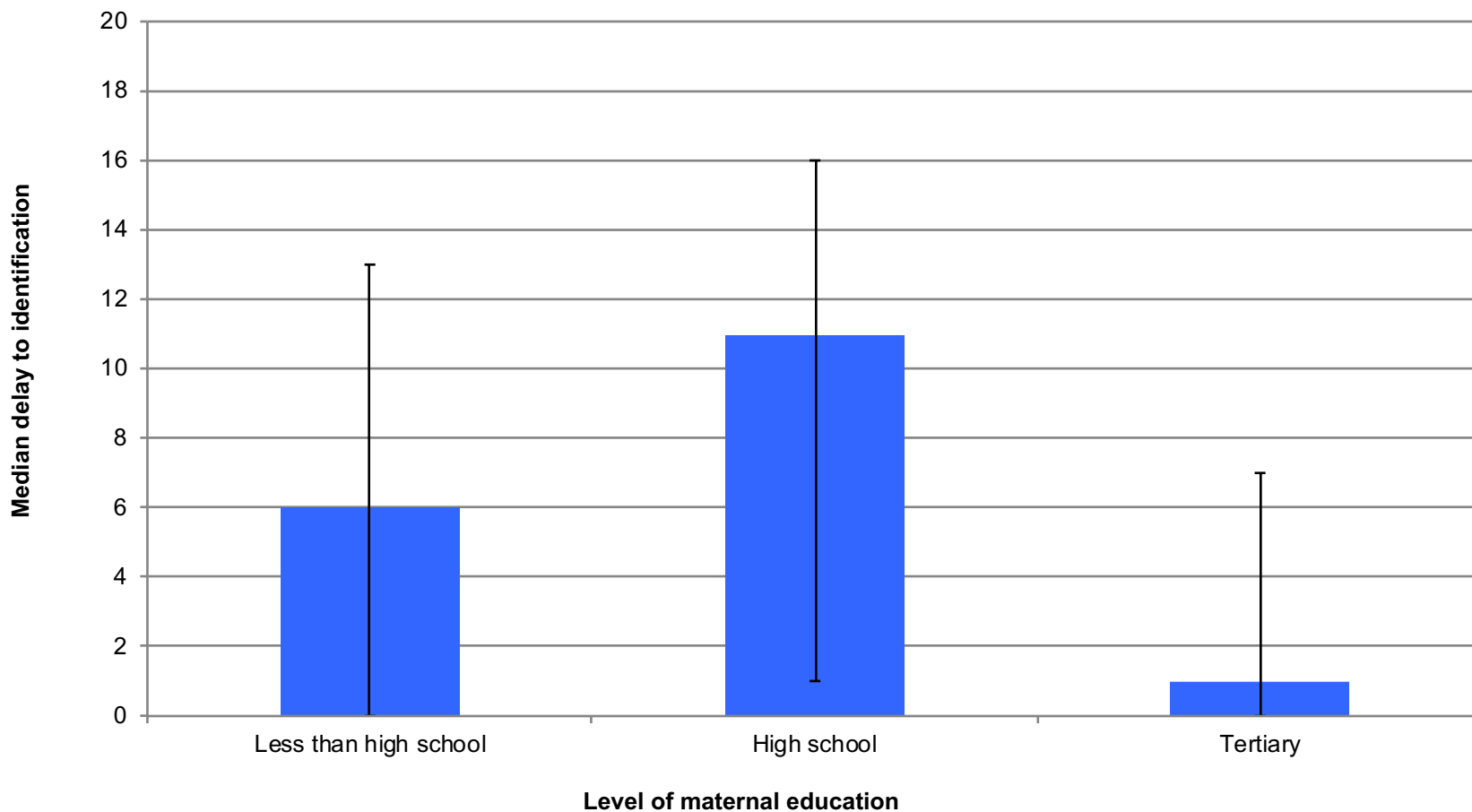


Suspicion by Mothers' Education

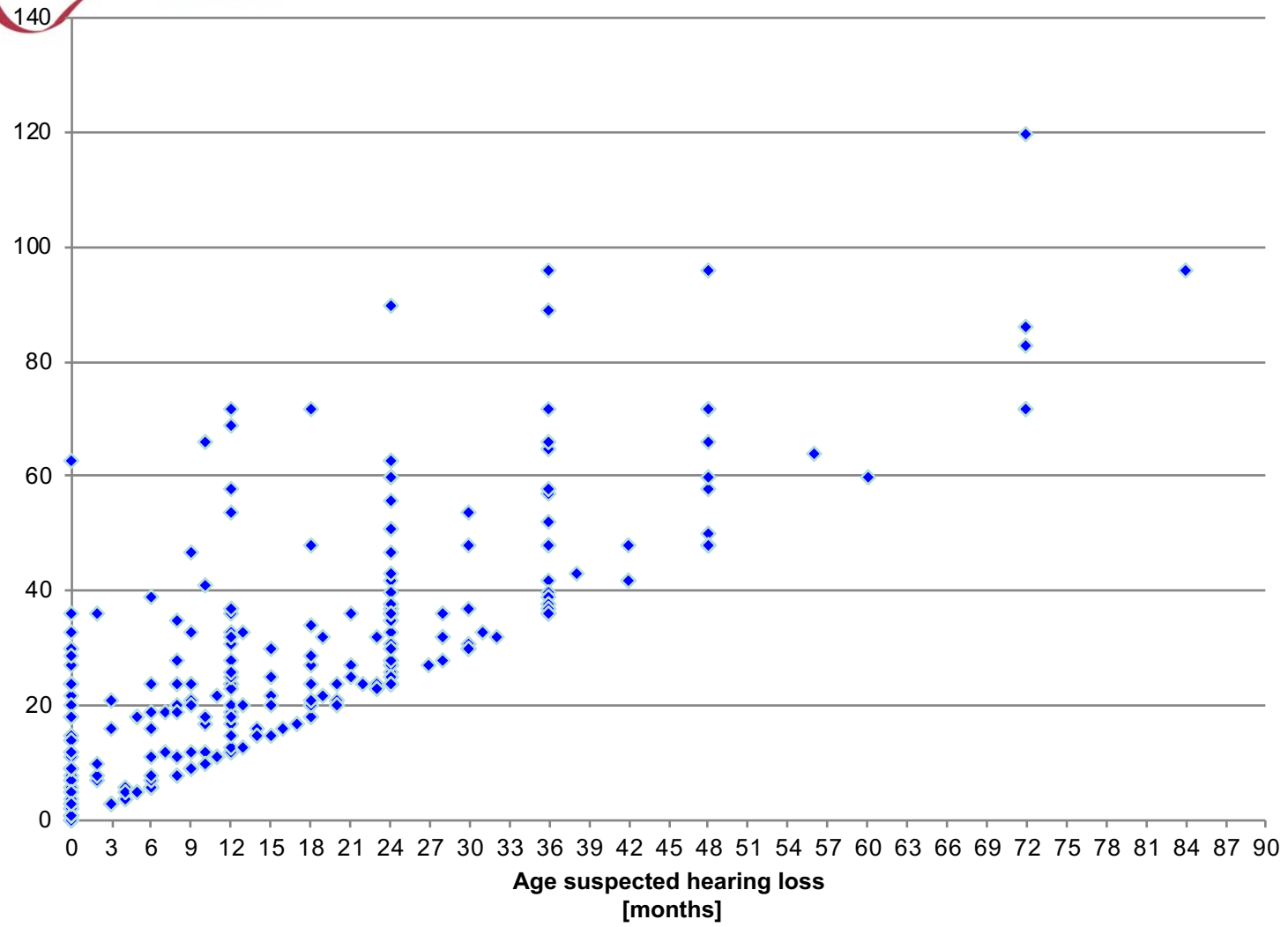
n=235



Delay to Identification by Mothers' Education



Age of Suspicion vs Identification



Delay: Age of Suspicion & Age of Identification
NO SIGNIFICANT CORRELATION
(p=0.32)

Findings – Maternal Suspicion

- Maternal Suspicion – unrelated to:
 - Maternal Education
 - Maternal Private / Public Health
- Delay between age at Maternal Suspicion and Identification – significant (p 0.032)
- **Earlier Suspicion DID NOT PREDICT earlier identification**

Findings

- Developing country - ⊘ UNHS
- A few small screening programmes (≠)
- Age of ID – 25.8 months vs Susp – 18mths
- ~~Golden Standard 1:3:6~~
- No funds for UNHS – Why?
We have Bigger more urgent (and life threatening) priorities within the health system
- **Mother suspicion in FREE**