

Addressing the challenges of paediatric hearing aid reviews in a developing country

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Special thanks to Tiwa Kachaje for patient management



Malawi

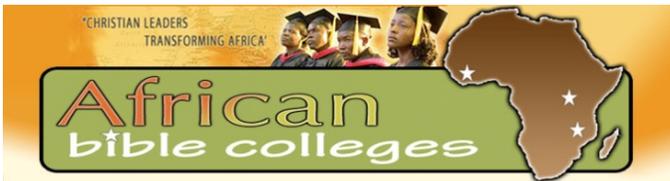


3rd poorest country in the world

Population >19 million

2 purpose-built Audiology clinics

3 Audiologists



African Bible College Hearing Clinic and Training Centre (ABC HCTC), Lilongwe



- Adult and paediatric clinical facilities
- On-site earmould lab
- Diagnostic hearing assessment possible from birth
- Hearing aids fitted from age 6 months
- 1 Audiologist and 6 highly skilled audiology assistants

A child has been fitted with hearing aids: what next?

- Regular reviews are vital to:
 - monitor progress with hearing aids
 - Reassess hearing
 - Identify problems and act



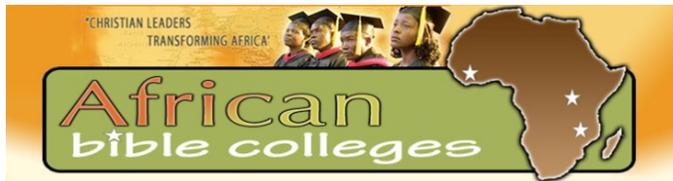
Retrospective audit of paediatric hearing aid reviews

Audit Standard:

Schedule for paediatric reviews suggested by Beauchaine (2002)

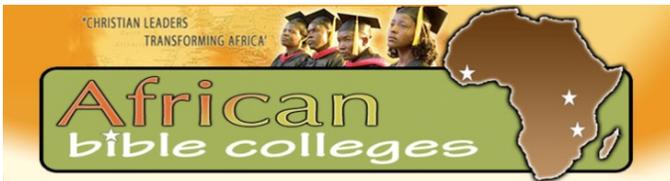
| Age (years) | Frequency of Audiology review |
|-------------|-------------------------------|
| <3 | Every 3 months |
| 3-5 | Every 6 months |
| 6-18 | Every 12 months |

All children fitted with one or two hearing aids from
4 November 2013 to 1 January 2017



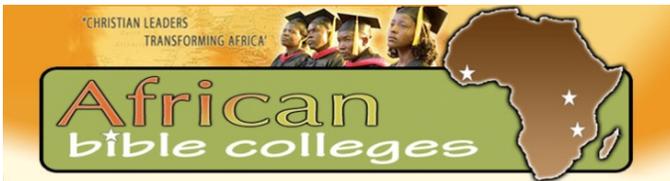
Exclusions to audit

1. Unilateral hearing loss
 2. Profound bilateral hearing loss
 3. ANSD
 4. Atresia
- Recent fittings, not yet due for review
 - Age >18 at time of audit



Initial results and actions

- 62 children fulfilled the criteria for inclusion in the audit
- 2/62 children had been reviewed within Beauchaine's timeframe and were due for further review
- Strenuous attempts were made to contact all 62 children to arrange review between April to July 2017



Outcome of re-audit (62 children)

| | Number of children |
|--|--------------------|
| Attended review appointment | 9 |
| Family could not commit to an appointment, but agreed to attend a drop-in clinic at a time convenient to them, and did so within 8 weeks | 2 |
| No valid phone number | 9 |
| Did not answer phone | 27 |
| Did not attend review appointment | 6 |
| Family could not commit to an appointment, but agreed to attend a 'drop-in' clinic at a time convenient to them, and failed to do so within 8 weeks | 2 |
| Appointment booked in the future | 5 |
| Family unable to attend the clinic | 2 |

Information from reviews

| Situation at review | Number of children |
|---------------------------------------|--------------------|
| Hearing aids lost | 2 |
| Hearing aids stolen | 1 |
| Not wearing aids | 2 |
| 1 aid fitted: broken | 4 |
| 2 aids fitted: one broken, one in use | 2 |
| 2 aids fitted: both in use | 0 |
| 1 aid fitted: in use | 0 |

Outcome following review

| Outcome | Number of children |
|--|--------------------|
| Hearing unaidable: referred to school for the Deaf | 2 |
| Fitted with replacement aids | 4 |
| Did not return for fitting replacement aids | 5 |

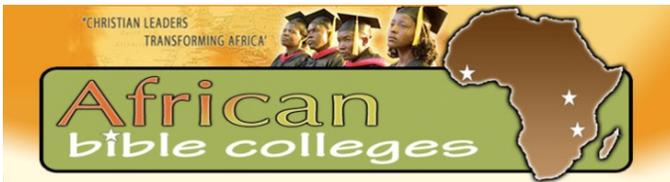
Why are so many children not...

- returning when their hearing aid breaks?
- returning when they find the hearing aids are not beneficial?
- attending reviews?
- coming for fitting appointments after review?



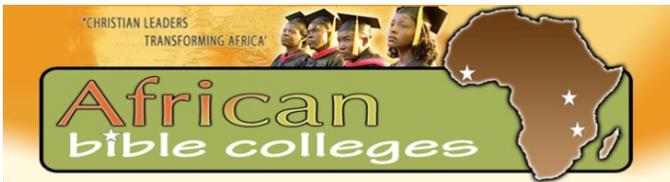
Barriers to accessing care (Bright *et al* 2017)

- travel costs
- Incidental costs:
 - time away from work to travel to clinic
 - food for journey
- Lengthy journeys on public transport
- No-one available to care for other children



Potential barriers to attending reviews

- Unaware of the need for regular review
- Attending a clinic for a 'check-up' is not culturally expected
- Anxiety about the cost of hearing aid repair/replacement
- Thinking that if one aid breaks, then the other will be sufficient
- Difficulty maintaining contact



How do we address these difficulties?



Preferred profile for hearing aid technology for low and middle income countries

- World Health Organization document 2017
- Follow-up is listed as 'desirable' rather than 'essential'



Changing the culture

Clinicians, commissioners and policy-makers need:

- a strong understanding and belief in the need for follow-up
- Clear and practicable pro-active follow-up protocols



Follow-up

- Absolutely vital
- Must be monitored and evaluated
- How is it funded?
- Is it ethical to provide paediatric hearing aids without also providing adequate long-term follow-up?



Postscript

- ABC Hearing Clinic has an established commitment to paediatric follow-up
- Significant improvements observed in those children from the audit who are now under regular review



References

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