Epidemiology of childhood blindness and severe visual impairment in Cross River State of Nigeria

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Key informant (KI) method for surveys

- Full population-based surveys prohibitively expensive
- KIs - well known & respected community members
- Selected to cover each subdivision: 1 KI / 2500 population

742 KIs covered all of CRS. Total pop= 2.9million
KI receive standard 1-day training

- After training, KIs have 2 weeks to list all children in catchment area believed to see poorly (talk to parents, teachers, community leaders, & visit homes)

- KIs bring listed children to identified facilities
Schools for the blind

- Children in the school for the blind in Obudu CRS were assessed separately since they would not be found in the communities.
- Included only those who actually live in CRS in final tally.
Examinations

- Performed by pediatric ophthalmologist/team
- Assessed VA by age-appropriate methods
- Field exam to ascertain cause: torch, direct and indirect ophthalmoscope, portable slit lamp? Referred to clinic if necessary
- Blind/severe visual impairment (BL, SVI)
Results

• 1020 children examined
  • 985 (KIs brought) + 26 (schools) + 9 (ID’d not brought by KIs)

• 108 were blind
  • (88 + 12 + 8)

• Minimum prevalence:
  • \( \frac{108}{1.16 \text{ mill children}} = 0.09/1000 \)

• If verification visit was typical then 89% of those not brought were also blind and the true prevalence could be
  • \( \frac{108 + 157}{1.16 \text{ million}} = 0.22/1000 \)
Causes of blindness

- Lens related: 35%
- Whole globe: 19%
- Referral error: 16%
- Cornea: 8%
- Retina: 8%
- Optic nerve: 5%
- Other: 8%
Lens related causes

(35% of all blindness)

2 amblyopia
2 PCO
1 uveitis

Pie chart:
- Unoperated cataract: 30
- Pseudophakic: 5
- Couched: 3
- Amblyopia: 2
- PCO: 2
- Uveitis: 1
Whole Globe

- Pthisis: 29
- Glaucoma: 28
- Others: 43
Corneal Blindness

- Harmful traditional medication: 29
- Measles and vitamin A deficiency: 24
- Congenital causes: 23
- Unknown causes: 29

Total: 105
Conclusion

• KI methodology a reasonable way to estimate prevalence and causes of blindness but important to consider children in schools and children identified but NOT brought by KIs

• Corneal causes of blindness are decreasing and consequently cataract and glaucoma are becoming relatively more important

• Unoperated cataract is an important cause in CRS. Requires innovative schemes to find the children early and provide good quality surgery and rehabilitation.
Special thanks to…

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• Thank you for listening.