

## COMMUNITY OPHTHALMOLOGY

### Assessment of Resources for Primary Eye Care Delivery in a Rural Area, South East Nigeria

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**Introduction:** The World Health Organisation (WHO) estimates that 285 million people are visually impaired, out of which 39 million are blind<sup>1</sup>. About 80% of blindness is avoidable, <sup>2</sup> and 90% of visually impaired people live in low and middle-income countries (LMICs)<sup>3</sup>. The availability and distribution of human and material resources for eye-care have a direct bearing on the quality of eye care delivery, its uptake and impact on blindness prevention.<sup>4</sup> Periodic assessment of the availability and distribution of Primary Eye Care (PEC) resources is therefore needed to create, and sustain the delivery of efficient and effective eye care services.

**Methods:** This was a cross-sectional descriptive study in Nkanu-West Local Government Area (LGA) in Enugu State. The selection procedure was a

multi-stage random sampling technique. The study was conducted between February 2<sup>nd</sup> and April 30<sup>th</sup> 2015. Study design was adapted from a previous study in Enugu.<sup>5</sup> At each health facility, data on the material and human resources were collected. The questionnaire had sub-sections on participants' socio-demographics and job characteristics, previous training in eye care, available eye care services and participants' attendance of trainings, updates, conferences. This was compared to the WHO vision 2020 benchmark.

**Results:** There were 119 primary health care workers (PHCW) in the LGA (Junior Community health extension worker, Community health extension workers, Community health officer). The participants comprised 98 females (96.1%) and 4 males (3.9%). The distribution of Population: PHCW ratios are shown in Table 1. The differences in Population to PHCW ratios were not statistically significant. Many of the workers (63.7%) had no training in eye care, while the majority (52.9%) does not attend update courses. The LGA had 18 Primary Health Care (PHC) facilities. The health facilities to population ratio are shown in Table 1. None of the 18 Primary health care (PHC) facilities stocked all the basic drugs for eye care. Basic equipment for eye care delivery was inadequate in all the facilities (Table 2).

**Table 1:** Distribution of health facilities: population ratio of the health districts

Health District	Health Facilities	Primary Health Care Workers	Population of District	Population: Facility Ratio	Population: PHCW Ratio
Akpugo	5	31	95148	1:19029	1:3069
Agbani	6	26	55745	1:9290	1:2144
Akwunanaw	4	22	52246	1:13062	1:2374
Central	3	23	44246	1:14749	1:1924
Total	18	102	247385	1:13743.6	1:2079

**Table 2:** Types of basic materials available in the facilities for eye care

Equipment Available	Availability in facilities N=18 (%)	WHO (recommended basic)
Records kept for patients	15 (83.3)	Snellen E chart
Proper referral forms	15 (83.3)	Torch and batteries
Torch and batteries	10 (55.6)	Hand magnifying lens
Tray with lid	7 (38.9)	Epilation Forceps
*Consumables	7 (38.9)	Dressing eye pads
<b>Eye health promotion materials</b>	7 (38.9)	Bandages
Visual acuity charts	6 (33.3)	Eye Shields
	-	tetracycline ointment
Eye shield	-	chloramphenicol eye drops
Epilation forceps	-	zinc sulphate
<b>Basic drugs</b>		silver nitrate
Ointment Chloramphenicol	13 (72.2)	
Vitamin A capsule	18 (100)	
Zinc sulphate	12 (66.7)	
Gutt Gentamycin	11 (61.1)	
Gutt Chloramphenicol	6 (33.3)	
Silver nitrate	-	
Measles immunization	18 (100)	

**Discussion:** The numbers of health facilities were adequate to provide PEC needs in the LGA. The adequacy of the health facilities was similar with a related study in Western Nigeria.<sup>6</sup> The available numbers of PHC workers in the study LGA were adequate compared to recommended WHO ratio of 1:10000.<sup>7</sup> However, this numerical adequacy might not translate to provision of adequate eye care services, as PHC workers may lack appropriate eye care skills. There were inadequate material resources available for eye care in all the PHC facilities. The non-availability of basic drugs for eye care has adverse implications for effective primary eye care delivery. Consumables and materials for eye care were available in a few of the centres. This is similar with findings from another study.<sup>8</sup> One limitation of the study was that the assessment of the skills of the PHCWs was not done.

**Conclusion:** The health facilities in the LGA were adequate. There were adequate and appropriate distributions of PHCW. The available material resources were inadequate.

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