

improve patients' adherence, as was reported by Kizor-Akaraiwe¹⁰ for glaucoma patients during the COVID-19 lockdown.

Conclusion: Financial constraints, ignorance and loss to follow-up hamper management of patients. Education on early presentation and adherence to management plans is vital.

Conflict of interest: The authors declare no conflict of interest

References

1. Onyiaorah AA, Kizor-Akaraiwe N, Nwosu SNN. Eye Health-seeking Behaviour of Traders in Rural Nigeria. *J West African Coll Surg.* 2022; 12(2):7.
2. Aghaji AE, Gilbert C, Ihebuzor N, Faal H. Strengths, challenges and opportunities of implementing primary eye care in Nigeria. *BMJ Glob Heal.* 2018 Dec;3(6):e000846.
3. Nwosu SNN, G.S O, T.O U. Delayed Diagnosis of Retinoblastoma. *Case Reports.* 1994;40(12):353–354.
4. Sburlan EA, Voinea L-M, Alexandrescu C, Istrate S, Iancu R, Pirvulescu R, *et al.* Rare ophthalmology diseases. *Rom J Ophthalmol.* 2019 Mar;63(1):10.
5. Tshivhase S, Khoza LB. Challenges Contributing to Loss to Follow-up as Experienced by Glaucoma Patients in the Vhembe District of Limpopo Province, South Africa. *Open Public Health J.* 2020 Oct;13(1):531–537.
6. Hasan MM, Hossain Chowdhury I, Ahmed Taher Hamid S, Alamgir HM. Financial and Geographic Barriers in Seeking and Utilizing Eye Healthcare in Bangladesh. *J Ophthalmol Clin Res.* 2023 Sep;10(1):1–7.
7. Hom GL, Cwalina TB, Jella TK, Singh RP. Assessing financial insecurity among common eye conditions: a 2016–2017 national health survey study. *Eye.* 2022 Oct;36(10):2044.
8. Olusanya B, Ashaye A, Ajayi B, Baiyeroju A. Reasons for non-utilisation of eye care services among adults in a rural West African population. *Afr J Med Med Sci.* 2018;47(1):79–84.
9. Okoye R. S, Bell L, Papadopoulos I. Barriers to Accessing Good Eye Care Services in Nigeria: A Focus on Anambra State. *J Niger Optom Assoc.* 2018;20(1):30–37.
10. Kizor-Akaraiwe NN. Follow-up and adherence to glaucoma care by newly diagnosed glaucoma patients in Enugu, Nigeria. *Ophthalmic Epidemiol.* 2019;26(2):140–146.

Community utilization of ophthalmic services: Assessment of Agbowo rural community, Lagos State, Nigeria

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Background: Eye health is a public health concern. Community-based ophthalmic services aim to bring eye care to the people's doorsteps, particularly rural dwellers who are often deprived of essential health care.^{1,2} The World Health Organization (WHO) and the International Agency for the Prevention of Blindness (IAPB) promote Integrated Primary Eye Care (IPEC) within existing primary health systems to facilitate eye services delivery.^{3,4} Studies have, however, revealed that even where available, community utilization sometimes remains poor.^{5,6} Most studies have focused on interviewing people in rural communities to assess their use of eye care services and the barriers they face.^{7,8} However, very limited

studies within the study environment have assessed ophthalmic services utilization at the base primary eye care centers. This study aims to assess ophthalmic service utilization at a rural community, determine the prevalence of ocular diseases and identify gaps in service delivery with the goal of suggesting measures for improved and sustainable service.

Methods: A retrospective cross-sectional study was conducted. The study duration was February 2021 (from the inception of the IPEC) to December 2023. All eye clinic attendees in this agro-based (farming and fishing) community were included. Data on demographics, ocular diseases, medical, optical and surgical interventions were obtained from the eye clinic,

refraction clinics, and operating theatre records. Data analysis was done using IBM SPSS version 29. Ethical approval was obtained from Ikosi-Ejirin Local Council Development Area and Institutional Health Research and Ethics Committee.

Results: There were 1,102 patient visits, with 735 (66.7%) as new cases. Age ranged from 4 months to 88 years (mean 47.29 ± 22.78 years). Females constituted 54.3%. Utilization of ophthalmic services was most prevalent among females (54.3%); patients in the presbyopic age range, 40-49 years (17.6%); older adults aged 60-69 years (15.7%); and middle-aged 50-59 years (15.1%) (Table 1).

Table 1: Age distribution and frequency of clinic attendance (new and follow-up visits)

Age (in years)	New cases	Follow-up	Total	Test statistics
0 - 9	59 (78.7)	16(21.3)	75 (6.8)	$\chi^2 = 41.520$ $p = <0.001$
10 - 19	95 (76.0)	30 (24.0)	125 (11.3)	
20 - 29	49 (77.8)	14 (22.2)	63 (5.7)	
30 - 39	60 (64.5)	33 (35.5)	93 (8.4)	
40 - 49	145 (74.7)	49 (25.3)	194 (17.6)	
50 - 59	113 (68.1)	53 (31.9)	166 (15.1)	
60 - 69	98 (56.6)	75 (43.4)	173 (15.7)	
70 - 79	79 (53.7)	68 (46.3)	147 (13.3)	
80 and above	37 (56.1)	29 (43.9)	66 (6.0)	
Total	735 (66.7%)	367 (33.3)	1102 (100.0)	

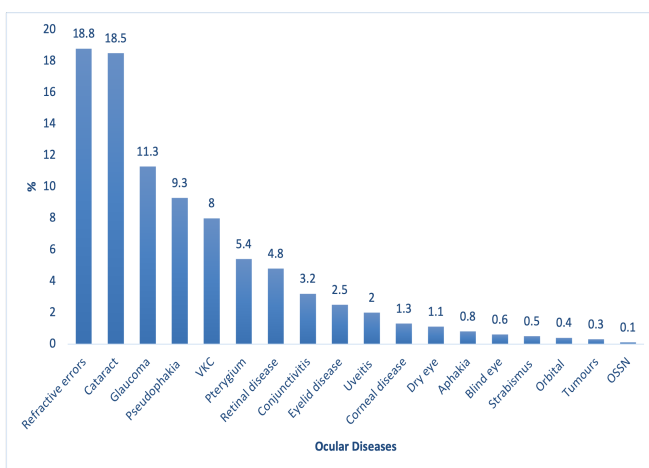


Figure 1: Prevalence of ocular diseases at the integrated primary eye care centre
*VKC vernal keratoconjunctivitis

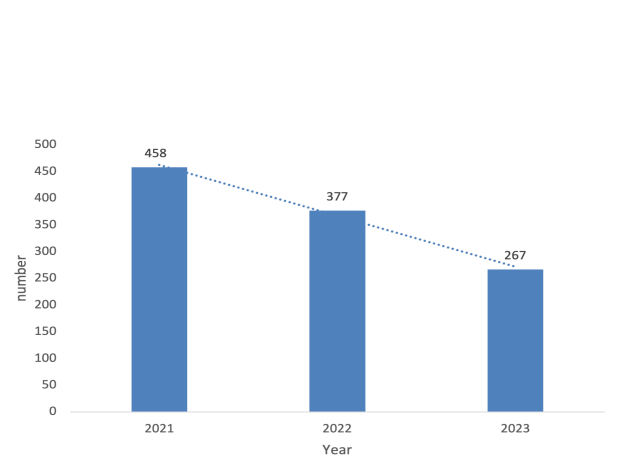


Figure 2: Yearly clinic attendance at the integrated primary eye care centre

Follow-up visits were more frequent among patients aged 40 years and above (Table 1). Prevalent ocular diseases (Figure 1) were uncorrected refractive errors (18.8%), cataracts (18.5%), glaucoma (11.3%), vernal conjunctivitis (8.0%), and pterygium (5.4%). A total of 401 (36.4%) individuals benefited from refractive error services, predominantly middle-aged patients in the 4th (28.4%) and 5th decades (18.0%), as well as adolescents aged 11-20 years (17.0%), while 99 (8.9%) had surgery. Figure 2 shows a fall in yearly attendance from 458 to 267 cases - a 17.4% decline in service utilization. Declines in surgical uptake (51.6%) and refraction services (27.4%) were also recorded.

Discussion: In this study, an initial satisfactory ophthalmic service utilization was reported. Females, middle-aged, elderly and adolescents utilized the services more, similar to previous studies^{8,9}, probably because they are more domiciled in the community. All age groups reported appreciable initial service uptake, followed later by poor uptake similar to an earlier study.¹⁰ The community needs for presbyopic correction, age-related cataract, refractive errors, glaucoma, pterygium, and allergic conjunctivitis are comparable to earlier studies.¹¹⁻¹³ Major identifiable gaps were a decline in ophthalmic, surgical and refractive services uptake. Barriers to clinic utilization may be accessibility, affordability, lack of eye health education, personnel and infrastructure deficiencies.^{7,14-16}

Conclusion: Ophthalmic services, though well utilized at inception, suffered a significant decline over the following years. Efforts to improve service utilization and sustainability, such as reinforced community awareness outreach and school eye health programs, are recommended.

Keywords: community utilization, integrated primary eye care, ophthalmic services, rural eye care

References

1. A.F. Elliott, G. McGwin Jr., L.B. Kline and C. Owsley. Vision impairment among older adults residing in subsidized housing communities. *Gerontologist*, 55 (Suppl 1) (2015), 108.
2. Hannah Faal, Andrew Bastawrous, Elmien Wolvaardt. Overcoming the challenge of the last mile Comm Eye Health Vol.35 No.115; 2022: 5 – 7.
3. World Health Organization. Universal eye health: A global action plan 2014–2019. Geneva: World Health Organization; 2013. Available from: <https://bit.ly/2WcgzzA> (accessed 19 July 2021). [Google Scholar].
4. World Health Organization. Integrated people-centred eye care, including preventable vision impairment and blindness. 2020. Available from: <https://bit.ly/34HESGs> (accessed 8 June 2021).
5. World Health Organization. Blindness and Vision Impairment. G5 Report. 2021.
6. Merga H, Amanuel D, Fekadu L, Dube L. A community-based cross-sectional study of eye care service utilization among the adult population in southern Ethiopia. *SAGE Open Med*. 2023 Sep 9;
7. Olusanya BA, Ashaye AO, Owoaje ET, *et al*. Determinants of utilization of eye care services in a rural adult population of a developing country. *Middle East Afr J Ophthalmol* 2016; 23(1): 96–103.
8. Ezinne NE, Ekemiri KK, Chukwuma I, Ojukwu CS, Mashige KP, Ilechie AA, *et al*. Utilization of eye care services in an underserved community in Enugu State, Nigeria. *Niger J Clin Pract* 2023; 26:81-89.
9. Al-Eissa EI. The morbidity pattern among adolescents visiting primary health care centers. *Saudi Med J*. 2000; 21:934–937.
10. Adimassu NF, Asefa NA, Anibesei DH, *et al*. Poor eye care service utilization among adults in Gondar city, Northwest Ethiopia. *EC Ophthalmol Res* 2018; 9: 647–657.
11. Khan AR, Al Abdul Lateef ZK, Al Yousef SA, Alramadan MJA, Khan A,

- Shaheen F. A study of ocular morbidity, utilization and impact on patients' satisfaction in an ophthalmic clinic at primary health center in Al Ahsa district of Saudi Arabia. *Qual Prim Care*. 2015; 23: 78-84.
12. Al-Shaalan FF, Bakrman MA, Ibrahim AM, Aljouadi AS. Prevalence and causes of visual impairment among Saudi adults attending primary health care centers in northern Saudi Arabia. *Ann Saudi Med*. 2011; 31: 473-480.
13. Khathlan AAB. Community ophthalmology clinic utilization and morbidities results from a private primary healthcare center in Saudi Arabia. *Saudi J Ophthalmol*. 2021 Sep 9; 35(1):34-38. doi: 10.4103/1319-4534.325781. PMID:34667930; PMCID: PMC 8486025
14. Ada Aghaji, Helen E. D. Burchett, Ngozi Oguego, Shaffa Hameed and Clare Gilbert. (2021) Primary health care facility readiness to implement primary eye care in Nigeria: equipment, infrastructure, service delivery and health management information systems. *BMC Health Services Research* 21:1.
15. Saydah SH, Gerzoff RB, Saaddine JB, Zhang X, Cotch MF. Eye care among US adults at high risk for vision loss in the United States in 2002 and 2017. *JAMA Ophthalmology*. 2020 May 1;138(5):479-489.
16. Killeen OJ, Cho J, Newman-Casey PA, Kana L, Woodward MA. Barriers and facilitators to obtaining eyeglasses for vulnerable patients in a Michigan Free Clinic. *Optometry and vision science: official publication of the American Academy of Optometry*. 2021 Mar 3;98(3):243.