



Vision Aid Overseas  
Incorporating OPTOMETRY GIVING SIGHT in the UK

# Providing access to refraction services and affordable spectacles through a public sector Vision Centre in Botswana



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## Background

Refraction services and spectacle provision are concentrated in the capital city of Botswana, Gaborone, and are primarily private commercial services available at a cost that is prohibitive for children, the vulnerable and the elderly in the community. Prior to 2013 there was no refraction and affordable spectacle provision in the public sector.<sup>1</sup> In partnership with the Ministry of Health and Vision Aid Overseas and based on the Botswana National Eye Care Plan 2007-2013,<sup>2</sup> Addenbrooke's Abroad (Cambridge University Hospitals) developed 'Pono Letlotlo', a three year project to improve eye care services, funded by a Seeing is Believing grant, in line with the World Health Organization's Global Action Plan for Universal Eye Health and the United Nations Sustainable Development Goals.<sup>3,4</sup> An integral part of this project was the creation of a national Vision Centre in Serowe Memorial Hospital to provide access to refraction services and affordable spectacles integrated within the eye health system.



## Purpose

The provision of a Vision Centre (VC) will reduce uncorrected refractive error, provide affordable spectacles in the Serowe area, and help integrate optometric services in the public sector. The Vision Centre will also act as a hub for spectacle ordering from 4 other public sector hospitals with resident optometrists and other hospitals as services increase, thereby providing a central spectacle provision service across the country providing improved affordability, accessibility and therefore quality of life and independence for vulnerable groups.

## Method

Vision Aid Overseas installed a Vision Centre at Sekgoma Memorial Hospital (referral/tertiary hospital), Serowe in August 2013. The Vision Centre has an optical workshop capable of producing single vision spectacles at an affordable cost, alongside optometry and refraction service provision. It aims to generate enough income to balance its own running costs and therefore become self-sustaining. A full-time optometrist was employed in July 2014 allowing the implementation of daily refraction clinics and onsite provision of affordable spectacles.



## Results

The Vision Centre was installed at Sekgoma Memorial Hospital in August 2013. Over a 10-month period (July 2014 - April 2015) a fully-staffed Vision Centre showed capability to service the hospital and capacity to service 4 linked hospitals and future national programmes. From July 2014 the community and local eye care professionals became aware of the new Vision Centre services creating a peak in demand during September 2014. Initially the clinic ran a walk-in service but it became apparent that staffing levels could not cope with an open clinic so a block booking system was introduced for better patient care. Since then the eye examination numbers have grown steadily (Fig 4)

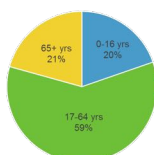


Figure 1: Patients by age

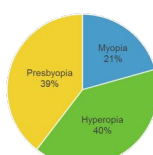


Figure 2: Patients by refractive error

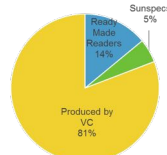


Figure 3: Spectacles dispensed

- 1412 patients seen (68.4% female, Fig 1), averaging 141 patients per month
- Prescribed exam rate 51.38% adult, 79.77% children
- 71.78% prescriptions fulfilled by onsite workshop (the remainder sunspecs and ready readers)
- 5 Outreach Clinics in local area

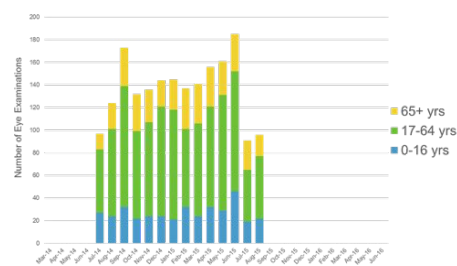


Figure 4: Eye examinations performed at the Vision Centre

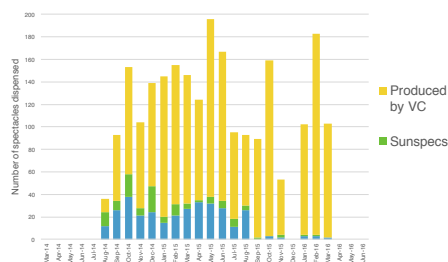


Figure 5: Spectacles dispensed by the Vision Centre

## Discussion

Hospital triage pathways and patients requiring more than one pair of spectacles (for instance distance and reading) (Fig.2&3) cause high dispensing rates. Unusually, more females attend the Vision Centre which the local staff feel is due to males being more resistant to seeking medical attention until such a time that their quality of life declines due to eye problems or because their driver's licence renewal has been declined. Numbers have grown steadily towards the hospital target of 150 refractions and 200 dispensed spectacles per month. Capacity can be increased further towards 400 pairs of spectacles produced per month.



## Conclusions

The Vision Centre has shown it can provide a substantial contribution to improved eye health locally when fully staffed. This service has also shown the potential for supplying affordable spectacles nationally via the network of optometry services in other public sector hospitals. It can also support new projects such as spectacles for the national school screening programme planned for 2016/7.<sup>5</sup> However staffing is crucial and will require hospital and Ministry support.

The new Botswana National Plan for Eye Care 2015-2019 will provide a focus for further development of services to reduce avoidable blindness and will support additional emerging eye care programmes.<sup>5</sup> This will result in long term improvement in eye care provision for the country in an integrated, sustainable manner in line with Vision2020.

## References

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