

## Lessons learned from a subsidised spectacles scheme aiming to improve eye health in Aboriginal people in Victoria, Australia

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**Abstract.** The Victorian Aboriginal Spectacles Subsidy Scheme (VASSS) aimed to improve access to visual aids and eye care for Aboriginal and Torres Strait Islander Victorians. The VASSS started in July 2010 and has operated continually since. In 2016, we explored the collaborations, planning, adaptations and performance of the VASSS over the first 6 years by reviewing and analysing service data, as well as data from semistructured interviews, focus groups and surveys. An estimated 10 853 VASSS cofunded visual aids were delivered over 6 years, and the mean annual number of comprehensive eye examinations provided within services using VASSS grew 4.6-fold faster compared with the 4 years preceding the VASSS. We estimate that 16% and 19% of recipients presented with distance and near vision impairments respectively, all of which were corrected with visual aids. VASSS achievements were attained through collaborations, flexibility, trust and communication between organisations, all facilitated by funding resulting from evidence-based advocacy. Access to visual aids and eye examinations by Aboriginal Victorians has improved during the operation of the VASSS, with associated direct and indirect benefits to Aboriginal health, productivity and quality of life. The success of the VASSS may be replicable in other jurisdictions and provides lessons that may be applicable in other fields.

**What is known about the topic?** The 2009 National Indigenous Eye Health Survey estimated that the age-adjusted prevalence of vision impairment was 2.8-fold higher and the prevalence of blindness 6.2-fold higher among adult Aboriginal Australians compared with non-Aboriginal Australians, predominantly due to uncorrected refractive error and cataract.

**What does this paper add?** Implemented in 2010, the Victorian Aboriginal Spectacles Subsidy Scheme (VASSS) has been supported, designed and well received by stakeholders and, critically, the Aboriginal community. The VASSS has successfully improved access to comprehensive eye examinations and high-quality affordable visual aids (principally spectacles, with cost certainty).

**What are the implications for practitioners?** The VASSS demonstrates the power of collaborative partnerships and the potential for solutions targeted at specific components of a system to generate wider benefits, including the reduction of the prevalence and burden of vision impairment by correcting refractive error, managing vision-threatening eye disease and increasing awareness of eye health issues.

**Keywords:** Aboriginal health, eye care, refractive error, vision, vision impairment.

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## Introduction

Vision impairment affects educational and economic opportunities, reduces quality of life and increases the risk of death.<sup>1</sup> Prevalence varies between communities, mainly because conditions that are considered preventable or treatable remain common in low-resource settings.<sup>1</sup> The most common causes of treatable vision impairment are refractive error, which can be corrected with visual aids such as spectacles, and cataract, which can be corrected with surgery. Preventable vision impairment can be caused by infections such as trachoma, or the delayed detection and management of degenerative or vascular conditions such as glaucoma or diabetic retinopathy.

The National Indigenous Eye Health Survey, published in 2009, estimated that the age-adjusted prevalence of mild, moderate and severe vision impairment (bilateral presenting visual acuity worse than 6/12 but equal to or better than 6/60) in adult Aboriginal Australians was 14.4%, and the age-adjusted prevalence of blindness (bilateral presenting visual acuity worse than 6/60) was 2.8%.<sup>2</sup> These rates of vision impairment and blindness were 2.8- and 6.2-fold higher respectively than for non-Aboriginal Australians. Uncorrected refractive error accounted for 54% of adult vision impairment and 14% of adult blindness. Blinding cataract was 12-fold more common in Aboriginal adults than non-Aboriginal adults.<sup>2</sup>

Advocacy regarding the findings of the National Indigenous Eye Health Survey coincided with the Close the Gap campaign for health equality between Aboriginal and non-Aboriginal people becoming government policy across Australia. The Victorian state government responded to the stark quantification of the gap in vision by inviting stakeholders to suggest potential solutions. The Victorian Aboriginal Spectacles Subsidy Scheme (VASSS) was one of the programs developed after input from the Aboriginal community, optometry, ophthalmology and public health. From the outset in July 2010, the VASSS has been funded by the Victorian state government and managed by the Australian College of Optometry (ACO) through the network of clinics participating in the already-established Victorian Eyecare Service (VES). The VASSS differs from the VES by providing cost certainty, having a lower patient copayment of A\$10 for visual aids, removing the requirement for a Pensioner Concession or Health Care Card to access the program and using a community-approved range of spectacle frames.

The VASSS aimed to improve: (1) access to visual aids by Aboriginal Victorians; (2) uptake by Aboriginal Victorians of eye examinations capable of identifying vision-threatening eye disease and connecting affected people with appropriate treatment; (3) Aboriginal community involvement in the process of

eye care planning; and (4) awareness of eye health risks within the Victorian Aboriginal community. Program evaluation in 2016 assessed progress in these areas, as well as contributions to broader aspects of Aboriginal health and well-being. This paper provides an overview of the evaluation and highlights key learnings.

## Methods

The Victorian Government funded the ACO from 2010 to deliver the VASSS across Victoria via Aboriginal Community Controlled Health Organisations (ACCHOs) and the VES network. The VES network includes permanent ACO optometry clinics in public health settings across metropolitan Melbourne and mobile (outreach) optometry services provided in conjunction with a range of partner organisations, as well as more than 40 predominantly independent optometry private clinics across rural and regional Victoria.

Cost, and cost uncertainty, have been identified as major barriers to eye care in Victoria.<sup>3,4</sup> The VASSS mandated zero patient copayment for eye examinations, a low cost-certain patient copayment of A\$10 for any visual aid needed and a community-approved range of spectacle frames, and removed the requirement to show proof of limited income (Health Care or Pensioner Concession Card).

The 2016 VASSS evaluation was funded by the Victorian state government and performed in accordance with the tenets of the Declaration of Helsinki, receiving approval from the ACO Human Research Ethics Committee. Additional advice on the ethical conduct of this evaluation was provided by the Victorian Aboriginal Community Controlled Health Organisation (VACCHO).

The evaluation reviewed and analysed ACO service data. Aboriginal communities were engaged using an iterative approach to ensure that questions and information were appropriate and relevant to community needs. Quantitative and qualitative data were obtained from staff working in Aboriginal agencies, Aboriginal clients accessing the VASSS, optometrists, ophthalmic support staff and ophthalmic and public health researchers and staff familiar with Aboriginal eye care in Victoria. Data were obtained from service reports, discussions, semistructured interviews, focus groups, a survey and document review. Full methods and results are available in the Evaluation Report.<sup>5</sup>

## Confounding factors

This was not a prospective controlled trial and the outcomes should not be considered definitively and exclusively caused by

the VASSS, because the VASSS has not operated in isolation between 2010 and 2016. The first concurrent program that may confound the observations is the VACCHO Statewide Eye Health Project Officer role, sharing the same funding base and start date as the VASSS. The purpose of the role was to work collaboratively across the sector to promote the importance of eye health, connect Aboriginal communities with eye health services, improve patient pathways and improve eye health outcomes for Aboriginal Victorians. The second relevant program is the Visiting Optometrists Scheme (VOS), which supports optometrists to deliver care in communities without regular eye services. The VOS has progressively contributed to improved access, starting with the support of services in three Aboriginal communities from July 2009, 1 year before the start of the VASSS, with further communities added throughout the period of investigation. Third, statewide and regional coordination concurrently improved, including sector-wide stakeholder meetings originally chaired by the Victorian state government and, more recently, by the VACCHO and policy leadership from Indigenous Eye Health at The University of Melbourne.

## Results

The VASSS appeared well received by stakeholders, successfully supporting access to comprehensive eye examinations and high-quality affordable visual aids (predominantly spectacles) for Aboriginal Victorians.<sup>5</sup>

### *Access to comprehensive eye examinations*

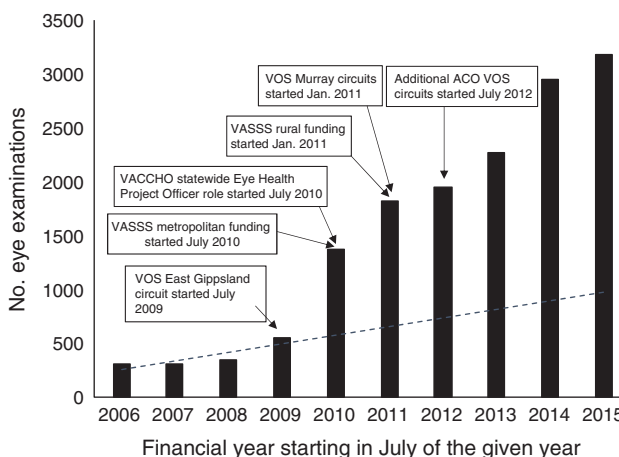
Fig. 1 shows that although the VASSS was not implemented in isolation, the collection of interventions arising from advocacy generated by the National Indigenous Eye Health Survey has coincided with a rise in the number of eye examinations provided by services using the VASSS. The growth rate of services across the 4 years before VASSS implementation, including VOS-supported services in Gippsland in the final pre-VASSS year, was 80 services per year, compared with 365 services per year across the six VASSS years evaluated to 2016. This corresponds to a 4.6-fold increase in service growth.

The difference is even more stark if the 3-year period preceding the start of either the VOS in Gippsland or the VASSS is compared with the 7 years combining all new interventions. Growth before all new interventions was 21 services per year, increasing to 410 services per year across the 7 years of staggered new interventions for a 19.5-fold increase in service growth.

The evaluation also shows that the geographic delivery of services associated with the VASSS matched the population distribution of Aboriginal Victorians.<sup>5</sup>

### *Vision impairment*

An estimated 10 853 VASSS cofunded visual aids were delivered over 6 years (to June 2016), against a contractual commitment of 12 712 by June 2017. However, not all visual aids delivered were for vision impairment from uncorrected refractive error; some were replacement visual aids for refractive changes or damaged spectacles, significant to an individual but not amounting to vision impairment. Of the total visual aids,



**Fig. 1.** Number of eye examinations conducted by Australian College of Optometry (ACO) optometrists (i.e. not including those conducted in participating rural practices) for Aboriginal Victorians over time. Columns show the actual number of examinations in each year from 1 July 2006 to 30 June 2016. The dashed line is the linear trend of examination numbers for the period before the start of the Victorian Aboriginal Spectacles Subsidy Scheme (VASSS), projected forward as a 'no-VASSS prediction' to June 2016. The start dates of relevant interventions are marked. VACCHO, Victorian Aboriginal Community Controlled Health Organisation; VOS, Visiting Optometrist Scheme.

approximately 46% were provided directly through ACO services and the remainder through VES rural and regional practices. An audit of eye health records estimated that 16% of recipients presented with distance vision impairment that improved with new spectacles and that 19% of recipients presented with near vision impairment that improved with new spectacles.<sup>5</sup>

Qualitative aspects of the evaluation suggested that:

- the detection and management of eye disease could be further improved with equipment purchases (e.g. slit lamp biomicroscopes and retinal cameras) for Aboriginal Health Services, funding eye disease diagnostic procedures conducted in VES rural practices and addressing challenges associated with patients attending ophthalmology services
- there is potential to increase efficiency by selectively targeting patients based on priority risks or barriers, such as refractive error, eye disease, systemic disease and disability
- vision and eye health information from some service providers (e.g. regarding risk factors for diabetic retinopathy) did not cover an adequate range of health literacy levels.

### *Partnerships and collaboration*

The funding initiatives noted in Fig. 1 created opportunities for partnerships and collaborations. Collaborations between Aboriginal communities, ACO, VACCHO, local eye care practitioners, funding bodies, Indigenous Eye Health at The University of Melbourne and other partner agencies have been critical in working towards closing the gap in vision between Aboriginal and non-Aboriginal Victorians. The partnerships and collaborative efforts listed below were noted as particularly beneficial.<sup>5</sup>

- Aboriginal Victorians, with leadership from VACCHO, recognised the problem of preventable vision impairment in their communities and contributed to the creation and implementation of solutions appropriate to each community.
- The VES section and Aboriginal health sections of the Victorian state government's Health Department worked together to secure continuous funding through three changes of government over the 6 years of review.
- Eye care practitioners, with leadership from the ACO, the Royal Victorian Eye and Ear Hospital and Indigenous Eye Health, engaged with the problems and formed networks with ACCHOs to provide high-quality eye care accessible to Aboriginal communities across the state.
- Partner agencies including ACCHOs and community health services provided critical connections between practitioners and individuals, particularly those with the most complex needs and situations.
- The Statewide Aboriginal Eye Health Committee and Project Officer provided policy leadership, as well as the coordination, facilitation and monitoring of interventions.

### *Planning, flexibility and trust*

The VASSS spectacles frame range, chosen collaboratively by the ACO and Aboriginal community representatives, appeared well received, based on interviews, focus groups and uptake. The A\$10 patient copayment for visual aids was reported as fair and reasonable. However, different opportunities and challenges presented in each place, and there was no one-size-fits-all statewide service delivery model. Different mixes of visiting and local optometry services worked well in different places. Visiting services through VOS were generally provided by Melbourne-based, ACO-employed optometrists providing services, using portable equipment, within facilities commonly accessed by Aboriginal people. VES rural services were generally provided by local optometrists within their own established, private optometry practice, with the following issues noted.<sup>5</sup> First, most participating VES rural practices chose to join the VASSS to contribute to Aboriginal eye and vision health; however, other financial, time and physical stressors (e.g. Medicare fee freeze, client non-attendance, limited space) can affect the sustainability of and ongoing participation in the scheme, and sustainability will require engagement, support and funding flexibility. Second, positive stories show that VES rural practices can be an important and beneficial part of the successful service delivery of Aboriginal eye care; however, not all VES rural private practices provided a culturally safe place for Aboriginal people (e.g. due to lack of familiar visual signals, approach and attitudes of staff, reputation or fear of upselling):

*I used to go to the local [VES Rural] practice – it was okay, but it's much more comfortable coming to the Aboriginal health service. It's easier to pick up the phone and ask for an appointment – I feel more confident, happy, free, less anxious coming here. (ACCHO Client)*

### *Economic evaluation*

VASSS returned far more value to Victoria than what it cost. A standard health economics estimate suggested potential annual

productivity gains resulting from the VASSS of up to A\$6.6 million.<sup>6</sup>

### *Wider benefits*

It was commonly described that the simplest positive outcomes from having an eye examination (getting glasses and seeing better) improved self-agency in approaching eye health care, engagement with community and broad aspects of Aboriginal health. It was felt that wider benefits may be generated:

*The Scheme is a game changer – it changed the conversation I have with clients from a real battle to get them to agree to make an appointment to a positive discussion about taking care of themselves. (ACCHO Care Coordinator)*

*The Scheme has been good – people ask for it. People say they haven't had an eye test in ages...or forever. But the Scheme gives them confidence to ask for a test. (ACCHO Clinic Coordinator)*

*Seeing better with glasses is an easy fix – clients can see an optometrist, get glasses, and see better. Achieving this makes people feel better – they realise that things can be done, things can be fixed. There is value in a person realising a positive outcome from having an eye examination. It helps people own their health, which changes their approach to solving health problems. (ACCHO staff)*

*VASSS brings more people to our ACCHO – it opens the door to general health care, other visiting services...It is great for diabetic care that the optometry service is in-house; people come for glasses, and tap into other services. (ACCHO Clinic Coordinator)*

*Health literacy has increased in the community over the past 5–6 years. Improved access to eye care has contributed to that. (ACCHO staff)*

Results of the 2016 National Eye Health Survey have recently been released.<sup>6</sup> Comparison with the 2009 National Indigenous Eye Health Survey<sup>2</sup> gives an indication of progress at the community-wide level. In 2016, the age-adjusted prevalence of vision impairment among adult Aboriginal Australians was 13.6%,<sup>6</sup> slightly reduced compared with 14.4% in 2009.<sup>2</sup> In contrast, there was a significant reduction in the age-adjusted prevalence of blindness in 2016 (0.4%) compared with 2009 (2.8%).<sup>2,6</sup> These Australia-wide changes obviously dilute any effect of the VASSS, which only covers Victoria. However, estimates for Victoria also appear positive, with crude prevalence of vision impairment among adult Aboriginal Victorians decreasing from 6.9% in 2009 to 5.1% in 2016.<sup>2,6</sup> Nevertheless, it should be recognised that too much has happened during this period to attribute these changes to any one program. Perhaps more importantly, the gap remained in 2016, with the rate of vision loss threefold higher among Aboriginal Australians compared with non-Aboriginal Australians, predominantly due to uncorrected refractive error and cataract,<sup>6</sup> indicating that there is more work to be done.

### **Discussion**

Several lessons can be taken from the VASSS. First, process was important to the measured improvements in eye care for Aboriginal Victorians. Collection of evidence followed by



evidence-based advocacy led to funding. Community engagement and collaborative planning resulted in initiatives that were workable for all. Flexible implementation of several synergistic programs permitted an openness to the opportunities and solutions to the challenges of each situation. Adaptation to local circumstances improved the probability of the programs being delivered and being suitable for Aboriginal clients across the state.

Second, the support of agencies that hosted and assisted services was critical to achieving eye care access, particularly for the most complex clients.

Third, more extensive cultural safety training and connection to community could improve the program. Although positive stories show that VES rural and regional practices can be a critical part of successful eye care service delivery, there is a lack of consistency and some practices are not considered a culturally safe place by Aboriginal people. It is important to recognise that participating practices are private enterprises, sensitive to outside influence, and that a combination of engagement, understanding and flexibility is required for sustained participation in public health and community service programs. To support improved cultural safety training, education fees could be paid by the managing and/or funding organisation. Ideally, multiple formats should be available and appropriate to the work situation (e.g. online), all practice staff (including front-of-house staff) should be involved and compliance should recognise the diversity of staff knowledge, experience and skills (some having worked closely with their local Aboriginal community for decades, others new to the interaction and some identifying as Aboriginal themselves).

Finally, a set of principles for the supply of subsidised spectacles to Aboriginal peoples has been recently formulated and endorsed by the National Aboriginal Community Controlled Health Organisation, Vision 2020 Australia and Optometry Australia.<sup>7</sup> VASSS essentially complies with the sector-endorsed principles, except in being state based (the first principle is national consistency). Each state and territory of Australia has its own subsidised spectacles system, with a move to national consistency being discussed with the Australian Government. The results of the recent National Eye Health Survey suggest that programs demonstrating positive impacts should be adapted by other states, and that sustained support is required to make a lasting difference in vision outcomes.<sup>6</sup>

## Conclusion

The VASSS has enhanced opportunities to reduce the burden of vision impairment among Aboriginal Victorians by correcting refractive error, managing vision-threatening eye disease and increasing awareness of eye health issues. VASSS implementation demonstrates the potential for solutions targeted at specific components of a system to generate wider benefits. In this case, the subsidy of visual aids along with service coordination, client engagement and support of outreach services have affected eye care delivery and outcomes. Simple, positive outcomes in health can improve self-agency, engagement with culture and community and broad aspects of Aboriginal health.

The process, collaborations, planning and flexibility observed in the VASSS may be applicable in other fields.

## Competing interests

The authors declare that they have no competing interests.

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