



NACCHO

National Aboriginal Community Controlled Health Organisation

National ACCHO Sector Report on Eye Health Service Delivery for Aboriginal and Torres Strait Islander people

November 2016

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Table of Contents

Introduction	2
A Commentary on the contemporary locational distribution of Eye Health and Eye Care service delivery by ACCHOs across Australia	2
Existing Services	4
Aboriginal Community Controlled Health Organisations	4
Mobile clinics for optometric and ophthalmologic services.	6
Eye health workforce	7
Data Issues	8
Eye Health initiatives	9
Nationally Significant Case Studies of Eye Health Service Delivery: Innovation by the ACCHO Sector and Partners	10
Case Study I - ACCHO-led approach to service delivery: Wuchopperen	12
Case Study II - NACCHO state/territory affiliate-led approach to service delivery: The IDEAS Van	14
Case Study III - Regional Collaboration: Victorian Aboriginal Community Controlled Health Organisation.....	20
Case Study IV - ACCHO-led Service Delivery: Institute for Urban Indigenous Health, Brisbane	288
Case Study V - Regional Collaboration: Central Australian and Barkly Integrated Eye Health Strategy (CABIEHS).....	34
Case Study VI - National Collaboration: Vision 2020 Australia.....	37
Conclusion.....	40
Recommendations	42
Eye Health Data.....	42
Eye Health Service Delivery	43
Appendix A: Questions posed at the outset	45
A: Statistical Service Delivery Information	45
B: Information about Service Delivery Capacity, such as:	45
Appendix B: Data Documents List: 31 March 2016 by the Indigenous Australia Program (IAP) of the Fred Hollows Foundation	0
Latest Eye Health Statistics for Australia	5

Introduction

NACCHO has undertaken this *National ACCHO Sector Report on Eye Health Service Delivery for Aboriginal and Torres Strait Islander people* between December 2015 and June 2016, through funds provided by The Fred Hollows Foundation.

The report consists of two parts. The first part consists of mapping and data set analysis of various measures related to the delivery of eye health care in the sector, where data was available. The second part comprises case studies of a variety of different service delivery types around Australia. Those agencies involved directly in the provision of services across the Northern Territory, Queensland, Victoria, ACT and parts of South Australia were interviewed in situ about the outcomes, resources, challenges, gaps and other information relating to their particular service model. These case studies have provided valuable information to inform the report's recommendations.

While the first part of the report identifies that the data gaps in Aboriginal Eye Health Care were larger than anyone could have estimated, the second part discovers a variety of services providing a high standard of service in both urban and remote centres around Australia, often with minimal resources. These case studies reveal a number of common themes which have contributed to the formulation of recommendations. This includes an almost universal view that a National Aboriginal Spectacles Scheme is required.

NACCHO commends to you this *National ACCHO Sector Report on Eye Health Service Delivery for Aboriginal and Torres Strait Islander people* and we hope and trust that it will be a valuable resource to both participants in the sector and policy makers in setting a long-term agenda for Closing the Gap in Eye Health across Australia.

A Commentary on the contemporary locational distribution of Eye Health and Eye Care service delivery by ACCHOs across Australia

NACCHO and the sector recognise the importance of data on eye health as critical for policy, planning, budgeting and service delivery whether it be for NGOs, representative professional bodies and state, territory and national governments.

The Commonwealth's clear commitment to eye health is acknowledged through the National Aboriginal and Torres Strait Islander Health Plan 2013-2023 and the National Framework for Action to Promote Eye Health and Reduce Avoidable Blindness and Vision Loss. However, there are concerns that the Commonwealth Budget (May 2016) has maintained the freeze on Medicare Benefits Scheme (MBS) item number claim values and will cut \$182 million from the Health Flexible Fund over the next 4 years. Health Flexible funding encompasses programmes such as the Rural Health Outreach Fund (RHOFF) that includes optometric and ophthalmic services.

The introduction of a new MBS item number, in November 2016, for non-mydratic retinal photography will assist in detecting and monitoring the progression of diabetic related eye

diseases. Aboriginal and Torres Strait Islander patients will benefit through having such examinations once a year whereas the interval is two years for the general population.

At the outset of this project, a range of questions were posed (see Appendix A: Questions posed at the outset). Data to answer these questions are not available. This concern is addressed in Section 3 of the report. The initial specific questions were subsequently refined to focus on location to create a baseline of evidence to understand patient populations, demand, distribution of resources (equipment and staff), access to services and gaps in service availability to Aboriginal and Torres Strait Islander people. This place-based approach will enable further data related activities to be referenced to actual service delivery, outputs and outcomes for Aboriginal and Torres Strait Islander people, their families and broader communities as delivered through the ACCHO sector.

These refined questions are seen as a starting point:

- 1) Where are existing resources located for equipment, qualified staff, training opportunities and focused eye health promotion?
- 2) Where is the greatest demand for optometric and ophthalmic services, initial focus on eye health examination, screening, diagnosis and treatment (MBS 715 along with MBS 10900, 10905, 10907, 10912-16, 10918, 109 and 105) and related interventions e.g. cataract surgery (MBS 42698, 42701, 42702, 42704 and 42707)?
- 3) Where are areas of under-resourcing for basic optometric and ophthalmologic services including digital retinopathy?
- 4) Where are there resources, but inadequately trained staff to be able to use the equipment e.g. non-mydratic retinal cameras?
- 5) Where are locations with opportunities to use telehealth and video-health technologies to support patients and practitioners, but where internet connectivity is inadequate?
- 6) Where are areas with need but no access to, or availability of, eye health services?

A key consideration in determining budgets and allocating available funding is identifying areas of service availability and areas of unmet need.

Existing Services

The National Health Services Directory, NHSD, (www.healthmap.com.au) provides a comprehensive but not complete map showing where Optometry Services are available.

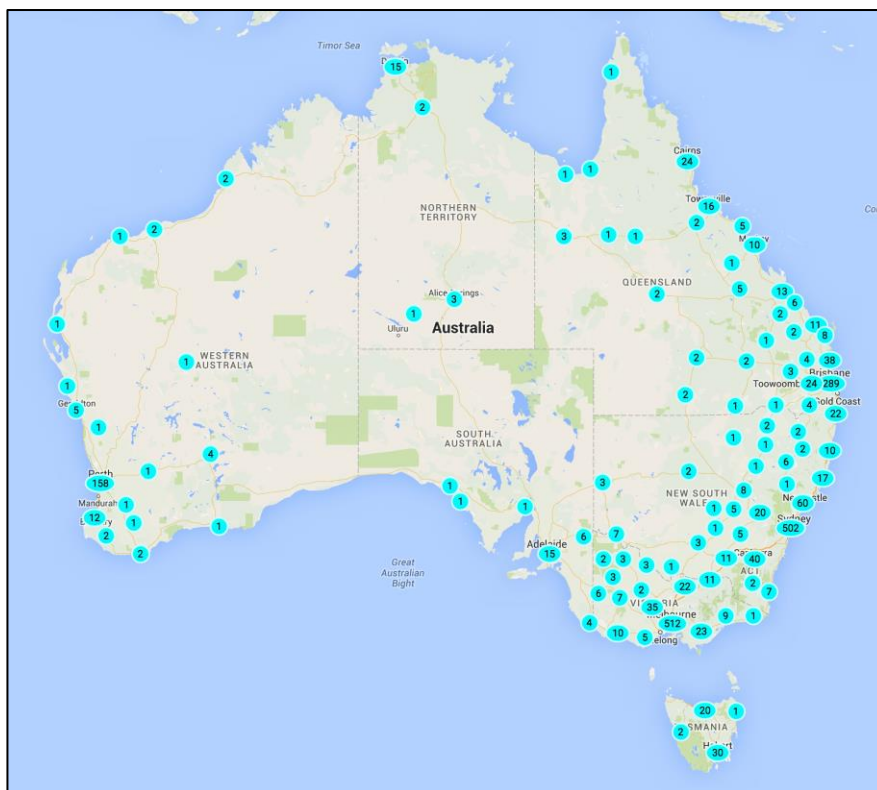


Figure 1: Map illustrating the location and number of Optometry services available.

NHSD provides the name, address and contact details for each of the provider organisations and is constantly updated and extended as new providers and locations are registered. NHSD data is also made available through an “app” for mobile phones available at www.healthdirect.gov.au/health-app.

Aboriginal Community Controlled Health Organisations

Eye health services accessible to Aboriginal and Torres Strait Islander people are primarily provided by Aboriginal Community Controlled Health Organisations (ACCHOs).

Vision screening is conducted as part of the Health Assessment for Aboriginal and Torres Strait Islander People (MBS Item 715) which is undertaken at every ACCHO as one of the basic primary health services.¹

¹ ‘Vision screening’ is a relatively short examination that can indicate the presence of a vision problem or a potential vision problem. A vision screening cannot diagnose exactly what is wrong with your eyes; instead, it can indicate that you should make an appointment with an ophthalmologist or optometrist for a more comprehensive dilated eye examination.

NACCHO is the national peak body for the ACCHO sector across Australia. The following map shows the location of the NACCHO Member Services “Hub” clinics where vision screening associated with a 715 health check are undertaken. ACCHOs have a “Hub” clinic which is often also the administrative centre. Outreach clinics are the spokes of the “Hub and Spoke” model. In the following map Member Services are also classified by remoteness according to the Australian Statistical Geographic Standard – Remoteness Areas (ASGS-RA).

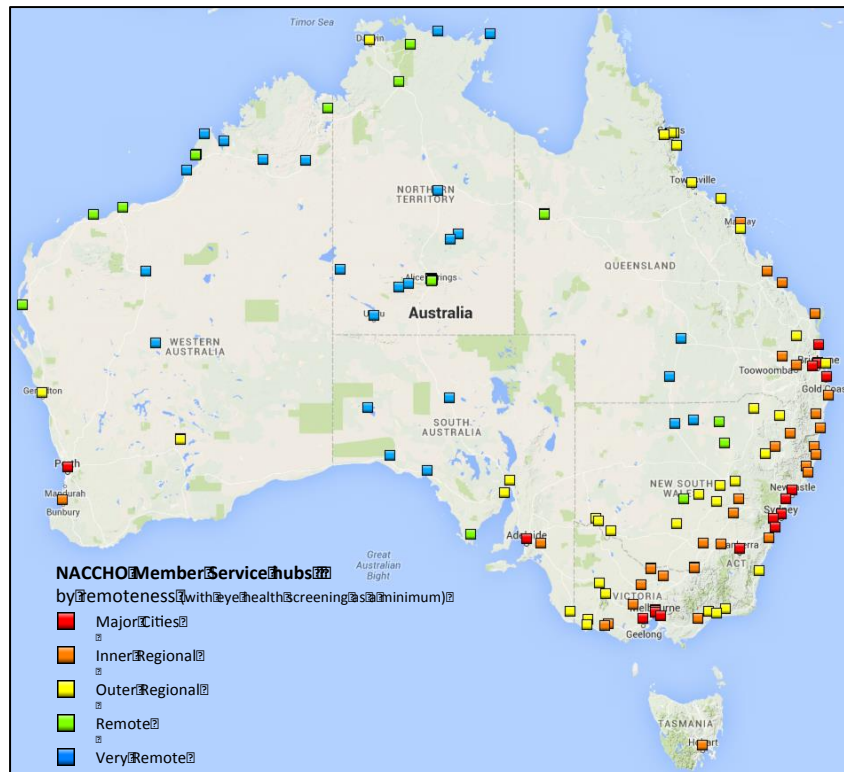


Figure 2: Location of NACCHO Member Service “Hubs” (Source: NACCHO Evidence Base)

An important aspect of the ACCHO network in terms of providing accessibility to services such as optometry is the establishment of outreach clinics (spokes). Such a service delivery

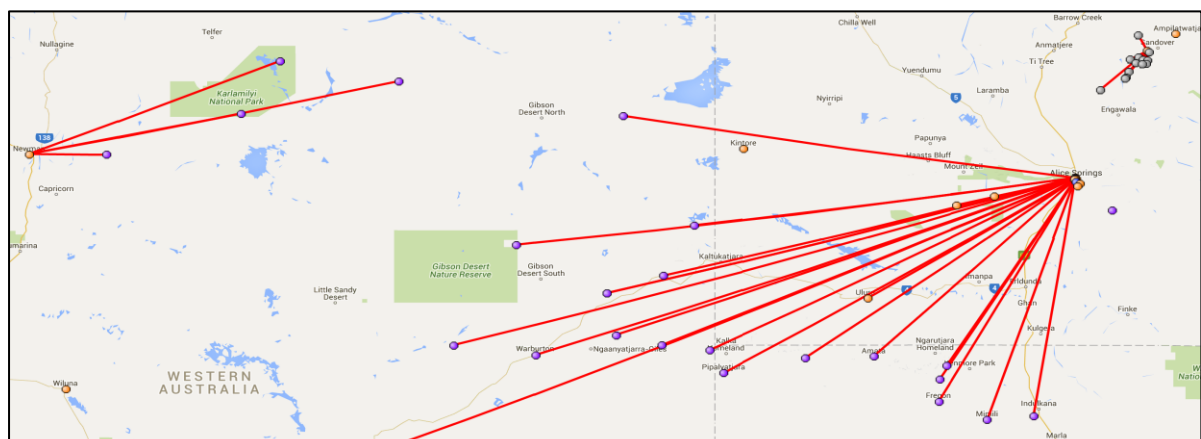


Figure 3: Map showing the Newman (Puntukurnu) and Alice Springs (Ngaanyatjarra and Nganampa) “Hubs” and their respective “Spokes”.

model keeps administrative and governance costs efficient and effective and allows coordination of staff and visiting specialists between communities.

NACCHO Member Services all have electronic patient health information and recall systems, an increasing number of which are linked over the internet. The benefits of e-health records and internet connected records are that:

- Patients are identified for eye health screening or interventions, with such interventions guided by Care Plans managed within their health records;
- Individuals and the number of individuals are known so that visits by optometric and/or ophthalmic specialists can be scheduled to optimise the specialist's time;
- Patients can be informed and scheduled to attend the specialist sessions;
- Records of the intervention, treatment or recommended actions are entered into the patient's clinical record, and;
- Any follow-up actions can be undertaken locally with telehealth support from the specialist available, where internet connectivity is adequate.

Mobile clinics for optometric and ophthalmologic services

There are an increasing number of organisations providing mobile optometric and ophthalmological services with telehealth support from distant specialists. For example, the Lions Outback Vision Van will be providing services across country WA in 16 towns, Katanning, Albany, Esperance, Kalgoorlie*, Leonora, Wiluna*, Newman*, Roebourne*, Karratha, Port Hedland*, Broome*, Derby*, Fitzroy Crossing*, Halls Creek* and Kununurra*.

*Towns are those in which Lions Outback Vision Van services will be conducted in collaboration with Aboriginal Community Controlled Health Services.

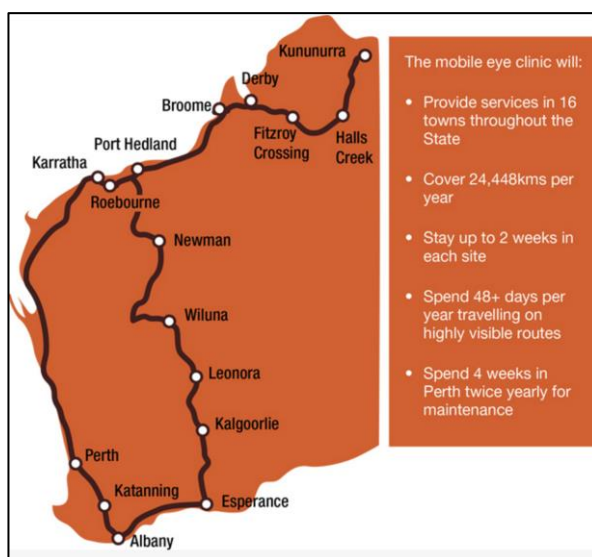


Figure 4: Lions Outback Vision Van serviced communities
(Source <http://outbackvision.com.au/outback-vision-van/> accessed 2016-06-01)

The Indigenous Diabetes, Eyes and Screening (IDEAS) van is an initiative of the Diamond Jubilee Partnerships Ltd. The IDEAS van began providing services in 2014, with \$5 million funding from the Queensland Government, and the support of Aboriginal Medical Services in Queensland and the Royal Flying Doctor Service. The IDEAS van and support teams are now working in 41 communities along with outreach services (see map below).

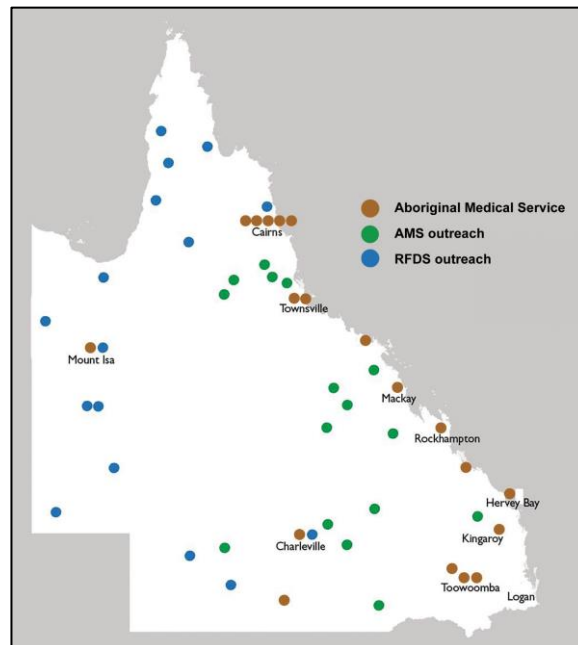


Figure 5: IDEAS van serviced communities
(Source <http://www.ideasvan.org/retinal-screening/> accessed 2016-06-01)

Both the IDEAS and Lions Outback Vision Vans work in collaboration with Aboriginal Community Controlled Health Services and have, with consent of the patient, electronic referral and records of occasions of service synchronised with the patient electronic health records. Synchronisation of records ensures that eye health services are recorded within a patient's care plan(s) to ensure continuity of care by enabling local follow-up actions, as required, after the mobile clinics have left.

Eye health workforce

The Australian Institute of Health and Welfare (AIHW) has released a report on the Eye health workforce in Australia (26 May 2016). This is a valuable resource to start to develop a representation of the alignment between eye health workforce, availability of suitable equipment (e.g. non-mydiatic retinal cameras), demand and service gaps.

The following table from the AIHW report highlights the difference in accessibility to optometric and ophthalmic specialists across the remoteness regions of Australia. The remoteness categories are the Australian Statistical Geographic Standard classification (ASGS-RA).

	Major cities	Inner regional	Outer regional	Remote	Very remote^(b)	Australia^(c)
Optical dispensers	2,818	704	233	17	—	3,773
Optometrists	2,975	580	226	19	8	3,810
Ophthalmologists	734	109	29	n.p.	n.p.	878
Orthoptists	486	47	14	—	—	547
Optical mechanics	572	57	15	—	—	636
Total^(a)	7,585	1,496	517	36	8	9,644

(a) Includes only occupations where data were sourced from the Census or the AIHW NHWDS. For occupational therapists specialising in eye health and for orientation and mobility specialists, data were sourced from professional associations and organisations employing eye health workers, and remoteness area were not available.

(b) Includes migratory areas.

(c) For data sourced from the NHWDS (optometrists and ophthalmologists), the Australia total includes people who did not state or adequately describe their state or territory, and those who were overseas. Therefore, remoteness area totals may not sum to the national total.

Note: All figures sourced from the Census reference underlying data that have been randomly adjusted to allow release of confidential data.

Sources: ABS Census of Population and Housing 2011 (optical dispensers, optical mechanics and orthoptists); AIHW NHWDS (ophthalmologists and optometrists).

The following table provided from the NACCHO Evidence Base using the ABS 2011 Census data shows the number of Aboriginal and Torres Strait Islander people living in the different ASGS-RA areas.

Indigenous Population	ASGS-RA	% of total Indigenous Population
233,146	Major Cities of Australia	34.80
147,683	Inner Regional Australia	22.05
146,129	Outer Regional Australia	21.81
51,275	Remote Australia	7.65
91,648	Very Remote Australia	13.68
669,881	Total	100.00

Data Issues

For the purposes of this project, a summary of eye health data sources has been compiled by The Fred Hollows Foundation (2016) Indigenous Australia Program (IAP) and is included as Appendix B.

Gaining an understanding of the extent and content of data relating to eye health and care across the health sector and the ACCHOs in particular is a journey of disbelief and frustration. Disbelief that with the millions of dollars being spent annually on eye health service delivery and reporting/research there is no national “vision”, leadership or coordination; frustration, in that there are excellent programmes locally and regionally, as outlined later in this report, but nearly all the data end up in disconnected silos of often incomparable measures with the only viable level of aggregation being at the national level. National level data is useless for planning, budgeting, coordinating and effecting service delivery for patients in the real-world.

One of the objectives for this report is to take a person-centric view to provide continuity of data collection and analysis from the local level to regional and jurisdictional levels. Clear pathways for certain data items need to be formalised so that data about “my eye conditions” can be known whenever an individual presents for an examination or intervention so that the trend in his/her condition can be known over time. Eye conditions, apart from a few acute problems, evolve slowly, so point-in-time testing will not indicate whether progressive potential problems are emerging until an intervention is required.

Much emphasis has rightly been placed on specific disease types or conditions such as trachoma or cataracts and controlling and/or ameliorating the effects of diseases such as diabetes. However, these conditions are progressive, evolving over time. Early interventions either slow down or reverse deterioration and/or allow the presence of a causal underlying factor to be identified are crucial for the well-being of the individual. Causal factors behind eye problems are not just clinical but also environmental and as such require a multi-disciplinary cross-sector approach to have lasting benefit.

Eye health and care data need to be collected and managed in a way that is accessible and useful within the broader context of primary health and well-being. The ACCHO sector is uniquely placed to be a catalyst for demonstrating the benefits of connecting eye health and care for the primary health and well-being of Aboriginal and Torres Strait Islander people.

The basic step required in eye health data management is that any examination is entered into the person’s clinical health record, not just retained by the person, business or organisation conducting the examination.

ACCHOs have had electronic health systems for their patients and their families, for nearly 20 years, providing integrated well-being and care records when services are provided within the Sector. Obtaining information from public and private providers is problematic. The ACCHO sector is endorsing the national My Health records as a vehicle for cross-sector data aggregation of health data at the level of the individual. However, being a national system, progress is too slow. The ACCHO Sector with organisations such as Optometry Australia, The Fred Hollows Foundation and others need to fast-track innovations in data flows and management that will, in the future, segue into the national health information records.

Eye Health initiatives

A number of eye health data initiatives are in progress including:

- a) AIHW under contract to the Australian Government’s Department of Health to develop a number of national eye health indicators,
- b) Proposals being developed to include one or more KPI(s) for retinal screening for people with diabetes nationally (Indigenous Eye Health, The University of Melbourne) and in the Northern Territory (AMSANT 2016), Queensland Health and QAIHC situational analysis (2015), Vision 2020 Australia (2015) and The Fred Hollows Foundation (2016),

- c) In depth strategy developed regionally around the Central Australia and Barkly regions (Central Australian Barkly Integrated Eye Health Strategy (CABIEHS) project 2016)
- d) Review of Eye Health Services for Aboriginal People conducted by the Greater Western Region of NSW, although specific to the region exemplifies what is wrong with the current situation and what needs to be done.
- e) Report on Eye Health Workforce (Australian Institute of Health and Welfare 2016. Eye health workforce in Australia. Cat. no. HWL 55. Canberra: AIHW).
- f) Burden of Disease report for Indigenous Australians to be released in August 2016.

Despite the initiatives outlined above, there is a fundamental step that is not receiving the emphasis within most of the studies and reports that is required and without which the plans and aspirations will incur great expense and not deliver sustainable benefits for the patient. The foundational issue is having occasions of eye health screening, referral, diagnosis and treatment part of the person's electronic health record, held for now with the ACCHOs, and shared with My Health Record in the future.

Once a person's data is integrated within their electronic health record with a formalised minimum data set (operational examples include those from Lions Outback Vision and the IDEAS project), then the siloed eye health and care data is available for reporting against other demographic and clinical variables, and to calculate national KPIs.

Nationally Significant Case Studies of Eye Health Service Delivery: Innovation by the ACCHO Sector and Partners

The following section of this report contains case studies of the various different models of service delivery to Aboriginal and Torres Strait Islander people with regard to eye health. There were a total of six recommendations to come out of these case studies, and these are explained within the relevant case study. However, there was one over-riding theme from the majority of service providers, and that is the need for a National Indigenous Subsidised Spectacle Scheme. As such, the rationale for this is explained below rather than within one of the Case Studies.

With over fifty per cent of vision loss amongst the Aboriginal and Torres Strait Islander population due to refractive error, it is estimated that around 30,000 Aboriginal and Torres Strait Islander Australians per year require spectacles to correct refractive error.² 35 per cent of Aboriginal and Torres Strait Islander adults have never had an eye examination and only 20 per cent of Aboriginal and Torres Strait Islander adults who require glasses actually have them, compared with 56 per cent in the wider community.³ Optometry Australia found that "it is clear that a lack of uniform access to prescription glasses is a major contributing

² Optometry Australia and NACCHO, *Closing the gap in vision through better access to prescription glasses for Aboriginal and Torres Strait Islander Australians*, Joint Submission to the Federal Budget, Canberra, January 2015, p6.

³ Optometry Australia and NACCHO, pp6-7.

factor to the current disparity in low vision and inequitable access amongst Aboriginal and Torres Strait Islander Australians.”⁴

While every state and territory provides a subsidised spectacle scheme, the eligibility varies and only Victoria has a specific Indigenous scheme. Some schemes only subsidise some of the cost. Most insist on the holding of a health care card or pension card. The choice and style of frames and lenses is restricted, and in the case of Western Australia, the subsidy is provided as a re-imburement via mailed cheque. Not only does this provide a barrier in terms of having the ready funds up-front to pay with until the re-imburement cheque arrives, but people with no fixed postal address cannot receive the cheque, and in many remote communities there is nowhere to deposit or cash a cheque.⁵

In their *Joint Submission to the Federal Budget 2015-16*, NACCHO and Optometry Australia made two recommendations:

Option 1 was to establish a “single ‘National Indigenous Subsidised Spectacle Scheme’ co-funded by the Australian and State/Territory Governments.”⁶

Option 2 was “Supporting State and Territory Governments to establish their own individual and nationally-consistent Indigenous Spectacle Schemes through an inter-governmental partnership arrangement.”⁷

This is consistent with the recommendations of the *Roadmap to Close the Gap for Vision* and also with a 2013 paper presented by Morse et al representing Brien Holden Vision Institute, Optometrists Association Australia, Vision 2020 Australia and Vision CRC.⁸ Most, but not all, services interviewed for this report had serious concerns on the effectiveness of their respective jurisdiction’s existing spectacles service.

These included:

- Private optometrists participating in the scheme at a loss resulting in them dropping out after a period of time or adopting measures which deter clients from accessing the scheme such as offering appointments several weeks into the future.
- The major chains who have the bulk of the market, such as Specsavers, OPSM and Big W, do not participate in the schemes in some jurisdictions.
- Frequent change in providers in some jurisdictions.
- Difficulties in locations close to jurisdictional borders where patient’s often reside in one jurisdiction, but are required to access services in another resulting in eligibility issues.

⁴ Optometry Australia and NACCHO, p7.

⁵ Morse, Anna, Cappuccio, Skye, Tahhan, N., Burnett, A., Ryan, S., Kiely, P., *What’s fair in vision care? Potential approaches for equitable access to spectacles*, 12th National Rural Health Conference, http://nrha.org.au/12nrhc/wp-content/uploads/2013/06/Morse-Anna_ppr.pdf, 2013.

⁶ Optometry Australia and NACCHO, p4.

⁷ *Ibid*.

⁸ *Ibid*; Morse et al, 2013, p1.

81.6 per cent of optometrists surveyed supported a National Spectacle Scheme for Aboriginal and Torres Strait Islander patients and 88 per cent said they would use such a scheme.⁹ The cost of a national scheme to address 50 per cent of the need for spectacles over three years is \$7.04 million. Economic analysis has found that through prevention of productivity loss by allowing people to study and work would amount to \$30 million if this National Scheme was implemented.¹⁰

The majority of stakeholders in Aboriginal and Torres Strait Islander eye health have indicated that it would be desirable to have a National Aboriginal and Torres Strait Islander Spectacles Scheme, which removes current barriers to accessing spectacles. Ideally this scheme would be as close to universal as possible while also allowing for some regional differences that may occur.

Case Study I - ACCHO-led approach to service delivery: Wuchopperen

The Wuchopperen Health Service is an Aboriginal Community Controlled Health service, with two sites in the Far North Queensland city of Cairns, and another site in Atherton to the west. It is a “one-stop shop” providing a wide range of medical treatments.¹¹ Since 2010, Wuchopperen has had an optometrist and an optical assistant on staff, working 27 hours over five days. The optometrist, Vicki Sheehan, sees patients who predominantly have been referred by general practitioners and diabetes educators. Ms Sheehan said that as ‘recalls’ – getting patients to return for their biennial check-ups – can be difficult, she will often keep an eye on which patients are attending the Medical Service for other reasons and takes the opportunity to do an eye check while they are there. Wuchopperen have found it important that the optometrist does her 27 hours across five days, in order to have a better chance of catching patients who only attend on a certain day of the week. Wuchopperen also undertake fortnightly children and families clinics, which enable them to screen the eye health of both the children and their parents.¹²

The Queensland Government, through their Spectacle Supply Scheme (SSS), provides a free pair of basic spectacles once every two years to holders of a concession card, health care card or Queensland Government Seniors Card. Wuchopperen is a provider for this scheme, as are a large number of private optometrists across Queensland. As this is not a specific scheme for Indigenous people like the Victorian scheme, Ms Sheehan says that this does mean that 2-3 non-Indigenous people per week access the scheme via Wuchopperen, but that this is not a particular burden on their resources.¹³

Ms Sheehan stated that Wuchopperen have a very good relationship with local ophthalmologists who are prepared to accept referrals of patients to initial appointments at no cost to the patient. However where eye surgery is required, Cairns Base Hospital has a considerable waiting list, as do most public hospitals in Australia. Wuchopperen have found

⁹ Optometry Australia and NACCHO, p9.

¹⁰ Optometry Australia and NACCHO, pp4-10.

¹¹ Sheehan, Vicki, (interview), Optometrist, Wuchopperen Health Service, Cairns, 20 January 2016.

¹² *Ibid.*

¹³ *Ibid*; Queensland Government, 2015.

the secret to having their patient seen in a reasonable time period is to “keep pushing.”¹⁴ This takes the form of regularly writing letters and speaking to the hospital, outlining reasons that make their patients deserving of priority in the surgery queue. Examples include: diabetics who require good eye-sight to read the ingredients on food packets; those taking medication who need to be able to read labels to ensure they are taking the right type and dose; older Aboriginal and Torres Strait Islander people who are much more likely to be carers of younger children than older people in the wider community.¹⁵ Patient visits to Wuchopperen for eye examinations in 2015 totalled 1146. Wuchopperen provided 433 clients with glasses under the Queensland Spectacle Supply Scheme and referred a further 197 clients to either an external ophthalmologist, one of two private clinics, or Cairns or Townsville hospitals for specialist treatment.

Ms Sheehan said that she had not seen any cases of Trachoma in the coastal areas of Far North Queensland serviced by Wuchopperen, but had seen some old scars when making visits to Mount Isa, which is 1249 kilometres south-west of Cairns. Ms Sheehan made the point that optometry is only taught in the capital cities and that there is not a sufficient Indigenous component in the courses. She says that in 27 years as an optometrist this has been the best job and she believes more optometrists would be involved in Indigenous eye health if they knew about it.¹⁶

Not only are Western Australia, Tasmania and the Northern Territory entirely without an optometry course, but the large state of Queensland, which is almost 3000 kilometres from the southern border to Cape York, has only one course - in the south-east corner. Optometry courses in North Queensland, Northern Territory and Western Australia would not only have the effect of students having more contact with Indigenous people on a day-to-day basis, but may also encourage Indigenous students to study optometry if it means they do not have to travel thousands of kilometres to do so and can remain close to family and country.

Transportation was identified as one of the major issues facing Wuchopperen as an eye-health care provider. It is a large draw on resources to take patients to appointments with specialists, and to the hospital for surgery. There is a heavy reliance on allied health services to undertake this. If they are unable to transport people, it can result in no-shows at ophthalmologist appointments. In the case of a vitrectomy, patients must travel 350 kilometres south to Townsville to have this procedure. After such an operation, patients are not able to fly. This can then necessitate an 8-hour return road journey from Cairns to collect the patient after a vitrectomy.¹⁷ Until recently, vitrectomies were only undertaken in Brisbane – an impossible ask when the road trip between Cairns and Brisbane is 1680km and takes approximately 18 hours.¹⁸

¹⁴ Sheehan, 2016.

¹⁵ *Ibid.*

¹⁶ Sheehan, 2016.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

Conclusion

With an optometrist and assistant on staff, Wuchopperen is making a big difference to the sight of Aboriginal and Torres Strait Islander people in the Cairns and Atherton regions. Over 400 pairs of glasses provided and a total of 1146 patient visits in one year demonstrates they are making serious inroads into the numbers of Aboriginal and Torres Strait Islander people in the region who had rarely if ever received culturally appropriate, low-cost treatment for their eyes previously.

The location of the optometrist within an Aboriginal Medical Service provides the opportunities to undertake eye examinations on people who would not otherwise visit an optometrist. At an ACCHO the clients feel safe and know that the eye examination will not result in the requirement for spectacles that they cannot afford. Wuchopperen arrange for further specialist treatment required and provide support and guidance along the patient journey. It is important that the optometrist, where possible, work five days a week in order to engage with all potential clients. As with many services, keeping up with transport needs is difficult – especially when treatment in Townsville is required. Also a familiar refrain is the lack of surgery places available in public hospitals and the constant need to try to advance patients in the waiting list. In common with other services, Wuchopperen is reliant to a considerable extent on the goodwill of private ophthalmologists prepared to provide their services at no cost to the patient. Health Departments and Governments need to examine whether this results in equitable treatment compared with other Australians, particularly those in capital cities. Better immersion in Aboriginal and Torres Strait Islander culture and the work of Aboriginal Medical Services at a tertiary studies level would be welcomed by services like Wuchopperen, as would Optometry courses at regional Universities to assist in the number of Aboriginal people studying optometry. The optometrist-onsite model works very well for Wuchopperen, and the Queensland Spectacle Supply Scheme also appears to work well in Far North Queensland. While taking into account local differences and that Spectacle Supply Schemes vary greatly across the nation, the in-house optometrist model is one worth considering by other services.

Case Study II - NACCHO state/territory affiliate-led approach to service delivery: The IDEAS Van

The Indigenous Diabetes Eyes and Screening (IDEAS) Van began operation in March 2014. As a tribute to Queen Elizabeth II in honour of her sixty years as Head of the Commonwealth, the Queensland Government provided \$5 million to the Diamond Jubilee Partnerships Ltd to establish a project that reduces avoidable blindness in Aboriginal and Torres Strait Islander people with diabetes.¹⁹

The IDEAS Van is a custom made fully-equipped ophthalmology and optometry imaging specialist treatment centre. A “clinic on wheels” that travels around rural and remote Queensland. The Van consists of a prime mover provided for use by Volvo, and a 14 metre fully equipped trailer constructed by Traymark. Kurtz Transport provide all logistical services including driving the trailer over the last 120,000 kilometres and setting it up in

¹⁹ Diamond Jubilee Partnership Limited, Ideas Van, <http://www.ideasvan.org>, 2016.

readiness for the clinics. Kurtz Transport have been incredibly generous to the project – providing considerable discounts on labour for driving the truck, and maintenance and repairs of the vehicle. They have designed very innovative solutions which provide the expensive and delicate equipment in the trailer with a soft, cushioned ride across the roughest corrugated dirt and gravel roads.²⁰

Vision loss is 11 per cent of the Aboriginal and Torres Strait Islander health gap. The three most common complications of diabetes within the Indigenous population are refractive change, cataracts and diabetic retinopathy. These account for over 90 per cent of reduced vision amongst Indigenous patients. Over the age of 40 years, Aboriginal and Torres Strait Islander people have 6-10 times the rate of blindness of other Australians. 94 per cent of this vision loss is preventable or treatable.²¹

In response, the IDEAS Van initiative has taken steps to provide Aboriginal and Torres Strait Islander Queenslanders suffering from diabetes with access to high-quality multidisciplinary and specialist care in local, familiar and culturally appropriate settings. It leverages and enhances the capabilities of 19 Community Aboriginal Health Centres (CAHC) and 14 Royal Flying Doctor Service (RFDS) hubs across Queensland from 51 rural and remote population centres and surrounding communities. Each site has a register of local Aboriginal and Torres Strait Islander people with diabetes, and health workers are trained and equipped to screen people on this register for diabetic retinopathy and signs of vision loss.²²

The screening program uses non-mydriatic retinal cameras, photos are taken of the retina of people with diabetes, which are then accessed and analysed remotely by Professor Paul Mitchell and his team to determine if diabetic retinopathy is present. Results are relayed back to the medical service for appropriate action - from booking an appointment for screening next year through to referral for urgent ophthalmic care. This ensures that the time that the IDEAS Van is in town is maximised and only people needing treatment attend appointments on the Van.²³

To further expand the reach of this screening service into remote Queensland, retinal cameras are also transported to 14 additional communities serviced by the Aboriginal Medical Service's outreach program, and the RFDS transports five retinal screening cameras to and between 14 remote hubs.

²⁰ *Ibid*; Elliott, Mike, email to Troy Reeves, 22 March, 2016; De Marco, Lyndall, (interview), Brisbane, 24 Feb 2016.

²¹ Indigenous Eye Health Unit, Melbourne School of Population and Global Health, 2015 Annual Update on the Implementation of The Roadmap to Close the Gap for Vision, University of Melbourne, 2015; Diamond Jubilee Partnership Limited, 2016

²² De Marco, Lyndall, 2016.

²³ De Marco, Lyndall, 2016.

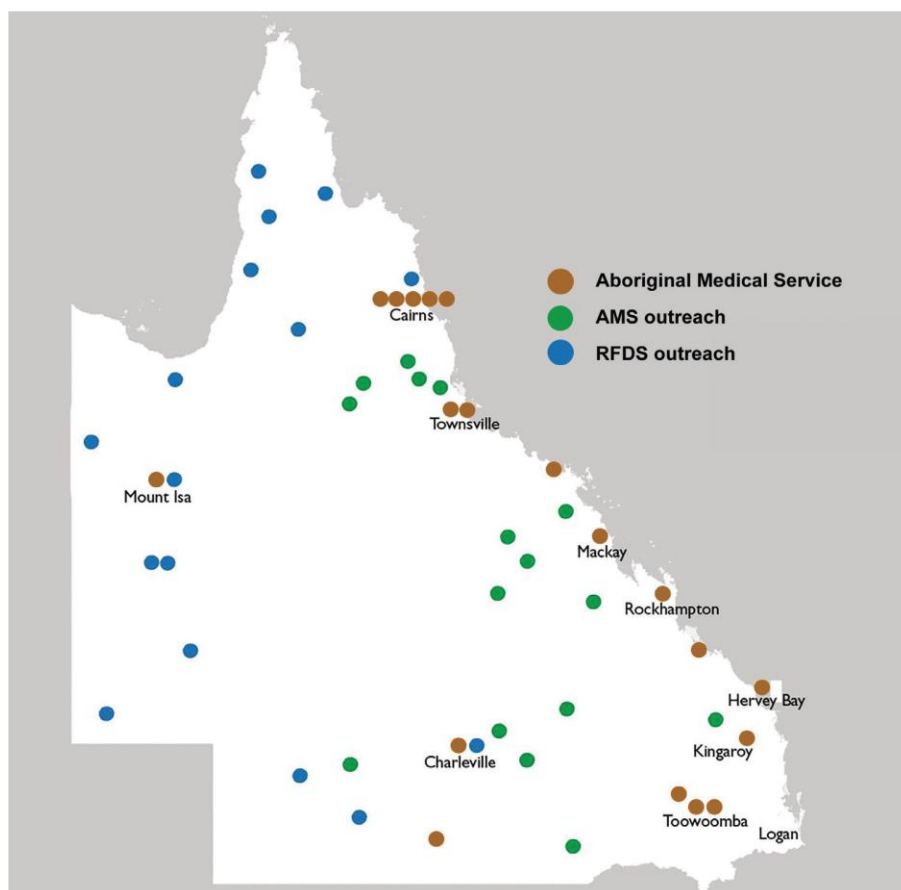


Figure 6: A map of Queensland indicating the screening program for the IDEAS Van with the help of the Aboriginal Medical Services and the Royal Flying Doctors Service. Image courtesy of the Diamond Jubilee Partnership Ltd

In the two years to March 2016, almost 3,500 patients have been screened from 51 communities. Nearly 15,000 retinal photographs have been graded by Professor Mitchell and his team at the Centre for Vision Research Westmead Hospital, and 37 volunteer clinicians have treated almost 1500 people at 91 clinics across Queensland.²⁴

IDEAS Van initiative sites are also equipped to offer point-of-care risk parameter testing to allow real-time monitoring of diabetic control, and have access to specialist clinical support, consultation, and education services via telehealth systems (including tertiary endocrinology support, provided by the Princess Alexandra Hospital telehealth service).²⁵

The Chief Executive Officer of the Diamond Jubilee Partnership Limited, Lyndall De Marco, reported that the IDEAS Van travels up to 5,000 kilometres per month throughout Queensland, to some of the state's most isolated communities. On the IDEAS Van, a clinical team of an ophthalmologist, optometrist and an ophthalmic assistant/orthoptist work together in the three clinic rooms, utilising state of the art equipment to manage these conditions. These professionals are all volunteers who take time out from private practice to work on the Van.²⁶

²⁴ De Marco, Lyndall, 2016.

²⁵ *Ibid.*

²⁶ *Ibid.*

All services on the Van are bulk-billed. The focus is on the engagement of local clinicians so that there is continuity of care between visits. However, some rural and remote centres benefit from fly-in clinicians who meet the Van as it makes one of its many stops. The average attendance at an IDEAS clinic is 87 per cent, with 98 per cent of patients attending at the Mount Isa clinics where the Van visits ten times a year and has become well-known and trusted.²⁷

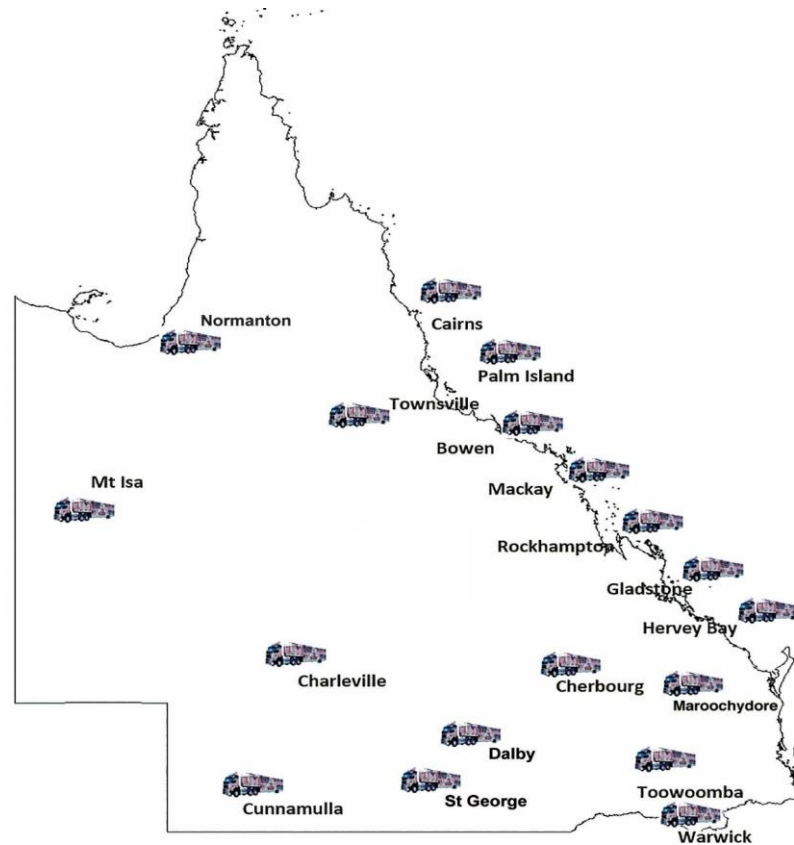


Figure 7: A map of Queensland indicating selected regional hubs for the IDEAS Van. Image courtesy of the Diamond Jubilee Partnership Ltd.

Important ingredients in the success of the IDEAS Van have been the involvement of partner organisations, the screening carried out by the Aboriginal Medical Services and the support from corporate sponsors.²⁸ Ms De Marco expressed an opinion which was also voiced by professionals in Cairns and in other states that there was a need for ophthalmologists to be employed by public hospitals, as visiting ophthalmologists and those in private practice who occasionally operate in the public system will never reduce the waiting list to a reasonable level.²⁹ Throughout the entire sector, there appears to be a high reliance on the ad-hoc charitable actions of ophthalmologists providing their services for the bulk-billing price, and often even donating this fee back to the service. Figures published by Queensland Health for

²⁷ *Ibid.*

²⁸ *Ibid.*

²⁹ De Marco, Lyndall, 2016.

January 2016 demonstrated 4,295 patients waiting for ophthalmological surgery across the state.³⁰

Although the IDEAS Van has been focused until now completely on the treatment of diabetic retinopathy, a recent Australian Government Department of Health scheme - the Outreach Eye and Ear Surgical Services program - provided one-off grants to reduce waiting lists for eye and ear surgery.³¹ The IDEAS Van in partnership with CheckUp accessed this funding. This has seen the organisation recently become involved in a partnership with a public hospital 475 km west of Brisbane to provide cataract surgery. Ophthalmologist Dr Rowan Porter prepared the patients for surgery by Dr Steven Rodwell.³²

Across three rounds of surgery, 54 patients from 15 communities had cataract procedures in Roma in a unique exercise that involved five Aboriginal Health Services and the Royal Flying Doctors Service (RFDS) transporting and caring for patients over a three day period. Patients came from as far as Thargomindah - 660 kilometres away - Cherbourg, St George, Dalby and Cunnamulla. The partnership and communal nature of this three day exercise was essential to its success.³³

The usual path for these patients would have been to sit on a waiting list for a long time, and then be required to travel hundreds of kilometres on their own or with just one support person to a large city hospital for surgery. The prospect of this very daunting experience, combined with the long waiting list, would have seen many patients never actually make it to surgery.



Figure 8: The interior of the three-room van. Image courtesy of the Diamond Jubilee Partnership Ltd.

³⁰ *Ibid*; Queensland Government, Hospital Performance: Elective Surgery, <http://www.performance.health.qld.gov.au/hospitalperformance/es-categories.aspx?hospital=99999>, 2016;

³¹ CheckUp, Media Release: Cataract Surgery Blitz in South West Queensland, http://www.checkup.org.au/icms_docs/235091_Cataract_Blitz_in_South_West_Queensland_3_February_2016.pdf 3 February 2016.

³² *Ibid*; De Marco, Lyndall, 2016.

³³ De Marco, Lyndall, 2016; CheckUp, 2016.



Figure 9: The IDEAS Van set up at Gidgee Healing (Mount Isa). Image courtesy of the Diamond Jubilee Partnership Ltd.

The IDEAS Van is a highly efficient model of delivering eye health services to Aboriginal and Torres Strait Islander people in rural and remote Queensland. With multiple organisations each concentrating on their own area of speciality, the progress of the Van around Queensland treating diabetic retinopathy is virtually seamless. The optometrists and ophthalmologists are seeing patients who have already been assessed as having diabetic retinopathy via the retinal screening cameras operated by the Aboriginal Medical Service staff. The regular presence of the Van in the communities has gained the trust of the people who live there and is demonstrated by the state-wide average attendance of 87 per cent. The IDEAS Van is a model that deserves to be rolled out across Australia and it is to be hoped that other state governments can see the long-term value in this, particularly with respect to *Closing the Gap*.

The operation of the IDEAS Van would not be possible without the very generous financial and in-kind logistical support of organisations such as the Queensland Government, Volvo, Kurtz Transport, J.J. Richards & Sons, Traymark, RFDS, Westmead Millennium Institute, Ellex, RANZCO, RACGP, Diabetes Queensland, the Queensland Eye Institute, Optometrists Association Australia, Princess Alexandra Hospital, University of Queensland, Device Technologies, QAIHC, CheckUp, Extensia, Bayer, BDO, Minter Ellison Lawyers and Crowe Horwath.

Case Study III - Regional Collaboration: Victorian Aboriginal Community Controlled Health Organisation

The Victorian Aboriginal Spectacles Subsidy Scheme (the Scheme) commenced in 2010 after the Australian College of Optometry (ACO), the Victorian Aboriginal Community Controlled Health Organisation (VACCHO) and the Victorian Aboriginal Health Service (VAHS) identified the need for the provision of spectacles to the Aboriginal Community, at minimum cost to the patient.³⁴

Blindness is 6.2 times more prevalent in Aboriginal and Torres Strait Islanders than in the rest of the Australian population and vision impairment is 2.8 times more prevalent. There is 20 times the rate of blindness in the Aboriginal and Torres Strait Islander than in the non-Aboriginal and Torres Strait Islander population. 35 per cent of Aboriginal and Torres Strait Islanders have never had an eye-exam and 39 per cent cannot see normal print. It was found that 94 per cent of this vision loss is preventable.³⁵

As part of the *Closing the Gap* initiative, in July 2010 the Victorian Department of Health provided new funding of \$180,000 for a three-year program to make spectacles more affordable for Aboriginal Victorians. The Victorian Aboriginal Spectacles Subsidy Scheme (the Scheme) was introduced in July 2010 initially to provide 1,800 subsidised visual aids to Aboriginal Victorians over a three year period. It has subsequently been extended and expanded. The program is delivered by the Australian College of Optometry (ACO), and optometry consultations are subsidised by Medicare. Development of the scheme is overseen by the Koolin Balit Eye Health Advisory Group.³⁶

History

The Australian College of Optometry is the principal provider of low-cost eye care in Victoria. Established in 1940 as a non-government, not-for-profit organisation originally to provide a course in optometry - now provided by the universities – the ACO now delivers public health eye-care services in both clinical and outreach settings.³⁷

Since 1985 the ACO has delivered Victorian Eyecare Service (VES) – a state government funded program providing subsidised eye care services to Victorians holding a Pensioner Concession or Health Care Card. Additionally the Visiting Optometrists Scheme (VOS), which has been funded by the Commonwealth since 1975, supports optometrists to take time off from their own practices to deliver services to remote and very remote locations. In

³⁴ Victorian Department of Health, *The Victorian Aboriginal Spectacles Subsidy Scheme Evaluation Report 2012*, Melbourne, 2012.

³⁵ Napper, G., Vickery, C., Barney, K., Peters, J., Anjou, M., Fricke, T., Jackson A.J., *Building an eye care program with Aboriginal communities in Victoria – a partnership approach*, <http://iaha.com.au/wp-content/uploads/2013/12/1355-B4-Napper-GNIAHA2013-11-26-copy.pdf>, Indigenous Allied Health Alliance Annual Conference, Adelaide, 2013.

³⁶ Forrester, S., Peters, J., Anjou, M., Jatkar, U., Jackson, A.J., Napper, G., *Looking Deadly! A systematic approach to improving eye care for Aboriginal Victorians*, Victorian Aboriginal Community Controlled Health Organisation, Melbourne, 2015.

³⁷ Forrester et al, p431.

1998, the ACO opened an optometry clinic at the Victorian Aboriginal Health Service (VAHS) in Melbourne. This now operates two full days per week and about 400 eye examinations are carried out per year. In regional Victoria, this ACO works in partnership with over 80 private optometry practices that participate in the VES.³⁸

While the VOS and VES delivered service to a number of Aboriginal communities in the past, including those communities in central Melbourne, Maribyrnong, Dandenong, Collingwood, St Kilda, and Mullum Mullum, the service was not Aboriginal specific and provided cultural accessibility barriers and cost barriers in the form of a requirement to hold a pension or health care card.

This led to the development of the Victorian Aboriginal Spectacles Subsidy Scheme (VASSS) model. The scheme was developed by the Victorian Department of Health in conjunction with the ACO. Key features include:

- A larger range of spectacle frames were made available than those accessible through the VES. These frames were selected with input from community elders and the Victorian Aboriginal Health Service.
- A patient contribution of \$10 per visual aid (more for non-standard lenses such as photosensitive lenses.)³⁹

The rules of the VES also apply. These include, every two years the provision of:

- One pair of reading glasses and one pair of distance glasses or
- One pair of bifocal glasses or
- One pair of multifocal glasses where necessary.
- Contact lenses if clinically required.
- Low vision aids if clinically required.

ACO's existing working relationship with the ACCHOs, their members and other Aboriginal community groups across Victoria has been recognised as providing an opportunity to promote the Scheme to eligible clients.⁴⁰

In December 2010, the Victorian Health Department provided ACO with an additional \$140,000 to expand the Scheme. These extra funds provided for another 1,069 visual aids in rural and regional areas between February 2011 and June 2013 through private optometry practices already servicing the VES. This expansion was designed to ensure that ACCHOs are able to refer patients to a practitioner in their area. Other benefits included:

- Encouraging development of good relations between a local optometrist and local Aboriginal clients.
- Eliminating travel and improving access to services for people requiring eye care.

³⁸ *Ibid.*

³⁹ Napper et al., 2013, pp.3-10.

⁴⁰ Napper et al., 2013, pp.3-10.

- Encouraging optometrists to work collaboratively with local primary health care providers.⁴¹

In March 2012, the Scheme was again expanded, with an additional \$100,000 provided to deliver an additional 810 visual aids by June 2013.⁴²

In addition to the funding for the ACO to run the VASSS, the VACKH Aboriginal Eye Health Strategy funded an Eye Health Project Officer for VACCHO and a patient pathway co-ordinator for the Eye and Ear Hospital in the 2010-13 period.⁴³

The Victorian Government has now developed *Koolin Balit: Strategic Directions for Aboriginal Health 2012 - 2022*. Eye Health initiatives under this program between 2013 and 2017 include: continuation of the VACCHO Eye Health Project Officer; Victorian Aboriginal Spectacle Subsidy Scheme; and patient pathway co-ordinator at the Eye and Ear Hospital. It also adds additional support to regions for eye health projects, including increased support for co-ordination and patient pathway support – Regional project officers in Loddon Mallee, Grampians, and Greater South West.⁴⁴

The Partners

The Australian College of Optometry

ACO was established in 1940 and has over 800 members and 150 employees. As the leading public optometry institution in Australia, it conducts research and provides clinical services, professional development, and education and membership to the optometry profession.⁴⁵

Victorian Aboriginal Community Controlled Health Organisation (VACCHO)

VACCHO is the peak body for Aboriginal health in Victoria, representing 24 Aboriginal health services who each deliver primary health services to their local communities. VACCHO plays a role in supporting relationships between ACO and the ACCHOs for provision of optometry services and delivery of the Scheme. VACCHO responds to enquiries about the Scheme from ACCHO staff, mainstream organisations and community members. Where optometry services are not available at an ACCHO, VACCHO facilitates links with private optometry services to ensure clients have access to the scheme. VACCHO also responds to enquiries about the Scheme from ACCHO staff, mainstream organisations and community members.⁴⁶ Koolin Balit provides funding for two eye officers with VACCHO.⁴⁷

The Victorian Advisory Council on Koori Health's Eye Health Subcommittee

The Victorian Advisory Council on Koori Health's Eye Health Subcommittee (the VACKH Subcommittee) comprises representatives from major stakeholders in eye health and Aboriginal health in Victoria. This includes state and Commonwealth government health departments, VACCHO, the Royal Victorian Eye and Ear Hospital, ACO, the University of

⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ Forrester et al, 2015.

⁴⁴ *Ibid.*

⁴⁵ Victorian Department of Health, 2012, p6.

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

Melbourne, Vision 2020 Australia, Vision Australia, and the Royal Australian and New Zealand College of Ophthalmologists.⁴⁸ Seventeen ACO optometrists work regularly with Aboriginal communities. This includes both experienced and younger optometrists, with clinical skills in a range of community settings, and specialist skills in paediatrics, ocular disease/therapeutics, low vision, and education. In return they benefit from cultural training, peer support and education, community interaction and learning/exchange.⁴⁹

Locations in which the ACO optometrists work include: the Victorian Aboriginal Health Service (VAHS) Fitzroy; outer suburban Aboriginal Health Services (Bunurong Dandenong and Western Suburbs Indigenous Gathering Place, Maidstone); Indigenous access programs at Braybrook, East Preston and Frankston; the Visiting Optometry Scheme in rural Victoria (13 ACCHOs); community work at schools and community health promotion events; and Northern Territory work with Brien Holden Vision Institute.⁵⁰

Causes of Blindness

The major causes of blindness in Aboriginal Australians in Victoria are cataract (32%) and diabetic retinopathy (9%). The major causes of low vision are uncorrected refractive error (54%) and cataract (27%).⁵¹

Drawn from funding agreements and project plans, the intended outcomes of the Scheme were:

- More optometrist consultation
- More spectacle prescriptions issued
- Earlier identification of vision-threatening eye disease
- Engaging new clients who haven't accessed services before
- Improved uptake of spectacle use
- More Aboriginal communities engaged in delivery of optometry services
- Increased awareness of eye care issues by health workers in ACCHOs
- Increased numbers of enquiries for eye services at ACCHOs
- Increased awareness of eye health risks within Victorian Aboriginal families⁵²

⁴⁸ Victorian Department of Health, 2012, p6.

⁴⁹ *Ibid.*

⁵⁰ *Ibid*, Napper et al, 2013.

⁵¹ Napper et al., 2015, p430.

⁵² Victorian Department of Health, 2012, pp10-12.

Optometry service locations in Victoria



- ACCHO locations only (GOAL IS TO HAVE NONE OF THESE)
- ACCHO locations with VOS/ACO services
- ACCHO locations with VOS and local practices offering scheme
- ACCHO locations with local practices offering scheme
- Practice offering scheme with no local ACCHO

Figure 10: Source: Napper et al., 2013, p11.

More optometrist consultation

In 2011, 509 optometrist consultations were conducted at the Victorian Aboriginal Health Service (VAHS). This was a considerable increase over the average of 316 per year between 2006 and 2010. The Victorian Department of Health found that this was the result of the implementation of the Scheme along with an increase in optometry clinic days from five half days per fortnight to four to six full days per fortnight.⁵³ In 2015, there was approximately 2100 consultations provided for Aboriginal and Torres Strait Islanders through ACO/VES services, not including rural areas.⁵⁴ ACO-operated services reported that 60 per cent of their consultations in 2010-11 were with patients who had not been seen by an ACO-operated service in the last two years.⁵⁵ This has now changed and almost all patients who the services see are return clients.⁵⁶ Data on the number of Aboriginal clients treated through the VES prior to the Victorian Aboriginal Spectacles Subsidy Scheme is not available, as VES providers were not previously required to identify the Indigenous status of people accessing the VES. However, anecdotal evidence indicates an increased demand for

⁵³ *Ibid.*

⁵⁴ Australian College of Optometry, 2016.

⁵⁵ Victorian Department of Health, 2012, pp10-12.

⁵⁶ Bentley and Napper 2016; Forrester 2016.

optometry services by Aboriginal people since the Scheme's commencement. A private optometrist practicing in a rural area for 17 years said he had not seen significant numbers of Aboriginal patients until the Scheme started.⁵⁷

More spectacle prescriptions issued

4199 pairs of spectacles were prescribed under the Scheme between 2010 and 2013. From 2013 to January 2016, a total of 5570 spectacles have been provided through the VASSS. In 2015 there were 2100 client consultations with Aboriginal and Torres Strait Islander community members, excluding rural practices. 2386 pairs of spectacles were dispensed through the VASSS across all metro and rural services in 2015.⁵⁸

From the very beginning, the acceptance of this Scheme was seen in the rate of collection of spectacles. In September 2011, there was only three individuals (or 3 per cent) out of 107 patients who had ordered spectacles but had not collected them. This compared with 6 out of 38 patients (or 16%) who did not collect them in July 2010 – indicating the affordability and acceptability of the frames by patients under the Scheme.⁵⁹

Of the 641 patients across Victoria who ordered spectacles through the scheme by 30 June 2011, 87 per cent had placed orders totalling \$20 or less – indicating the purchase of one or two pairs of \$10 glasses. Only 7 per cent of orders were greater than \$100. ACO advises this is due to the purchase of more expensive frames or of photosensitive lenses.⁶⁰ A number of patients advised ACO that they had not previously purchased glasses or attended eye-checks due to cost. Both providers and patients commented that the frames available under the Scheme are of better appearance, quality and comfort than those available through the VES. Some patients had been using readymade glasses due to the undesirable appearance and/or cost of frames under the VES.⁶¹

Earlier identification of vision-threatening eye disease

Refractive error is inexpensively and easily corrected with spectacles. Since the introduction of the Scheme the ratio of spectacles prescribed to consultations performed at VAHS has increased to 0.9 from 0.5.⁶² 98 per cent of vision loss due to diabetes can be prevented with timely treatment. In ACO-operated services, the number of patients examined with diabetes increased from 22 patients in September 2010 to 79 patients in June 2011. This increase coincided with the commencement of the Visiting Optometrists Scheme at Swan Hill, Echuca, Dareton, Robinvale and Mildura. Some areas had rates of diabetes as high as 43 per cent among patients examined. The Victorian Department of Health stated that “it is critical that more Aboriginal patients who have diabetes access appropriate eye care on an annual basis.”⁶³

⁵⁷ *Ibid.*

⁵⁸ Australian College of Optometry, *Victorian Aboriginal Spectacles Subsidy Scheme: summary February 2016*, Melbourne, 2016.

⁵⁹ Victorian Department of Health, 2012, p13.

⁶⁰ Victorian Department of Health, 2012, p13.

⁶¹ *Ibid.*

⁶² *Ibid.*, p15.

⁶³ Victorian Department of Health, 2012, p16.

Optometrists typically refer cases of chronic eye diseases to ophthalmologists. This includes diabetic retinopathy, cataract and glaucoma. Baseline data are not available for treatment of these diseases, but it is possible to see that there is detection and provision of care for more conditions than refractive error.

The Table below provides a summary from VOS trips. Column D includes diagnoses for:

- Dry eye
- Pterygium
- Age related macular degeneration
- Oculomotor issues
- Diabetic retinopathy
- Cataract
- Glaucoma ⁶⁴

A VOS Clinic	B Period	C Patients examined	D Number of diagnoses other than refractive issues	E Referrals made	F Reports provided
Mildura, Dareton and Robinvale	Apr 2011 - Nov 2011	239	72 (30 %)	21 (9%)	78 (33%)
Swanhill and Echuca	Mar 2011 – Oct 2011	178	10 (6%)	9 (5%)	34 (19%)
Lake Tyers and Orbost	Aug 2010 – Jan 2012	125	17 (13.6%)	17 (14%)	22 (18%)
Total		542	99 (18%)	47 (9%)	134 (25%)

Source: Victorian Department of Health, *Evaluation Report: the Victorian Aboriginal Spectacles Subsidy Scheme*, 2012, p17.

Other Health Benefits

Other health benefits reported as a result of the Scheme include patients being better able to read food and medication labels to manage their diabetes and other conditions. One patient reported she had taken up knitting to help her quit smoking now that she could read the knitting patterns.⁶⁵ Some patients were estimated to have been in need of an eye assessment for as long as 10 years due to developing vision problems, headaches or improvising with ready-made glasses.⁶⁶

Problems

Five of the six providers spoken to for the Evaluation Report said ‘no shows’ were one of the biggest challenges and said that support from the local ACCHOs had been crucial in improving attendance rates. Two optometrists raised difficulties in referring patients to ophthalmologists. One commented on the need to weigh up referring a patient to travel to Melbourne for free treatment, or to a local services that charges. The practitioner mentioned that there was one visiting ophthalmologist who bulk-bills but that the

⁶⁴ Victorian Department of Health, 2012, p16.

⁶⁵ Victorian Department of Health, 2012, p16.

⁶⁶ *Ibid.*, p.18

optometrist does not wish to burden him with every patient. Another private practitioner commented that although referrals are being made for clients with diabetic retinopathy, the cost of seeing a retinal specialist of around \$200 out-of-pocket may prevent some clients from attending the specialist.⁶⁷

As with other services, there are concerns that the current freeze on Medicare rebate indexation and the move to under-65s only being eligible for a bulk-billed check-up every three years has led to some concern about the financial pressure put on both Aboriginal Medical Services and on those in private practice who volunteer their time.⁶⁸ Attendance remains a challenge in Victoria, with the lack of eye health co-ordinators in the state considered to be a contribution to this situation. Access to ophthalmologists are another challenge. While they exist in most towns, only some bulk bill. One ACCHO is in the position of being able to pay ophthalmologists, but most aren't. The public waiting list for eye surgery is long, and the scenario seen in the 'leaky pipe' comes into play, with many patients lost from the system before they get to surgery.⁶⁹

As can be seen from the figure below, the long and drawn out process for Aboriginal and Torres Strait Islander Australians to reach surgery from the initial assessment sees many patients drop out. This can be through frustration and seeing others who have waited even longer than they have still not being treated. It can be due to something as simple as not having a fixed postal address, or moving and not updating that postal address and therefore not becoming aware of appointments.⁷⁰ The 'plug' at the end of the pipe is probably the biggest cause of patients not making it all the way to surgery. Long waiting lists are the main deterrent to persevering with a seemingly endless process. Simplification of the process and considerably more publicly funded ophthalmologists undertaking surgery would see a lot more people treated.⁷¹

⁶⁷ *Ibid.*, p17.

⁶⁸ Bentley, Sharon, and Napper, Genevieve, (interview), Australian College of Optometrists, Melbourne, 4 February 2016; Forrester, Susan, (interview) VACCHO, Melbourne, 4 February 2016.

⁶⁹ Bentley and Napper 2016; Forrester 2016.

⁷⁰ Forrester 2016.

⁷¹ *Ibid.*

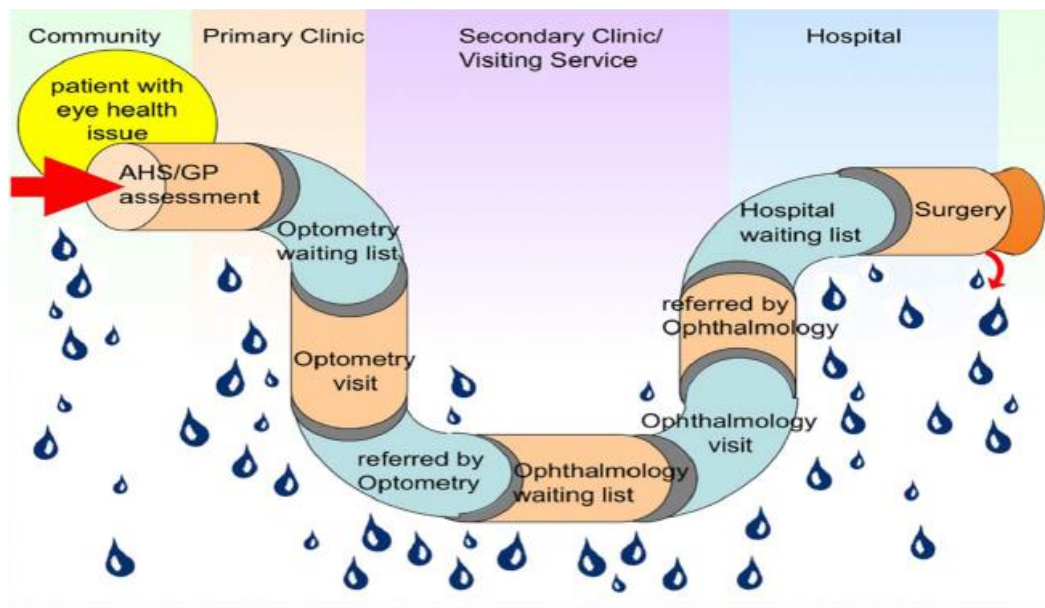


Figure 11: The 'leaky pipe,' from *The Roadmap to Close the Gap for Vision* ⁷²

The Victorian Aboriginal Spectacles Scheme has been an overwhelming success, with close to 10,000 pairs of spectacles being provided to Indigenous patients since 2013. While there are some geographic areas of Victoria which still do not have ready access to the Scheme and any Scheme attempting to address such disadvantage can always be better resourced, the Scheme receives praise from almost all stakeholders in Victoria and is one that should be closely examined by other jurisdictions with a view to replication.

Case Study IV - ACCHO-led Service Delivery: Institute for Urban Indigenous Health, Brisbane

The Institute for Urban Indigenous Health (IUIH) was established in 2009 in the inner-Brisbane suburb of Bowen Hills by four Aboriginal Community Controlled Health Services (ACCHS) to provide for the needs of the 65,000 Indigenous Australians living in south-east Queensland. This figure is approximately the same as the combined Aboriginal and Torres Strait Islander populations of Victoria and South Australia, and is 9000 more than the total in the Northern Territory. The IUIH regional network has now expanded to eighteen multi-disciplinary primary health clinics or ACCHS, stretching from the Queensland-New South Wales border to Caboolture north of Brisbane and from Laidley west of Brisbane to North Stradbroke Island in the east. Approximately 26,000 patients per annum access these clinics, which provide many specialist services.⁷³

Most of the eighteen Health Services provide eye health care. These include:

- eye health screening and assessment by a qualified optometrist

⁷² Taylor, H.R., Anjou, M.D., Boudville A.I., McNeill, R.J., *The Roadmap to Close the Gap for Vision*, Full Report, Indigenous Eye Health Unit, School of Population Health, University of Melbourne, January 2012.

⁷³ Institution for Indigenous and Urban Health (IUIH), www.iuih.org.au, no date, accessed 29 Feb 2016; Penrose, Lisa, Optometrist, IUIH, Interview 24 February 2016, Brisbane.

- access to a range of free glasses, low vision aids and vision therapy if required
- information about maintaining good eye and vision health
- referral to specialist ophthalmology services if laser or cataract surgery is required.⁷⁴

There is fixed eye equipment in fourteen clinic sites. The Fred Hollows Foundation, through an agreement with the Australian Government Department of Health, donated the funds for the equipment at five of these sites. Where these services are not provided in clinic, they are provided by a mobile eye health van which predominantly visits services in northern Brisbane. All clinics provide transport for patients requiring it. IUIH is funded by a combination of Commonwealth and State Government programs and revenue from the clinics billing items to Medicare.⁷⁵

The Australian Government Department of Health's Care Co-ordination and Supplementary Services is one of the Commonwealth programs that assists. This aims to improve access to co-ordinated multi-disciplinary care for Aboriginal and Torres Strait Islander patients with chronic diseases, including diabetes. The co-ordination is provided by nurses and Aboriginal Health Workers and helps patients access the services needed to treat chronic disease. A flexible funding pool is also available to Care Co-ordinators to expedite patient access to urgent and essential allied health or specialist services, certain medical aids and transport to services.⁷⁶

The Queensland Government's Spectacle Supply Scheme (SSS) provides a free pair of basic spectacles once every two years to holders of a concession card, health care card or Queensland Government Seniors Card.⁷⁷ IUIH is a provider for this scheme, in addition to a large number of private optometrists across Queensland. IUIH have found that approximately eighty per cent of their patients qualify under the scheme. The subsidy for dispensing spectacles is only \$30 each, however with the 2015 changes in Medicare, routine full eye examinations for those under 65 are only payable once in a three year period and the bulk billing rate has been reduced to \$56.80. The Medicare rebate for another examination within three years is only \$28.45. IUIH has found that this change has impacted significantly on their income.⁷⁸

With the high incidence of preventable vision loss, which requires regular monitoring, a routine check every three years is not best practice and these are check-up costs that the clinics and private practices then have to fund from other income. For those conditions which require contact lenses, manufacturers have been generous in the past in providing these for low or no cost under special Schemes but the continuation of these schemes is certainly not assured.⁷⁹

⁷⁴ IUIH, 2016

⁷⁵ Penrose, 2016.

⁷⁶ Australian Government, Department of Health, *Chronic Disease*, <http://www.health.gov.au/internet/main/publishing.nsf/content/irhd-chronic-disease>, 2015.

⁷⁷ Queensland Government, *Queensland Spectacle Supply Scheme*, www.qld.gov.au/health/support/equipment/types/spectacles/index.html, 2015.

⁷⁸ Penrose 2016.

⁷⁹ *Ibid*; OPSM, *We Bulk Bill*, <http://www.opsm.com.au/eye-care/benefits/bulk-billing>, 2014.

A total of 3940 optometry patients across the eighteen services were seen in the twelve months to September 2015, with over 200 spectacles per month issued under the Queensland Government's Spectacle Supply Scheme (see Fig 1). As can be seen in Fig 2, approximately half the patients seen at the 18 clinics have refractive error, hence the large demand for spectacles.

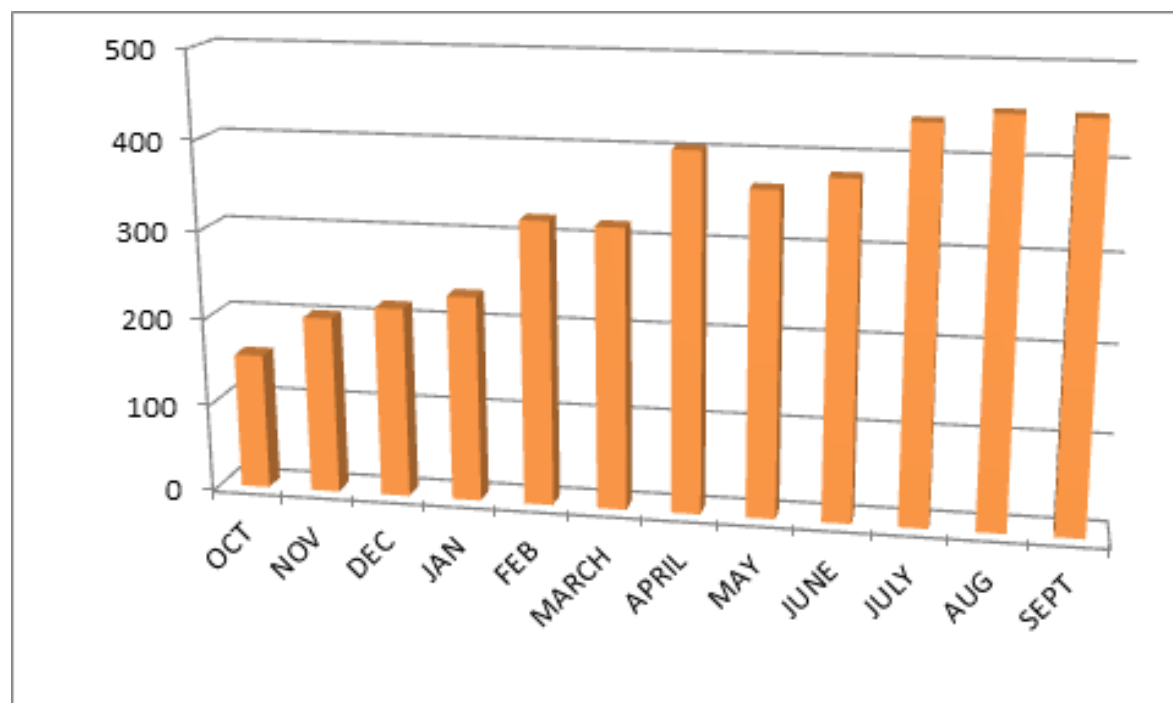


Fig 12: Optometry Patient Consultations Oct 2014-Sept 2015 (IUIH Regional data) Total: 3940 Oct 2014 - Sept 2015
200+ pairs of MASS (low income) spectacles dispensed per month

Diabetic retinopathy is the third highest diagnosis in south-east Queensland as demonstrated in Fig 2 and one which is much more prevalent amongst Indigenous people than the wider population. This can be treated by the IUIH Ophthalmology team either at the ACCHO clinics or in the consulting rooms of participating ophthalmologists. Cataract is the second largest diagnosis shown in Fig.2. The length of time between diagnosis and surgery at public hospitals can often mean that patients do not ultimately end up having the surgery. Queensland Health figures from January 2016 showed 4,295 people waiting for eye surgery across the state.⁸⁰

⁸⁰ Queensland Government, *Hospital Performance: Elective Surgery*, <http://www.performance.health.qld.gov.au/hospitalperformance/es-categories.aspx?hospital=99999>, 2016.

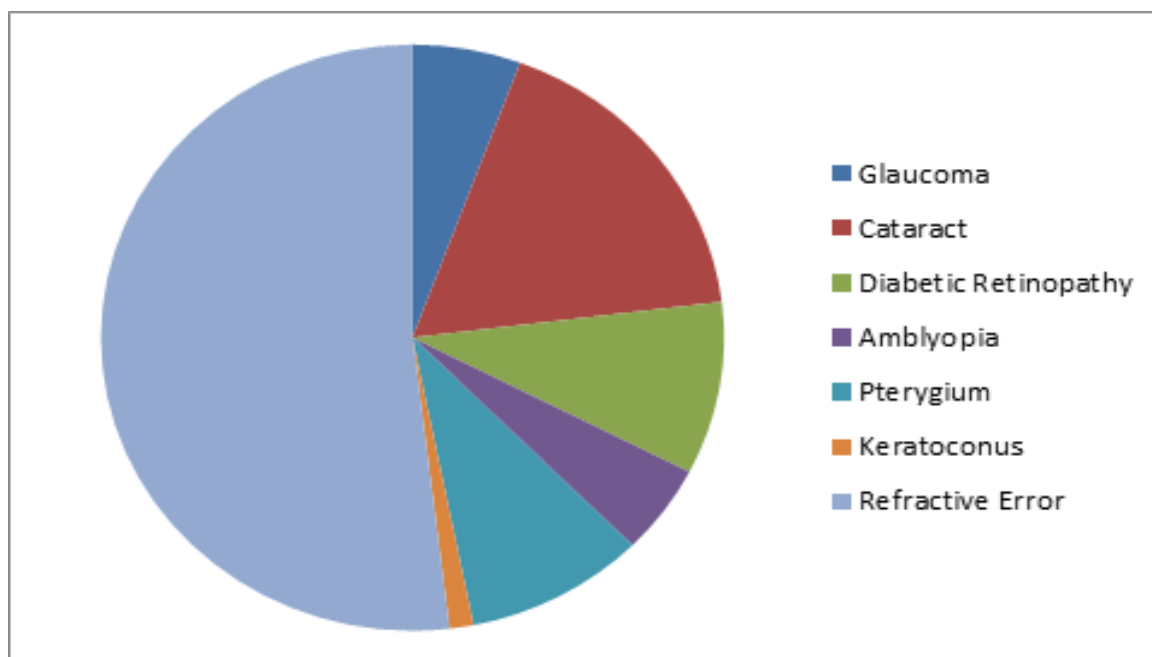


Figure 13: Major eye conditions diagnosed in 11 clinic locations over a 3 month period in 2015

If the patient is transient, or even moves just once, loss of contact over time can mean the patient is not advised when their surgery date is approaching. Alternatively, when a patient sees so many other friends and relatives waiting for surgeries for a long time, they give up hope of ever receiving their cataract operation and disconnect from the system.⁸¹

Similarly to the IDEAS Van, the IUIH recently received funding from the Australian Government's scheme to reduce eye and ear surgery waiting lists. Through CheckUP - the chosen provider in Queensland - \$63,000 was provided from the *Outreach Eye and Ear Surgical Services Program*. This funding was used, along with funding for lenses provided by The Fred Hollows Foundation, to undertake a total of 33 cataract surgeries across two days at the Peninsula Private Hospital at Redcliffe on the northern outskirts of Brisbane, with the assistance of two surgeons.⁸² With the efficiencies achievable by a private hospital that is not also required to run such facilities as an Emergency Department and Maternity Ward, eighteen eye surgeries were able to be completed on Day One and fifteen on Day Two. Eight per day is generally the maximum achievable in a public hospital in the greater Brisbane area and these would not all have been Aboriginal and Torres Strait Islander patients. As with the IDEAS Van, IUIH found that crucial to success was both the prior planning and preparing patients and ensuring they attend, and also making the whole process one that the entire group goes through together.⁸³

Providing IUIH with the autonomy to arrange their own surgery days, solely for patients of the ACCHS and where the patients could all support one another in a community environment rather than being with strangers at a large hospital such as the Royal Brisbane appears to be a successful way of doing eye surgery and an extension of this program would be widely welcomed. Follow-up continuity of care for cataract patients is also crucial and

⁸¹ Sheehan, 2016.

⁸² Penrose, 2016; CheckUp, 2015.

⁸³ Penrose, 2016.

IUIH has found by completing pre and post op appointments “under the same roof” in the patient’s ACCHS has improved the quality of follow up care, and reduced complications compared to the public hospital pathway.⁸⁴

Other than the above-mentioned concerns on the low rebates from the Queensland and Australian Governments for eye examination and spectacle provision, IUIH’s main concern for south-east Queensland is that their Eye Health Manager’s position and also an assistant continued to be funded so that the success seen since 2009 can continue. As with the Wuchopperen service in Cairns, IUIH expressed concerns that there appeared to be little to no exposure to Indigenous patients or cultural awareness training amongst optometry graduates in Queensland - as most evidenced by a surprising lack of understanding demonstrated during an interviewing process recently, in which IUIH failed to find a suitable candidate.⁸⁵

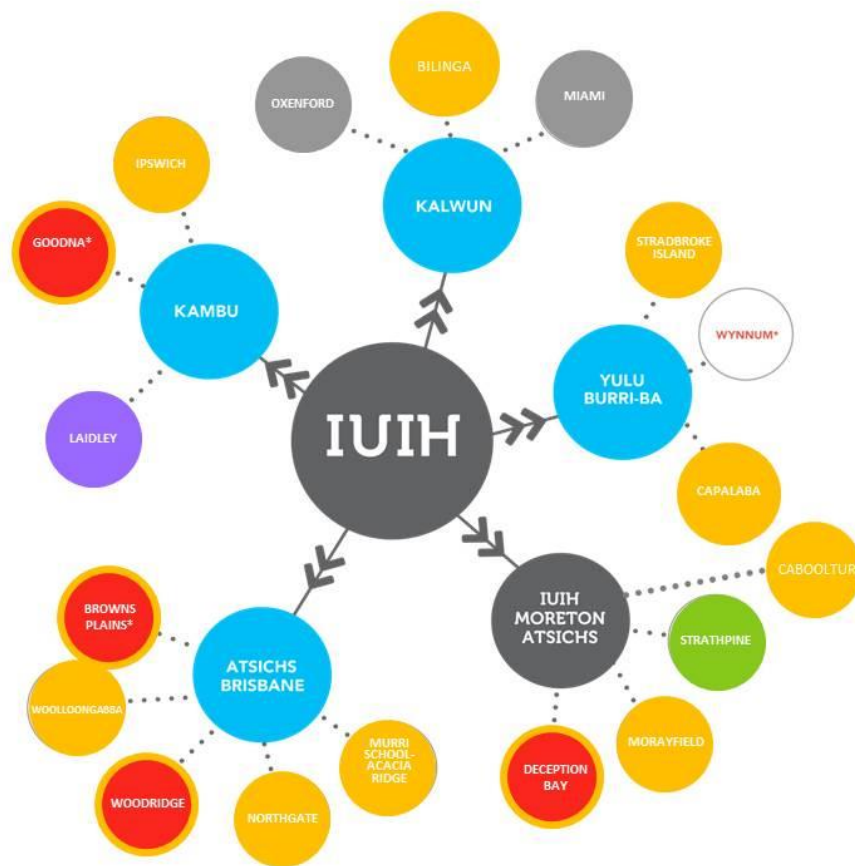


Figure 14: The hub and spoke model of IUIH and its services across south-east Queensland.
Source: IUIH.

The IUIH hub and spoke model appears to work very effectively. With 18 services across south-east Queensland – one of the most densely populated areas for Aboriginal and Torres Strait Islanders – IUIH and the ACCHS has been able to treat the eyes of almost 4000 people per year, a figure expected to be closer to 6000 in the 2015/16 financial year.⁸⁶ Half of these

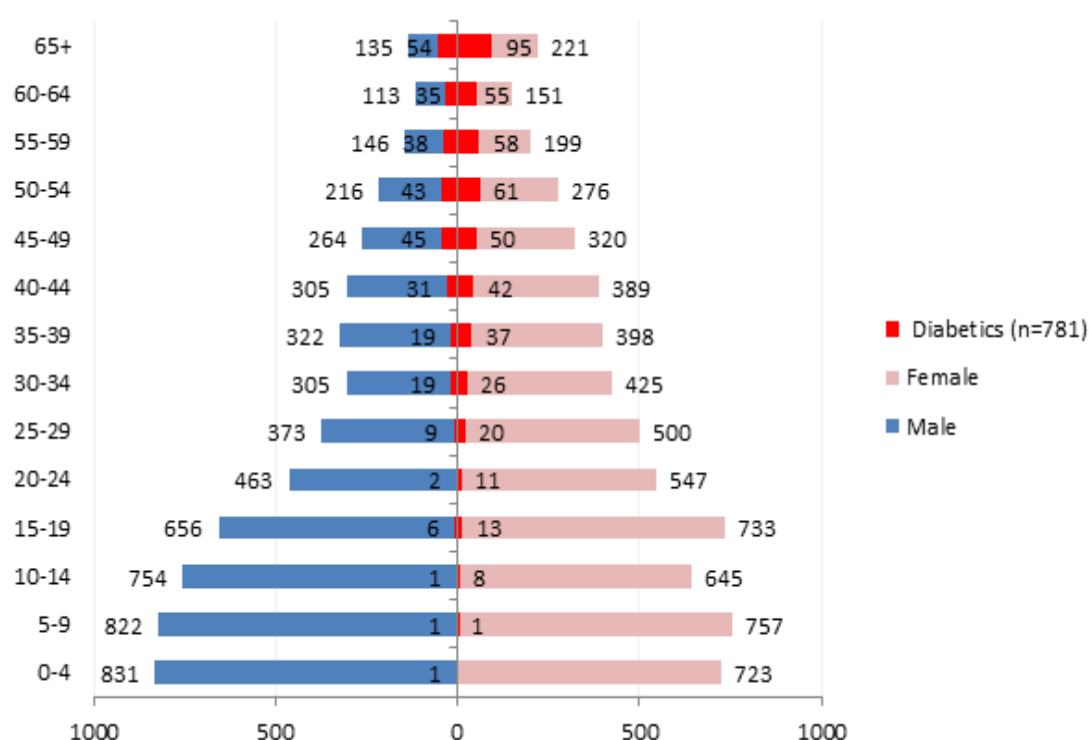
⁸⁴ Penrose, 2016.

⁸⁵ Sheehan, 2016; Penrose 2016.

⁸⁶ Penrose, 2016.

can be treated quickly and effectively by the provision of spectacles. The funding was provided under the Outreach Surgical Services (OSS) scheme from the Australian Government. IUIH was able to hire an operating theatre and surgeons for two days, operating exclusively on the eyes of Aboriginal and Torres Strait Islander patients. It appears to have been very successful and is a model that governments should consider on a more permanent basis.⁸⁷

In common with most other organisations interviewed for this report, the low level of Medicare rebates for eye examinations and the change to only bulk billing patients under 65 years for an examination once every three years were a cause for concern. Additionally, IUIH believe that the Queensland Spectacle Supply Scheme does not recompense sufficiently per dispensed pair of spectacles for either an ACCHO or private practice to provide spectacles without incurring a loss. Like Wuchopperen in Cairns, it was felt in south-east Queensland that optometry graduates emerged from university relatively unfamiliar with Aboriginal health issues and were not culturally aware. Assuming continued funding of the Eye Health Manager's position and that of her assistant, it appears that IUIH will continue to make serious inroads into treating the considerable number of Aboriginal and Torres Islanders in south-east Queensland who require eye treatment.



Total number of active Indigenous clients across south-east Queensland with Diabetes, June 2015 (n=781)
(Representative of 9 Aboriginal and Torres Strait Islander Community Controlled Health Services)

⁸⁷ *Ibid*, CheckUp, 2016.

Case Study V - Regional Collaboration: Central Australian and Barkly Integrated Eye Health Strategy (CABIEHS)

In 2005 a feasibility assessment for an integrated regional eye service in Central Australia, The Banscott Report,⁸⁸ was undertaken. This report identified a fragmented eye health system in Central Australia that did not sufficiently address the needs of the local Indigenous population. The Central Australia and Barkly regions have an Aboriginal and Torres Strait Islander population of around 20,000. Outside of the two major towns of Alice Springs and Tennant Creek, this population is dispersed across a large geographic area which includes outstations and a number of small remote communities.

In response to these gaps identified, the *Central Australia and Barkly Integrated Eye Health Strategy* (CABIEHS) and Steering Committee was formalised in 2010 and since then has continued to work toward the shared vision that *'All people in Central Australia and Barkly regions have access to timely and appropriate eye health and vision care services.'*

CABIEHS provides the partnership and governance arrangements to facilitate a shared responsibility for the delivery of eye health and vision care services and the advancement of an effective eye health system across the two regions. In essence, CABIEHS was established as a result of there being no single organisation mandated with the specific responsibility or authority to provide the full comprehensive and cost effective eye health service across the two regions.

The membership of CABIEHS consists mainly of those key eye health service providers at the primary, secondary and tertiary health care levels, relevant funders and key policy and decisions makers. Membership of CABIEHS includes and is not limited to representation from the two major Aboriginal Community Controlled Health Services (ACCHOs) from each region, The Fred Hollows Foundation, the Northern Territory and Commonwealth governments, and other non-government stakeholders. CABIEHS aims to provide an integrated eye health service delivery model with a seamless and effective patient journey for the Central Australia and Barkly regions of the Northern Territory, especially for residents of remote Indigenous communities.

One of the most critical functions of CABIEHS is to enable the coordination of eye care across primary, secondary and tertiary levels of the health system, across both regions, using a patient-centred approach. This includes the provision of eye intensive surgeries at Alice Springs Hospital to avert the build-up of surgery lists and manage alignment with the national standard for wait list timeframes. Between 2007 and 2015, 16 Surgery Intensive weeks have provided 770 surgeries to 746 patients from both regions, significantly reducing waiting lists.

The collection, collation and analysis of eye health data and service information is pivotal to support strategic, operational and clinical decision making for CABIEHS. Consistency in stakeholder reporting has been aided by an agreed CABIEHS dataset, which was formalised

⁸⁸ Banscott Health Consulting (2005) *Integrated Regional Eye Service in Central Australia: feasibility assessment report*.

in 2014 and has further enhanced the committee's ability to identify and address service gaps. Whilst the screening needs have always been recognised (as highlighted by the Banskott Report), optometry data indicates a 9% increase in screening between 2014 and 2015⁸⁹. This correlates with the ophthalmology data, which reflects a 12% rise in outpatient department appointments between 2012 and 2015, with 75% of these surgical appointments being completed.⁹⁰

Prescription glasses issued for refractive error also increased by 35% during this time period, indicating more opportunity for detection of eye health problems through increased screening and streamlined services provided by the partners.

Undoubtedly, strong relationships between partners have contributed to a smoother and less fragmented patient pathway. These relationships operate at the senior executive level where policy decisions can be made, and at the operational level where staff are working together in a practical way to resolve issues. Notable achievements that have directly impacted on the patient journey include:

- Three positions supported through CABIEHS for outreach eye care services in Central Australia and the Barkly which includes an Outreach Ophthalmology Indigenous Liaison Officer (ILO) based at Alice Springs Hospital. The positions have been funded by the Australian Government and were secured by a collaborative funding submission through the CABIEHS. These roles are critical for streamlining the patient journey and the ILO position in particular strengthens the cultural safety of the patient journey, meaning that fewer patients drop out of the system.
- The improvement and strengthening of outreach optometry services through the ongoing collaboration between the ACCHOs and the Brien Holden Vision Institute.
- Collaborative advocacy activities resulting in the securing of additional resources towards achieving the CABIEHS shared vision. This includes workforce; equipment and infrastructure upgrades.
- Continual identification of eye care gaps and barriers to accessing services and an agreement on priority action areas for the regions.

The diagram below shows the various points along the patient journey that are being strengthened through CABIEHS actions – demonstrating that CABIEHS, through collaborative action, impacts almost every part of the rural/remote patient journey for eye care.

⁸⁹ Collation of CABIEHS partner's optometry data, 2015

⁹⁰ Alice Springs Hospital Outpatient Department Ophthalmology Data, 2015

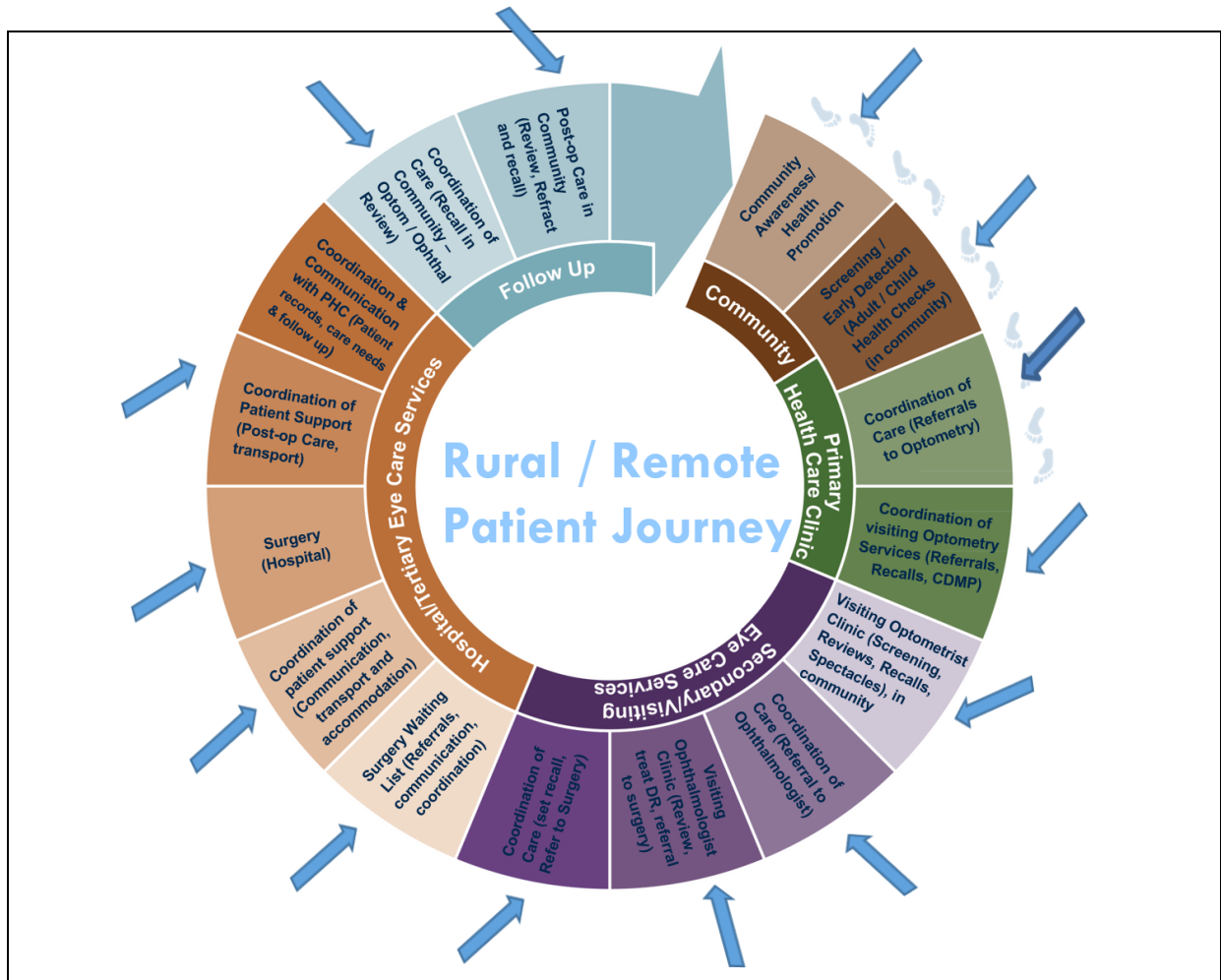


Figure 15: Components of the patient journey supported by CABIHS actions

A 2012 independent review of CABIHS concluded that the continuation of this collaborative approach to streamlining the eye health system for the region is justified and required until at least all of the key components of eye care services are in place for Central Australia and the Barkly.⁹¹

In 2014, an internal review process by the CABIHS Steering Committee mapped the progress achieved and identified new and existing key priority areas that would continue to strengthen and improve access to eye care services for Aboriginal and Torres Strait Islander people.

In order to continue working towards a comprehensive eye health system that is efficiently streamlined and ensures cultural safety, the CABIHS Committee continues to use its Health Systems Strengthening approach to inform and underpin future strategic directions.

Progress is underway to align the strategy towards the shared goal of informing the national eye health system and addressing the eye health needs of Aboriginal and Torres Strait Islander people in the coming years.

⁹¹ Health Policy Analysis (2012) CABIHS Review Final Report, April 2012

Case Study VI - National Collaboration: Vision 2020 Australia

Established in October 2000, Vision 2020 Australia is a national advocacy organisation funded by the Australian Government's Department of Health, member organisations and some eye health related private organisations. Their work is based around four key pillars: Prevention and Early Intervention; Aboriginal and Torres Strait Islander eye health and Vision Care; Independence and Participation; and Global advocacy.⁹²

Vision 2020 Australia is part of *VISION 2020: The Right to Sight*, a global initiative of the World Health Organisation and the International Agency for the Prevention of Blindness. Vision 2020 Australia represents around 50 member organisations involved in: local and global eye care; health promotion; low vision support; vision rehabilitation; eye research; professional assistance and community support.⁹³

Vision 2020 Australia Aboriginal and Torres Strait Islander Committee

The Vision 2020 Australia Aboriginal and Torres Strait Islander Committee provides a platform for members to collaborate and shape the direction of Vision 2020 Australia's systemic advocacy related to Aboriginal and Torres Strait Islander eye health and vision care. Currently chaired by Jaki Adams-Barton from The Fred Hollows Foundation, the members of this committee are:

- Aboriginal Health and Medical Research Council of NSW
- Aboriginal Health Council of South Australia
- Australian College of Optometry
- Australian Society of Ophthalmologists
- Brien Holden Vision Institute
- Indigenous Eye Health, the University of Melbourne
- Lions Australia
- Lions Eye Institute
- National Aboriginal Community Controlled Health Organisation (NACCHO)
- OneSight Foundation
- Optometry Australia
- Optometric Vision Research Foundation
- The Fred Hollows Foundation
- Royal Institute for Deaf and Blind Children
- The Royal Australian and New Zealand College of Ophthalmologists.⁹⁴

NB. with NACCHO Affiliates being invited to join the Committee in 2016.

⁹² Ah Tong, Brandon and Davies, Sarah, Interview 3 February, Vision 2020, Melbourne, 2016.; Vision Initiative, <http://www.visioninitiative.org.au/about-the-program/what-is-the-vision-initiative>, 2016.

⁹³ Vision Initiative 2016.

⁹⁴ Vision 2020, *Aboriginal and Torres Strait Islander Committee*, <http://www.vision2020australia.org.au/about-us/our-committees/aboriginal-and-torres-strait-islander-committee>, no date.

This committee supports and promotes the *Roadmap to Close the Gap for Vision* (the Roadmap), developed by Indigenous Eye Health at the University of Melbourne. It directly supports the achievement of Vision 2020 Australia's third goal in the Strategic Plan 2014-17:

*To ensure that Aboriginal and Torres Strait Islander people have equity of access to quality eye health and vision care services.*⁹⁵

The Committee is a policy and development mechanism for advocacy and brings together a range of stakeholders to give each of these important organisations a voice in developing policy and program initiatives for eye health and vision care in Australia.⁹⁶

The Committee's primary goal moving forward is ensuring engagement with Aboriginal Community Controlled Health Organisations (ACCHOs) to make sure this voice is included in Vision 2020 Australia's advocacy. The peak body, NACCHO, have been involved on the Committee for a number of years, including holding the Chair position during the January 2012-December 2013 term.⁹⁷

The Vision Initiative

The Vision Initiative is an integrated health promotion program funded by the Victorian Government and managed by Vision 2020 Australia. It aims to prevent avoidable blindness and vision loss in Victoria.

The Vision Initiative is the Victorian Government's public health response to the National Framework for Action to Promote Eye Health and Prevent Avoidable Blindness and Vision Loss and aims to prevent avoidable blindness and reduce the impact of vision loss for all Victorians.

The Vision Initiative has three objectives:

- improve the understanding and awareness among **health professionals and eye health professionals** of eye health and vision issues and referral pathways
- increase **community** awareness and knowledge of at-risk, non-tested and under-tested groups about the importance of prevention activity, regular eye tests and the value of low vision services
- ensure a platform **for collaboration and sustainable partnerships** between Victorian eye health and vision care providers, government and other organisations.

Partnerships are a key mechanism to the success of the Vision Initiative. The program receives ongoing support from the Vision Initiative Steering Committee which is made up of 14 organisations representing the eye and health sectors across Victoria.⁹⁸

⁹⁵ Vision 2020

⁹⁶ *Ibid.*

⁹⁷ *Ibid.*

⁹⁸ Vision Initiative, 2016.

In 2014, the Australian Government endorsed the *Implementation Plan under the National Framework for Action to Promote Eye Health and Prevent Avoidable Blindness and Vision Loss* (NFIP). The NFIP outlines Commonwealth responsibilities for eye health and vision care, nominating three key priority areas: Aboriginal and Torres Strait Islander eye health; preventing eye disease associated with chronic conditions (particularly diabetes); and improving the evidence base. However, the current NFIP is limited to Commonwealth responsibilities and does not include the role of states and territories.

Vision 2020 Australia has called for the development and implementation of a successor to the 2014-16 National Framework Implementation Plan with priorities, responsibilities and performance indicators for the Commonwealth and all states and territories until 2019.⁹⁹

Vision 2020 Australia has also been campaigning to prevent and treat avoidable vision loss and blindness in Aboriginal communities. They have identified that at least 75 Local Government Areas with Public Health Networks (PHNs) across Australia require a targeted eye health prevention strategy. They have called for \$20.1 million investment by the Australian Government over four years to fund the prevention strategy.

Joint Sector Funding Proposal: Close the Gap on Eye Care

In April 2015, Vision 2020 Australia submitted a sector funding proposal to the federal government, *Close the Gap in Aboriginal and Torres Strait Islander Eye Health and Vision Care*. The eight recommendations, which call for a total of \$4.65m in funding were:

- (i) That the Australian Government allocates additional yearly funding of \$1.05 million for the Visiting Optometrists Scheme
- (ii) That the Australian Government allocates additional yearly funding of \$1m for Aboriginal and Torres Strait Islander ophthalmology outreach services.
- (iii) That the Australian Government ensures that Primary Health Networks are tasked with and sufficiently resourced to undertake high level regional co-ordination of eye health and vision care delivery, to better integrate and strengthen local systems, driven by appropriate performance and process indicators.
- (iv) That the Australian Government allocates an additional annual \$1.2m to support service coordination of care at a community level.
- (v) That the Australian Government contributes a further \$800,000 to trachoma health promotion based on the *SAFE Strategy*, particularly focusing on clean faces and safe bathrooms.
- (vi) That the Australian Government sets aside \$600,000 to fund the support, monitoring and reporting to an oversight function that sits within the Australian Health Ministers' Advisory Council (AHMAC).
- (vii) That the Australian Government commits to a national approach for improving access to prescription glasses among Aboriginal and Torres Strait Islander people.

⁹⁹ Vision 2020 Australia, *Towards 2020: A shared vision of working in partnership for eye health and vision care*, no date, p8.

- (viii) That the Australian Government ensures that Aboriginal and Torres Strait Islander people are not disadvantaged by the rebate reduction for optometric services.¹⁰⁰

Conclusion

This report found that some impressive work is being done across the country, for the most part with very limited resources, to Close the Gap in Eye Health Care in Australia. The commitment and dedication to delivering these services in regional, rural and some very remote areas is to be commended.

Sadly, the data that would enable a better understanding, co-ordination and planning of these services is either not available, has never been collected, or is not in a usable format. Questions that on the surface seem simple, such as which areas have trained staff in eye health or where is the greatest demand for optometric and ophthalmic services, are currently not answerable without considerable time, effort and travel being put in to collect the data. Initiatives at all levels are necessary to improve data collection and sharing such as eye health advisory groups, minimum data sets, integration of data into clinical information systems and data protocols.

Case studies highlight initiatives that are addressing some of the gaps in eye health service delivery but more work and system wide changes are still required to enable improvements for all Aboriginal and Torres Strait Islander people. System wide changes could adopt learnings from the case studies such as:

Regional collaboration to promote coordination and patient-centred care

Partnerships between organisations can facilitate shared responsibility for the delivery of eye health and vision care services and work to advance the eye health system. Regional collaboration with governance structures can increase coordination across primary, secondary and tertiary service levels to better enable a patient centred approach to eye care.

Flexibility in service delivery to increase patient consultations

The co-location of specialist eye care services within Aboriginal Medical Services can mean patients who would not otherwise have had an eye check are seen by an optometrist. A workforce that can provide opportunistic screening and services across the entire week can also increase patient coverage.

A need to address transport barriers for eye treatment

When patients are required to travel long distances to access treatment, no shows can occur due to no or inadequate transport and/or support options to attend appointments.

A need for culturally appropriate training and university courses

Many services felt that optometrists were coming to them from university without the proper training in culturally appropriate practices and the unique circumstances of Aboriginal Medical Services.

¹⁰⁰ Vision 2020 Australia, *Close the Gap in Aboriginal and Torres Strait Islander Eye Health and Vision Care*, p5.

A need for sustainable practices and certainty in funding

Increases in workforce and funding are required across the board. Public ophthalmology was a key issue that emerged, with many areas relying on individual ophthalmologists working for the bulk-billed rate or on ad hoc funding programs which only fund surgery for a period of months. In addition, the decrease in the bulk-billing rebate and the allowable frequency of it was raised as a considerable issue of concern for the future of Aboriginal and Torres Strait Islander eye care, and the failure to understand that Aboriginal and Torres Strait Islander clients often require more frequent eye checks than the wider population due to comorbidities such as diabetes and other chronic diseases.

Finally, case studies also highlighted broad support for a National Spectacles Scheme for Aboriginal and Torres Strait Islander people and highlighted some of the positive contributions made possible by the Australian Government's Outreach Eye and Ear Surgical Services Program.

Recommendations

The recommendations in relation to eye health data do not repeat those already in place from other organisations including the Indigenous Eye Unit (University of Melbourne), Outback Vision, Vision 2020 Australia and the States' and Territories' Departments of Health.

These recommendations are intended for those organisations reporting through OCHREStreams, that is, those receiving Commonwealth Indigenous Health Funding:

Eye Health Data

1. The Australian Government Department of Health to establish a national eye health data advisory group as a sub-committee of the soon to be revised OCHREStreams Advisory Group.
2. A minimum data set be developed for testing as a collaboration led by the NACCHO Lead Clinicians Group with the Affiliate Lead Clinicians Groups, Optometry Australia, Australian Society of Ophthalmologists, Australian Health and Hospital Association, Primary Health Networks, The Fred Hollows Foundation, the Indigenous Eye Health The University of Melbourne, Lions Outback Vision and AIHW, ensuring that data elements are in place to support national, jurisdictional and ACCHO Sector KPIs, with other providers being reviewers.
3. Eye health referral/data pathways be developed to integrate data into "health home" clinical information systems and well-being and care plans in a vendor neutral manner, cognisant of the National e-Health Standards and directions;
4. Data protocols and consents be developed for those receiving eye health and care interventions for data to be sent from all screening, assessment and treatment providers including when Medicare Claims are being made.
5. Changes be made by the Department of Social Services to the requirements for accessing Medicare Item Numbers to include sharing optometric and ophthalmologic occasion of service data with the patient's "Health Care Home".
6. An evidence-based, geographically sensitive funding/resource allocation model be prepared.
7. A reporting, monitoring and evaluation mechanism be detailed to assess outcomes and benefits for individuals, and to provide input to the resource allocation model to inform policy, regulations, budgets and contractual obligations and cost benefits for the health system.

Eye Health Service Delivery

8. A National Spectacles Scheme

Consistent with the *Joint Submission to the Federal Budget 2015-16* by NACCHO and Optometry Australia, the recommendations of the *Roadmap to Close the Gap for Vision*, and with a 2013 paper written by representatives of the Brien Holden Vision Institute, Optometrists Association Australia, Vision 2020 Australia and Vision CRC, this report calls for the implementation of a National Indigenous Spectacles Scheme to provide low or no cost spectacles to Aboriginal and Torres Strait Islander people throughout Australia. http://www.naccho.org.au/wp-content/uploads/OA-NACCHO-Joint-budget-submission-2015-16_Better-access-to-prescription-glasses-for-Aboriginal-and-Torres-Strait-Islander-Australians_final.pdf

9. Increased number of ophthalmologists employed permanently by public hospitals

This report recommends the permanent employment of ophthalmologists at all major public hospitals to provide timely and local eye surgery and to provide a more permanent and reliable arrangement than the current ad hoc arrangements around the country which rely heavily on donations of time, money and materials by medical professionals and other stakeholders to provide eye surgery to Aboriginal people.

10. The Continuation of the temporary *Outreach Eye and Ear Surgical Services Program*

Until such time as Recommendation (2) is implemented, the Commonwealth Government's temporary *Outreach Eye and Ear Surgical Services Program* should be continued in order to fund the provision of eye surgery blitzes in a culturally appropriate and community environment co-ordinated by ACCHOs.

11. Universities to consult with ACCHOs on the training of optometrists

Universities should consult with optometrists working in ACCHOs regarding perceived gaps in the education of optometry graduates with respect to culturally appropriate practices and the unique circumstances of Aboriginal eye health.

12. Consideration to be given to establishing optometry courses at universities in regional Queensland, the Northern Territory and Western Australia.

Both Aboriginal and Torres Strait Islander recruitment into optometry and a fuller immersion of students into culturally appropriate practices and treatment could be better facilitated by the provision of university courses in optometry in one or more of Perth, Darwin and northern Queensland.

13. That the Australian Government Department of Health make provision for funding of an adequate number of Regional Eye Health Co-ordinators within ACCHOs on a permanent basis

Regional Eye Health Co-ordinators should be refunded by the Commonwealth Government as permanent positions within ACCHOs, with the budget for this position to be separate to the general operating budget of each ACCHO

14. Adequate Medicare funding and frequency of eye examinations

The recent reduction in the bulk billing amount for an eye examination by an optometrist and the change in eligibility for a bulk-billed examination for those under 65-years from biennially to triennially has caused considerable concern. The cost impost to the ACCHO sector due to this has resulted in an erosion of their financial positions so that the standard of care is not lessened. These decisions must be reviewed urgently.

Appendix A: Questions posed at the outset

A: Statistical Service Delivery Information

- (i) Number and proportion of patients with eye health information in their electronic health record at an ACCHO
- (ii) number of persons screened by Indigenous status, age and gender (where), referred (where and to whom), diagnosed (where, what and by whom) and treated (where, what and by whom) from their electronic health record
- (iii) uptake rate for treatments
- (iv) the time interval between diagnosis and the beginning of treatment or intervention such as the supply of spectacles
- (v) National Cataract Surgery Rate (CSR) by Indigenous status & gender
- (vi) CSR in each state/territory Health District by indigenous status and gender
- (vii) Average CSR surgery wait times by indigenous status and gender
- (viii) Percentage of with a GPMP and/or TCA in place by state/territory, Health District, age and gender.
- (ix) Total number of Comprehensive Eye Examinations (MBS Item 10905) claimed nationally by indigenous status, state/territory, age and gender
- (x) Number of those in (viii) performed/claimed for Aboriginal and Torres Strait Islander people.
- (xi) Percentage MBS Item 10905 performed/claimed at an ACCHO service
- (xii) Total number of Diabetic Eye Reviews (MBS Item 10915) claimed nationally by indigenous status, state/territory, age and gender.
- (xiii) Percentage of Diabetic Eye Reviews (MBS Item 10915) claimed nationally by indigenous status, by state/territory, age and gender
- (xiv) Percentage of MBS Item 10915 performed/claimed at an ACCHO service

B: Information about Service Delivery Capacity, such as:

- the current eye health workforce
- number of Full Time Equivalent positions
- funding sources of positions
- regional co-ordination
- whether specific eye health responsibilities have been integrated/embedded within other roles limitations on eye health service delivery
- geographic area covered by these services
- suggestions for improvement of service delivery
- what are the key eye conditions treated?
- types of services supported / delivered including support to visiting Optometrists / Ophthalmologists
- the communities / locations visited by these
- the number of days in each community
- location by the REHC / visiting Optometrist or Ophthalmologist etc.

Appendix B: Data Documents List: 31 March 2016 by the Indigenous Australia Program (IAP) of the Fred Hollows Foundation

Type	No.	Document	Author	Details
Australian Eye Health Statistics	1	Australian Eye Health Data Sources (Excel Spreadsheet)	IAP	Statistics on cataract surgery rates, optometry rates, trachoma screening; and links to data sources.
	2	Eye Health Statistics Used by IAP	IAP	Collection of relevant eye health statistics for use in IAP documents, collated from a variety of sources, with references. Regularly kept up to date.
	3	MBS Analysis March 2016 v2	IAP	MBS figure breakdowns for optometry, ophthalmology, adult health checks and GP Management Plans, by jurisdiction and gender.
	4	Quantitative analysis of IAP gender data	IAP	Methodology for analysing IAP program data to analyse gender differences in service delivery. Several IAP projects are now providing gender disaggregated data.
	5	A Guide to Australian Eye Health Data (2007)	AIHW	Compiles details of Australian data sources related to eye health.
	6	Data collection & Review for service improvement (presentation, March 2016) <i>[Part of an embargoed document; anticipate release within 3 months]</i>	AIHW	Outlines main data sources for eye health, key findings from latest AATISHS and other data related in Indigenous eye health, identifies gaps in data and data analysis.

Type	No.	Document	Author	Details
	7	Visiting Optometrist Scheme (VOS) Needs Assessment – Queensland 2015-16	CheckUP	Optometry needs assessment including statistics and stakeholder consultations. Have been done in each jurisdiction.
	8	11-2015 Queensland Health Situational Analysis	IAP	Overview of policy context, governance, eye health service provision, key statistics, wait times; with sources and links.
	9	Review of Aboriginal Eye Health NSW	NSW Health	Maps eye health services, data and gaps across Greater Western NSW
	10	Australian hospital statistics: Elective Surgery Waiting Times 2013-14	AIHW	Numbers on waitlists, type of surgery, time waited, changes in waiting times, plus more.
	11	Provision of Indigenous Eye Health Services (2009)	IEHU	Health service data compiled to give ratios of ophthalmologists and optometrists in different regions, Cataract Surgery Rates, diabetic eye disease and outreach services.
	12	Remote Service Delivery (RSD) Program Bulletin	IAP	Cataract surgery data, waiting times and attendance rates for intensive eye surgery program delivery – NT and NSW.
Eye Health Indicators	13	National Eye Health Indicator suggestion	IAP	Suggestion from consultant Dianne Beatty.
	14	V2020 Correspondence with Commonwealth regarding National Eye Health Indicator	V2020	Letter detailing V2020 request for a national KPI for diabetic retinopathy screening.
	15	IEHU Indigenous Eye Health Indicators	IEHU	Proposed national indicators for eye health developed by IEHU.
	16	Letter from AMSANT proposing new KPI for diabetic retinopathy screening	AMSANT	Appendix to letter details the proposed Indicator.
	17	IAP Bank of Indicators (Excel spreadsheet)	IAP	Documents all indicators used throughout IAP Programs. Some of these indicators are

Type	No.	Document	Author	Details
				common across various regional programs, with the possibility to aggregate or compare.
Data issues	18	TEOOROP Project Monitoring Report June 2014-July 2015	Menzies School of Health Research	Includes a comprehensive summary of data collection issues that is very relevant in the NT, and possibly elsewhere, along with suggestions for improvement.
	19	Eye health data in the Australian Context	IAP	Summary of data issues within the Australian context, and strategies used by IAP to overcome some of these barriers.
	20	IAP Data Issues Background Brief	IAP	Background details of data issues within the Australian eye health care context.
	21	Katherine Region Integrated Eye Health Program (KRIEHP) Bulletin, 2015	IAP	Provides a description of eye health data issues relating to patient information systems working in silos.
Data Case Studies	22	CABIEHS – Alice Springs Hospital Ophthalmology Data Story 2015	IAP	Ophthalmology data sourced from Alice Springs Hospital Outpatients Department, including cataract surgery rates, waiting times, DNAs, etc.
	23	CABIEHS Bulletin	IAP	Outlines collaborative approach to regional eye health care service delivery.
	24	CABIEHS Health Systems Strengthening Approach outline	IAP	Outlines how CABIEHS is working towards a Health Systems Strengthening approach to working collaboratively to achieve outcomes.
	25	CABIEHS Data Sharing Protocol	IAP	This protocol sets out how CABIEHS members will share, analyse, use and/or disseminate data.
Publicly available Eye	26	My Hospitals website: http://www.myhospitals.gov.au/		Hospital-level performance data, including number of cataract surgeries by year and waiting times.

Type	No.	Document	Author	Details
Health and related data sources	27	IEHU Calculator for calculating service provision needs: http://dr-grading.iehu.unimelb.edu.au/ecwc/	IEHU	Calculates annual requirements for delivery and coordination of eye care services.
	28	Medicare Benefits Schedule statistics: http://medicarestatistics.humanservices.gov.au/statistics/do.jsp? PROGRAM=M=%2Fstatistics%2Fmbs_item_standard_report&DRILL=ag&group=721%2C+723&VAR=services&STAT=count&REPORT_FMT=by+state&PTYPE=calyear&START_DT=201401&END_DT=201412	Medicare Australia	Can generate reports with breakdowns of MBS Item claims by jurisdiction and gender.
	29	National Indigenous Eye Health Survey 2008 <i>[next due 2016]</i> : http://iehu.unimelb.edu.au/publications?a=339842	IEHU	Prevalence and main causes of vision impairment, utilisation of eye care services. Survey of 3000 Aboriginal and Torres Strait Islander people across varying degrees of remoteness.
	30	Australian Hospital statistics AIHW: http://aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129550480	AIHW	Admitted patient information, including cataract surgery rates.
	31	National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) <i>[latest 2004-05]</i> : http://www.abs.gov.au/ausstats/abs@.nsf/mf/4715.0/	ABS	Self-reported general health, diabetes and related, eyesight problems.

Type	No.	Document	Author	Details
	32	ABS National Health Survey [latest 2014-15]: http://www.abs.gov.au/ausstats/abs%40.nsf/mediareleasesbyCatalogue/91E4B04AD4632FBFCA257F7E000F867E?OpenDocument	ABS	General health, including diabetes and related. Also breakdown by socio-economic status. Self-reported.
	33	Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) [latest 2012-13]: http://www.abs.gov.au/ausstats/abs@.nsf/mf/4715.0/	ABS	Part of the National Health Survey. Combines existing NATSIHS (above) with a NATSINPAS (Nutrition & Physical Activity survey) and NATSIHMS (Health Measures Survey). Collects data on long-term health conditions, including diabetes and complications, risk factors, remote and non-remote.
	34	National Trachoma Surveillance Report (annual) [latest 2014]: http://www.health.gov.au/internet/main/publishing.nsf/content/health-oatsih-pubs-trachreport	NTSRU, Kirby Institute	Annual reports on active trachoma, from regions identified of being potentially 'at risk' of experiencing endemic trachoma.
	35	Indigenous Specific Primary Health Care Data - national KPIs: http://www.aihw.gov.au/indigenous-primary-health-care-nkpi/	AIHW	Annual report on national KPIs. Includes diabetes and diabetes complications.

Latest Eye Health Statistics for Australia

Topic	Statistic	Reference	Notes on study/reference
General eye health	Blindness in Indigenous Australian adults is 6 times higher than in non-Indigenous Australians.	Taylor HR, Anjou MD, Boudville AI, McNeil RJ. <i>The roadmap to close the gap for vision</i> , 2012, The University of Melbourne: Melbourne. http://iehu.unimelb.edu.au/_data/assets/pdf_file/0006/701673/the_roadmap_to_close_the_gap_for_vision_summary_report_jan_2013.pdf	This data was collected as part of the National Indigenous Eye Health Survey (2008).
	94% of vision loss experienced by Aboriginal and Torres Strait Islander people is preventable or treatable.	Taylor HR, Xie J, Fox SS, Dunn RA, Arnold A-L & Keefe JE 2010c. <i>The prevalence and causes of vision loss in Indigenous Australians: the National Indigenous Eye Health Survey</i> . Medical Journal of Australia 192:312–8.	This data was collected as part of the National Indigenous Eye Health Survey (2008).
Diabetes	12.7% of Aboriginal and Torres Strait Islander people have diabetes.	National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) 2004-05. http://www.abs.gov.au/ausstats/abs@.nsf/mf/4715.0/	Self-reported rates. Survey of 10,439 people. Age –standardised rate.
	Aboriginal and Torres Strait Islander people are more than 3 times more likely than non-Indigenous Australians to have diabetes.	National Aboriginal and Torres Strait Islander Health Measures Survey (NATSIHMS) 2012-13 http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4727.0.55.001main+features902012-13	Biomedical survey of 3,300 people.
	Aboriginal and Torres Strait Islander adults in remote areas are twice as likely to have diabetes when compared to urban areas.	National Aboriginal and Torres Strait Islander Health Measures Survey (NATSIHMS) 2012-13.	Biomedical survey of 3,300 people.
	The overall Australian prevalence of diabetes is 5.4%	Australian Institute of Health and Welfare www.aihw.gov.au/diabetes	Self-reported through the ABS 2011-12 Australian Health Survey.

Diabetic Retinopathy	<p>30% of Aboriginal and Torres Strait Islander people living with diabetes has diabetic retinopathy.</p> <p><i>Compared to 15.3% of the general population. Ref: The Australian Diabetes, Obesity and Lifestyle Study, 2003</i></p> <p>https://www.bakeridi.edu.au/Assets/Files/AUSDIAB_Report_2005.pdf</p>	<p>Xie J, Arnold A, Keeffe J, Goujon N, Dunn RA, Fox S, Taylor HR. <i>Prevalence of self-reported diabetes and diabetic retinopathy in indigenous Australians: the National Indigenous Eye Health Survey</i>, Clinical & Experimental Ophthalmology, 3(6): 487-93.</p>	<p>Survey of 394 adults over 40 years with diabetes. This data was collected as part of the National Indigenous Eye Health Survey (2008).</p>
	<p>19% of Aboriginal and Torres Strait Islander people living with diabetes reported vision loss, compared to 10.7% of non-Indigenous Australians.</p>	<p>Australian Institute of Health and Welfare http://www.aihw.gov.au/diabetes-indicators/loss-of-vision/</p>	<p>Data from the ABS National Health Survey, 2007-08 and the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) 2004-05.</p>
	<p>Among Indigenous adults, those with diabetes form 72% of those requiring an eye examination in any year.</p>	<p>Tapp RJ, Boudville AI, Abouzeid M, Anjou MD, Taylor HR. <i>Impact of diabetes on eye care service needs: the National Indigenous Eye Health Survey</i>. Clinical & Experimental Ophthalmology, 2015. 43: 540-43.</p>	<p>This data was collected as part of the National Indigenous Eye Health Survey (2008).</p>
Screening Rates	<p>20% of Indigenous adults with diabetes undergo eye screening within the recommended time frames.</p> <p>Compared to 50% of non-Indigenous adults with diabetes.</p>	<p><i>National Indigenous Eye Health Survey: Minum Barreng (Tracking Eyes), full report</i>. Indigenous Eye Health Unit, University of Melbourne, 2009.</p>	<p>Self-reported survey of 394 adults aged over 40 years living with diabetes. This data was collected as part of the National Indigenous Eye Health Survey (2008).</p>

	<i>[Recommended time frames are every 1 year for Aboriginal and Torres Strait Islander population and 2 years for non-Indigenous population]</i>		
	35% of Aboriginal and Torres Strait Islander adults report never having had an eye examination <i>Compared to approximately 10% of Australian adults who have never had an eye examination (Royal Australian College of Ophthalmologists Eye Foundation, July 2013)</i>	<i>National Indigenous Eye Health Survey: Minum Barreng (Tracking Eyes)</i> , Indigenous Eye Health Unit, University of Melbourne, 2009.	Survey of 1189 adults aged over 40 years.
Cataract	Cataract causes one-third of blindness in Aboriginal and Torres Strait Islander adults.	<i>National Indigenous Eye Health Survey: Minum Barreng (Tracking Eyes)</i> , Indigenous Eye Health Unit, University of Melbourne, 2009.	Survey of 1189 adults aged over 40 years.
	Blindness from cataract is about 12 times as high in Aboriginal and Torres Strait Islander adults as in other Australians.	Taylor HR, Xie J, Fox SS, Dunn RA, Arnold A-L & Keefe JE 2010c. <i>The prevalence and causes of vision loss in Indigenous Australians: the National Indigenous Eye Health Survey</i> . Medical Journal of Australia 192:312–8.	This data was collected as part of the National Indigenous Eye Health Survey (2008).
	Indigenous clients wait almost twice as long for surgery as non-Indigenous clients.	Boudville AI, Anjou MD & Taylor HR, <i>Indigenous access to cataract surgery: an assessment of the barriers and solutions within the Australian health system</i> , Clinical and Experimental Ophthalmology, 41(2): 148-154, 2013.	Quotes Australian Hospital Statistics 2009-2010, from the Australian Institute for Health & Welfare (AIHW).
Trachoma	Overall prevalence of trachoma for 5-9 year olds in screened communities is 4.7%.	Australian Trachoma Surveillance Report 2014, The Kirby Institute for Infection and Immunity in Society, The University of NSW, 2015.	4,284 children aged 5-9 years from 125 remote Aboriginal communities

	State/Territory breakdown: NT: 5.9% SA: 4% WA: 2.9% NSW: 0%		considered at-risk or potentially at-risk of trachoma were screened.
	Trichiasis (late scarring and in-turned eyelashes) affects 0.9% of Aboriginal and Torres Strait Islander people over 40 years	Australian Trachoma Surveillance Report 2014, The Kirby Institute for Infection and Immunity in Society, The University of NSW, 2015.	9497 adults > 15 years were screened for trichiasis. This does not include those screened for trichiasis as part of Adult Health Checks MBS Item 175. <i>Trichiasis screening is believed to be greatly under-reported and so this is unlikely to be an accurate representation of trichiasis prevalence in Australia.</i>
	Trichiasis surgery occurred for 17 adults.	Australian Trachoma Surveillance Report 2014, The Kirby Institute for Infection and Immunity in Society, The University of NSW, 2015.	
	Overall prevalence rates of 'clean faces' amongst 5- 9 year olds was 83%.	Australian Trachoma Surveillance Report 2014, The Kirby Institute for Infection and Immunity in Society, The University of NSW, 2015.	4,241 children aged 5-9 years from 125 remote Aboriginal communities considered at-risk or potentially at-risk of

			trachoma were screened for clean faces. <i>There are potential issues with this indicator as a true measure of facial cleanliness.</i>
	Endemic levels of trachoma (>5%) were reported in 48 communities.	Australian Trachoma Surveillance Report 2014, The Kirby Institute for Infection and Immunity in Society, The University of NSW, 2015.	4,284 children aged 5-9 years from 125 remote Aboriginal communities considered at-risk or potentially at-risk of trachoma were screened.
Refractive Error	Uncorrected refracted error causes 14% of blindness in Aboriginal and Torres Strait Islander adults.	<i>National Indigenous Eye Health Survey: Minum Barreng (Tracking Eyes)</i> , Indigenous Eye Health Unit, University of Melbourne, 2009.	Survey of 1189 adults aged over 40 years.
	Blinding uncorrected refractive error occurs 5 times more frequently amongst Aboriginal and Torres Strait Islander adults compared to non-Indigenous adults.	<i>National Indigenous Eye Health Survey: Minum Barreng (Tracking Eyes)</i> , Indigenous Eye Health Unit, University of Melbourne, 2009.	Survey of 1189 adults aged over 40 years.