



The role of chronic disease primary health care workers in diabetic eye care



Brien Holden Vision Institute

3rd AH&MRC Chronic Disease Conference
Growing Stronger Living Longer
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THE VISION COOPERATIVE RESEARCH CENTRE

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Models of vision care delivery for Aboriginal communities

This project is investigating practical solutions for improving systems for the delivery of eye care in Aboriginal and Torres Strait Islander communities, with a particular focus on **integration of eye care with primary health care**.

This project is being conducted in partnership with NSW and NT ACCHSs.

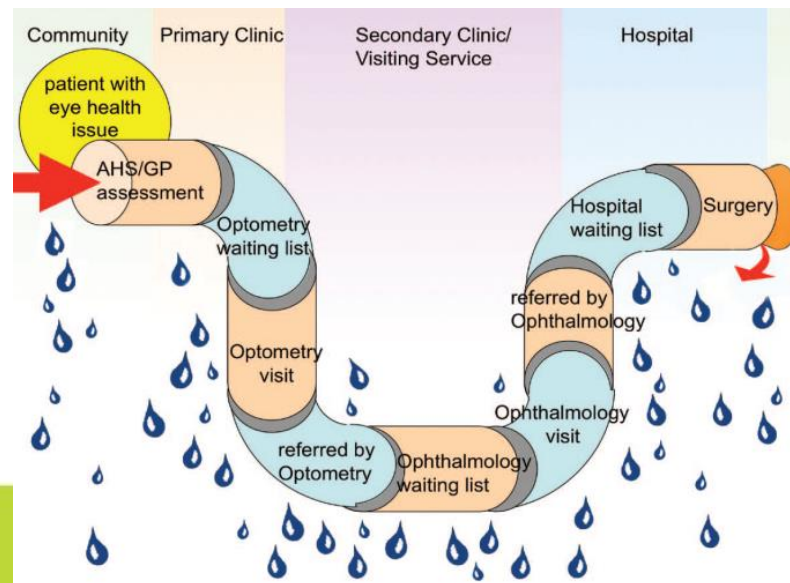
General Eye Care Statistics for Aboriginal people

*Rates of blindness and vision impairment **6x** and **3x** higher.*

*Overall, **94%** of vision loss is preventable or treatable,*

*yet **35%** of adults have never had an eye exam.*

The eye care pathway can be disjointed and represented by the “leaky pipe”

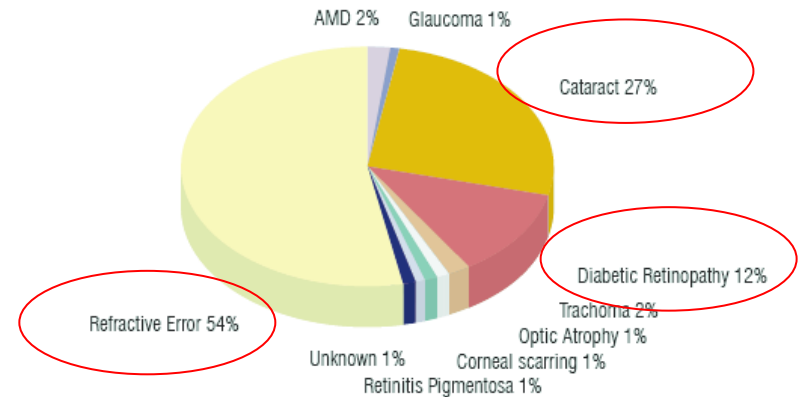


Background

The National Indigenous Eye Health Survey identified that:

- Diabetic eye disease is the third leading cause of vision loss and blindness.
- Blindness from diabetic retinopathy in Aboriginal adults was 14 times more common in comparison to non-Aboriginal Australian adults.

Vision Impairment in Indigenous Adults



**MOST OF THIS BLINDESS COULD BE PREVENTED BY
REGULAR EYE EXAMINATIONS TO DETECT EARLY
STAGES OF VISION IMPAIRMENT**

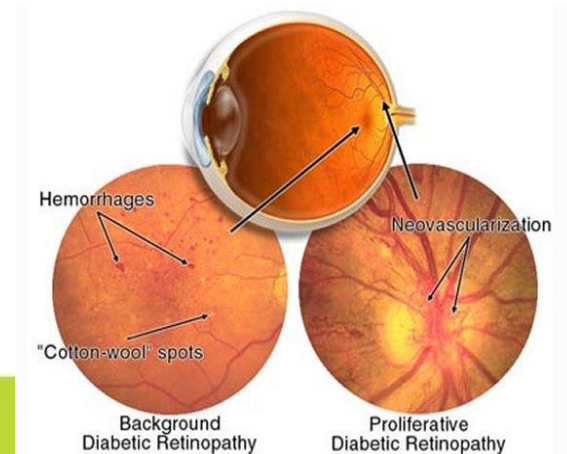
Eye Care and Diabetic patients

Anyone with diabetes may get diabetic retinopathy

Diabetic retinopathy is a disease of the retina due to microvascular complications of diabetes

Diabetic retinopathy is caused by:

- Poorly controlled diabetes
- Concurrent poor control of hypertension and/or hyperlipidaemia
- Long history of diabetes



Eye Care and Diabetic patients

- The onset is usually gradual, and most vision loss occurs when the retinopathy is at a stage that is less responsive to treatment (e.g. laser)

EARLY DETECTION AND PREVENTION

of vision loss from diabetes is therefore important through

ROUTINE (ANNUAL) INTERNAL EYE ASSESSMENTS

with pupil dilation by an eye care practitioner

Recommendations

The NHMRC recommends dilated retinal examinations for all patients with diabetes by a trained eye care professional

- Optometrist or
- Where existing retinopathy requiring management, Ophthalmologist

However, as reported in the National Indigenous Eye Health Survey [2009]

- Of the estimated 37.4% of Aboriginal adults with diabetes, only 20% have had an eye examination in the past year.

Excerpt from NACCHO/RACGP National Guidelines

Recommendations: Visual acuity					
Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/strength of evidence	References
Screening	Infants aged <6 months	Conduct a general eye examination. Refer if red eye reflex absent or other abnormality found	As part of a newborn and 3–6 month health assessment	GPP	12
	Children aged 4–5 years	Screen for visual acuity (VA) (use E chart if required) Refer if VA is less than 6/9 or there is a two line difference between eyes	Opportunistic and once only at routine health assessment	GPP	12
	All adults aged >40 years People with poor near-vision (presbyopia)	Near and far visual acuity assessment is recommended to detect visual loss due to presbyopia or cataract The use of near test material and Snellen chart (and E chart if required) is recommended for testing visual acuity If unable to see normal sized print (type) refer to optometrist or ophthalmologist for	Annually as part of an adult health assessment	GPP Snellen IC E chart IIIC	15–17,27
Behavioural	People with diabetes	Cataract Surgery Undertake visual acuity and retinal assessment by trained assessor as indicated in diabetic management guidelines Retinal photography by trained primary care staff combined with external review by an ophthalmologist is a useful strategy for comprehensive screening	Annually		
	Current smokers	Advise smoking cessation to reduce the risk of developing cataracts (see Chapter 1: Lifestyle, section on smoking)	Opportunistic	IIIC	10
	All people	Recommend reduced ocular exposure to UV-B light to reduce risk of cataract (eg. wearing sunglasses)	Opportunistic	IIIC	7,8

In-service Training

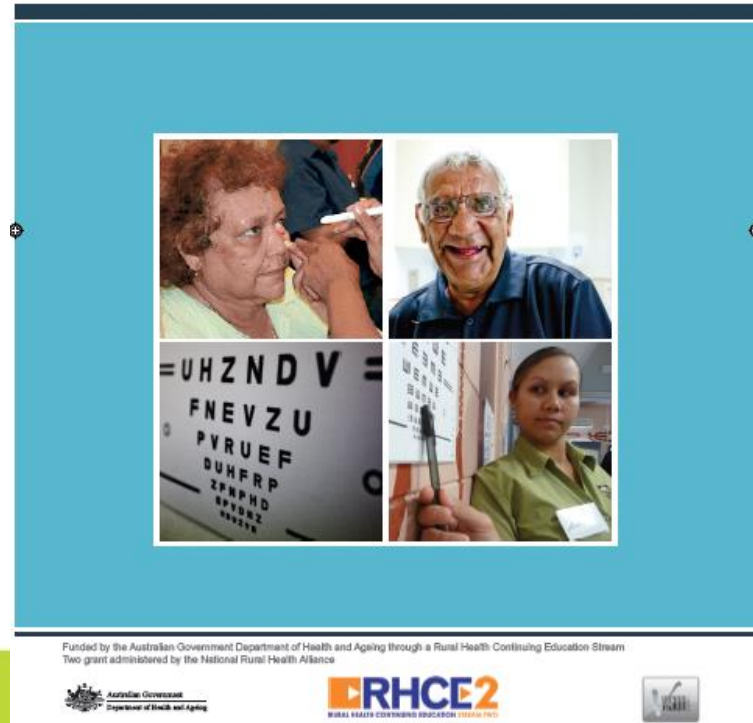
In-service training was conducted at 6 NSW ACCHS during 2013 delivering training to Primary Health Care workers



Referral pathways

Role of Primary Health Care Workers in Eye Care Training Manual

2013



How can you help your patients

Ensuring a structured approach for recalling patients requiring a retinal assessment (diabetes) is in place at your ACCHS to ensure timely access to eye and vision care.

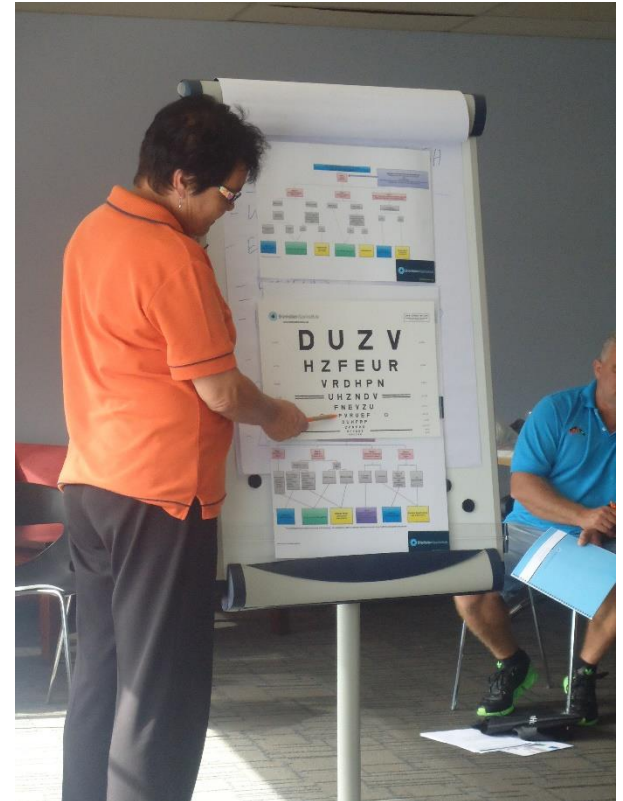
Ensure in the CDMP that key eye and vision care aspects are included:

- Measurement of vision and external eye check (routine GP clinical examination)
- Referral to optometry for a yearly dilated retinal exam (patients with diabetes)



How can you help your patients

- Primary Health Care Practitioners/Workers are ideally placed to prompt and remind people to have an eye examination, annually.
- Screening for diabetic retinopathy will increase comprehensive care and equity of eye care service provision.
- Diabetic retinopathy screening programs are not only highly cost effective, but are also cost saving.



What should be in a CDMP

- At a minimum it should include
 - Distance Visual Acuity
 - Dilated retinal examination by an eye care professional
 - Optometrist
 - Ophthalmologist
 - Or an organised system of retinal photography with review by a trained assessor
 - This should occur for people with diabetes
 - Upon diagnosis; and
 - Annually thereafter

Chronic Disease Management Plan Template (vision section in red box)

Visual observation of eyes and eyelids. Inverted upper eye lashes may be difficult to see - examine eyes with a loupe if there is chronic irritation. Fundoscopy if possible.

Eye examination (No previous values)

Cataracts ☐ Yes ☐ No ☒ Blank (No previous values)

any abnormalities detected in the past?

Dilated eye check or retinal photography (No previous values)

Tick the box if needs:

Optometry referral ☐ (No previous values)

Tick the box if needs:

Ophthalmology referral ☐ (No previous values)



Refer to an optometrist if

- Distance Visual Acuity is 6/9 or worse
 - Reduced vision compared to their last assessment
- The patient's retinal photography or ophthalmoscopy shows diabetic retinopathy.
- The patient's last optometry examination (with dilated retinal assessment) was over a year ago.



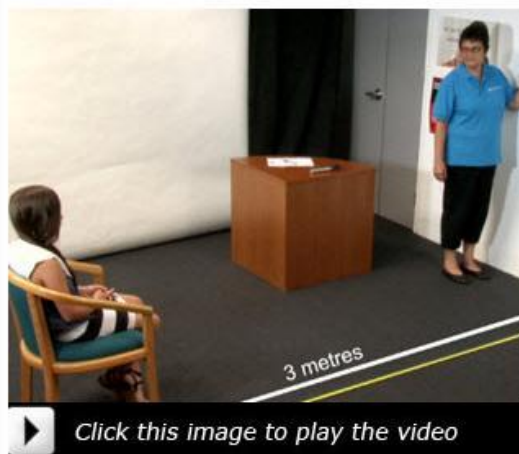
Currently in development Role of Primary Health Care Workers in Eye Care On-line Training Module (June 2014)

Eye Care

- Overview
- Pre-Quiz
- Introduction
- Background
- Levels of Eye care
- Practitioners & Roles
- Case History
- Distance Visual Acuity
 - Distance Visual Acuity Adults
 - Distance Vision video
 - Measuring Distance Vision for Children
 - Self Assessment 5
- Pinhole Visual Acuity
- Near Visual Acuity
- External eye care
- Diabetic Eye Care
- Case Studies
- Post-Quiz
- References
- Module Evaluation
- Module Progress
- Course Home

Measuring Distance VA

The following video will demonstrate how to measure distance visual acuity. **note:** Seat the patient 3 metres from the chart, when using the Institute distance visual acuity chart. Always check your chart for the correct setup distance, as not all charts are designed for 3 metres.



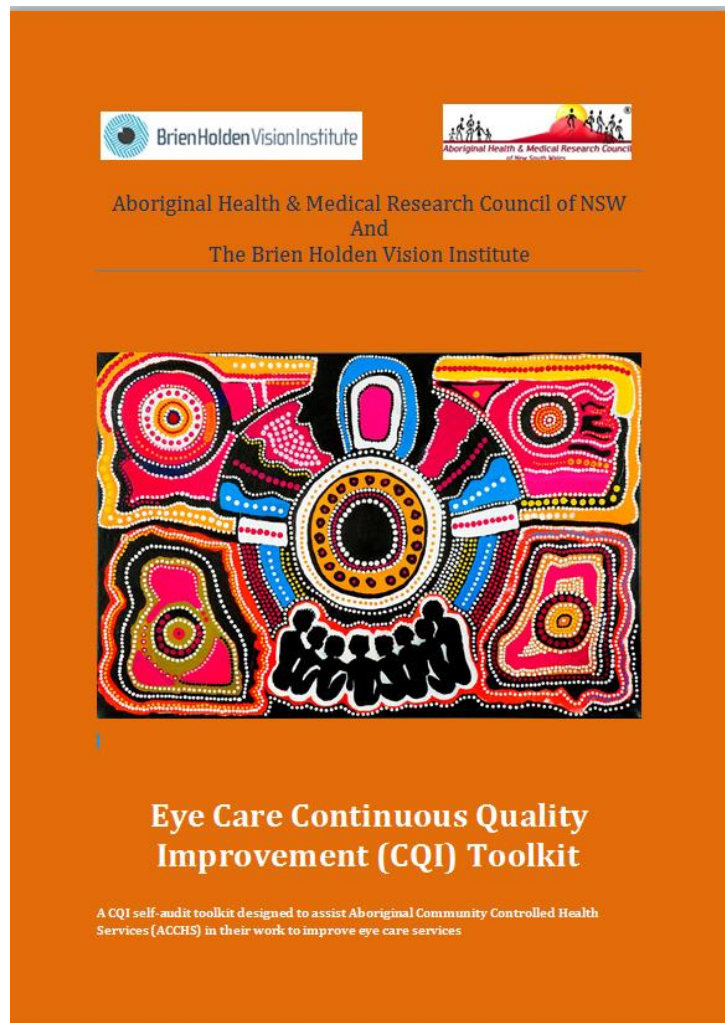
Click this image to play the video

Measuring Distance VA

For further practice on measuring VA on your patient please click on the below link.

<http://dev.brienholdenvision.org/LA2/index.html>

Eye Care Continuous Quality Improvement (CQI) Toolkit





Eye Health Clinical Audit Tool



This toolkit is designed for primary health care staff including Aboriginal Health Workers, Nurses and General Practitioners who are responsible for eye care delivery in Aboriginal Community Controlled Health Services (ACCHS) that are interested in using Continuous Quality Improvement (CQI) tools to improve eye health outcomes in their patient population.

Purpose: This toolkit has been developed to focus on three major causes of reduced vision and blindness for Aboriginal and/or Torres Strait Islanders. These causes are diabetic retinopathy, cataract and refractive error. Importantly, this toolkit enables the analysis and review of clinical data to inform staff about areas of good practice and highlight areas of improvement with routine eye and vision checks which are part of everyday Primary Health Care practice, and secondary eye care referral pathways.

Objectives:

- To improve access to eye health services, which should result in improved health outcomes for their client populations
- To build capacity of ACCHSs to conduct self audits and CQI initiatives using their own eye health data

Two sets of indicators have been developed to reflect data collected under two different inclusion criteria options: Priority One specifically targets diabetes patients, while Priority Two measures all patients over the age of 40

SECTION 1

ACCHS Name:	[Enter Name]
Date of Audit:	[Enter Date]
Auditor Name:	[Enter your name]
Priority: Chosen	[one or two]
Pencat Eligible	200
IHSsampling Certainty	90%
IHSsampling Precision	10%
Sample Size	51

[Press this button to refresh Indicator Tables](#)

Eye Care Continuous Quality Improvement (CQI) Toolkit

A CQI self-audit toolkit designed to assist Aboriginal Community Controlled Health Services (ACCHS) in their work to improve eye care services.

Practical 'step-by-step guide' for completing the "Eye Health Clinical Audit Tool" (electronic audit tool).

Random sampling of patient files collected from ACCHS Patient Information Management System (PIMS) to review and analyse clinical data against a set of quality indicators.



Inclusion Criteria

PRIORITY ONE	Inclusion Criteria Priority One: Diabetic Patient Eye Care Audit Tool	% (Results)
	Identify as Aboriginal and/or Torres Strait Islander	
	Have a diagnosis of Type 1 or Type 2 Diabetes	
	Aged ≥ 16 years	
	Be a current patient (attended the health service 3 times in past 24 months)	

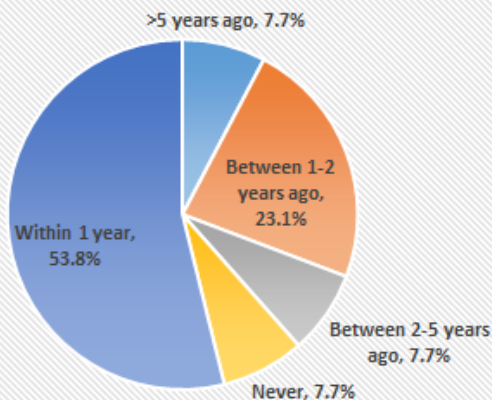
PRIORITY TWO	Inclusion Criteria Priority Two: All Patients Aged ≥ 40 years	% (Results)
	Identify as Aboriginal and/or Torres Strait Islander	
	Aged ≥ 40 years	
	Be a current patient (attended the health service 3 times in past 24 months)	

Sample results

PATIENT ID	(Multiple Items)
Count of Q2.1 According to your health centre records when did this patient have their last optometry examination?	
Row Labels	
>5 years ago	7.7%
Between 1-2 years ago	23.1%
Between 2-5 years ago	7.7%
Never	7.7%
Within 1 year	53.8%
Grand Total	100.0%

Q2.1 According to your health centre records when did this patient have their last optometry e...

■ >5 years ago ■ Between 1-2 years ago ■ Between 2-5 years ago ■ Never ■ Within 1 year



 CLINICAL EYE HEALTH AUDIT REPORT (PRIORITY TWO INDICATORS) 	
ACCHS Name:	Test
Date of Audit:	27-Feb-14
Name of Auditor:	Colina Waddell
Eligible population (penCAT number)	100
Sample amount (IHSSample%)	40
Demographics	
Age Distribution:	15 to 24 Yrs: 7.7% 25 to 54 Yrs: 69.2% 55 to 74 Yrs: 23.1% 75+ Yrs: 0.0%
Gender:	Male: 38.5% Female: 46.2% Transgender: 15.4%
PRIORITY TWO	Inclusion Criteria Priority Two: All Patients Aged >= 40 years Identify as Aboriginal and/or Torres Strait Islander Aged ≥ 40 years Be a current patient (attended the health service 3 times in past 24 months)
	% (Results)
Section One: Primary Eye Care Checks	
1.1	Have completed an Adult Health Check in the last 12 months 76.9%
1.2	Have had an eye assessment in the last 12 months 46.2%
Section Two: Secondary Eye Care Services	
2.1	Have had an Optometry Examination in the last 12 months 53.8%
2.2	Have been prescribed spectacles 53.8%
2.3	Have received spectacles 46.2%
Section Three: Diabetic Care	
3.1	Have a diagnosis of Type 1 or Type 2 Diabetes 69.2%
3.2	On a recall system for an annual Diabetic Retinal Screening 92.3%
3.3	Have had a Retinal Examination in last 12 months 23.1%
3.4	Have been diagnosed with Diabetic Retinopathy 61.5%
3.5	Have been referred to an Ophthalmologist for Diabetic Retinopathy 53.8%
3.6	Have seen an Ophthalmologist for Diabetic Retinopathy and the report is in their patient files 38.5%
3.7	Overdue for an annual Diabetic Retinal Screening 38.5%
Section Four: Cataract Care	
4.1	Have been referred to Ophthalmologist for Cataract in the last 24 months 69.2%
4.2	Have seen an Ophthalmologist for Cataract and the report is in their patient files 38.5%
4.3	Require Cataract surgery 46.2%
4.4	Have received Cataract surgery 38.5%

Ethics Approval & Acknowledgements

- Aboriginal Health & Medical Research Council (NSW) Ethics Committee 836/11
- Human Research Ethics Committee of Northern Territory Department of Health and Menzies School of Health Research HOMER-2012-1712
- ACCHS staff members
- AH&MRC staff members
- Brien Holden Vision Institute staff members

References

1. Taylor HR, Keeffe JE, Arnold AL, Dunn RA, Fox SS, Goujon N, et al. National Indigenous Eye Health Survey, Minum Barreng (Tracking Eyes). Melbourne, Australia: Indigenous Eye Health Unit, Melbourne School of Population Health, The University of Melbourne, 2009.
1. Taylor, H.R., et al., *The Roadmap to Close the Gap for Vision (Full Report)*. 2012, Melbourne School of Population Health, University of Melbourne
2. Brien Holden Vision Institute: Role of Primary Health Care Workers in Eye Care Training Manual 2013

THANK YOU

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for everyone...everywhere

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