



EYE AND VISION ASSESSMENT IN PRIMARY HEALTH CARE

Primary Health Care (PHC) professionals in Aboriginal and Torres Strait Islander health services perform basic eye and vision checks as part of routine preventive health checks (Adult and Child Health Checks), according to their level of training. The PHC professional will refer patients with reduced vision, diabetes and other eye conditions either to an optometrist or an ophthalmologist for further assessment.

The *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people* recommends that eye and vision assessments are a necessary part in preventive health checks for Aboriginal and Torres Strait Islander adults[1]. Refer to the attached step-by-step guide for an outline on the recommended referral and decision-making process for these eye and vision assessments. Every eye and vision check in PHC should include;

- 1 Case history
- 2 Distance visual acuity (VA) → Pinhole VA where indicated
- 3 Near VA
- 4 External eye check

This document outlines each of these steps. There are additional tests for children and adults with diabetes (refer to the end of the chapter on where to find more details).

1 CASE HISTORY

Why? The symptoms a person has with their vision are just as important as the VA you measure, as the symptoms won't always be associated with reduced VA. Even if VA is 'normal', symptoms such as eye strain and difficulty focusing indicate the need for an optometry exam.

How? Asking a few questions about a person's eyes and vision before testing will give useful information to guide the rest of the assessments.

In questioning, use open-ended questions to cover the following points:

- Vision problems/difficulties, when looking at things up close and far away
- Problems with the eyes (e.g. irritation, discharge, redness)
- Visual symptoms (e.g. double vision, distorted/wavy vision, flashes of light or floaters)
- Related symptoms (e.g. headaches/eyestrain, especially when looking up close)
- Eye and health history (e.g. previous eye surgery, diabetes)

2 DISTANCE VA

What is VA? Visual acuity (VA) is a measure of how clearly a person sees when they are looking directly at an object. Distance VA applies to objects at 6m and beyond. It is often measured at 3m, which is more practical.

Why? Distance VA is the main indicator of a person's visual function. Measuring VA over time is the main way reduced vision can be detected and then an appropriate referral for eye care initiated.

How? Measure the person's presenting distance VA, using a standard chart, for the right (R) and left (L) eye. You need to find the *smallest line* that a person can possibly see.

In all primary health checks we want to measure *presenting distance VA*. Presenting vision is the person's VA when they present for an eye check. This is called either:

- Aided (with spectacles or contact lenses) or
- Unaided (without correction).



Figure 1a: Distance letter chart

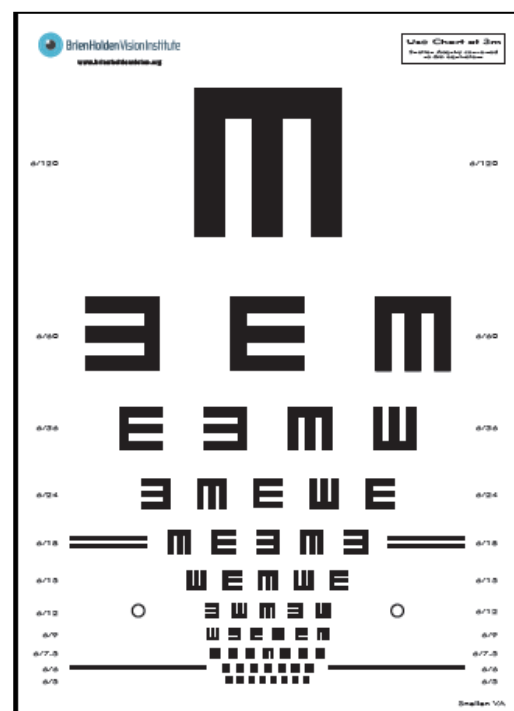


Figure 1b: Distance tumbling E chart

The distance VA chart (Figure 1a) should be placed at the appropriate distance and in good light. The person covers their eye not being tested with the palm of their hand (Figure 2). Then ask the person to read the smallest line on the chart that they can see.



Figure 2: Covering the eye with the palm of the hand - peeking is impossible.

If the person cannot read, use an E chart (Figure 1b). Ask the person to indicate the direction of the E's they can see on the chart. They can either tell you the direction (e.g. "up", "left" etc.) or point the direction using their hand (Figure 3). Encourage the person to give you an answer - "Even if it feels like you are guessing". This will often give a whole other line or two beyond where they wanted to stop reading.

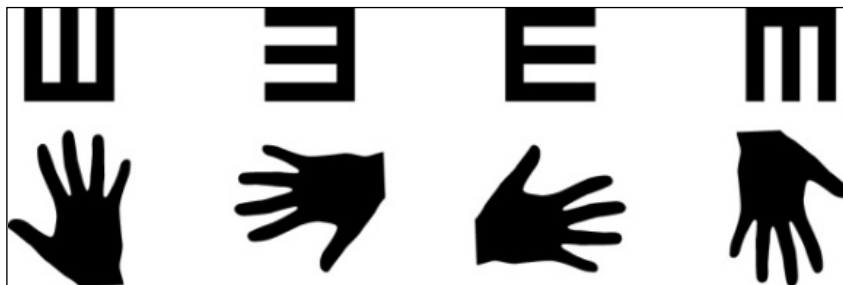


Figure 3: Hands showing the direction of the "E"

Once they have read the lowest letters they can read, record the distance VA, which can be found on the side of the chart. Include whether it is aided or unaided. Repeat for the left eye.

Example of recording VA:

Distance VA: Unaided R 6/12, L 6/7.5,

PINHOLE VA:

Why? Do this if distance VA is 6/9 or worse as it will help to find out if there is refractive error. This will tell you if spectacles will help correct a person's vision.

How? Measure the person's distance VA through a pinhole occluder.

Use a pinhole occluder (Figure 4). If your Health Centre doesn't have one, order a set for each consulting room from your medical equipment supplier. Some pinhole occluders only have one hole, others have multiple holes. Multiple holes is preferred.

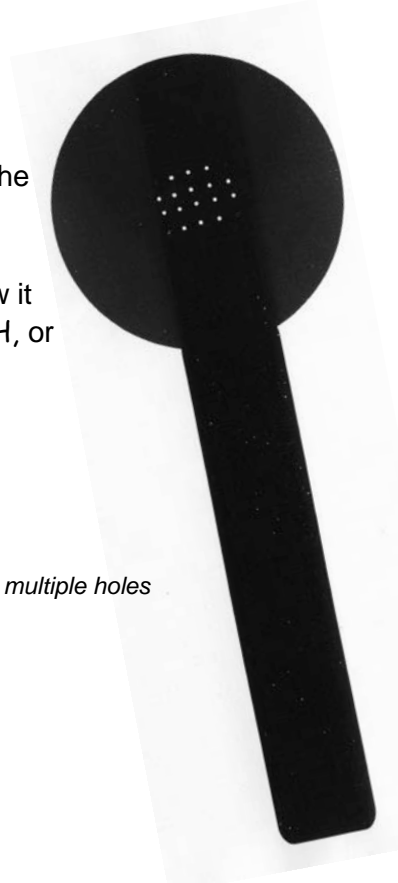
Testing VA with the pinhole is done in the same way as testing, just using the pinhole occluder in front of the eye other eye is occluded. The person looks through any of the reads the smallest line that they can see.

Record the VA for each eye that was measured. To show it with a PH write either next to the VA, PH VA, VA with PH, or pinhole.

Example of recording pinhole VA:

Distance PH VA: R /7.5, L 6/7.5,

Figure 4: A pinhole occluder with multiple holes



distance VA being tested. The pinholes and

was measured simply VA with

length to vision e vision. Most near vision.

with both eyes

3 NEAR VA

Why? This is a very quick and easy test which adds screening, by detecting people who need spectacles for people over the age of 40 will have some difficulties with

How? Measure the smallest print size a person can see together at their usual near reading distance.

Use a near vision chart (Figure 5). Near vision charts have paragraphs of words of different size. The different sizes called an "N" point size. N5 is very small print and N8 about the size of normal newspaper print.

Measure **presenting** near vision. If the person has reading glasses they should wear them.

Ask the person to hold the near chart where it is comfortable for them to hold reading material and to read smallest print they can see. Near VA is measured with eyes together. For people who

cannot read text, use near vision charts with numbers or E's. Record the smallest print read, and whether near vision was measured aided (with current reading glasses) or unaided (no reading glasses).

4 EXTERNAL EYE CHECK

Why? To identify any external eye abnormalities that, required, can be appropriately managed or referred.

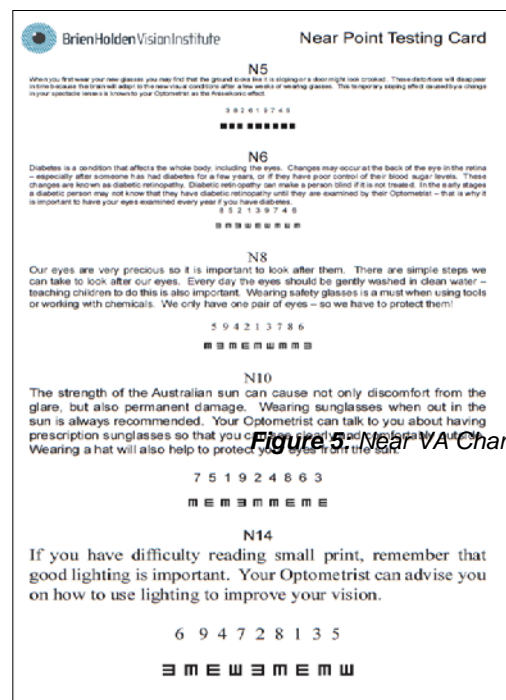


Figure 5: Near VA Chart

are

the both

where

How? Assess the outside structures of the eye using a light and some magnification if needed (e.g. pen torch, ophthalmoscope or head band loupe with illumination), and note any abnormalities.

Assess the outside structures of the eye for any abnormalities.

Examine the following structures of the eye, looking for any abnormalities:

- Eyelids and lashes (including trachoma related trichiasis in adults and trachoma follicles in children)
- Conjunctiva: both on the eyeball over the white part of the eye (bulbar conjunctiva) and under the eyelids (palpebral conjunctiva)
- Cornea: check the cornea is clear (including trachoma related opacification (scarring) in adults)
- Iris and pupils: check that pupils are round, equal in size, and reactive to light



Figure 6: Examining the front of the eye

In addition, for children, check there is a red reflex when you shine a light on the eye, and also check for strabismus. You don't need to diagnose something if you're unsure what it is, just record what you see and refer to the appropriate eye care professional.

★ Referrals:

	Optometrist	Ophthalmologist	GP
Symptoms	<ul style="list-style-type: none"> The patient complains of any eye or vision difficulties such as blurred vision, sore eyes or tired eyes. 	<ul style="list-style-type: none"> Patient reports any of the following; sudden onset of double vision, loss of all/part of vision, eye pain, recent onset of flashes of light and floaters*. 	
External eye signs	<ul style="list-style-type: none"> There are abnormalities of the external eye without pain or vision changes. 	<ul style="list-style-type: none"> Abnormalities of the external eye along with changes in vision or eye pain*. Trichiasis. 	<ul style="list-style-type: none"> Active trachoma: treat the person and their household contacts with oral azithromycin.
Vision	<ul style="list-style-type: none"> VA improves with pinhole. Near vision is N8 or worse. 	<ul style="list-style-type: none"> Changes in vision along with eye pain or abnormalities of the eye*. sudden onset of double vision, loss of all/part of vision*, 	
	If VA with a pinhole is worse than 6/12, refer for a comprehensive eye examination by an optometrist or ophthalmologist, whoever is scheduled to come next, within the next 2 months.		
History	<ul style="list-style-type: none"> A routine optometry exam is indicated, for example an annual diabetic eye exam. 		

* These may be emergencies. Contact your local ophthalmologist to discuss the case over the phone before deciding on the management or initiating a referral. Follow standard clinical protocol (e.g. CARPA).

For more detailed information on eye and vision assessments in the Adult Health Check, and guidelines for the Child Health Check and Chronic Disease Management Plan there will be an electronic module available via the Remote Area Health Corps (RAHC) website, in 2014.

REFERENCE

1. NACCHO and RACGP, *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people* 2012: South Melbourne. p. 290.

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STEP BY STEP GUIDELINE

