



Minim Barreng
Indigenous Eye Health Unit

“The Challenges for Eye Care in Australia”

*Working towards the elimination of trachoma
and reducing Indigenous disadvantage.*

The Gerard W Crock Lecture
9th June 2011

Hugh R Taylor AC

Harold Mitchell Professor of Indigenous Eye Health
Melbourne School of Population Health



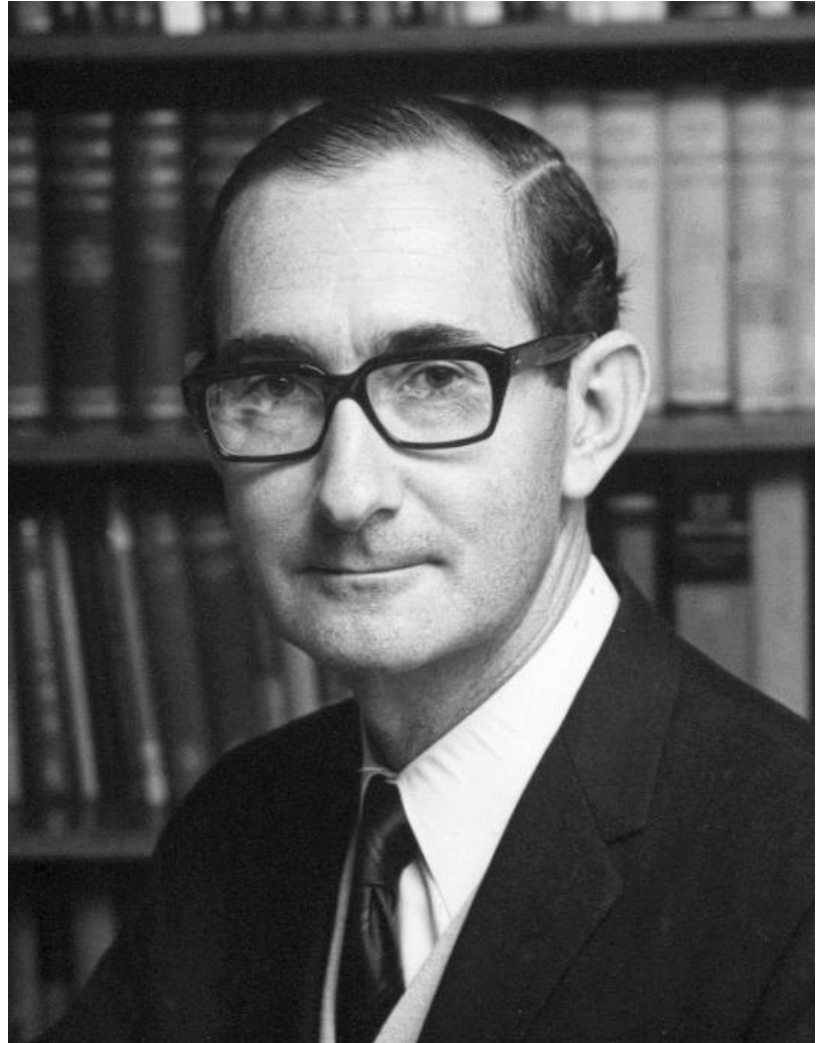
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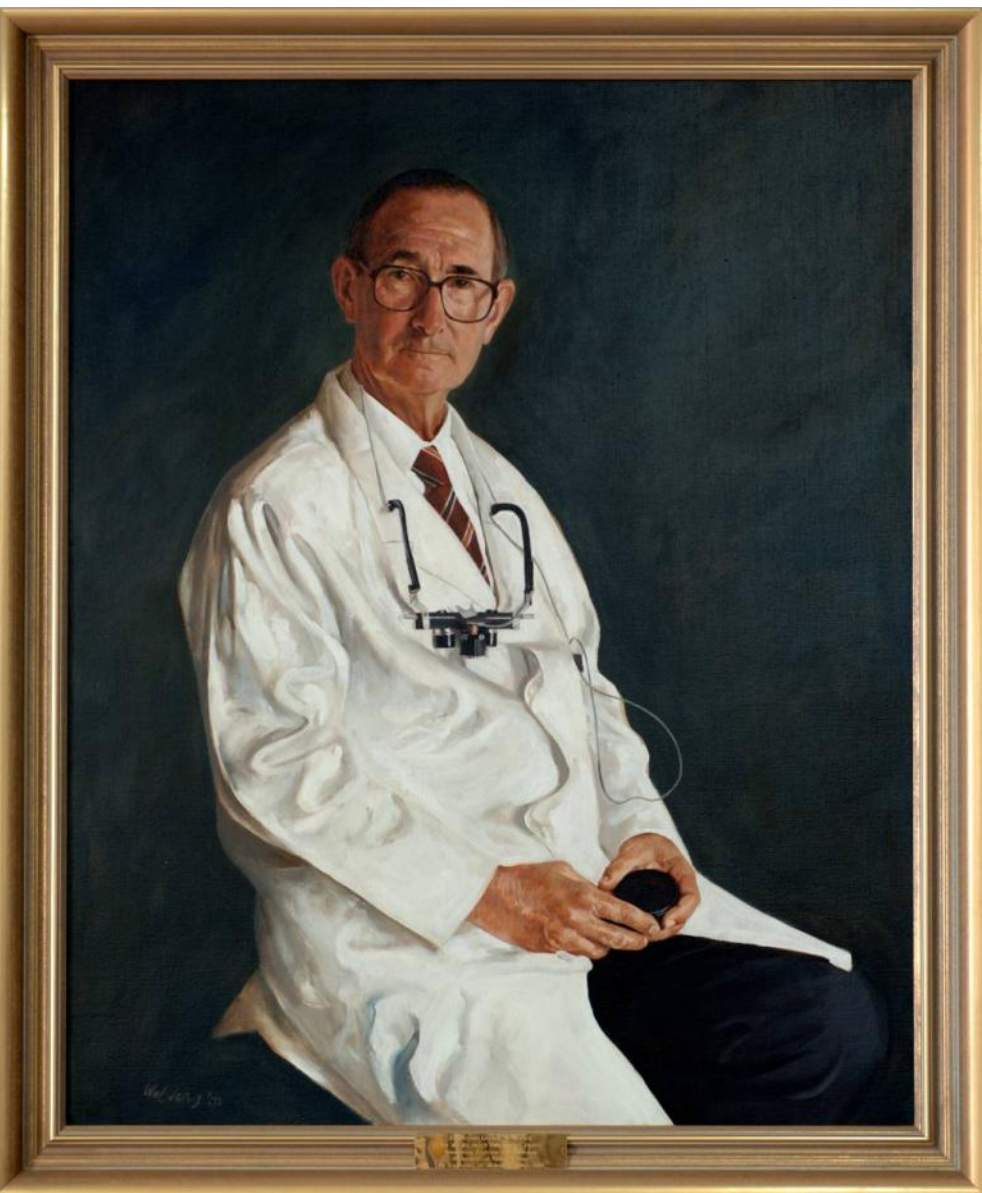
Professor Emeritus Gerard W Crock AO, KStJ, MB BS, FRCS, FRACS, FRACP, FRANZCO

14-9-1929 – 23-12-2008

Schooling in Perth,
Medical School at
University of Melbourne
1948-53

Ophthalmology training
Moorfields
Wilmer Institute





1963

Foundation Ringland Anderson
Professor of Ophthalmology,
University of Melbourne

Major contributions-

Retinal imaging

Microsurgery

Innovation

Teaching

Beloved clinician





40th Anniversary
Melbourne University
Dept. Ophthalmology
1964-2004



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International Council of Ophthalmology 1966 – 1973

Academia Ophthalmologica Internationalis

Chair XV 1976-1989

Emeritus

1985 Order of Australia

1990 Knight of St John



October 2007

MUDO and CERA's Achievements

- Publications for 2005-2010
 - 3rd in number of publications
 - 4th in H Factor
 - 5th in number of citations
- Ranked with Moorfields, Hopkins and Harvard



Outline

- The frequency of eye problems in Australia
- The impact of eye problems in Australia
- The frequency of eye problems in Aboriginal and Torres Strait Island peoples
- Programs to eliminate trachoma
- The provision of eye care services



Visual Impairment - $<6/12$ or driving vision prevents healthy and independent ageing

Falls increase two times

Hip fractures increase four to eight times

Depression increases three times

Nursing home admission three years earlier

Social dependence increases two times

Social isolation increases two times

Doctors visits increase two times

Mortality increases two times



Table 2.7: Commonly reported long-term conditions, 2007–08

Condition	Males		Females	
	Per cent	Rank	Per cent	Rank
Long-sightedness	22.8	1	28.5	1
Short-sightedness	20.1	2	25.3	2
Hayfever and allergic rhinitis	14.1	3	16.0	3
Back pain/problems, disc disorders ^(a)	14.1	4	13.5	4
Hearing loss	13.1	5	7.4	11
Asthma	8.9	6	11.0	6
Hypertensive disease	8.8	7	10.0	7
Chronic sinusitis	6.7	8	11.2	5
Mood (affective) problems	6.2	9	8.7	9
High cholesterol	6.0	10	5.4	15
Osteoarthritis	5.9	11	9.7	8
Migraine	3.3	16	8.0	10

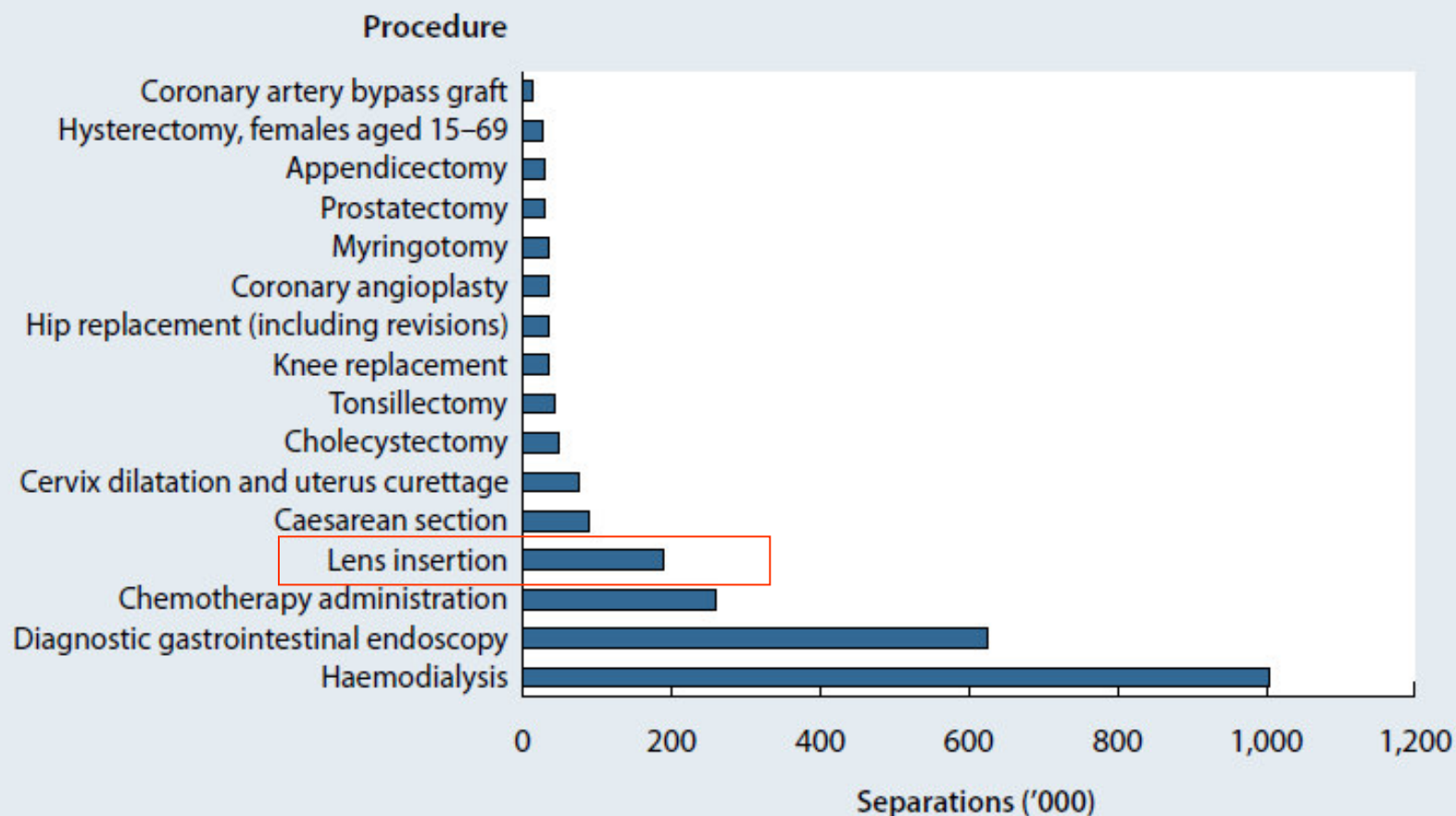
(a) Includes back problems not elsewhere classified.

Source: ABS 2009d.



Table 2.8: Five most commonly reported long-term conditions, by age group, 2007–08

Age (years)	Condition	Per cent ^(a)	Age (years)	Condition	Per cent ^(a)
0–14	Asthma	10.3	45–54	Long-sightedness	49.5
	Hayfever & allergic rhinitis	7.2		Short-sightedness	31.8
	Allergy (undefined)	5.4		Back pain & disc problems ^(b)	20.8
	Short-sightedness	4.0		Hayfever & allergic rhinitis	17.7
	Long-sightedness	3.5		Chronic sinusitis	12.6
15–24	Hayfever & allergic rhinitis	17.5	55–64	Long-sightedness	59.4
	Short-sightedness	17.2		Short-sightedness	37.6
	Asthma	11.2		Hypertensive diseases	23.6
	Back pain & disc problems ^(b)	8.6		Back pain & disc problems ^(b)	22.9
	Mood (affective) disorders	7.8		Osteoarthritis	20.4
25–34	Short-sightedness	22.6	65–74	Long-sightedness	56.4
	Hayfever & allergic rhinitis	19.2		Short-sightedness	37.3
	Back pain & disc problems ^(b)	14.1		Hypertensive diseases	32.0
	Mood (affective) disorders	9.8		Hearing loss	26.3
	Chronic sinusitis	9.6		Osteoarthritis	23.6
35–44	Short-sightedness	22.7	75 and over	Long-sightedness	52.6
	Hayfever & allergic rhinitis	20.7		Hearing loss	41.8
	Back pain & disc problems ^(b)	17.8		Hypertensive diseases	38.7
	Long-sightedness	15.3		Osteoarthritis	32.0
	Chronic sinusitis	10.9		Short-sightedness	30.3

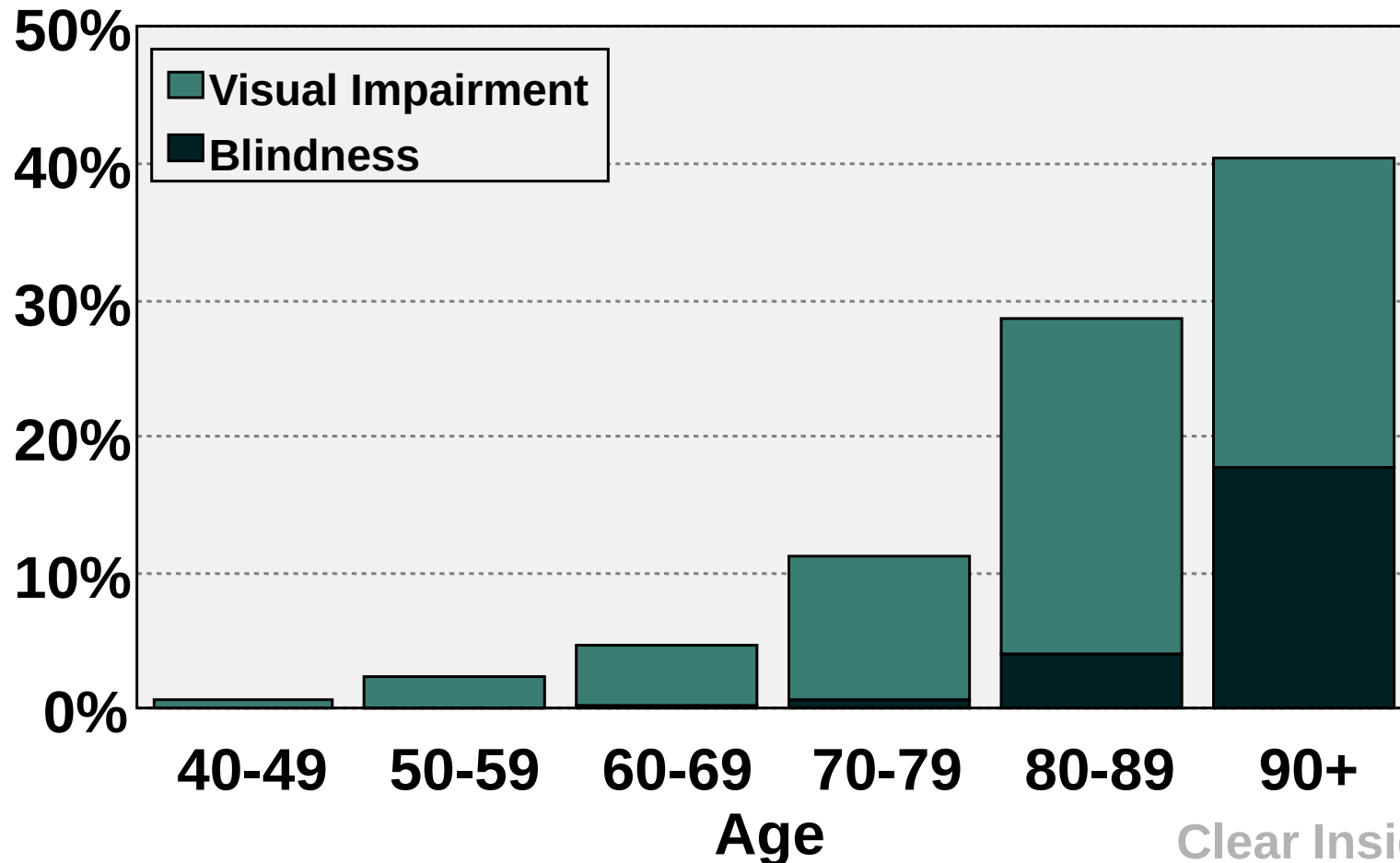


Source: National Hospital Morbidity Database.

Figure 7.15: Separations for selected procedures, public and private acute hospitals combined, 2007-08

Visual Impairment and Blindness

Australia - 2004

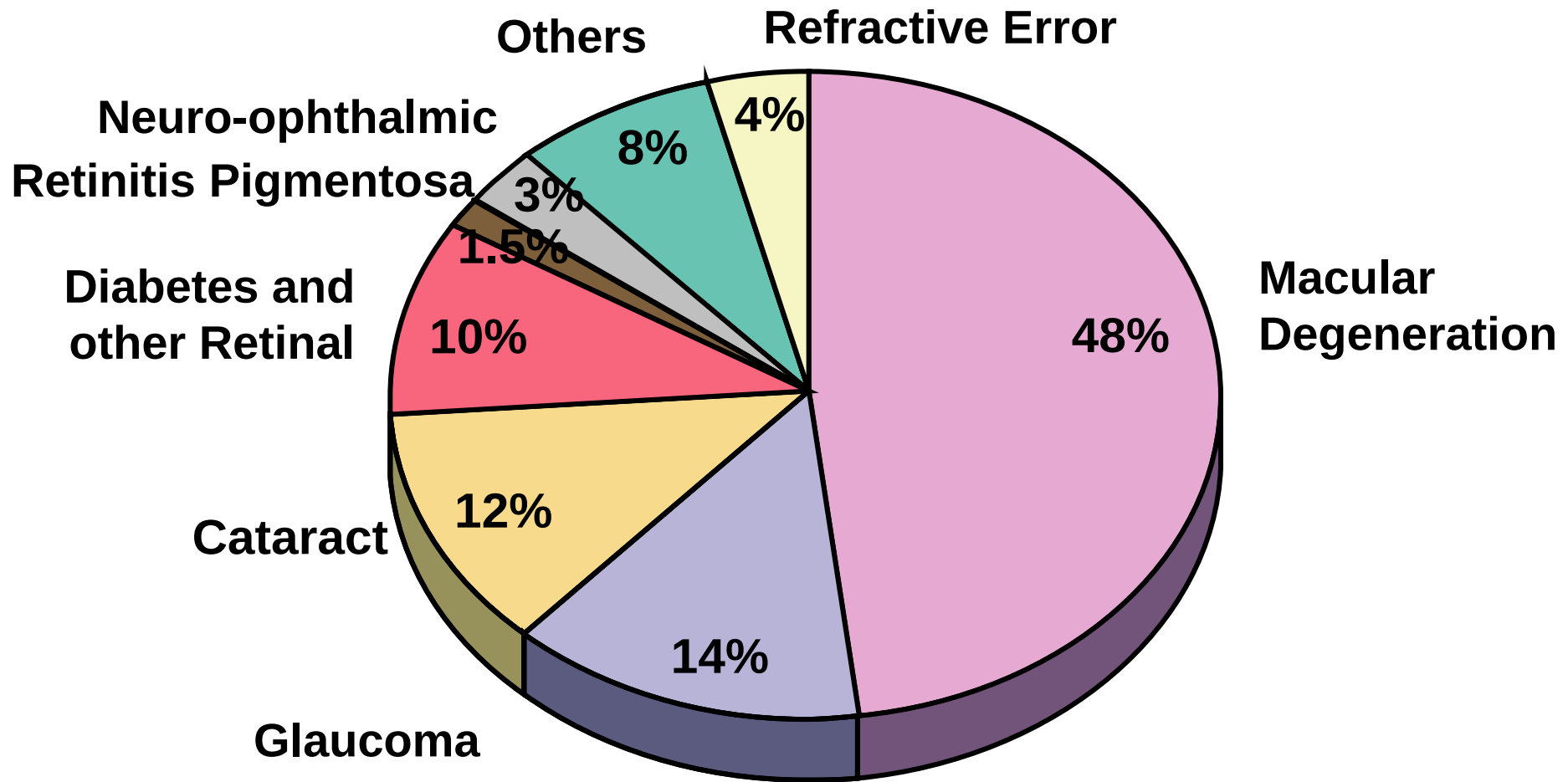


Clear Insight 2004

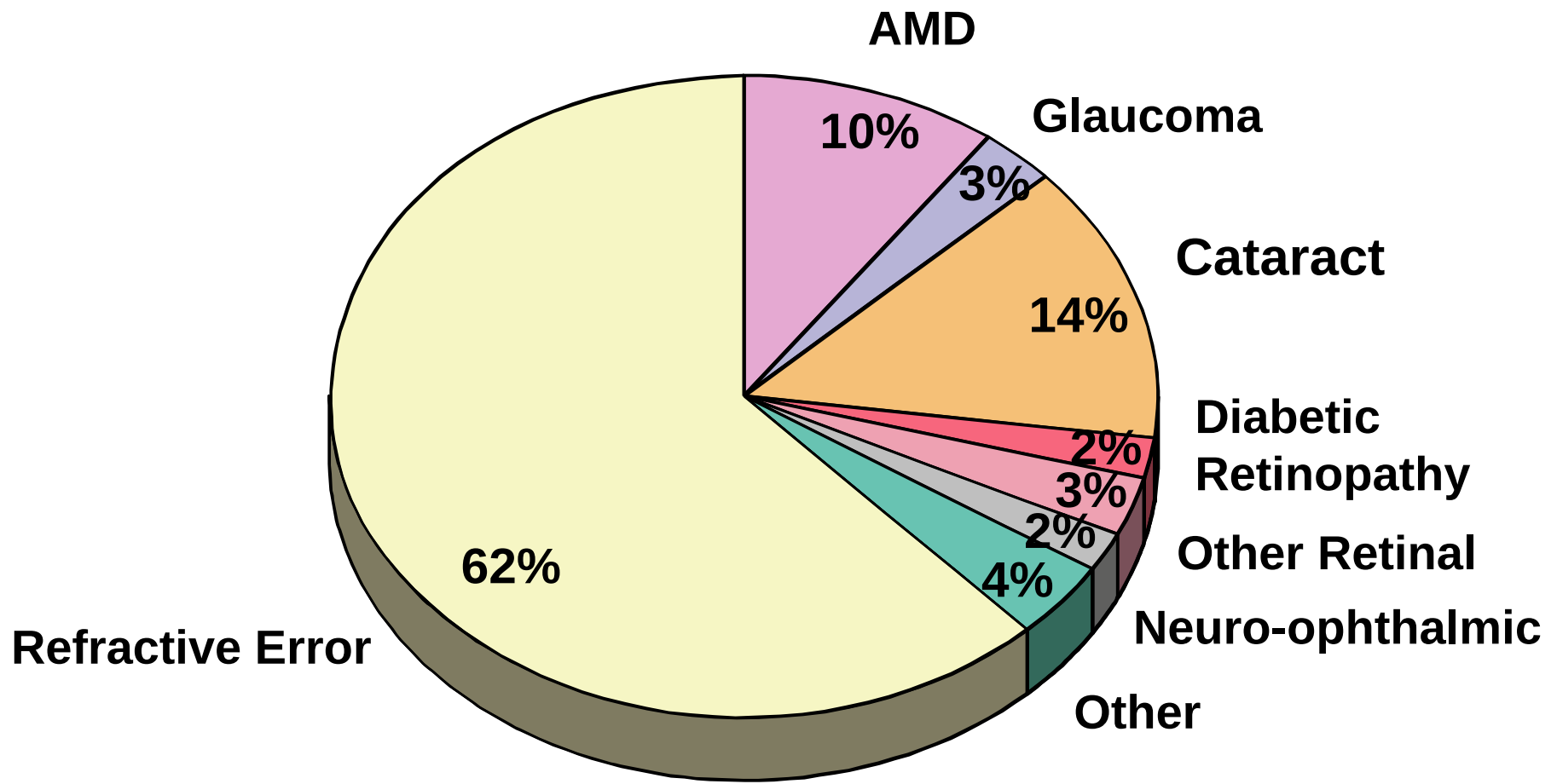


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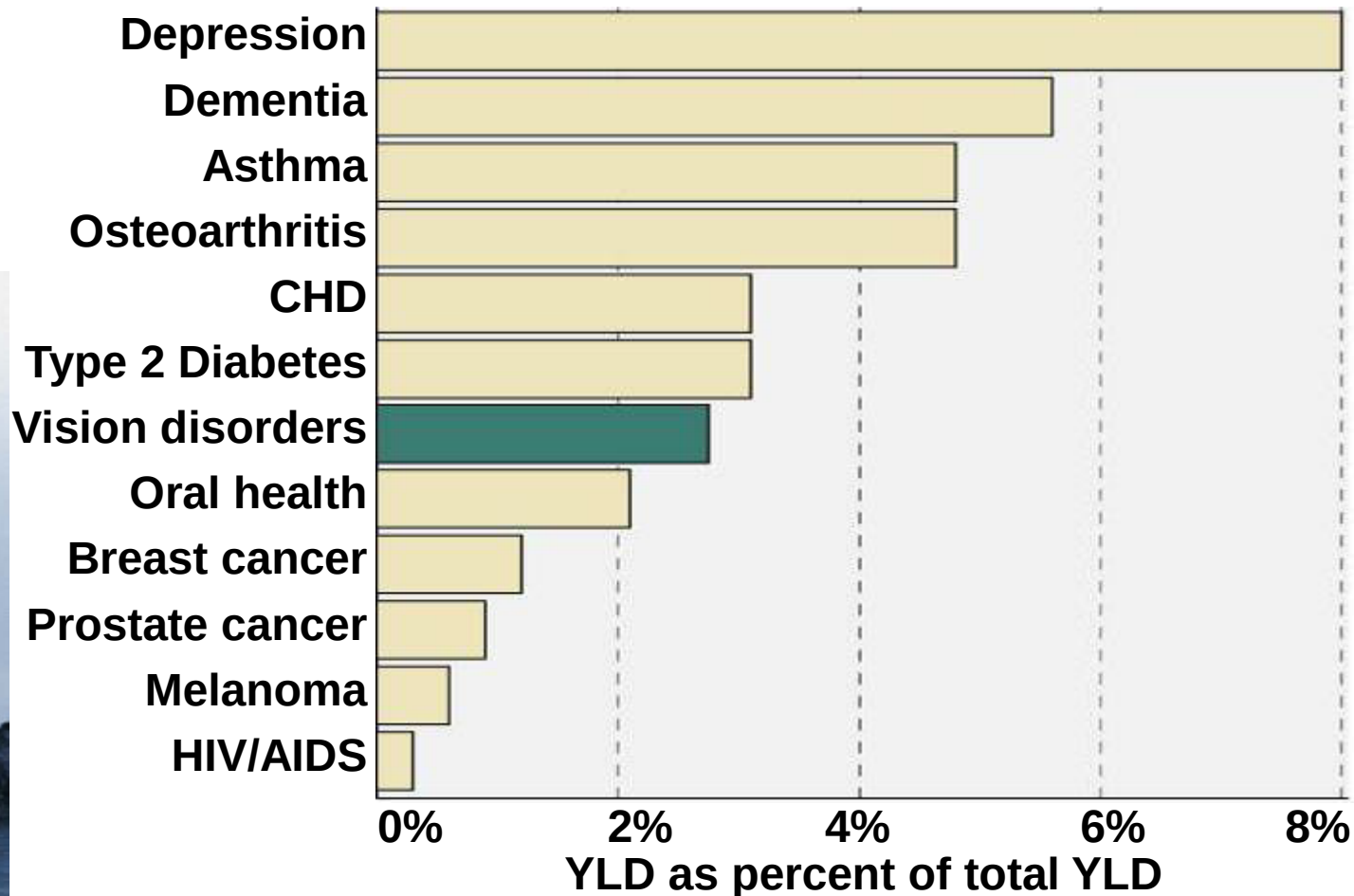
Blindness - 66,500 Australians -2009



Vision Impairment – 575,000 Australians -2009



Years of Life Lost to Disability (YLD) - 2004



Eye Research Australia
Clear Insight

The Economic Impact and Cost
of Vision Loss in Australia

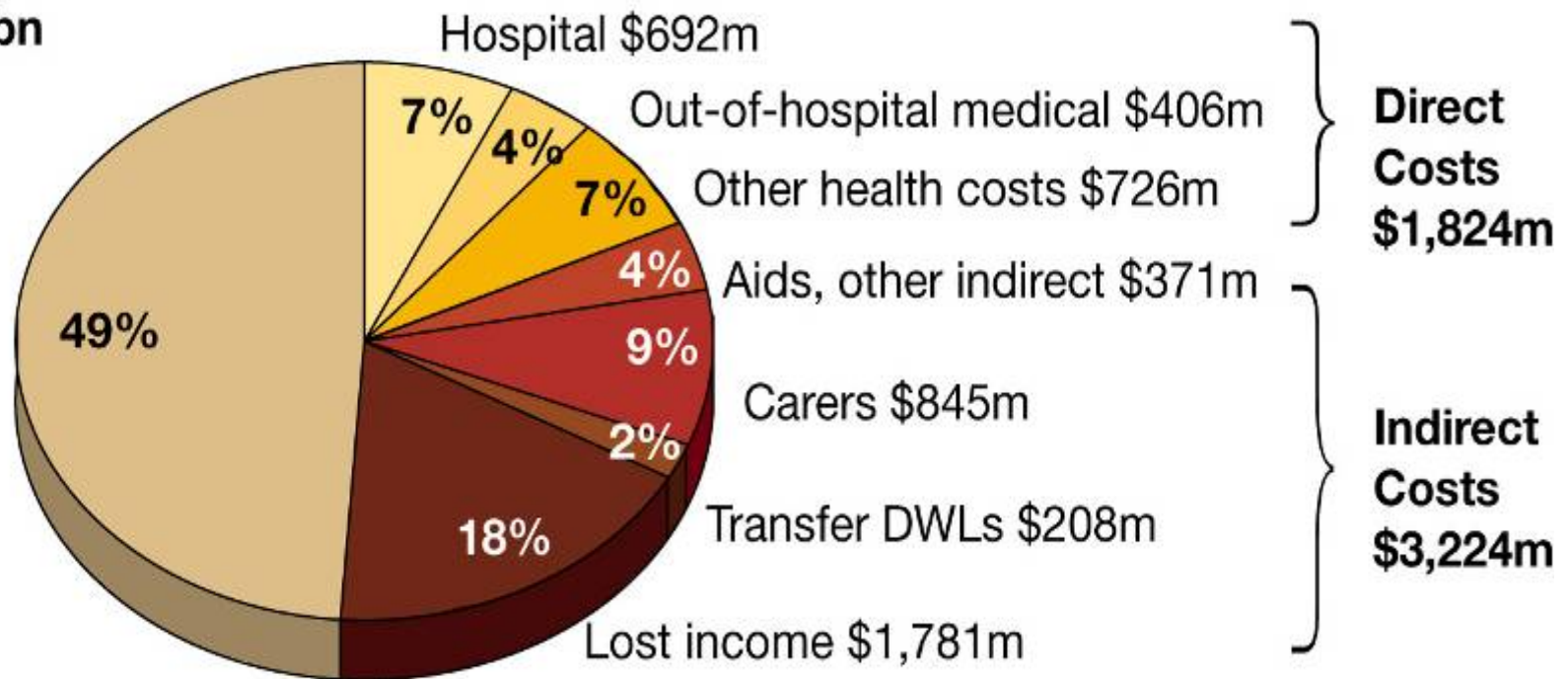
A Report prepared by Access Economics Pty Limited



Total Costs of Vision Disorders Australia, 2004

Total \$9.85bn

Loss of
Well-being
\$4,818m



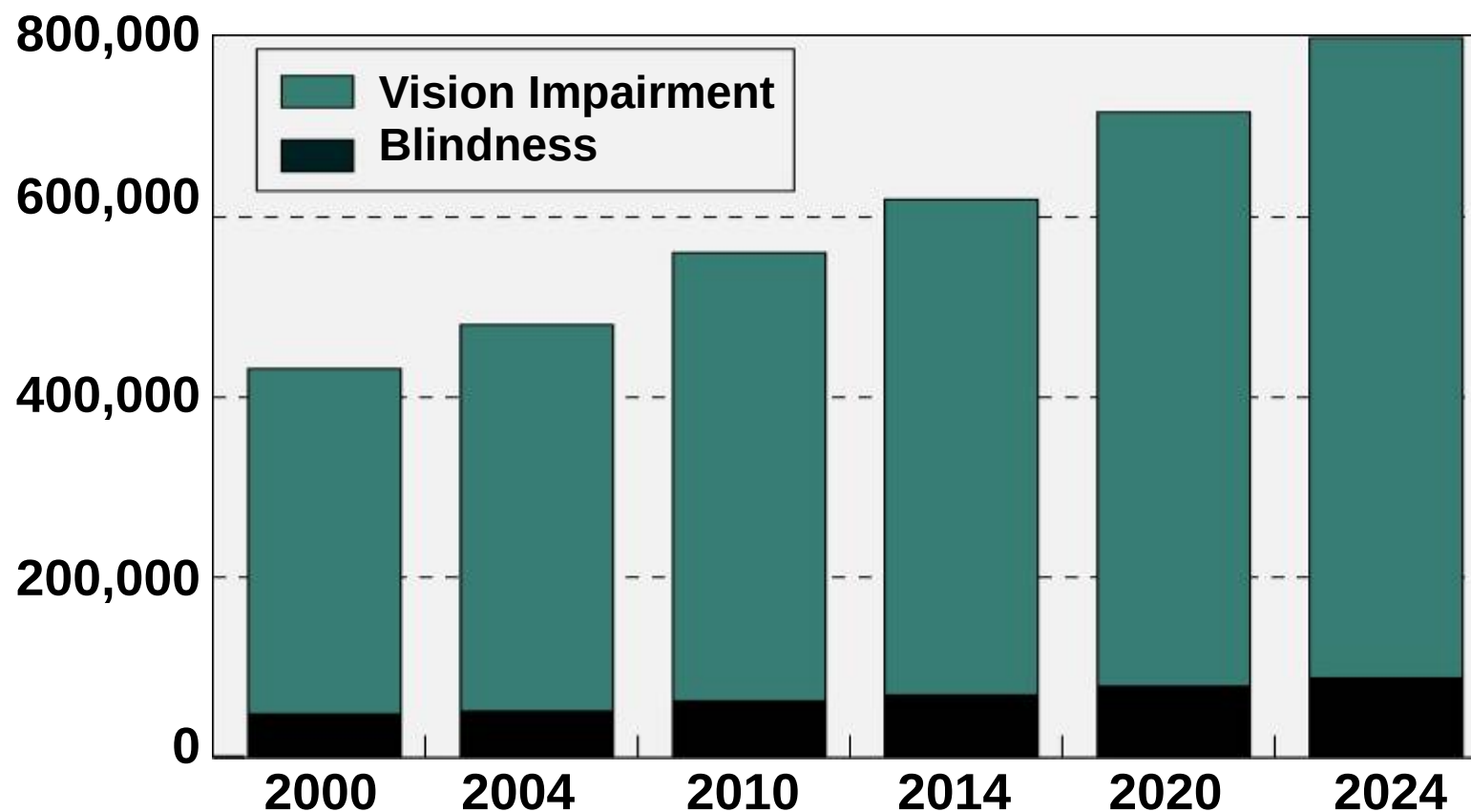
Clear Insight 2004



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Vision Impairment and Blindness

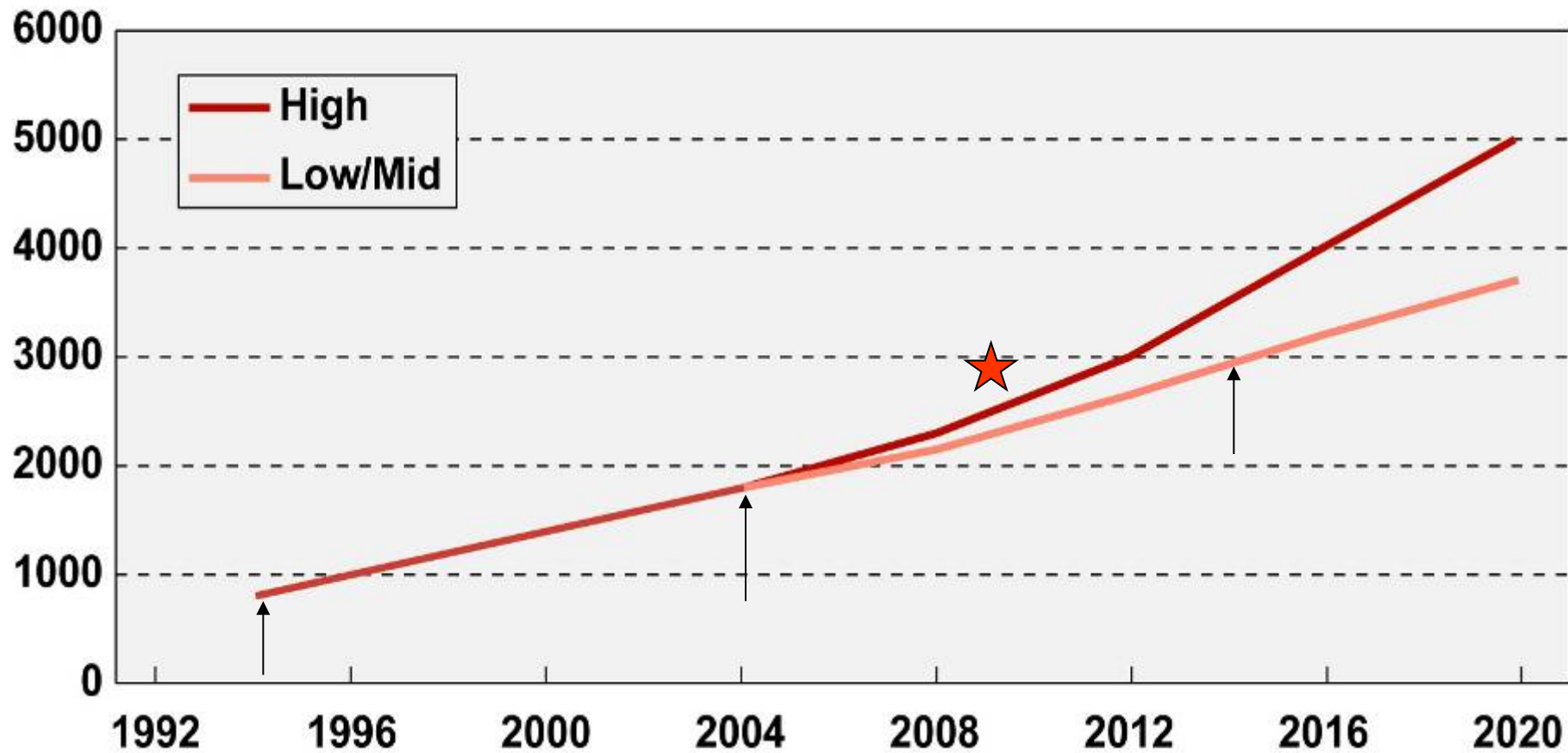
2004 - 2024



Projected Direct Health Costs

1993-2020

\$Million



Clear Insight 2004



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What can we do about it?

3 “Simple” Things

1. Prevent the things we can prevent
2. Treat the things we can treat
3. Solve the remaining problems



Eye Care Intervention Package 3 “Simple” Things

2005-6	Cost	\$188.8m	
	Net benefit	\$-25.7m	
	Total Savings	\$911m	x4.8
Lifetime	Cost	\$1,620m	
	Net benefit	\$662m	
	Total Savings	\$10,016m	x6.2



www.cera.org.au 2005

Indigenous Eye Health Unit

Ultimate Aim

To Close the Gap for Vision

Goals

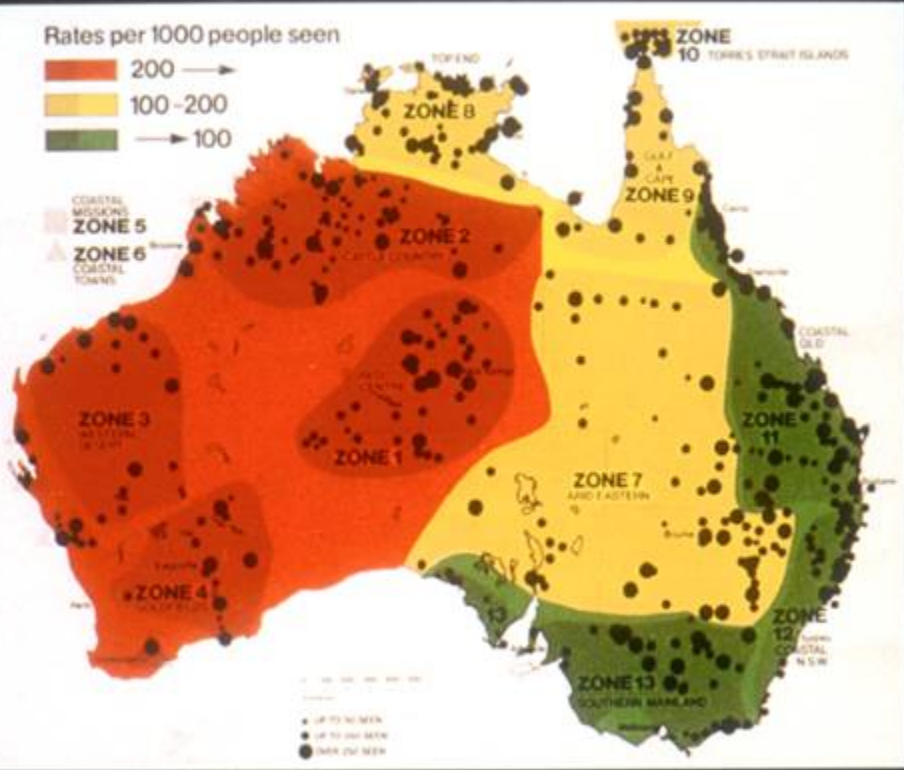
1. Define to scope of the problem
2. Characterise current service models
3. Develop recommendations for sustainable, cost-effective eye care services

...but also Fast Track Trachoma

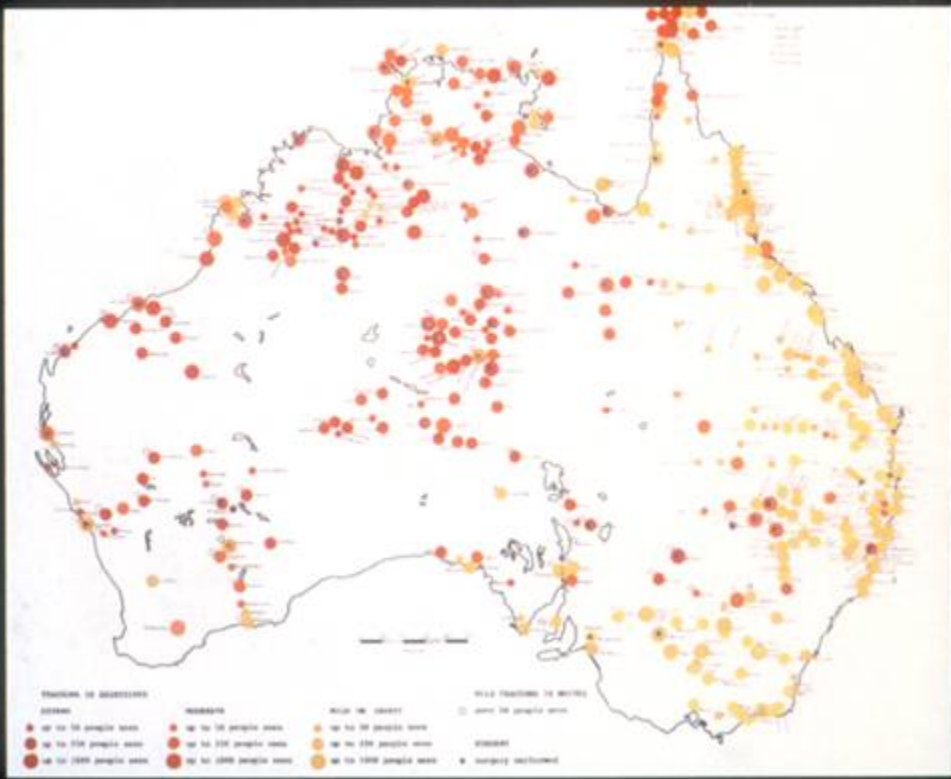


National Trachoma and Eye Health Program, 1976-1978

DISTRIBUTION OF BLINDNESS AMONGST ABORIGINES MORE THAN 60 YEARS OF AGE.



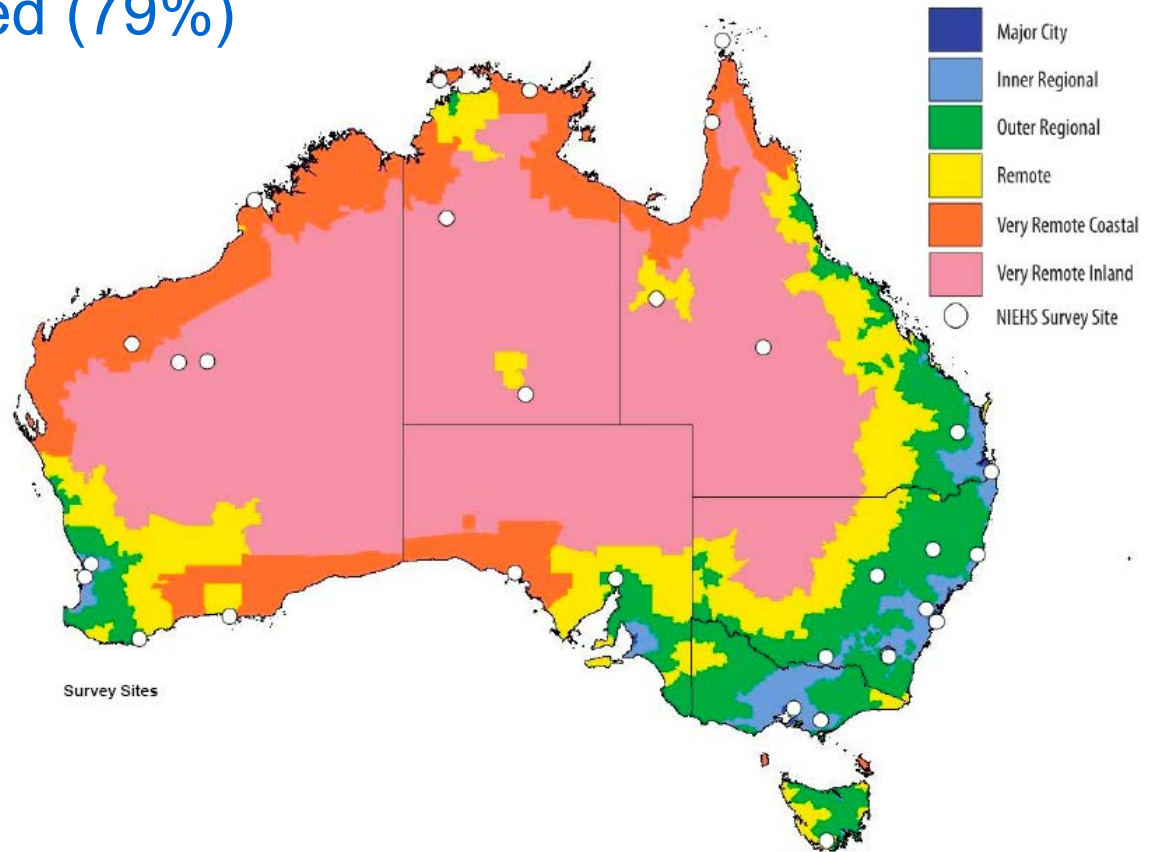
COVERAGE OF AUSTRALIA BY NATIONAL TRACHOMA AND EYE HEALTH PROGRAM FIELD TEAMS, 1976-1979.



NTEHP 1980

National Indigenous Eye Health Survey, 2008

30 randomly selected sites
5-15yr old and 40yr and older
2883 people examined (79%)



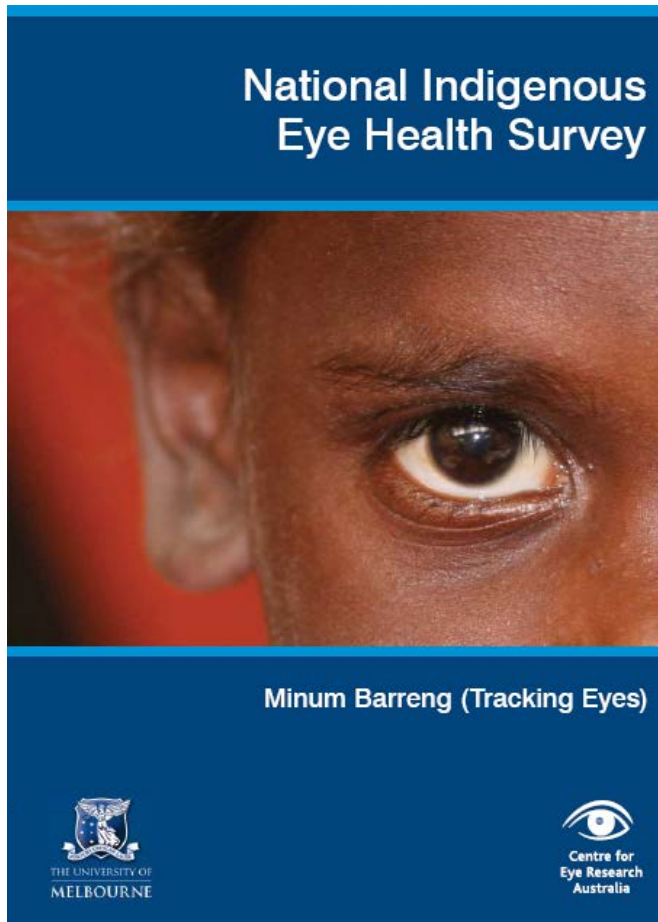
Survey Sites





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Report Launched by the Governor General September 2009



Vision Loss in Children

One fifth as common as in mainstream children

Vision Loss in Adults

Blindness is 6 times more common

Low Vision is nearly 3 times more common

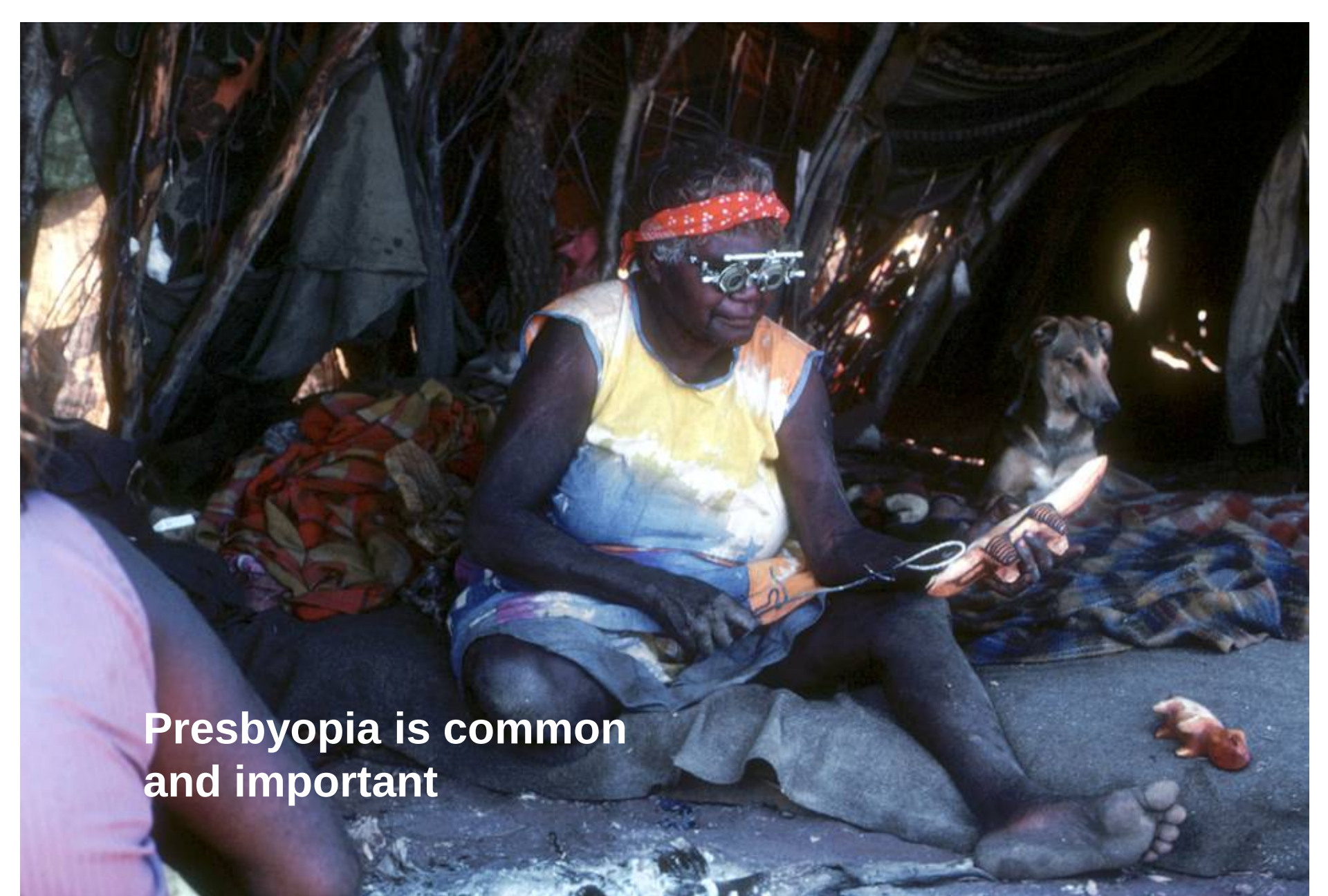
Causes of Blindness in Adults

32% Cataract

14% Refractive Error, and Optic Atrophy

9% Trachoma and Diabetic Eye Disease

**Overall 94% of Vision Impairment is avoidable
...and 35% have never had an eye exam**

A photograph of an elderly Indigenous Australian woman sitting inside a traditional shelter made of branches and bark. She is wearing a red headband with white polka dots and a pair of glasses. She is holding a knife in her right hand and a piece of wood in her left. A dog is visible in the background. The text "Presbyopia is common and important" is overlaid on the bottom left of the image.

**Presbyopia is common
and important**





There is a clear need
for proper refraction services



Refractive Error

- **Half of vision loss** in both adults and children is due to Refractive Error
- **39% of adults cannot see normal print**
- Services to provide distance and reading glasses are needed in every Indigenous community



Cataract

- Overall, 3.1% of Indigenous adults suffer vision loss from cataract
- **Blinding cataract is 12 times more common in Indigenous adults**
- Only 65% of those needing cataract surgery have been operated on
- Regular cataract surgery services with adequate capacity are required



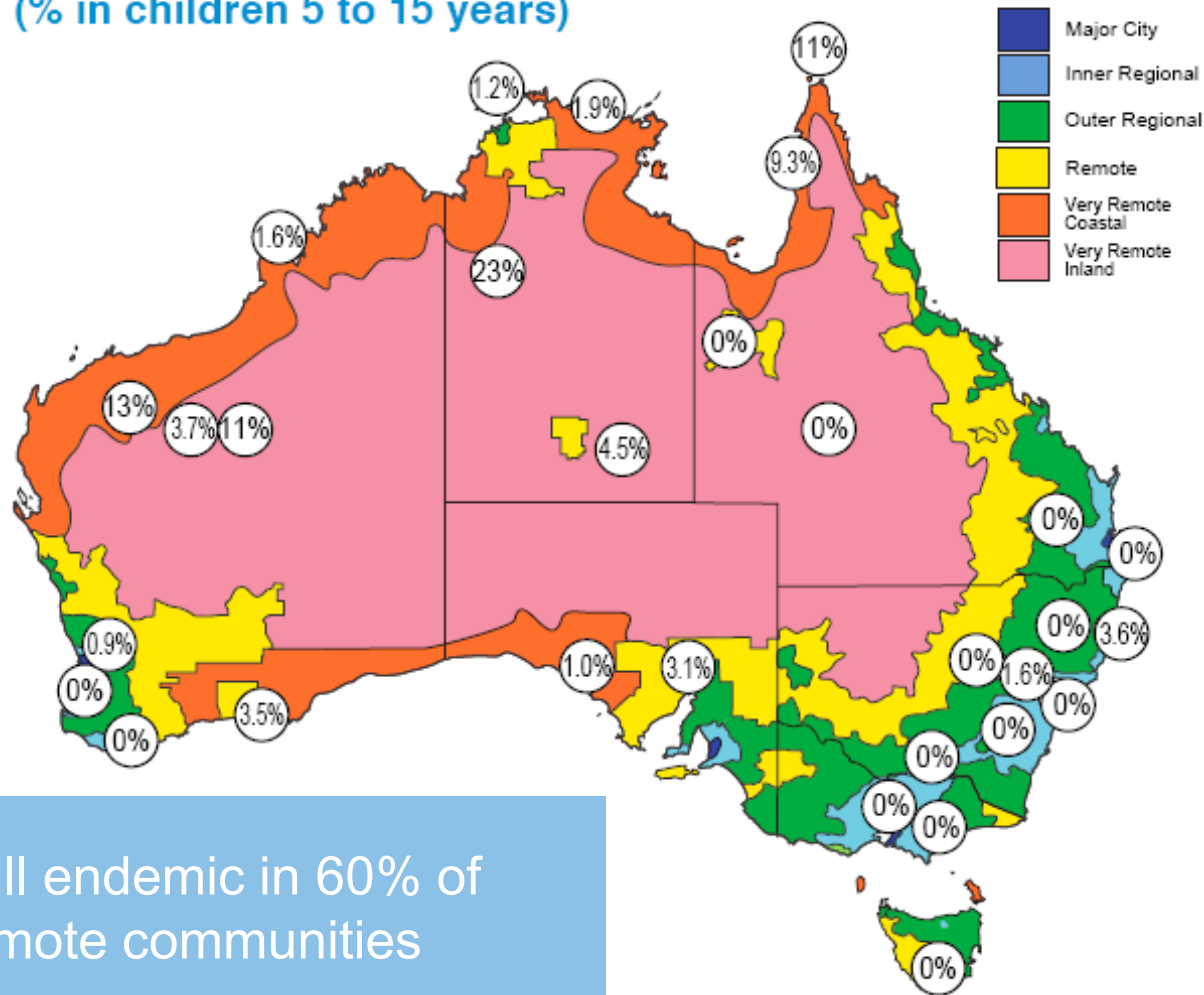
Diabetes

- ▶ Diabetic eye disease is the equal third cause of blindness
- ▶ Indigenous people with diabetes:
 - 36% have diabetic eye disease
 - Only 20% have had a recent eye examination
 - Only 37% have received the laser surgery they need
- ▶ Regular screening and accessible laser facilities are required



Trachoma

TF Prevalence in Indigenous Children (% in children 5 to 15 years)



Still endemic in 60% of remote communities

Older people with trichiasis found across the country



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Trachoma in Australia, NTSRU 2009

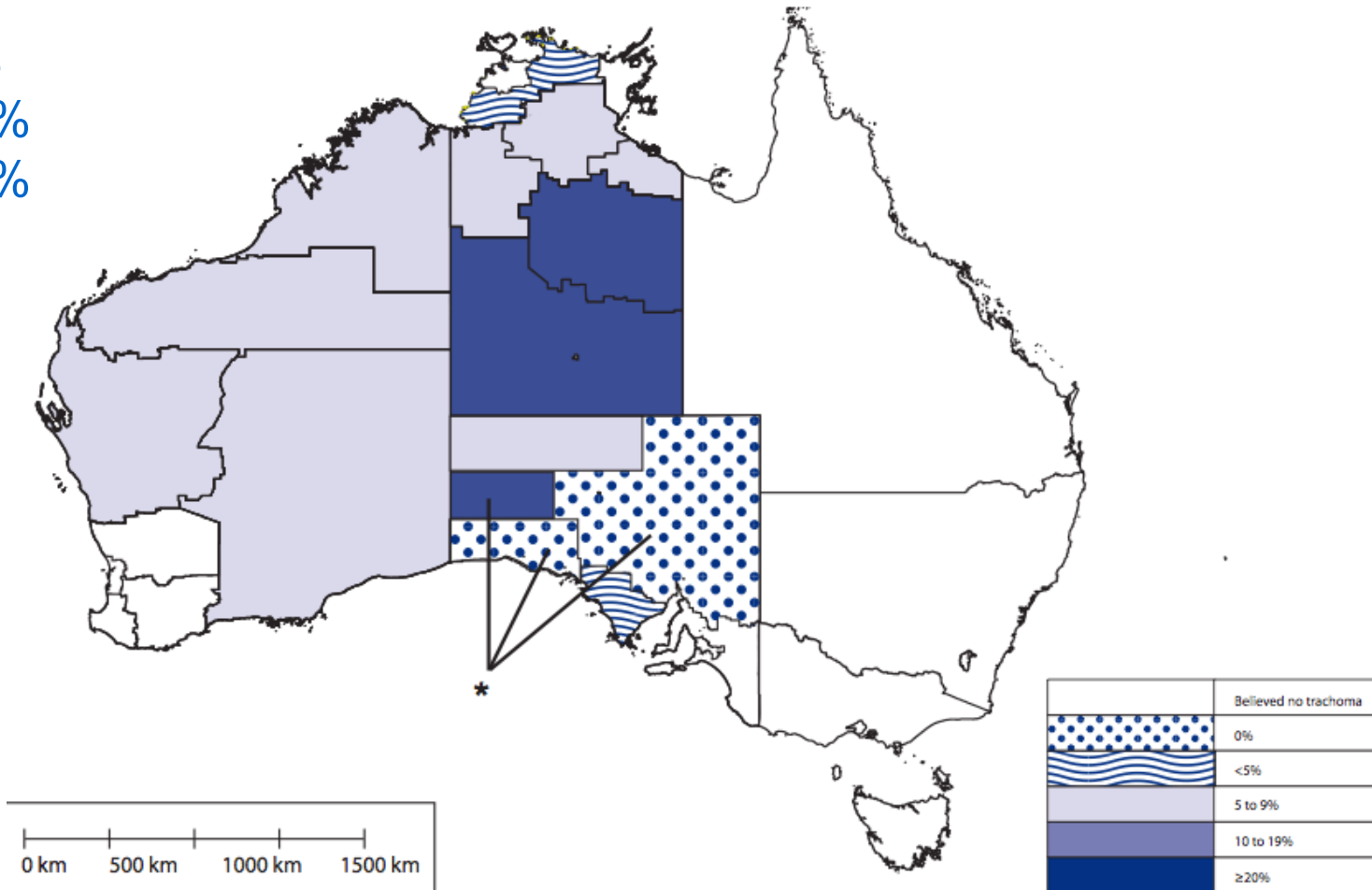
Communities At Risk

120/234

82 of these >5%

54 of these >20%

17 of these >50%



Further action:

- Trachoma can be prevented with the SAFE Strategy:
 - Surgery for trichiasis,
 - Antibiotic therapy,
 - Facial cleanliness and
 - Environmental improvements
- The extent of trachoma needs to be clearly mapped
- All children at risk need to be checked regularly with follow up treatment
- Elderly people across the country need to be checked for intumed lashes (TT) as part of the Healthy Adult check and if needed, referred for surgery



The Two Key Areas

Antibiotic Distribution

Azithromycin

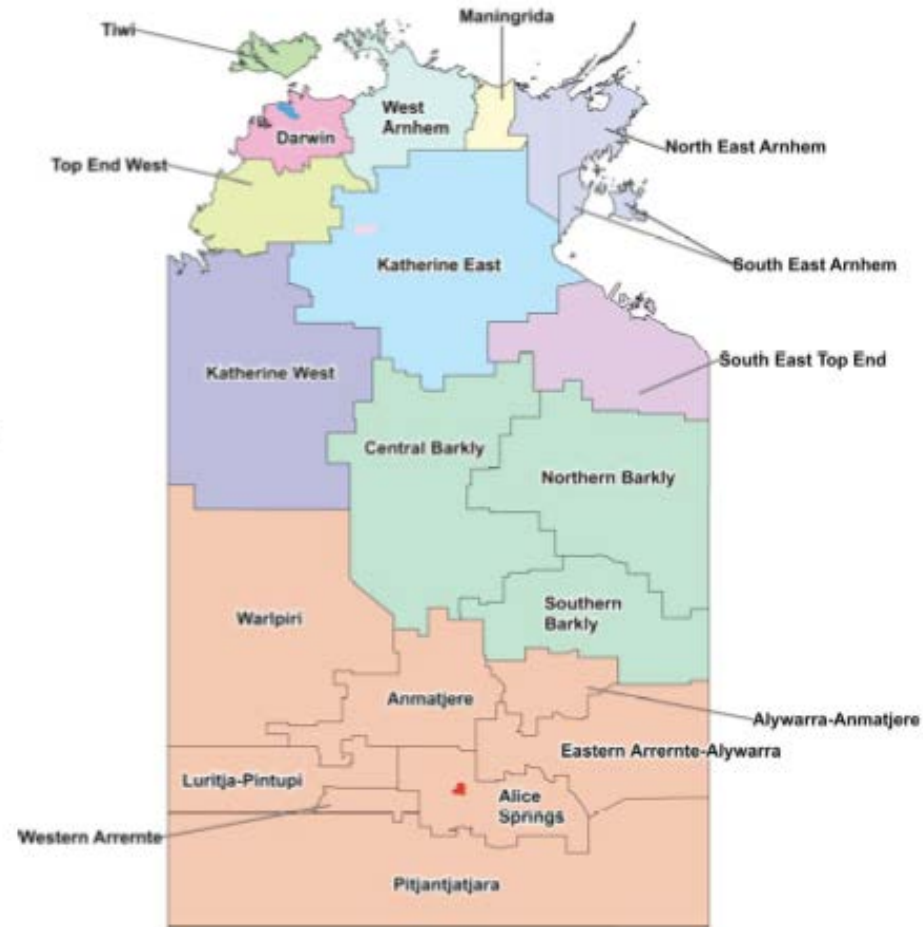
Facial Cleanliness



Katherine West Health Service

- AMS Established 1998
- Area: 162,000 sq km
- Population: 3,5000 – 90% Indigenous
- Seven major communities of 40-1,500 people
- Traditional land of 9 language groups
- Trachoma prevalence 23%

The Northern Territory



Katherine West Health Service Trachoma Control Program

Team with Project Officer/Nurse and AHW

Responsible for implementation of trachoma activities

Develop and document material

Provide demonstration and training

Looking at linkages such as “Healthy Eye and Healthy Skin Program”



Community Toolkit to Eliminate Trachoma

- Consultation and development of resources:
 - Staff KWHB,
 - Staff CDC,
 - Ngumpin Reference Group,
 - KWHB communities (4),
 - NT education, housing and environmental health
- Reviewed 60 resources and drafts
 - 12 months,
 - 87 people consulted,
 - 7 field trips
- Launched Aug 2010
 - 36 Kits in KWHB,
 - 400 in NT, 88 in WA



CLEAN FACES, STRONG EYES!

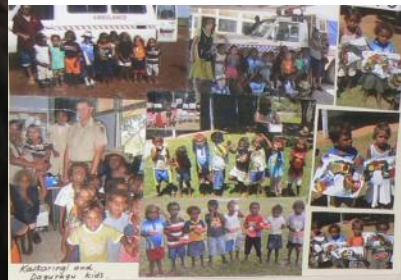
Trachoma Story Kit



Resource Book
Background Material
Flip Charts
Posters
School Curricula
Colouring sheets
Stickers and Stamps
DVDs
Mirrors



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27th February 2009

Prime Minister Rudd announces \$16m over 4 years
to eliminate trachoma as part of
\$58m Indigenous Eye and Ear Package

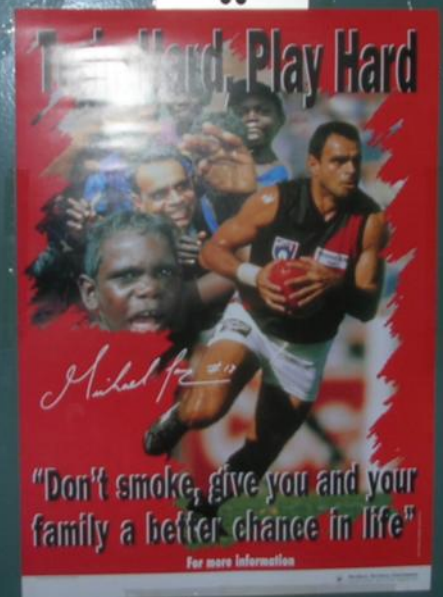




HEALTH
INFORMATION



STRONG
&
NEEDLES

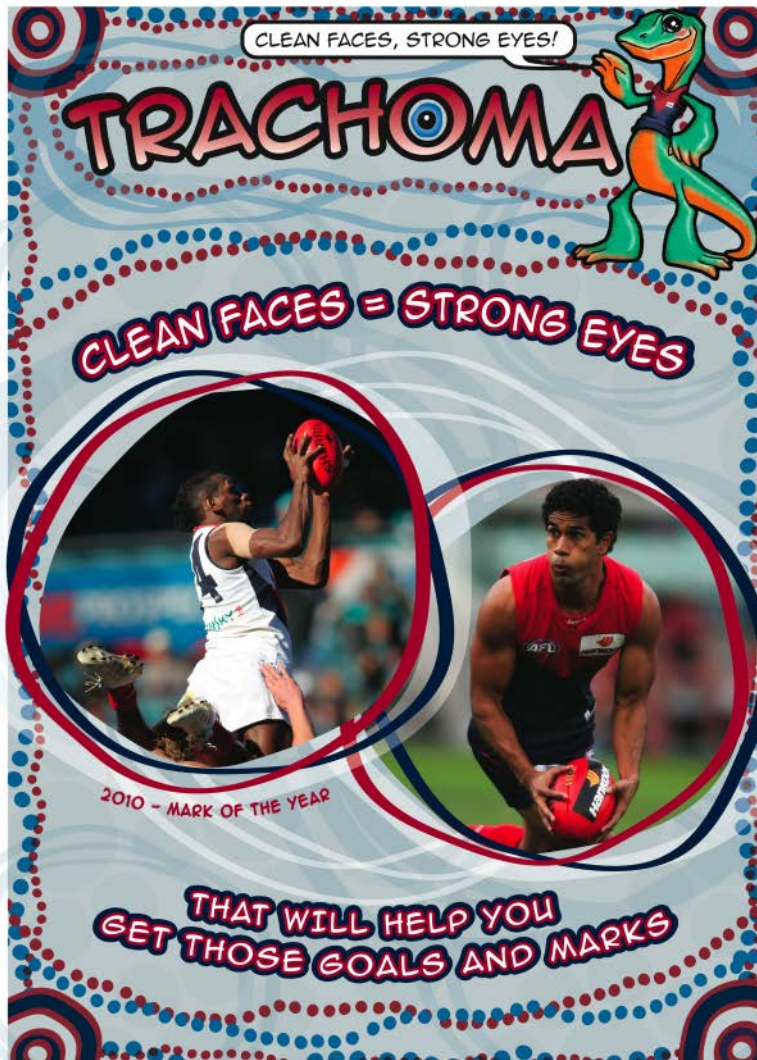


April 2010 Melbourne Football Club Trachoma Ambassadors





January 2011 – 2 Trachoma Posters



HANKOOK

KASPERSKY

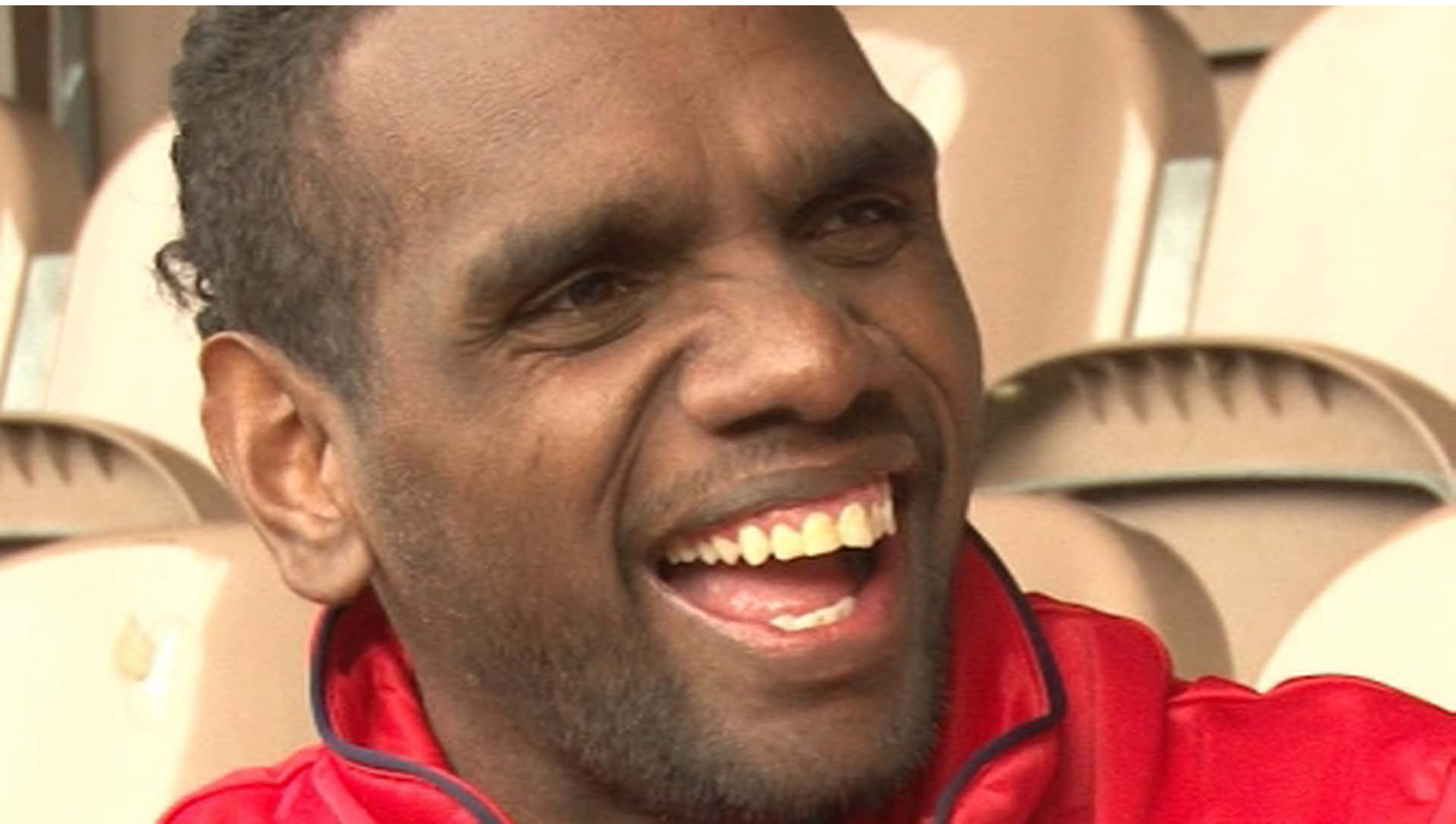


HANKOOK

KASPERSKY



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Social Marketing Campaign

- Indigenous TV Children's Program
 - Yamba, the Honey Ant
- Football shows
- Radio announcements
- Trachoma Song
- Goanna Suits
- Developing
 - Scripts
 - Involve MFC players



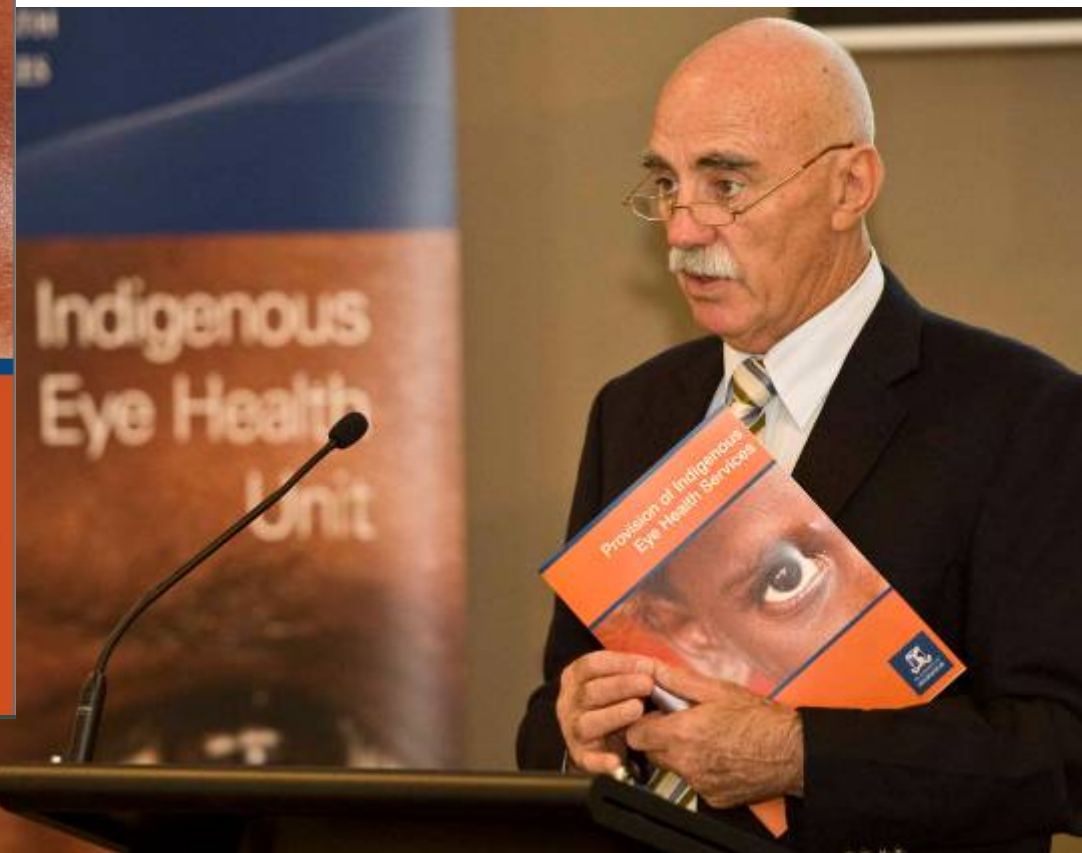
Provision of Eye Care

- 94% of vision loss is unnecessary
- And one third of adults say they have never had an eye exam
- Why aren't eye services being utilised?

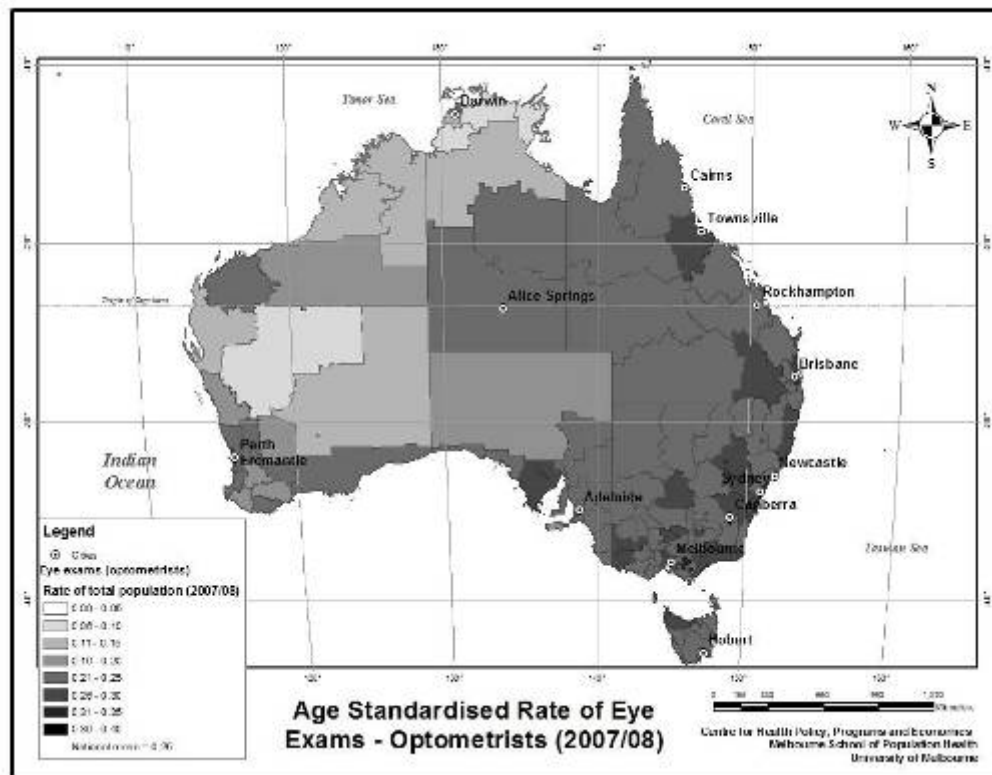


Provision of Indigenous Eye Health Services

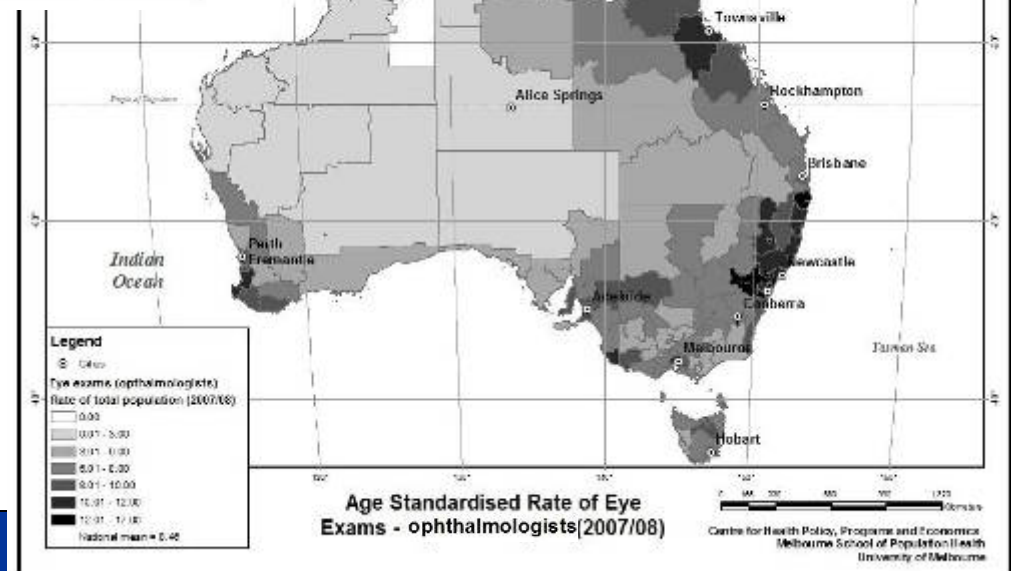
17th May 2010



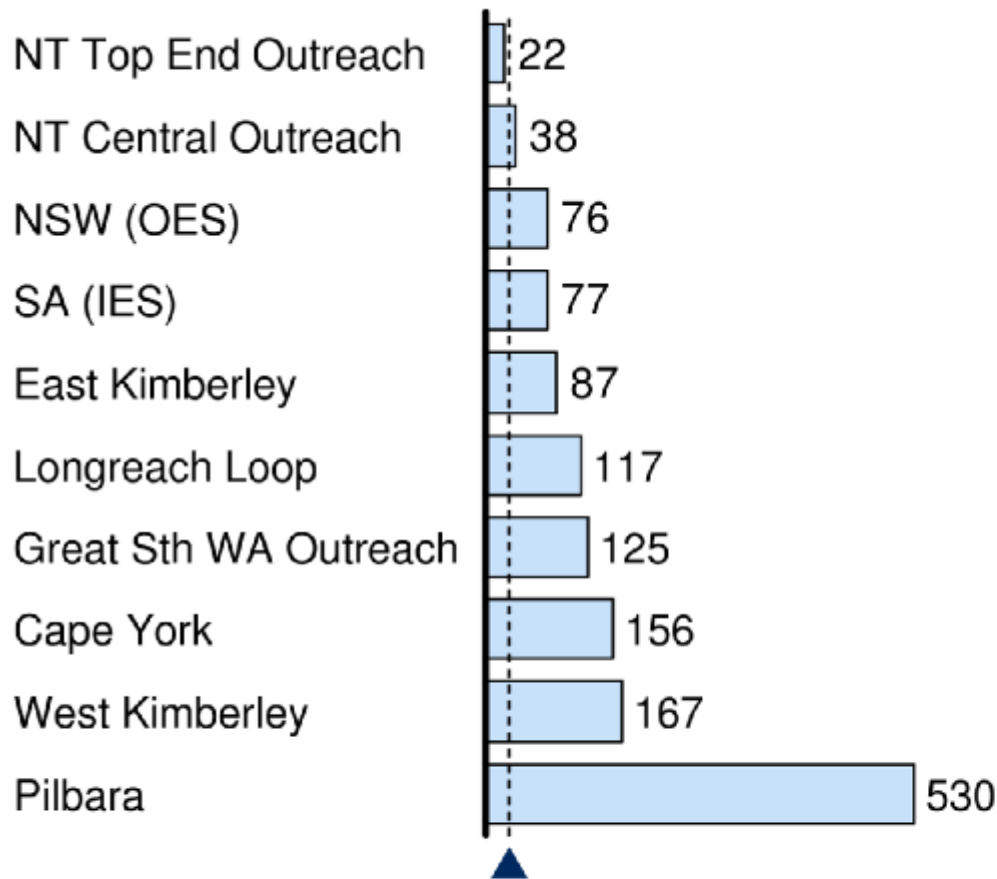
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There is a huge disparity in the distribution of eye care provided

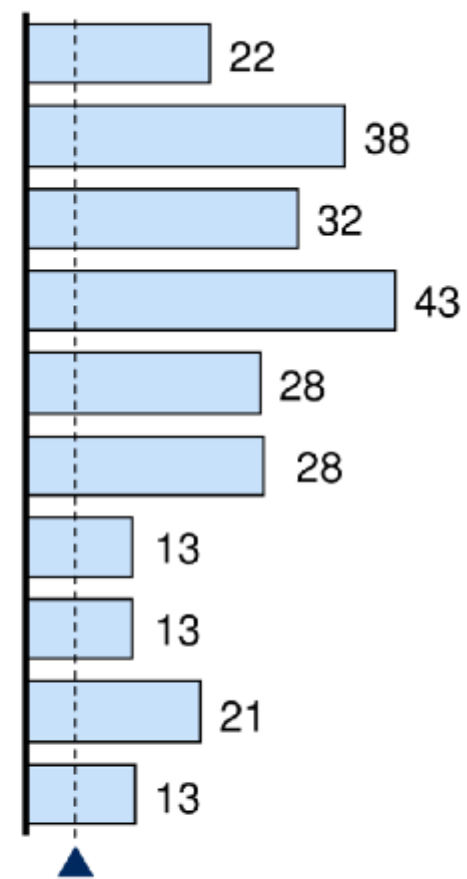


Ophthalmologists



National
average 28.0

Optometrists

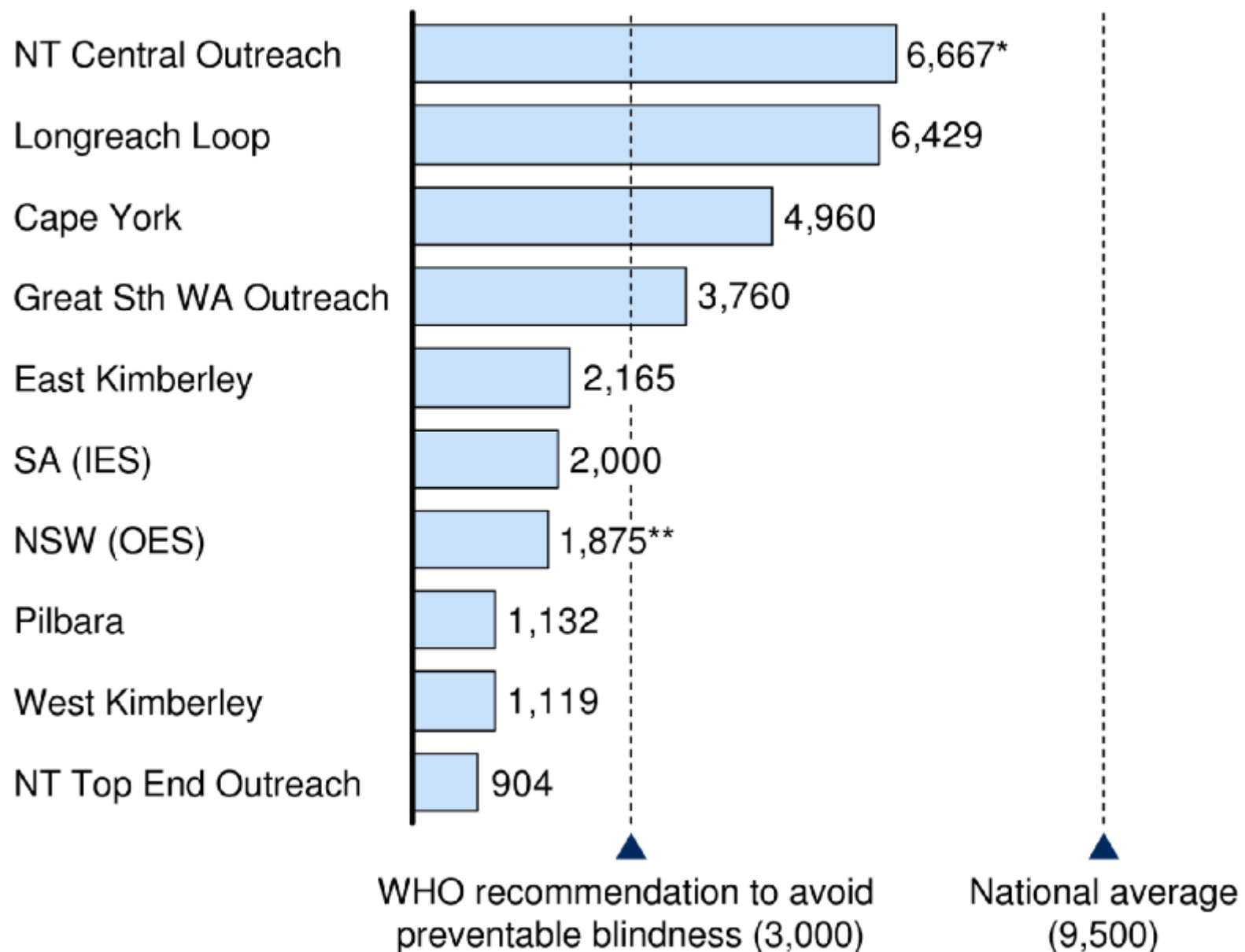


National
average 5.4

Population ('000s) per full-time health professional



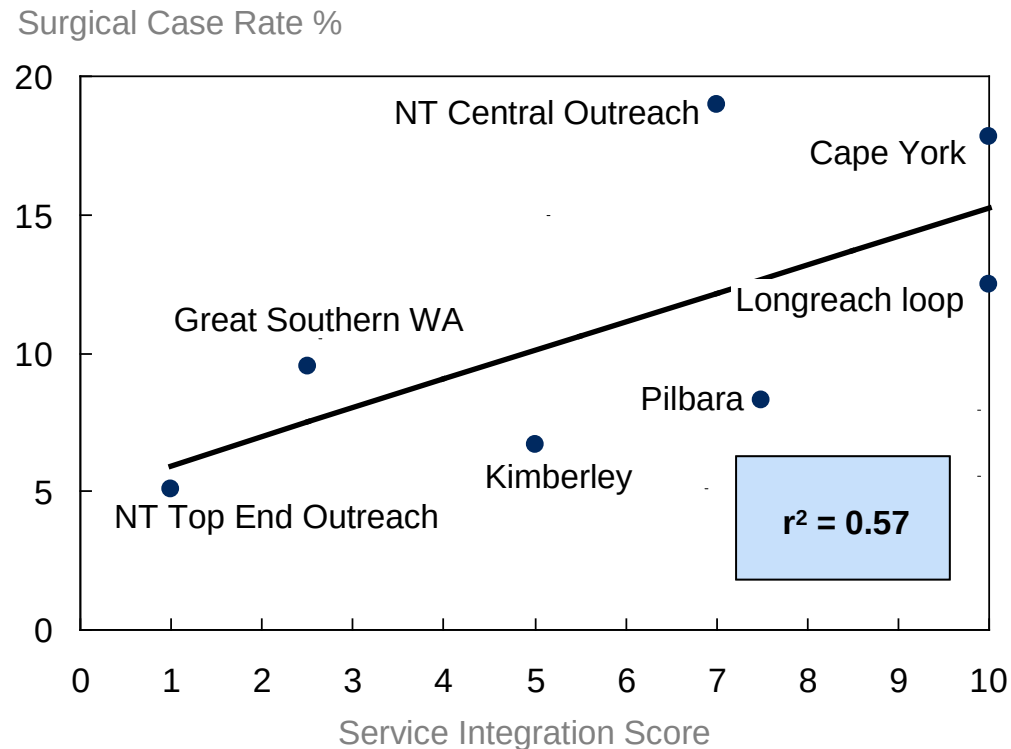
Cataract operations per million population per year



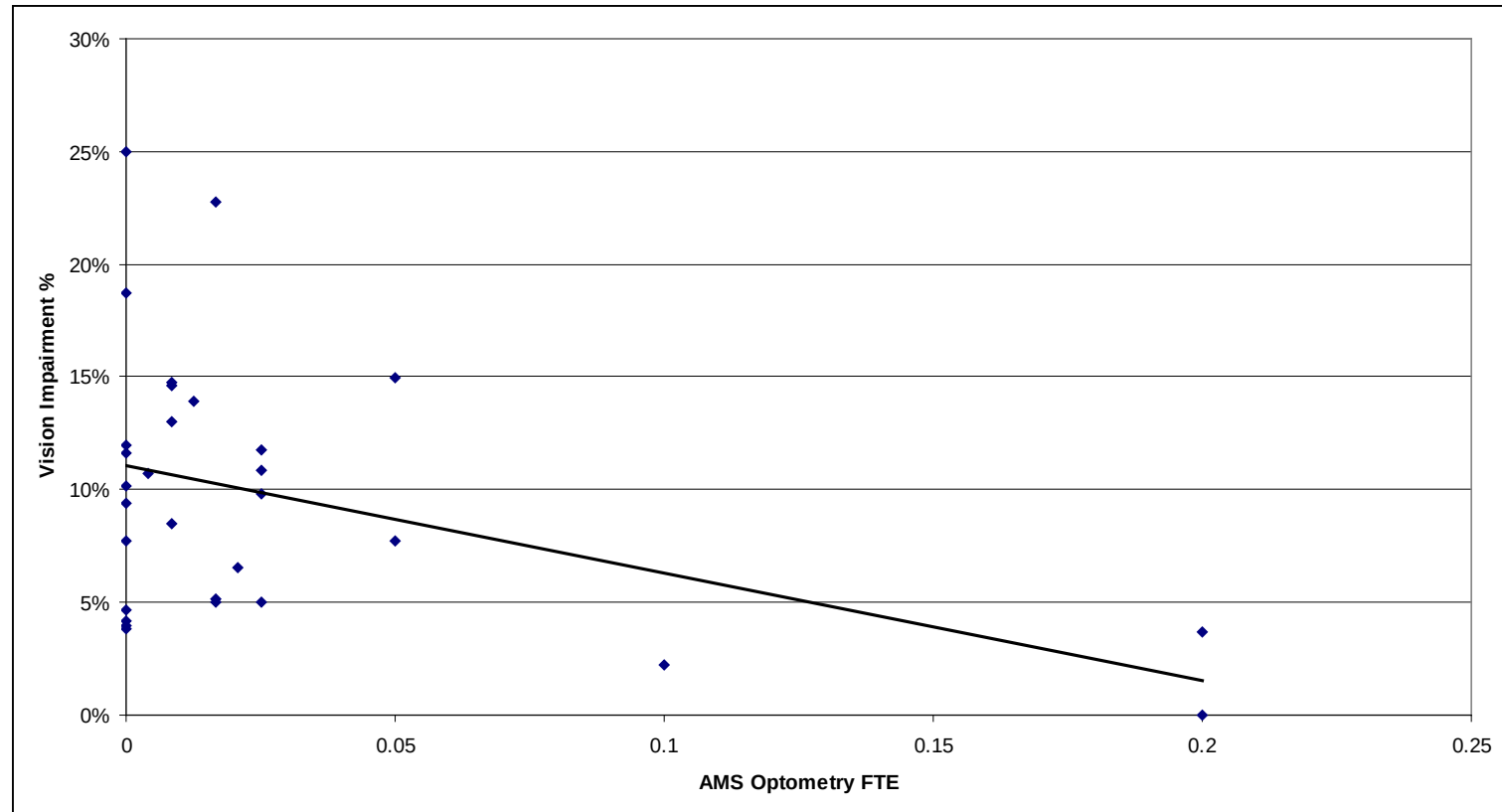
Co-ordination of Services

Good Co-ordination

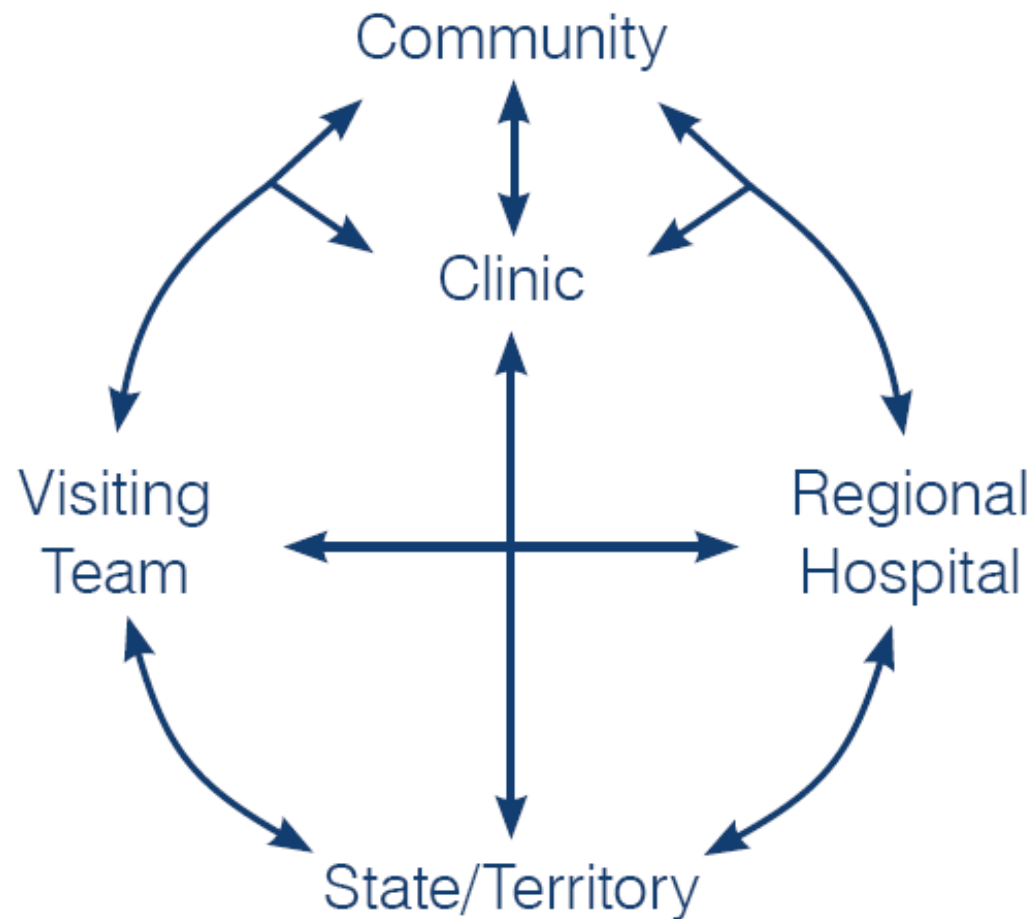
- reduced costs
by 15%
- improved clinic throughput
by 40%
- reduced waiting times
by 5 months
- increased cataract surgery
by 80%



Eye Services in AMS Reduce Vision Loss



Good Coordination is required in at least 5 levels...



...and eye care must be coordinated with other services



Vision Loss is not less in Urban and Regional Areas...

Crude Prevalence rates of Vision Loss in Indigenous Australians

State	Children		Adults		Regions	Children		Adults	
	Low Vision	Blindness	Low Vision	Blindness		Low Vision	Blindness	Low Vision	Blindness
NSW	3.3%	0.4%	5.7%	2.4%	Major City	4.5%	0.6%	7.7%	2.6%
NT	0.8%	0%	9.1%	3%	Inner Regional	2.6%	0%	7.8%	2.4%
QLD	0.9%	0.3%	11.6%	0.4%	Outer Regional	1.5%	0%	6.6%	0.6%
SA	0%	0%	9.3%	1.6%	Remote	0.9%	0%	10.2%	0.8%
TAS	0%	0%	4.7%	0%	Very Remote Coastal	1.1%	0.3%	9.5%	1.1%
VIC	0%	0%	6.9%	6.9%	Very Remote Inland	0.3%	0.3%	12.7%	3.9%
WA	1.9%	0.2%	12%	1.8%	TOTAL	1.5%	0.2%	9.4%	1.9%

...even though services are readily available.

Projected Needs for Eye Care Services for Indigenous Australians



Provide targets for eye care delivery

The number of people who need to
be seen or treated

The number of eye providers required
Data Used:

ABS for regional population

National Survey for
prevalence

National manpower coverage



27 May 2011



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National Need for Eye Services

- Diabetes examinations 39,000 pa
- Diabetic laser surgery 5,000 pa
- Cataract surgery 4,400 pa
- Exams and glasses 26,000 pa
- Trichiasis surgery 1,500 operations

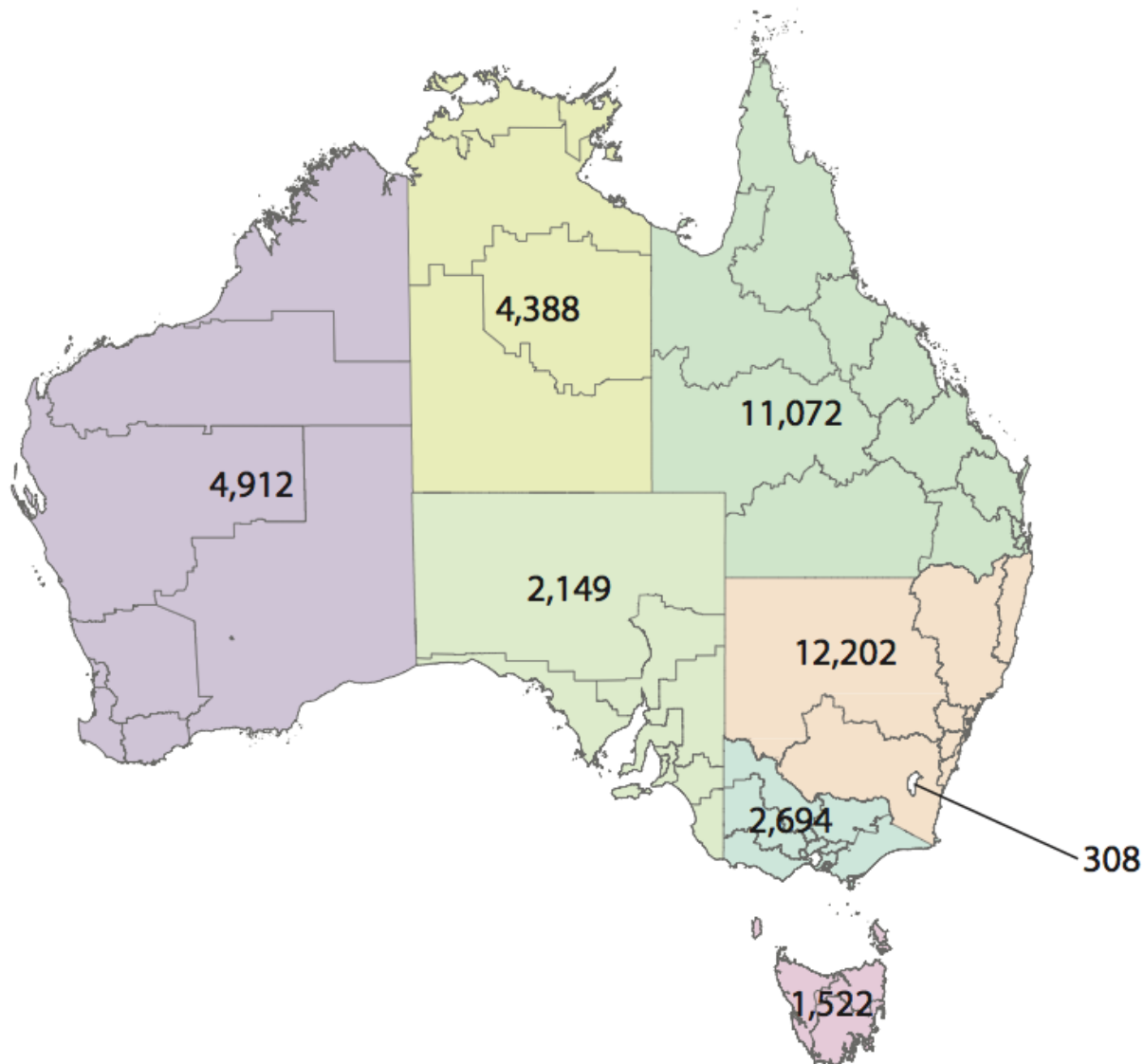
Need to increase providers

Ophthalmologists 1 FTE :28,000

Optometrists 1 FTE :4,90

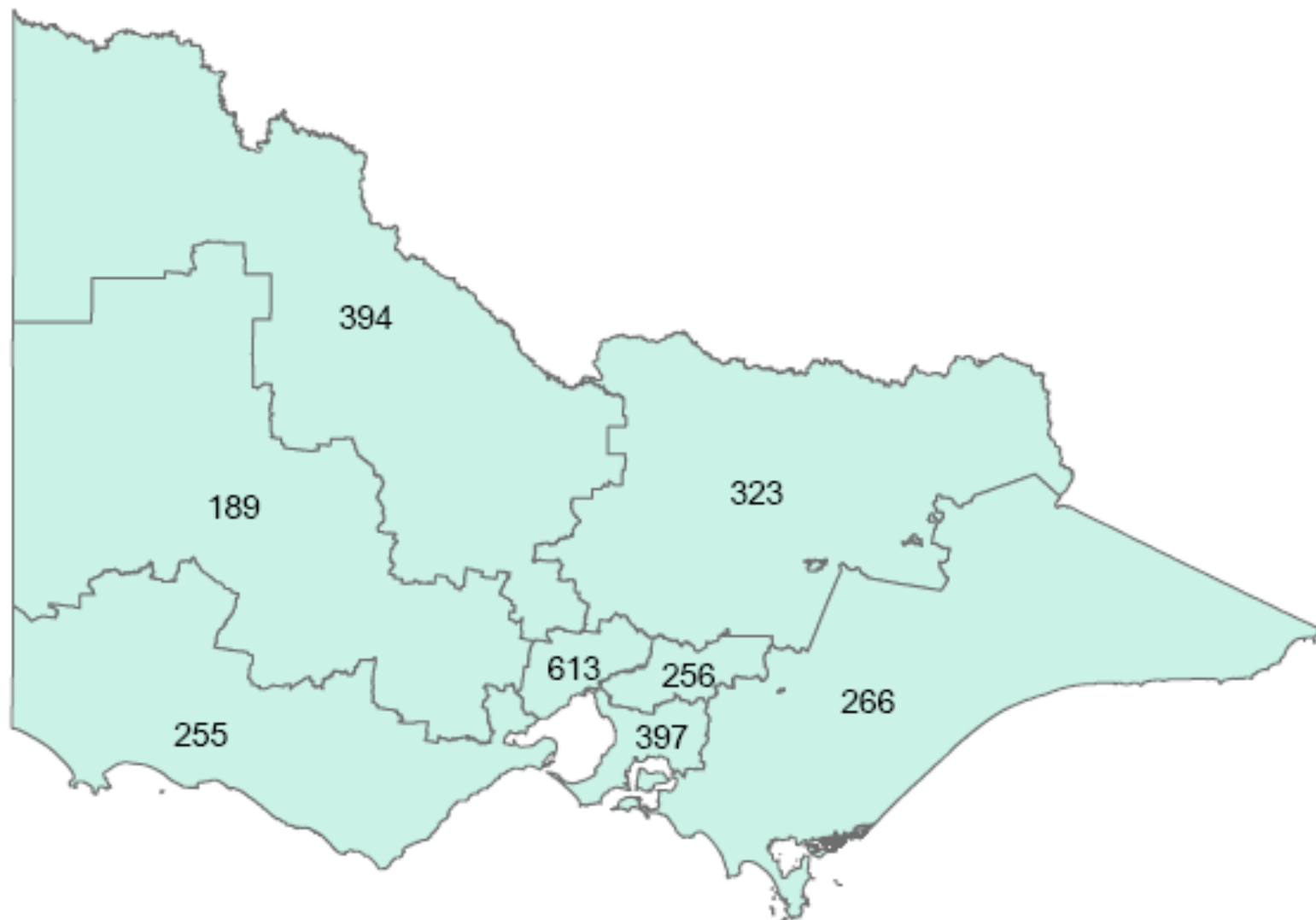


Estimated number of Indigenous people with **Diabetes** who require an annual eye examination
Total: 39,247



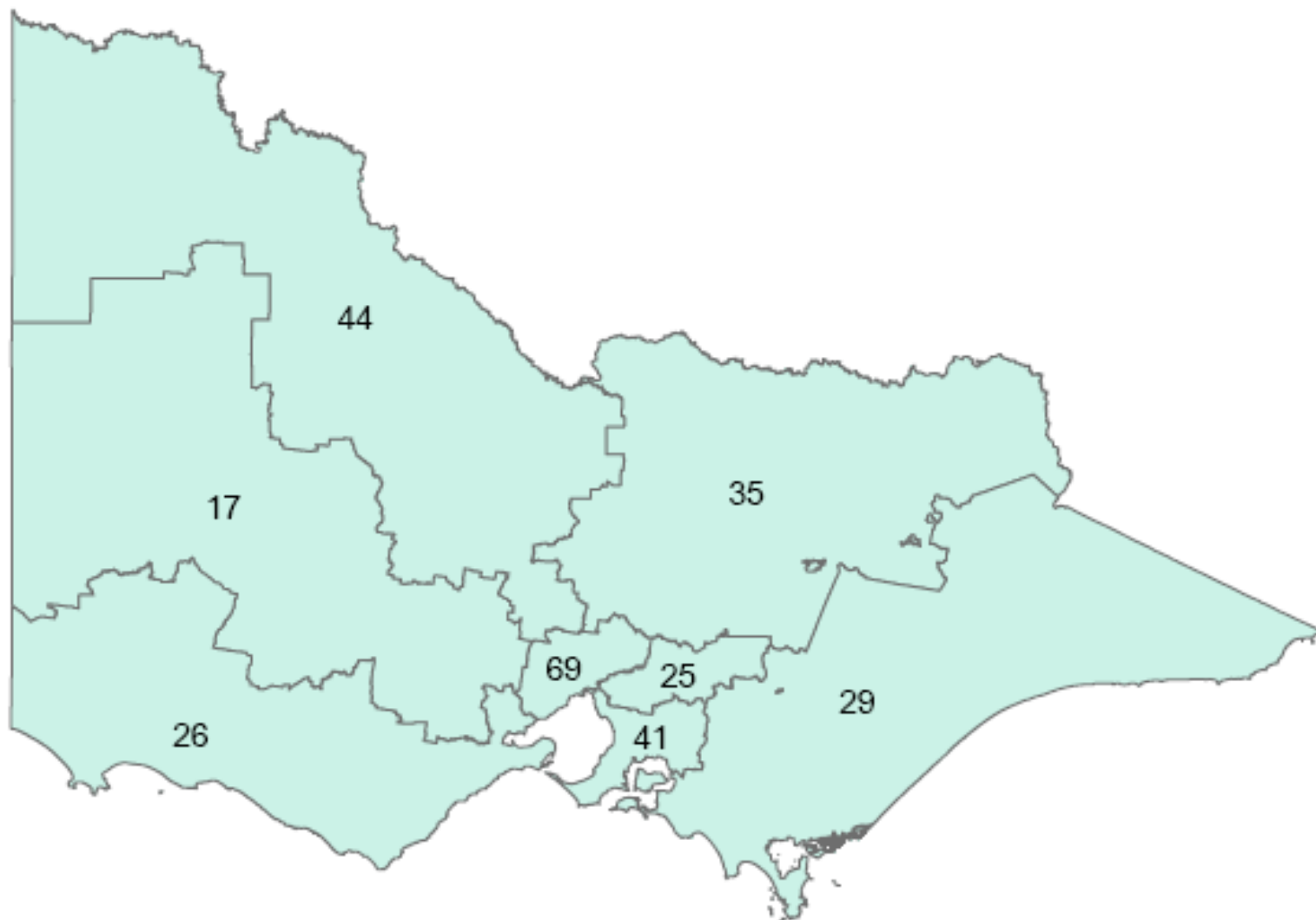
Estimated Number with Diabetes Requiring Annual Eye Exam

Total: 2,694



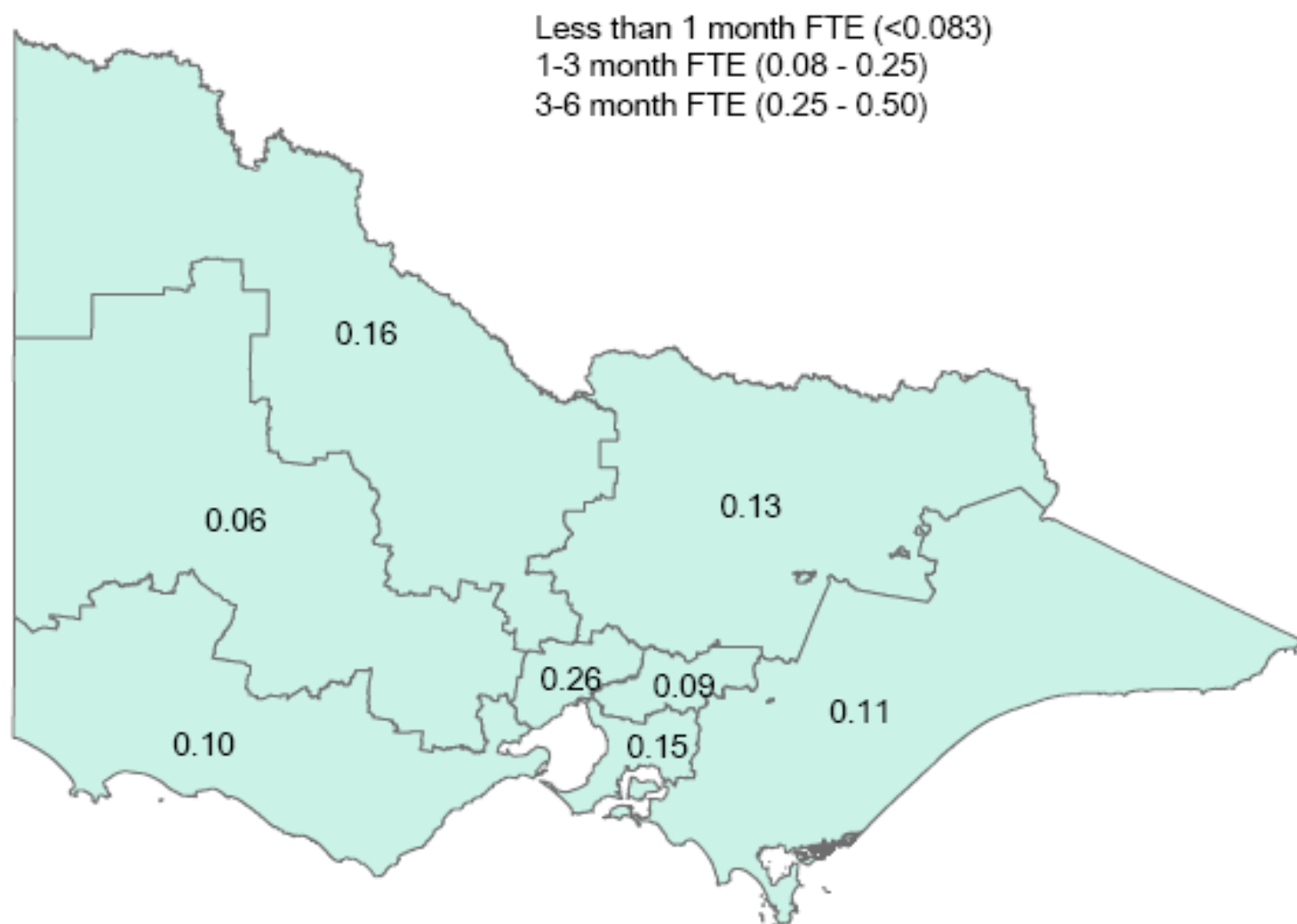
Number of Cataract Operations to Reach National CSR(9500)

Total: 285



Number of Ophthalmologists Required to Meet National Average (1:28,000)

Total: 1.07



A Critical History of Indigenous Eye Health Policy-Making



Towards Effective System Reform



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- Review covers 1976-2010
- 11 Health Ministers
- 9 Heads of Department
- 7 Department name changes
- 7 formal reviews of eye health
- Detailed review of reports and documents
- Interviews with 23 key “players”



27 May 2011

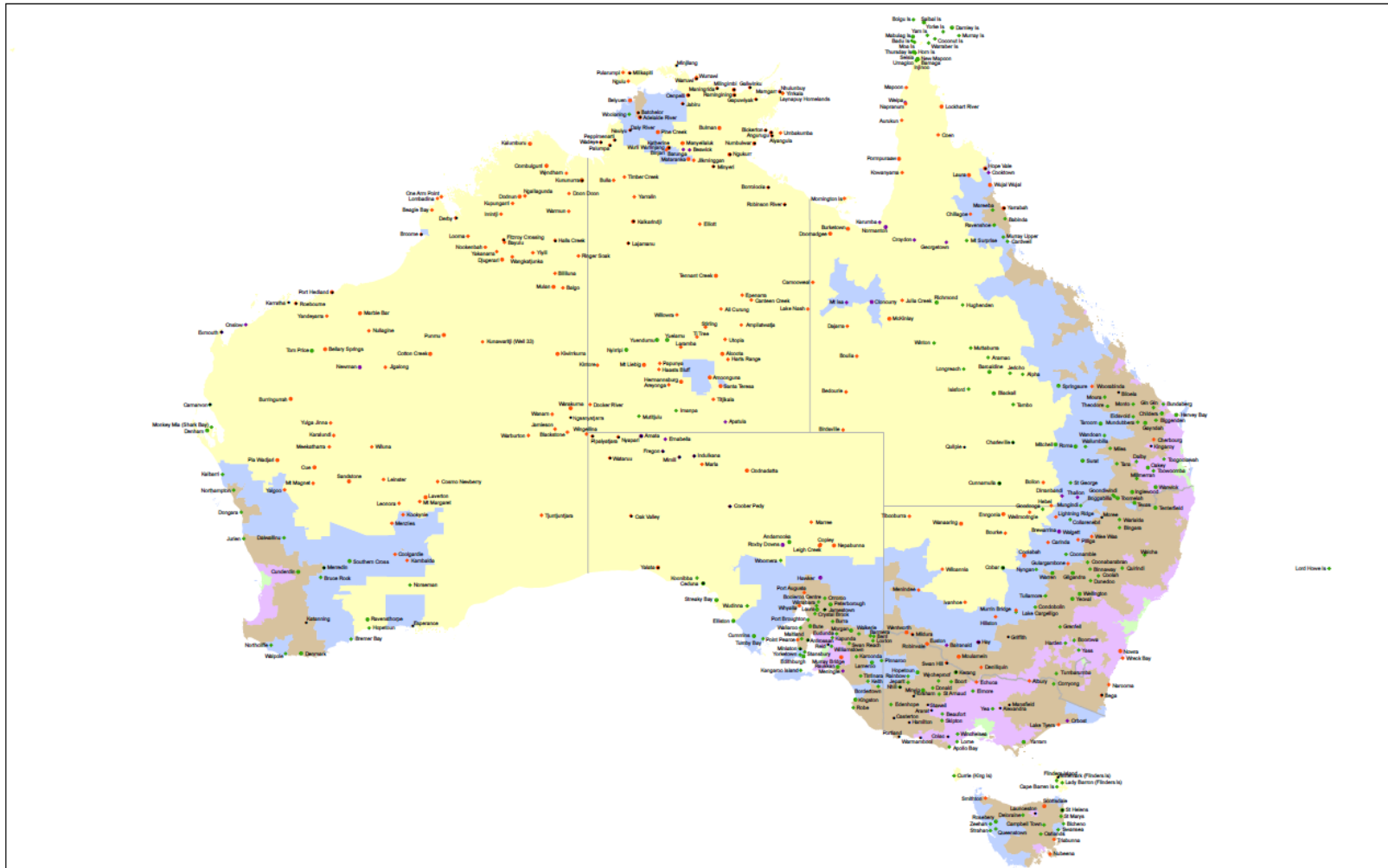
Consistent Findings-

7 Reviews of Eye Health, 1980-2004

- Need for close community input and involvement
 - “Solutions” cannot be imposed
- Need for national oversight and monitoring
 - Peaks and troughs, often led by a “champion”
- Need to integrate basic eye care into primary care
 - Stand alone services are not appropriate, but PHC must do primary eye care
- Need mechanisms to overcome jurisdictional issues
 - Implementation often delayed
- Need commitment of appropriate priority and resources
 - Many recommendations not implemented



Remote Visiting Services - VOS and MSOAP



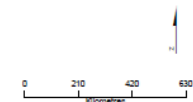
**Visiting Optometrists Scheme (VOS) and MSOAP
planned Ophthalmology services for 2010-11**
National



- MSOAP planned Ophthalmology service 2010-11
- VOS Core Program
- VOS Core Program and Indigenous Expansion
- VOS Indigenous Expansion
- State border

ASGC - RA

- Major Cities of Australia (RA1)
- Inner Regional Australia (RA2)
- Outer Regional Australia (RA3)
- Remote Australia (RA4)
- Very Remote Australia (RA5)

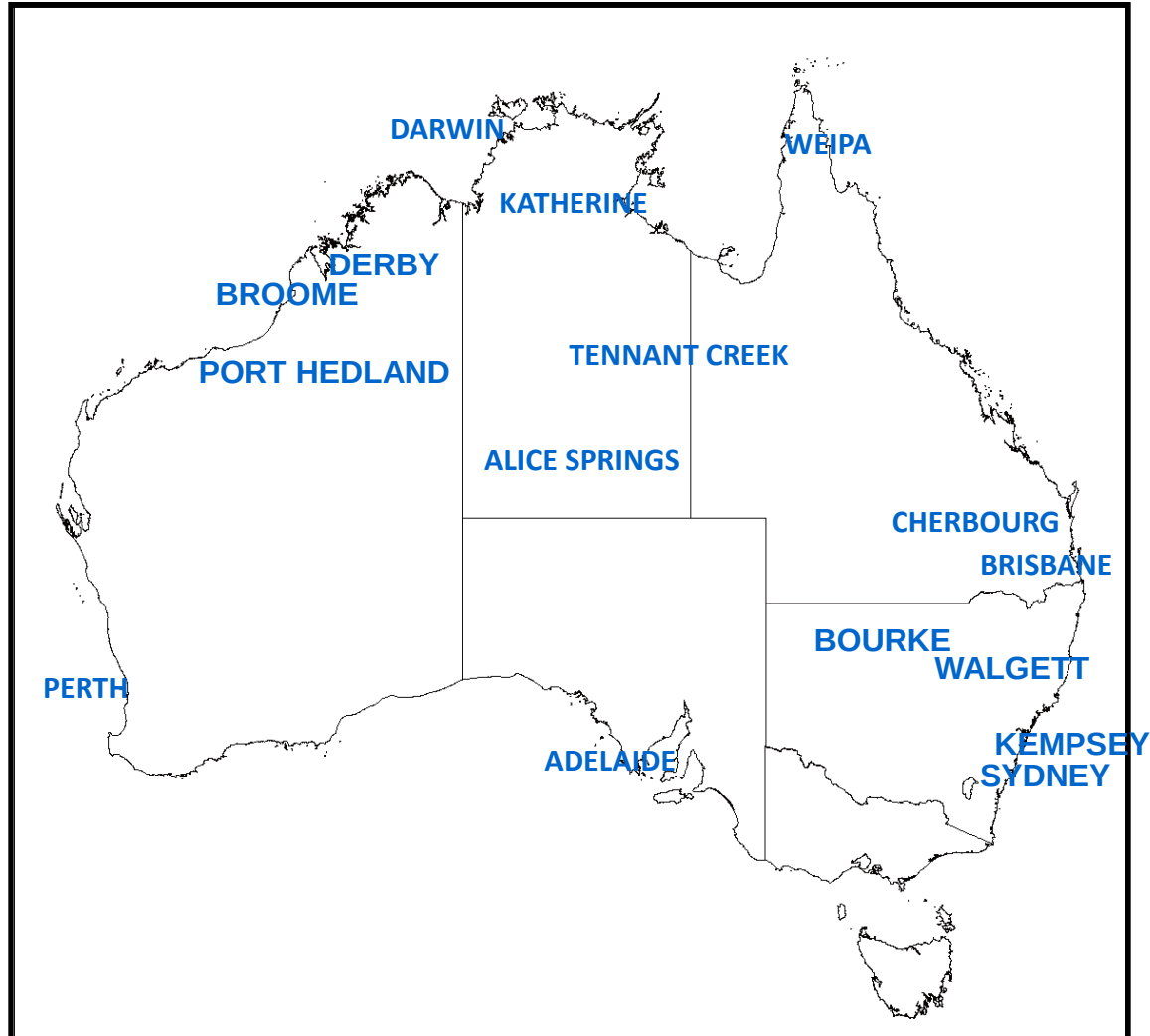


Prepared by Primary & Ambulatory Care
Division, DoHA
Mapping and On-line Services Section
November 2010
Courses
Medicare Australia
Australian Bureau of Statistics
Department of Health and Ageing
VOS and MSOAP data current to November 2010

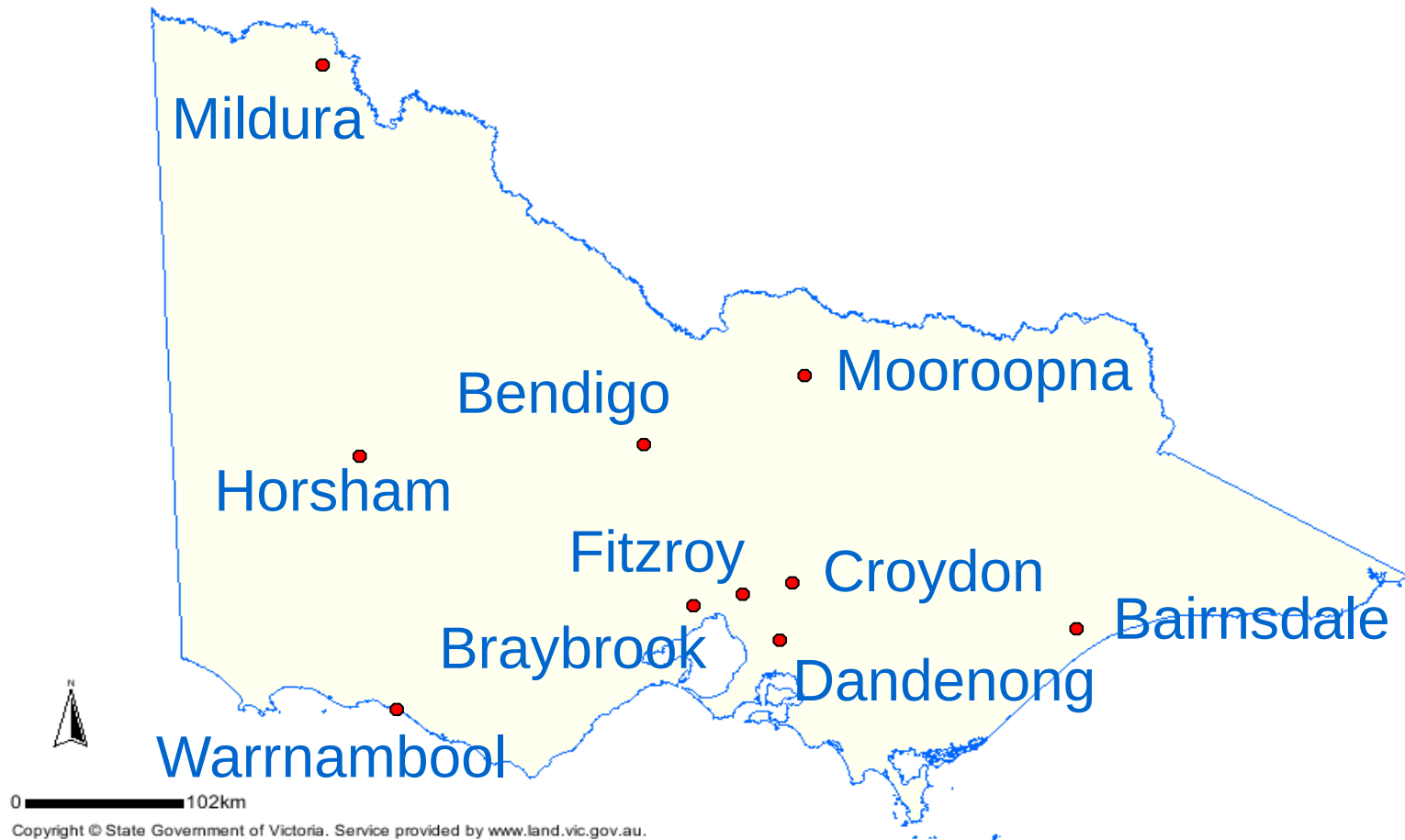


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13 Eye Services Across Australia



10 AMS Across Victoria



Service Coordination - Pathway of Care

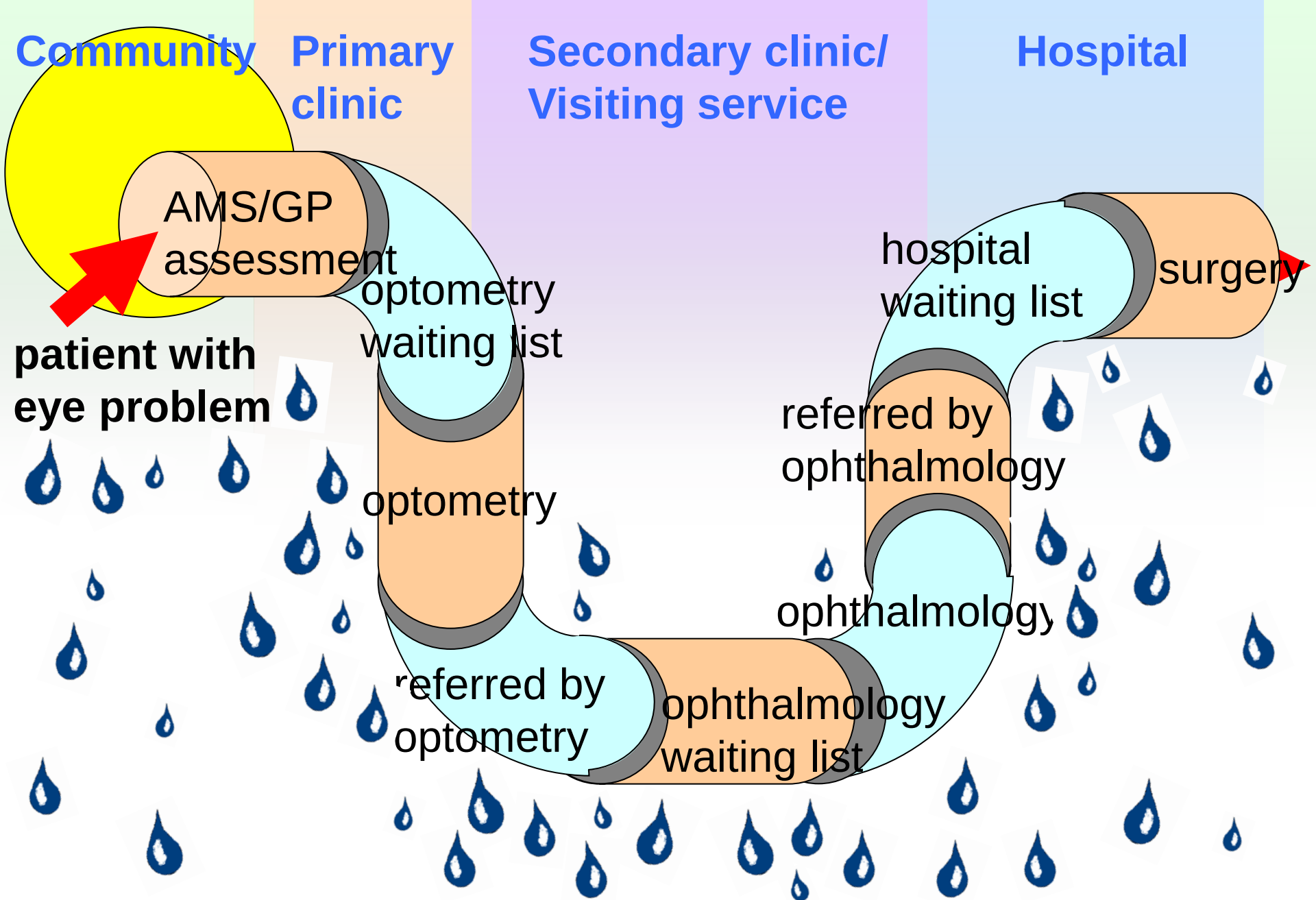
- Identify key components to enhance the pathway of care and provision of eye services through AMS
- Input from National and Victorian consultations:
 - patients/clients/community
 - remote and visiting service providers
 - urban and rural service providers
 - Government
 - other stakeholders



Utilisation Issues

- Many significant similarities but elements may differ
- Lack of knowledge and communication among service providers
- Insufficient coordination and management of the pathway
- The system is complex – for everyone
- Eye health messages and checks exist but implementation is poor
- Proper case management requires additional and functioning referral pathways





Some Findings and Barriers

- Awareness and knowledge around eye health
- Priority given to eye health
- Confidence/comfort accessing services
- Cost; visits, glasses, surgery
- Waiting times
- Patient travel costs

- Coordination
- Communication
- Referral pathways



Some Enablers

- Provision of services in AMS services
- Assistance with spectacle cost
- Priority for cataract surgery
- Support; coordination, transport, financial, advocacy
- Case management
- Trust/relationships with service personnel (AMS, optometry)
- Specific personnel (REHC's, other AMS staff)



Why Eye Health is Important

- It is common;
 - most common self reported health complaint 30%
 - blindness rates are 6 times higher,
 - blindness from cataract is 12 times higher, surgery 7 times less
- It causes;
 - 11% of Years of Life Lost to Disability for Indigenous people
 - 3rd leading cause of the Gap for Health!
 - increases mortality rates by at least 2 fold
- It is discrete and fixable;
 - Cataract surgery, New glasses, Diabetic blindness, Trachoma
- It provides a paradigm for all specialist health care;
 - it requires integration into primary health care
 - it needs coordination within a regional basis
 - it requires community engagement

The challenge now is to develop Policy Recommendations

Facilitate visiting eye teams

Improve and expand MSOAP and VOS

Coordinate the pathway of care

Provide adequate case management and coordination

Improve utilisation of available eye services

Including cultural safety and low cost spectacles

Develop costed models of care for new interventions

Develop a roadmap for policy change
to provide quality eye care...

...and Close the Gap for Vision

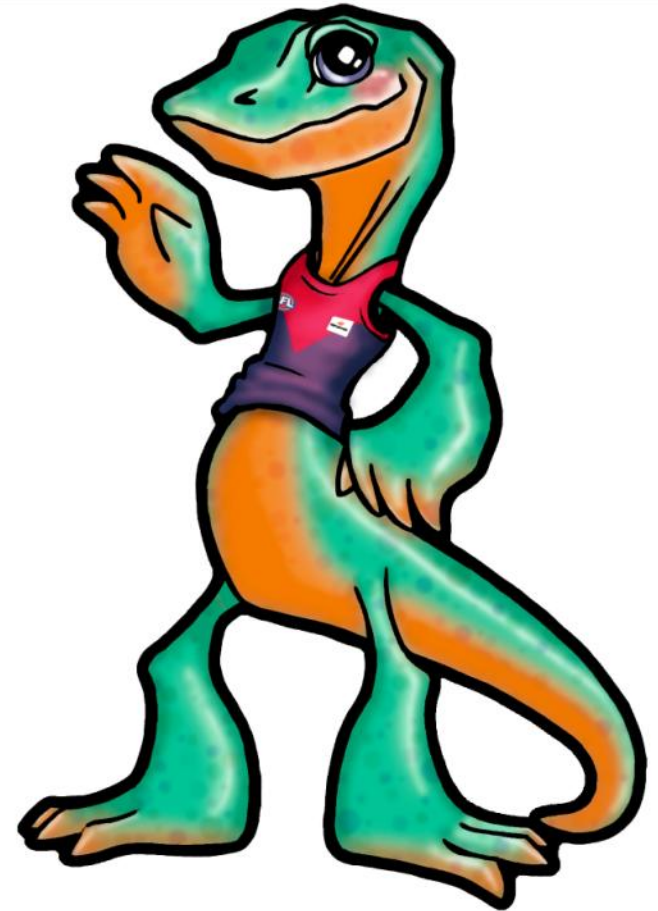


May 2010 – Yuendumu with MFC



Clean Faces, Strong Eyes

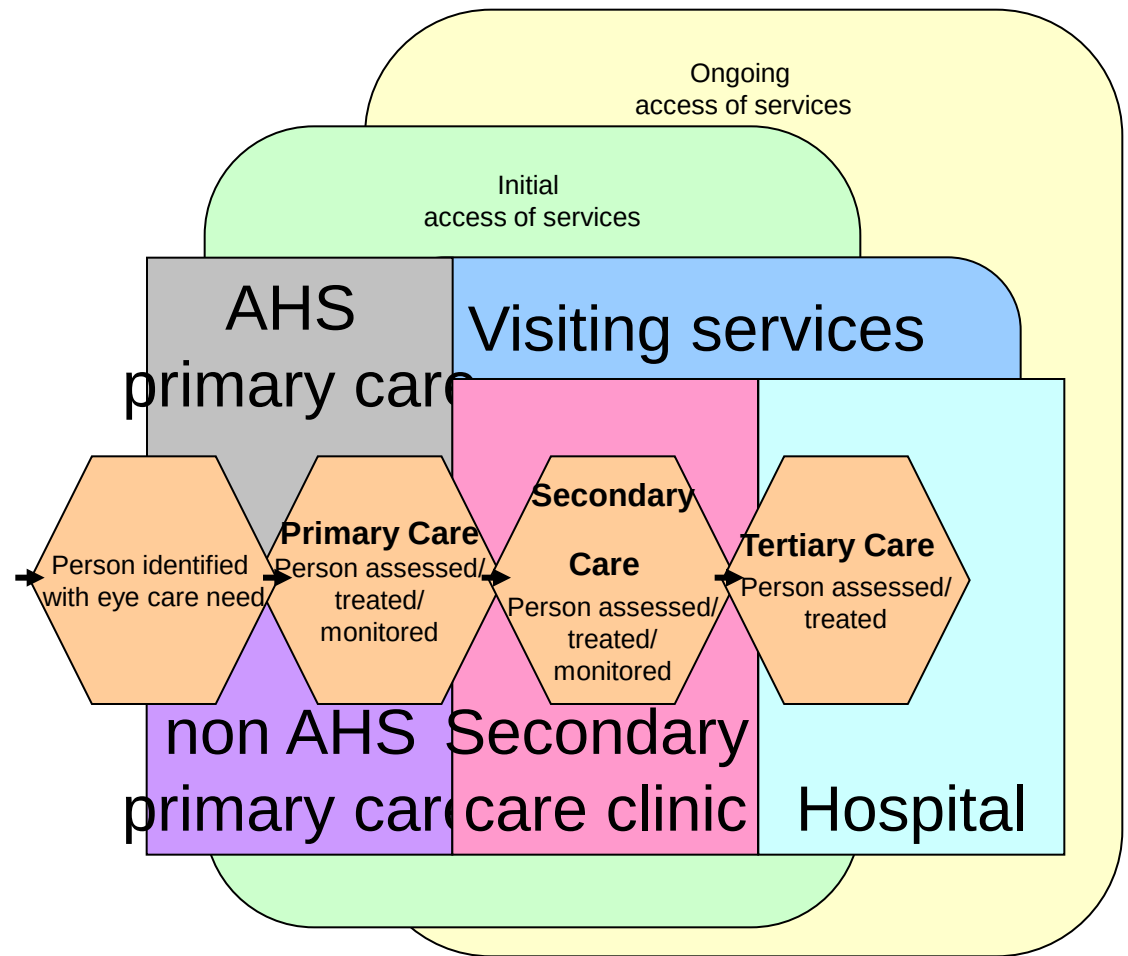
- Social Marketing for Health Promotion
- Radio commercials
- Television commercials
- Televisions appearances
- Musical score to accompany marketing

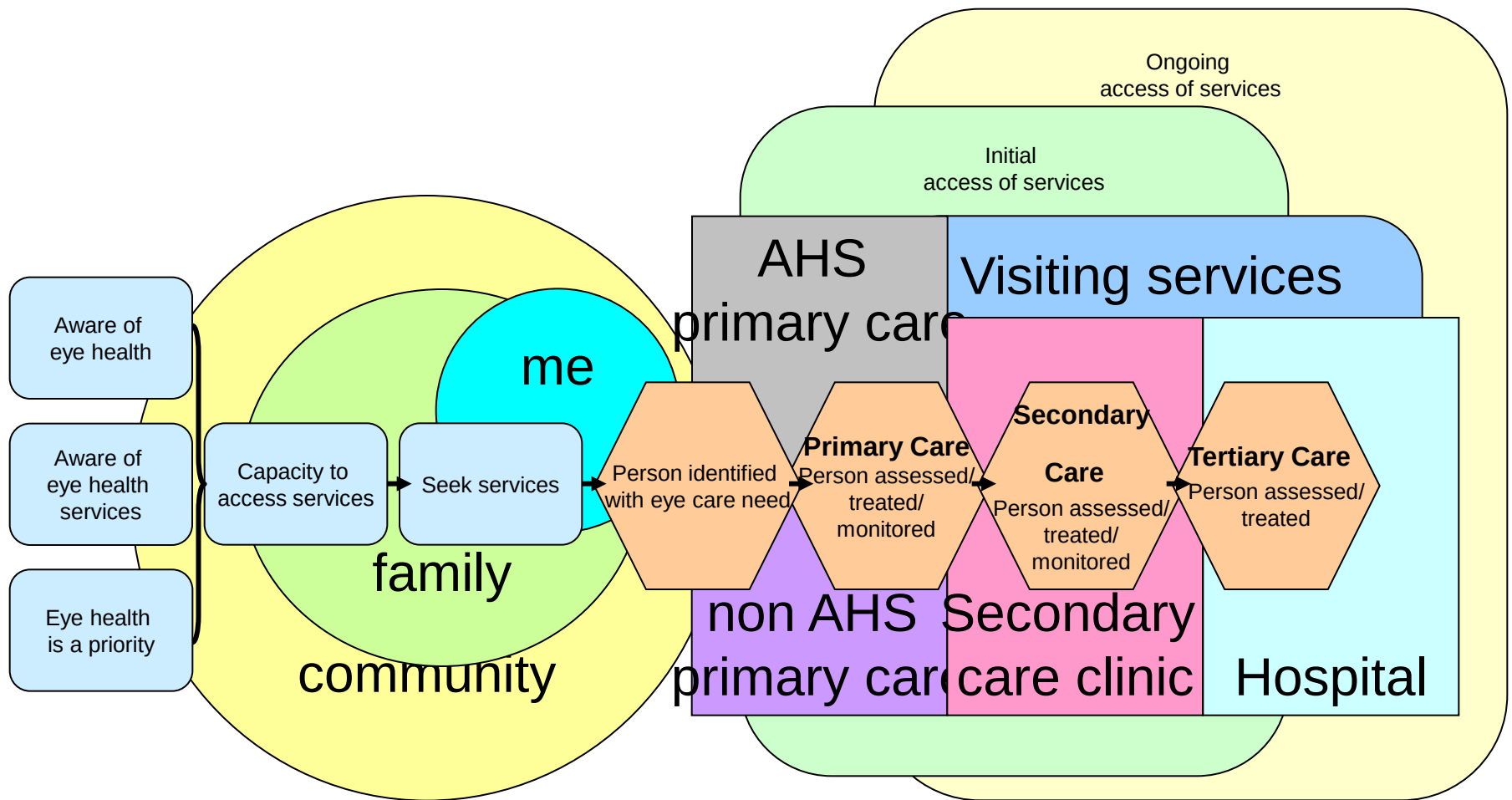


Material Developed; www.iehu.unimelb.edu.au

- National Indigenous Eye Health Survey Report
- Outreach Eye Services in Australia
- Access to Eye Services Among Indigenous Australians: An Area Level Analysis
- Accuracy of Screening Methods for Diabetic Retinopathy: A Systematic Review
- Trachoma Resource Book
- Antibiotic Treatments of Trachoma: A Systematic Review
- (A Critical History of Indigenous Eye Health Policy Making: Towards Effective Policy Reform)
- (Projected Needs for Eye Care Services for Indigenous Australians)







Service Utilisation

Urban and Rural Services



Site Selection

- Site Selection rationale
 - Local Aboriginal Medical Service
 - Local (and or visiting) eye health care services
 - Regional hospital
- 10 sites in Victoria identified of interest
 - 4 Urban (Fitzroy, Croydon, Maribyrnong, Dandenong)
 - 6 rural (Mildura, Warrnambool, Bairnsdale, Shepparton, Bendigo*, Horsham#)



Barriers Vignette

AMS Diabetic Retinopathy (DR) client and partner consulted.

- DR patient had burst blood vessel. Had bilateral laser surgery over the course of several years and had lost vision.
- Partner exposed, through patient support, of the eye care pathway (*primary health care, optometry appointments, surgery and post op follow-up*)
- Partner was responsible for the partner in terms of driving, reading etc
- Partner had never had eyes checked and it had not occurred to get eyes checked (*awareness, priority, ?*)



Enablers/Barriers Vignette

DR patient

- AMS facilitated care
 - coordinated appointments
 - provision of transport
 - accompanying person
 - cost of treatment, glasses, procedures
(*support, case management*)

however

AMS

- Burden of facilitation/case management
 - financial, human resources, capacity.
 - Sustainability of approach?

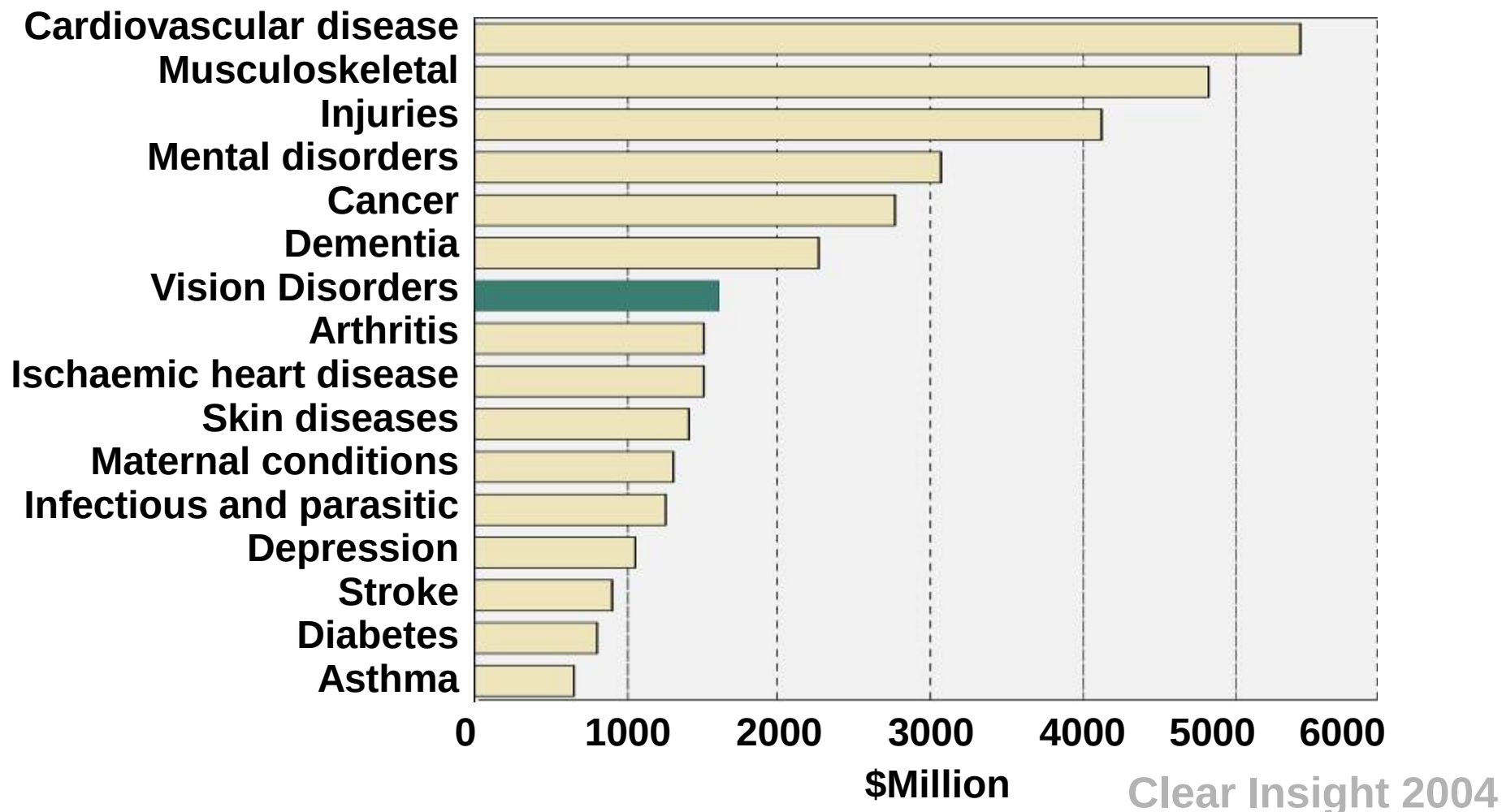


Barriers/Solutions Vignette

- Generally reported cost of glasses is barrier
- Evidenced by:
 - Do not attend (DNA) optometry appointments
 - Do not pay/pick up glasses when prescribed
- ACO (further) reduced spectacle scheme
 - \$10 (nominal) fee
 - Anecdotal evidence supports initial success
 - High attendance rates ('100% at VAHS')
 - Demand has lead to long wait list to see optometry service
 - Improved pick up and payment rates
 - Reported from AMS and ACO staff that change to scheme has been successful for outcomes



Direct Health Costs Comparison -2004



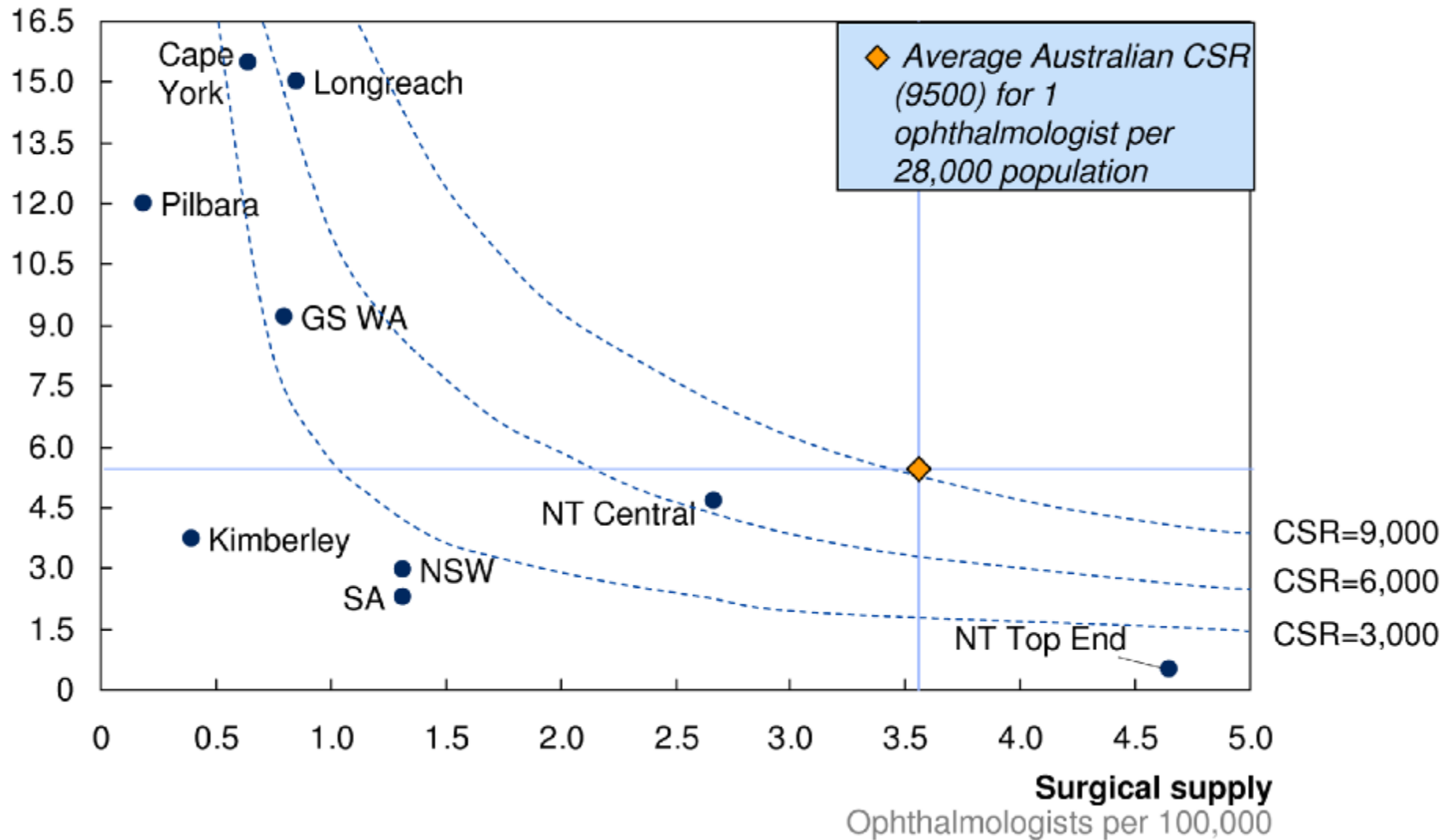
Total Costs of Vision Loss, 2009

	2004	2009
Direct Health System	18%, 1,892m	18%, 2,980m
Indirect		
- Aids etc	4%, 371m	5%, 839m
- Carer costs	9%, 843m	1%, 251m (819m)
- Productivity loss	18%, 1,781m	14%, 2,279m
- Dead weight loss	2%, 208m	5%, 869m
Loss of Wellbeing	49%, 4,818m	57%, 9,495m
Total	\$9.85bn	\$16.6bn (69%increase)

Access Economics 2010

Surgical throughput

Cataracts per week

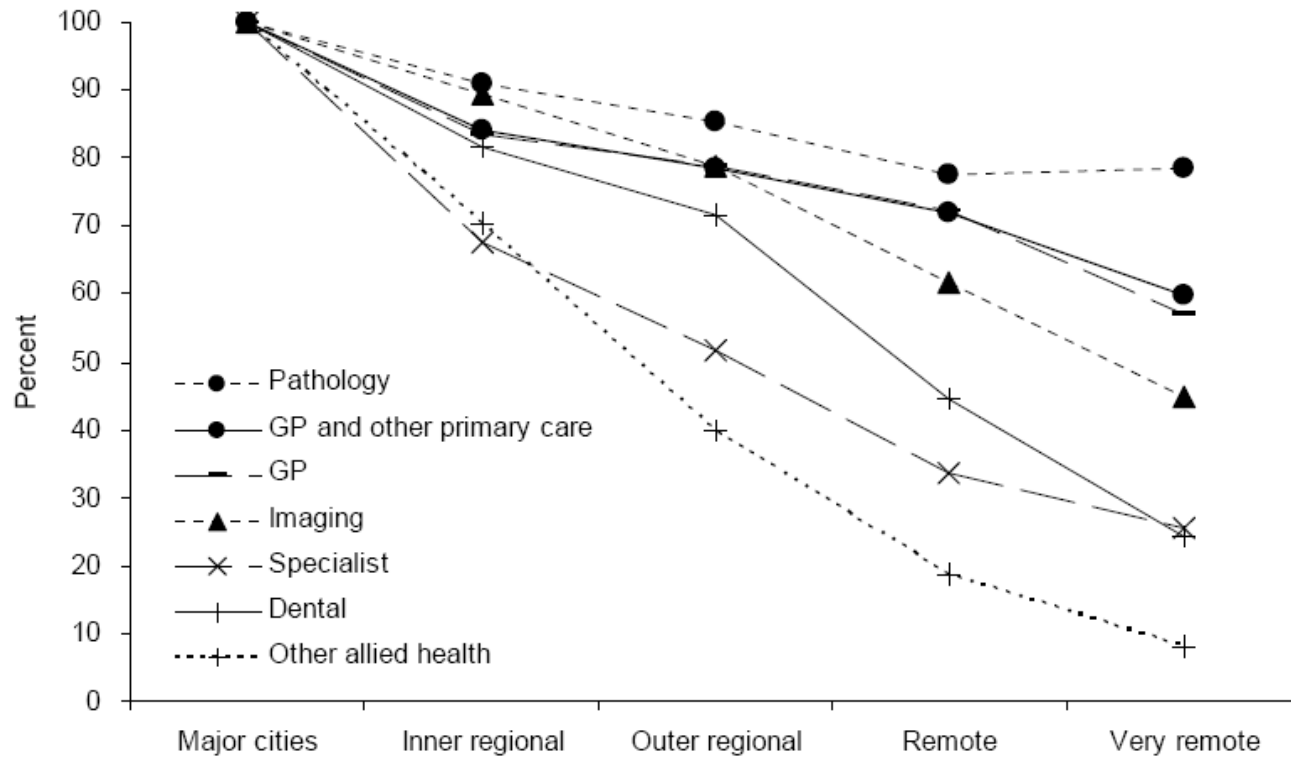


Aboriginal people
have better vision
than Europeans

World Record Vision 6/1.2



Shortage of all Health Care in more Remote Areas



Source: AIHW health expenditure database.

Figure 1.2: Age-standardised per person expenditure^(a) by ASGC, percentage of Major cities expenditure, 2006-07

AIHW 2011



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Potential Solutions

- Supported transport including an accompanying person
- Increase priority of eye care for clients and within AHS
- Multiple funding and business arrangements exist to support the clinical components of the pathway
- Consistent access to affordable spectacles and awareness of costs
- Fast track for those needing hospital care
- Case management through the complex eye health systems.



Barriers to the provision and utilization of eye health services for Indigenous Australians

Patient care pathway

