



Non mydriatic retinal photography

A roundtable in preparation for new MBS items
for people with diabetes

Report

Indigenous Eye Health

25 July 2016



TABLE OF CONTENTS

Acknowledgments	2
Acronyms	2
Executive summary	3
Hopes and fears	6
The importance of DR screening	7
Aboriginal Medical Services - supporting increased DR screening using NMRP	8
Making DR screening work in mainstream practices	10
Next steps	11
Conclusion	12
Appendices	13
APPENDIX 1: Agenda.....	13
APPENDIX 2: Budget announcement fact sheet.....	14
APPENDIX 3: MBS NMRP draft item descriptors.....	15
APPENDIX 4: Roundtable presentations	17
APPENDIX 5: Roundtable attendees	29

Acknowledgments

Indigenous Eye Health at The University of Melbourne would like to thank all who contributed to and participated in the roundtable. We would particularly like to thank all speakers who presented on the day and Dr Kate Taylor for facilitating the meeting.

Funding support from the Australian Government Department of Health is acknowledged and appreciated.

Acronyms

ABS	Australian Bureau of Statistics
ACRRM	Australian College of Rural and Remote Medicine
ADEA	Australian Diabetes Educators Association
AMS	Aboriginal Medical Services
CEE	Comprehensive Eye Exam
DA	Diabetes Australia
DoH	Department of Health, Australian Government
DR	Diabetic Retinopathy
GP	General Practitioner
MBS	Medicare Benefits Schedule
NACCHO	National Aboriginal Community Controlled Health Organisation
NDS	National Diabetes Strategy
NHMRC	National Health and Medical Research Council
NMRP	Non-Mydriatic Retinal Photography
OA	Optometry Australia
PHN	Primary Health Network
RAHC	Remote Area Health Corps
RACGP	Royal Australian College of General Practitioners
RANZCO	Royal Australian and New Zealand College of Ophthalmologists
VACCHO	Victorian Aboriginal Community Controlled Health Organisation

Executive summary

On 25 July 2016, Indigenous Eye Health at the University of Melbourne hosted 'Non-mydratric retinal photography - a roundtable in preparation for new MBS items for people with diabetes'. This meeting brought together representatives from peak national bodies across Australia, covering Indigenous health, eye care and diabetes, to discuss approaches and actions necessary to support the successful introduction of new Medicare Benefits Schedule (MBS) items for non-mydratric retinal photography (NMRP) for people with diabetes. Participants were provided with updates including currently available information and resources, discussed the barriers and solutions to increase diabetic retinopathy (DR) screening rates in Aboriginal Medical Services (AMS) and mainstream practices, and identified some of the next steps for implementation. Thirty-one people attended the meeting representing fourteen organisations.

The new MBS items for retinal photography were announced in the 2016-2017 Federal Budget and are largely aimed at the primary care of people with diabetes. The items are available for use from 1 November 2016 with a \$33.8 million budget allocation over four years. The item descriptors require assessment of visual acuity and NMRP, including analysis and reporting of the images for presence or absence of DR. The items are available for Aboriginal and Torres Strait Islander people with diabetes every 12 months and for other patients every 24 months.

The Australian Government Department of Health engaged the Fred Hollows Foundation in 2016-2017 to undertake an eye care equipment audit of cameras, slit lamps and the need for training in AMS. An additional \$4.8 million has been budgeted by the Australian Government to support the purchase of cameras, slit lamps and training over the next three years.

Participants recognised and supported the potential value of the new MBS items to assist in improving DR screening rates in Indigenous and non-Indigenous Australians. A number of barriers and reservations were also identified that would impact on the successful uptake of the items in both population groups.

AMS were considered well positioned in terms of structure and clinical approach to utilise the new MBS items. The equipment and training support for AMS will provide positive impetus for the new items, but challenges of successful change management in the complex AMS work environment, ensuring appropriate support staff skills and capacity and respecting existing clinical pathways require on-going consideration.

Discussion examined the structure of GP services and implications for business models, which mean that high volume centres will be more likely to achieve the economies of scale needed to justify the capital investment of camera purchase. Similarly, an underlying logic of siting cameras in pathology centres which have a concentration of patients with diabetes getting routine blood screening was recognised. Changing GP perspectives to conduct DR screening in clinics will require additional promotion and development of a good business model. Future work is required to support the uptake in mainstream practices but suggestions included focussing on larger practices, regional and rural practices, and practices with significant Indigenous and diabetic populations.

The Roundtable provided opportunity for discussion about the new MBS items, and individual organisations also considered the next steps they could take to support implementation. These approaches included providing support to clinics and health practitioners, informing and training members and other professionals by means of newsletters, seminars and conferences and working with other organisations to support integration of this newly funded screening approach within practices and care pathways.

Introduction

In Australia, there are at least 1.5 million people with diabetes. Alarming, 50% of people with diabetes do not get their recommended eye checks. This matters, because with appropriate screening and treatment, 98% of vision loss from diabetes can be prevented.

The 2016-2017 Federal Budget included announcement of funding for two new Medicare Benefit Schedule (MBS) items for retinal photography for people with diabetes aimed at general practitioners (GPs). The items are available for use from 1 November 2016 with a \$33.8 million budget allocation over four years.

The MBS items will support improved retinal screening for people with diabetes. Retinal screening rates are estimated to be around 20% for Indigenous Australians and 50% for the mainstream population. The new items are expected to benefit about 370,000 people, many of whom are living in rural and remote locations.

In particular, the new measure is expected to help Aboriginal and Torres Strait Islander people who are at an increased risk of vision loss from diabetic eye disease. The service has been designed for patients who would not regularly attend an optometrist or ophthalmologist for a comprehensive eye exam often due to remoteness and/or socioeconomic barriers. The service will enable GPs and diabetic clinics to promptly provide this service at the point of consultation and then refer patients with problems for a definitive eye examination.

In July 2016, Indigenous Eye Health (IEH) at the University of Melbourne convened a roundtable of peak national organisations in Indigenous health, eye care and diabetes to support and prepare for the introduction of the new MBS items.

Roundtable objectives and goals

To bring together key organisations to discuss approaches and actions necessary to support the successful introduction of the new MBS items for non-mydratic retinal photography (NMRP).

Specifically, this included:

- providing background information on the new MBS items and DR screening
- identifying the barriers to successfully implementing the new MBS items
- identifying and workshopping solutions to the barriers
- discussing the approaches and actions in the lead up to 1 November 2016 and beyond

This report provides a brief summary and overview of the main discussion areas and ideas presented at the Roundtable.

Participants

Thirty-one (31) participants from fourteen (14) peak national organisations across Australia participated in the Roundtable. A full list of participants is attached (Appendices).

The organisations represented were:

- Australian College of Remote and Rural Medicine (ACRRM)
- Australian Diabetes Educators Association (ADEA)
- Baker IDI
- Diabetes Australia
- Department of General Practice, The University of Melbourne
- Department of Health, Australian Government
- Fred Hollows Foundation
- Indigenous Eye Health, The University of Melbourne
- National Aboriginal Community Controlled Health Organisations (NACCHO)
- Optometry Australia
- Royal Australian College of General Practitioners (RACGP)
- Royal Australian and New Zealand College of Ophthalmologists (RANZCO)
- Victorian Aboriginal Community Controlled Health Organisations (VACCHO)
- Vision 2020 Australia

Hopes and fears

The initial session provided participants with the opportunity to identify their hopes and fears for the introduction of the new items. These are broadly categorised below.

Hopes

- Screening rates are increased
- Earlier detection of DR
- Access to screening improved
- Earlier detection is linked to earlier treatment
- Reduced vision loss from DR
- Equity in screening rates for Indigenous
- Equity in screening rates by remoteness
- Inter-professional collaboration and cooperation is enhanced
- Agreed, understood and effective referral pathways established
- That the intervention is cost effective
- Awareness of diabetic eye disease is raised
- That the new systems are effective
- Training available for primary care teams including GPs

It was hoped that:

- screening is more accessible, screening rates increase, DR is detected earlier, treatment is applied earlier and that vision loss from DR is reduced;
- Indigenous people and people living in more remote locations have increased DR screening rates;
- new items provide opportunity for improved inter-professional interaction and clearer, agreed, well utilised pathways;
- new system is effective and cost efficient; and
- diabetes awareness, health promotion and training is improved.

Fears

- Intervention doesn't work
- Intervention is not used
- Intervention provides only marginal improvement
- Lack of uptake of new items
- Inter-professional collaborations not achieved
- Intervention design is flawed
- Investment wasted
- Poor or difficult implementation
- Practitioners might not support/engage
- Overflow where treatments required are not available
- Existing pathways are disrupted
- Too expensive to implement
- Change management required is too difficult

It was feared that:

- the intervention might not be used and might not, or only marginally, work;
- implementation fails by design flaws or difficulty implementing and that the investment will be wasted;
- practitioners do not engage or collaborate;
- significant DR is uncovered and subsequent care cannot be delivered; and
- existing services pathways are disrupted.

The importance of DR screening

Speakers

Paul Zimmet (Baker IDI)

Reducing the increased burden of diabetes - The National Diabetes Strategy

Hugh Taylor (IEH)

Diabetic retinopathy screening - the population impact

Mary Warner (DoH)

Introduction of the new MBS items for non-mydratic retinal photography

The objectives of the opening session:

- Consider the current gap of undiagnosed DR screening between Indigenous and non-Indigenous Australians
- The importance of the new MBS items in the burden of diabetes
- Understand what the MBS items are
- Identify the barriers to DR screening

Key presentation and discussion insights

It is currently estimated that 1.5 million people in Australia have diabetes. The overall burden of diabetes is considered to be an underestimate.

The National Diabetes Strategy has seven key goals. Some of these include encouraging earlier detection of diabetes, reducing the incidence of complications associated with diabetes and enhancing care and prevention by means of research, national oversight, evidence and data.

Good control of modifiable risk factors (i.e. glycaemic control, systolic blood pressure and serum lipids) only reduces annual incidence and does not impact lifetime risk of diabetic eye disease.

Early detection and timely treatment is important in preventing most cases of blindness.

NMRP is successful for DR detection. Studies have shown that NMRP has 84.6% sensitivity and 96.4% specificity.

The new MBS items complement current comprehensive eye examinations (CEE) provided by optometrists or ophthalmologists. Patients accessing the NMRP service must have a diagnosis of diabetes (not DR). If DR is detected or images are ungradable, a referral in accordance with NHMRC guidelines is required.

Medical practitioners or specialists providing primary glycaemic management for a patient with diabetes must interpret retinal images to claim the item. If the images are captured by another party, they will need to come up with their own financial arrangement outside of Medicare.

Additional barriers to the successful implementation of the new MBS items were identified in group discussions. These included:

- GPs and medical practitioners may lack the skills necessary to operate retinal cameras and grade images
- uptake by GPs in mainstream practices might be minimal as the activity may not be financially viable
- GPs might not be confident in conducting DR screening
- DR screening rates might not be increased as the uptake may be minimal
- waiting lists for treatment of DR might rise with increased detection

Aboriginal Medical Services - supporting increased DR screening using NMRP

Speakers

Rhonda Stilling (DoH)

National equipment inventory and funding for non-mydriatic retinal cameras

Mitchell Anjou (IEH)

Resources to assist AMS implementing NMRP

The objectives of the session:

- Outline the inclusions of government funding
- Discuss the new and existing tools available for DR screening in AMS practices
- Identify solutions to the barriers of assimilating the items in AMS

Key presentation and discussion insights

A grant of \$4.8 million (over the next three financial years) has been set aside for purchase of equipment and training of staff. The Australian Government has funded the Fred Hollows Foundation to undertake a nationwide audit to determine which AMS practices have non-mydriatic retinal cameras or require one. Initially, the audit will target regions that are involved in the Roadmap to Close the Gap for Vision. The goal is to place 30 non-mydriatic retinal cameras in the first year in areas where staff are trained.

In the lead up to 1 November 2016, the DoH has two major goals:

- The placement of equipment in identified AMS clinics or the maintenance of current retinal cameras
- The training of staff in operating NMRP and image grading

There are several resources available to support implementing the item in practice. A number of possible solutions were identified to address some of the barriers that practices may encounter:

Room space/darkened room: space required to operate the equipment is estimated at 1.5m X 0.7m.

Costs of camera: The purchase of a new camera is less than \$20,000. To lease the camera over a three-year period is estimated at \$600 per month. To recover lease costs, medical practitioners would be expected to capture the following number of retinal photos:

Indigenous Australians - annual eye exam

- Need 144 people with diabetes without retinopathy (or a total of 216 people with diabetes, assuming 2/3 of people with diabetes have no retinopathy)

Non-Indigenous Australians - biennial eye exam

- Need 288 people with diabetes without retinopathy (or a total of 432 people with diabetes, assuming 2/3 of people with diabetes have no retinopathy)

Training: A number of resources are available for training staff on diabetes, DR and DR grading:

- RAHC modules on eye health and diabetes
- Health promotion materials on diabetes
- DR online grading course

The group discussion focused on what additional resources are needed to resolve the barriers and solutions were identified for most of the concerns.

Limited medical practitioners at AMS: Many eye care services can be provided by locally trained eye health workers, educators or nurses. The new items limit billing for DR screening to medical practitioners. Still, local health workers should be trained on how to capture retinal photos and grade images and if required can use Telehealth to send images off for grading.

Support: A helpline or support from a peer (i.e. optometrist or ophthalmologist) could be made available to local health workers, medical practitioners and diabetic specialists to seek advice on DR screening or image interpretation. Support can occur via phone, email or a face-to-face discussion over the Internet.

Equipment/Training: Funding for the maintenance of retinal cameras and staff training in AMS practices will be supported by DoH. Cameras placed in clinics should be relatively portable and training should focus on both the operation of equipment (specific to the equipment provided) and the grading and assessment of images.

Priority at the local level: Often, eye health is not a main priority at the local level as other health issues may be considered more important by the community. Diabetes has a number of complications not related to eyes. It may be challenging for medical services to determine which complication should be of primary focus. For local health services to uptake the new items, the necessary education and resources should be provided to raise awareness of the impact DR and vision loss.

Educating health professionals: A one-page document outlining the guidelines on early complications, performing DR screening and simplified referral pathways for health services, is required. Information should also be provided to medical practitioners and staff on the importance of eye health screening.

Waitlist for treatment of DR: The increase in DR screening rates will increase the waitlist time of DR treatment.

Data: Clinical level - reliance on individual practitioners to determine which patients have had DR screening is not viable without additional resourcing. Therefore, it is important that clinical practice software and databases are updated to provide information on clinic screening rates and which individuals have been screened or not.

Population level - monitoring access to the items at a population level and disaggregated to regions will assist regional planning and initiatives to support improve screening rates. Clinical data should match up with the ABS and AIHW reporting. The DoH has an online resource called Medical Benefits Schedule Statistics, where data on the items and groups of the MBS can be accessed. Data on the uptake of the new MBS items will be published January 2017.

Making DR screening work in mainstream practices

GP panel discussion

Brad Murphy (RACGP)

John Furler (Department of General Practice, The University of Melbourne)

Nadia Lusic (VACCHO)

Ralph Audehm (Department of General Practice, The University of Melbourne)

The objectives of the session were to:

- Understand the current approach used by GP practices in screening DR
- Determine the barriers of conducting DR screening in mainstream clinics
- Identify ways we can encourage use of the items in practices

Key discussion insights

GPs work in a number of settings, these include: corporate practices, community health, rural practices and solo clinics. Over the last few years there has been significant reform around delivering quality of care.

The opportunity to use the new items is potentially viable for large corporate GP practices with economies of scale, but may be harder for smaller practices to incorporate.

Urban practices are more likely to be comfortable in referring patients with diabetes to optometrists or ophthalmologists for assessment of DR, rather than carrying out the screening themselves. Pathology centres were also mentioned as an alternative but do not currently provide this service.

Lack of desire can be attributed to lack of education and skill in identifying DR signs, the financial cost and opportunity cost of implementing the items and time constraints in practice. It is evident that educating and training GPs, as well as a sound business model, are key determinants for the introduction of DR screening to succeed in practices. A strong incentive or 'hook' is needed for GPs to have the desire to undertake DR screening.

There is a perception that even from medical school, teaching deters GP graduates from feeling confident in assessing eyes. Educators should encourage recent graduates to perform eye assessments.

The current item involves a two-step process. One, the capture of the retinal images and two, interpretation of the image. Either step may represent a barrier, particularly in practices.

GPs may also be concerned that they will have Medicare claims rejected if patients have recently received the service elsewhere. It was recognised that optometrist currently face this issue.

The cost of leasing the equipment only addresses a small component of the financial burden. Additional costs and opportunity cost arise from training staff to perform the test and setting aside space for the equipment (i.e. loss of a consulting room). For mainstream practices to adopt the items, a good business model is required to showcase how this could work in routine practice. This would involve assessing the segment of the market, looking at:

- Size of the practice
- Ownership
- Location
- Patient demographic
- Ability and willingness to engage with the community

Next steps

The objective of this session was to:

- Establish the next steps and approaches organisations need to take to ensure they are ready for commencement of the new items on 1 November 2016

Key discussion insights

The group identified three key steps that AMS and mainstream practices each should undertake:

AMS:

1. Audit of equipment and provision of training
2. Consider current patient pathways and the impact of new items. Consider working with Primary Health Networks (PHNs) to support pathways and coordination
3. Monitor performance of DR screening by reporting the number of services delivered against target

Mainstream:

1. Develop a business model to inform GP practices. Determine how much it will cost initially to set up and then over subsequent years
2. Identify a champion or leader and develop an advocacy approach to encourage and influence change in DR screening in GP practices
3. Explore the option of sharing equipment. GPs could engage PHNs to discuss the option of purchasing equipment

All in attendance determined what approaches they could take next to implement the items successfully. The approaches identified included:

- Provide educational material in the form of pamphlets, information sheets, health promotion materials that incorporate key messages on diabetes, DR screening, new MBS items and referral pathways
- Promote the new MBS items at conferences, seminars and amongst members of respective organisations
- Develop and promote the business model for mainstream practices
- Focussing on larger practices, regional and rural practices, and practices with significant Indigenous and diabetes populations
- Inform ophthalmologists about the new MBS items and how they can support medical practitioners and specialists
- Participate in the nationwide audit of equipment and training of staff in AMS
- Work closely with GPs and PHNs to determine how the items can be implemented and integrated
- Engage the local community and offer expertise when necessary
- Training of medical practitioners and specialists in operation of equipment and interpretation of retinal photographs
- Engage with other organisations to assist in implementing next steps.

Conclusion

The Roundtable identified a number of barriers and ways to overcome them to support implementation of the new MBS items in clinical practice. Further work is required from participants to address identified barriers before the items become available 1 November 2016.

Organisations have agreed to share information with their organisations and members regarding the new MBS items and undertake work to support implementation. Some cross organisational activity was also identified.

Some key documents and resources and the presentations from the Roundtable are located in the Appendices to this report. The documents can also be accessed at the Indigenous Eye Health website: www.iehu.unimelb.edu.au.

Appendices

APPENDIX 1: Agenda

Non mydriatic retinal photography – a roundtable in preparation for new MBS items for people with diabetes

Monday 25 July 2016, 10.00 am – 3.00 pm

Graduate House, The University of Melbourne,
220 Leicester St, Carlton, Victoria



Agenda

9:45 am	Registration and morning tea	
10:00 am	Welcome and introductions	Kate Taylor
Session 1	The importance of diabetic retinopathy screening	
10:20 am	Reducing the increased burden of diabetes - The National Diabetes Strategy	Paul Zimmet
10:30 am	Diabetic retinopathy screening – the population impact	Hugh Taylor
10:40 am	Introduction of the new MBS items for non mydriatic retinal photography	Mary Warner
10:50 am	Group discussion: Identifying the barriers to DR screening using NMRP	Kate Taylor
Session 2	Aboriginal Medical Services – supporting increased DR screening using NMRP	
11:20 am	National equipment inventory and funding for non mydriatic retinal cameras	Rhonda Stilling
11:30 am	Resources to assist AMS implementing NMRP	Mitchell Anjou
11:40 am	Group discussion: Solutions to increase DR screening in AMS using NMRP	Kate Taylor
12:30 pm	Lunch	
Session 3	Making DR screening work in mainstream practices	
1:15 pm	GP perspectives on diabetic retinopathy screening	Brad Murphy
1:25 pm	Group discussion: Solutions to increase DR screening in mainstream GP practices	Kate Taylor
Session 4	Next steps and close	
2:10 pm	Group discussion: Where do we go from here? Actions and responsibilities	Kate Taylor
2:40 pm	Summary of the day and closing remarks	Hugh Taylor
3:00 pm	Close	

MBS Medicare Benefits Schedule

DR diabetic retinopathy

NMRP non mydriatic retinal photography

AMS Aboriginal Medical Service

GP General Practitioner

ieh um 18072016



Budget 2016-17

Medicare Benefits Schedule – listing of photography with non-mydrriatic retinal cameras

This measure will particularly help Aboriginal and Torres Strait Islander people who are at risk of the chronic sight-threatening disease diabetic retinopathy. It lists two new items on the Medicare Benefits Schedule (MBS) to cover the testing of the disease with a non-mydrriatic retinal camera, which offers a quick, minimally-invasive way of taking images of a patient's eyes. Aboriginal and Torres Strait Islanders will be eligible for the test once every year and non-Indigenous patients once every two years.

Why is this important?

- The service is for patients who would not regularly attend an optometrist or ophthalmologist for a comprehensive eye exam, often due to remoteness and/or socioeconomic barriers.
- Diabetic retinopathy occurs in 25–44 per cent of people with diabetes at any time in their lives. Ninety per cent of people with diabetes will have the disease after 25 years.
- It is estimated that each year 80 per cent of Aboriginal and Torres Strait Islander people and 24 per cent of non-Indigenous Australians with diabetes do not attend regular screening at the optometrist or ophthalmologist.

Who will benefit?

- The service is expected to benefit around 370,000 people and roughly a quarter of these will be Aboriginal and Torres Strait Islander people, many of whom are living in rural and remote locations.
- The service will enable GPs to promptly provide this service at the point of consultation rather than referring at-risk patients to another health practitioner.
- General practitioners will receive additional income for providing this service.

How much will this cost?

This measure is ongoing and will cost \$33.8 million from 2016–17 to 2019–20, commencing 1 November 2016.

Category 2 – DIAGNOSTIC PROCEDURES AND INVESTIGATIONS

MBS 12325

Aboriginal and Torres Strait Islander Peoples Assessment of visual acuity and bilateral retinal photography with a non-mydratic retinal camera, including analysis and reporting of the image/s for initial or repeat assessment for presence or absence of diabetic retinopathy in a person of Aboriginal and Torres Strait Islander descent with medically diagnosed diabetes if performed:

- a) By the medical practitioner providing the primary glycaemic management of the patient with diabetes (excluding optometrists and ophthalmologists); and,
- b) 12 months after the previous retinal photograph.

This service is not available to patients with:

- a) An existing diagnosis of diabetic retinopathy; or
- b) Visual acuity of less than 6/12 in either eye or a difference of more than two lines of vision between the two eyes at the time of presentation.

Fee: \$50.00

Explanatory notes:

This service is separated into two items, MBS item 12325 and MBS item 12326, in line with NHMRC guidelines' recommended frequency of repeat testing in persons of Aboriginal and Torres Strait Islander descent and the general population.

This item is intended for the provision of retinal photography with a non-mydratic retinal camera. Mydriasis is permitted if adequate photographs cannot be obtained through an undilated pupil.

Presenting distance vision means unaided distance vision or the vision obtained with the current spectacles or contact lenses, if normally worn for distance vision.

Detection of any diabetic retinopathy should be followed by referral to an optometrist or ophthalmologist in accordance with the NHMRC guidelines.

Where images are of inadequate quality for detection of diabetic retinopathy, referral to an optometrist or ophthalmologist for further assessment is indicated.

MBS 12326

Assessment of visual acuity and bilateral retinal photography with a non-mydratic retinal camera, including analysis and reporting of the image/s for initial or repeat assessment for presence or absence of diabetic retinopathy in a person with medically diagnosed diabetes if performed:

- a) By the medical practitioner providing the primary glycaemic management of the patient with diabetes (excluding optometrists and ophthalmologists); and,
- b) 24 months after the previous retinal photograph

This service is not available to patients with:

- a) An existing diagnosis of diabetic retinopathy; or
- b) Visual acuity of less than 6/12 in either eye or a difference of more than two lines of vision between the two eyes at the time of presentation.

Fee: \$50.00

Explanatory notes:

This service is separated into two items, MBS item 12325 and MBS item 12326, in line with NHMRC guidelines' recommended frequency of repeat testing in persons of Aboriginal and Torres Strait Islander descent and the general population.

This item is intended for the provision of retinal photography with a non-mydratic retinal camera. Mydriasis is permitted if adequate photographs cannot be obtained through an undilated pupil.

Presenting distance vision means unaided distance vision or the vision obtained with the current spectacles or contact lenses, if normally worn for distance vision.

Detection of any diabetic retinopathy should be followed by referral to an optometrist or ophthalmologist in accordance with the NHMRC guidelines.

Where images are of inadequate quality for detection of diabetic retinopathy, referral to an optometrist or ophthalmologist for further assessment is indicated.

APPENDIX 4: Roundtable presentations
 – Professor Paul Zimmet

Reducing the Increased Burden of Diabetes in Australia: National Diabetes Strategy 2016-2020



FAT NATION
Motto: Our birth is plain to see

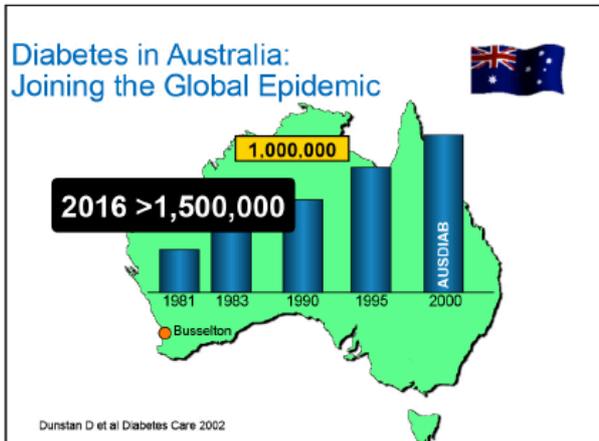
Paul Zimmet AO
Professor of Diabetes, Monash University
Senior Principal Research Fellow, Indigenous Health, SAHMRI
Professorial Fellow, Baker IDI

National Diabetes Strategy

Co-chairs
 The Hon Judi Moylan
 Professor Paul Zimmet AO

Background

- 1996 – Diabetes became a National Health Priority Area
- 1999-2004 – first National Diabetes Strategy
- 2005 – National Chronic Disease Strategy
- 2013 – Diabetes Australia - Federal Election 2013: A National Diabetes Strategy and Action Plan

PERSPECTIVES

Diabetes mellitus statistics on prevalence and mortality: facts and fallacies

Paul Zimmet, George Annels, Christine J. Hayward and Peter H. Bennett

Diabetes mellitus is one of the most important public health problems of the 21st century. It has become a global epidemic, and its prevalence is increasing rapidly in all countries, particularly in developing nations. It is a leading cause of morbidity and mortality. This paper reviews the current state of knowledge on the prevalence and mortality of diabetes mellitus, and discusses the challenges of obtaining accurate data. It also discusses the importance of using standardized definitions and methods for surveillance, and the need for more research to improve our understanding of the disease.

Global diabetes epidemic 'worse than we thought'

The diabetes epidemic is worse than we thought, according to a new report from the International Diabetes Federation (IDF). The report, titled 'Global Diabetes Prevalence 2013', shows that the number of people with diabetes worldwide has increased from 193 million in 2000 to 238 million in 2011. The report also shows that the prevalence of diabetes is increasing in all countries, and that the burden of the disease is shifting from developed to developing countries.

Zimmet P et al. Nature Reviews July 2016

Australian Health Survey 2011-12*

(ABS: Based on FPG test & self-reported)

- Known diabetes **4.5%**
- Newly diagnosed diabetes **1.0%**
- Total with diabetes **5.5%**
- Prediabetes – 3.4% by FPG (6% by HbA1c!)

ALL SIGNIFICANT UNDERESTIMATES

*25 years & over

Australian Health Survey 2011-12

Indigenous Australians n = *around* 13000

- Known diabetes 12.4%
- Newly diagnosed diabetes 2.0%
- Total with diabetes 14.3%
- Prediabetes – 5.3%

ALL SIGNIFICANT UNDERESTIMATES

NDS Advisory Group

Purpose

To provide expert policy advice to Government that prioritises the national response to diabetes within the broader context of prevention and primary health care, supporting patients with complex health conditions and the growing burden of chronic disease on our health system.

Membership	
The Hon Judi Moylan, Co-chair	President, Diabetes Australia
Professor Paul Zimmet AO, Co-chair	Emeritus Director, Baker IDI Heart & Diabetes Institute
Professor Stephen Colagiuri	Professor of Metabolic Health, Boden Institute of Obesity, The University of Sydney
Professor John McCallum	Head of Research Translation Group, NH & MRC
Professor Andrew Palmer	Head, Health Economics Research Unit, Menzies Research Institute Tasmania;
Professor Alex Brown	Indigenous Health Research Theme Leader, South Australian Health & Medical Research Institute
Ms Donna Ah Chee	CEO, Central Australian Aboriginal Congress
Ms Tracy Ayles	President, Australian Diabetes Educators Association
Mr Mike Wilson	CEO, Juvenile Diabetes Research Foundation
Dr Susan Alberti AO	Chairman, Susan Alberti Medical Research Foundation
Professors Hugh Taylor, Martin Sillink, Jeremy Oats, Dr Rob Grenfell & Mr Craig Johnson (CEO, ADA)	Expert Advisors

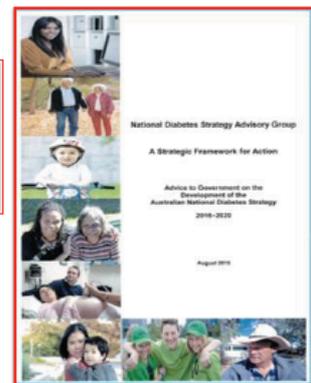
Consultations

- Aim is to:
 - Test the proposed actions
 - Seek your feedback and endorsement for the direction of the proposed new National Diabetes Strategy
 - Encourage you to contribute to the development of the Strategy

Consultations

- Face to face consultations in selected cities
- Online consultations via the Australian Government Department of Health website:
<http://www.health.gov.au/internet/main/publishing.nsf/Content/ndsag>

A National Diabetes Strategy for Australia



August 2015



Table 1: Components of the Australian National Diabetes Strategy, 2016-2020

Vision
Strengthen all sectors in developing, implementing and evaluating an integrated and coordinated approach for reducing the social, human and economic impact of diabetes in Australia

Principles

1. Collaboration and cooperation to improve health outcomes	3. Facilitation of person-centred care and self-management throughout their life
2. Coordination and integration of diabetes care across services, settings, technology and sectors	4. Reduction of health inequalities
	5. Measurement of health behaviours and outcomes

Goals

1. Prevent people developing type 2 diabetes	5. Reduce the impact of diabetes among Aboriginal and Torres Strait Islander peoples
2. Promote awareness and earlier detection of type 1 and type 2 diabetes	6. Reduce the impact of diabetes among other priority groups
3. Reduce the occurrence of diabetes-related complications and improve quality of life among people with diabetes	7. Strengthen prevention and care through research, evidence and data
4. Reduce the impact of pre-existing and gestational diabetes in pregnancy	

Enablers
Factors which influence the ability to achieve goals such as leadership and governance, workforce, information and research capacity, financing and infrastructure, and partnerships and networks

- Key goals for a national diabetes strategy for Australia**
- Goal 1: Reduce the number of people developing type 2 diabetes
 - Goal 2: Promote earlier detection of type 1 and type 2 diabetes
 - Goal 3: Reduce the occurrence of diabetes-related complications and improve quality of life among people with diabetes
 - Goal 4: Reduce the impact of diabetes among Aboriginal and Torres Strait Islander peoples
 - Goal 5: Reduce the impact of diabetes among high-risk and vulnerable groups
 - Goal 6: Reduce the impact of pre-existing and gestational diabetes in pregnancy
 - Goal 7: Strengthen prevention and care through research, evidence, data and national oversight

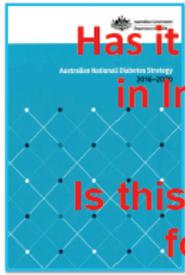
TABLE 1. Summary of the strategic framework for the National Diabetes Strategy

Table 3: Overview: complexity of management of chronic diabetes complications

Complication	Assessment	Prevention	Medical Management	Behavioral/Support
Eye	Diabetic retinopathy, cataracts, glaucoma, macular oedema	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids
Heart	Coronary artery disease, heart failure, atrial fibrillation	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids
Neuropathy	Distal symmetric polyneuropathy, autonomic neuropathy	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids
Diabetic foot	Diabetic foot ulcers, infections	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids
Acute and chronic kidney disease	Diabetic kidney disease	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids	Control of glycaemia, blood pressure, lipids

Hollows Foundation/IDF Initiative on Diabetes Eye Health

Australia: A Hope for the Future



**Has it died or is it just
in Intensive Care?**

**Is this a Strategic Plan
for Inaction?**

Contents	
Executive summary	1
Introduction	2
Abbreviations	3
1. Introduction	4
1.1 The challenge of diabetes	6
1.2 The challenge of diabetes	8
1.3 Prevent people developing type 2 diabetes	18
1.4 Promote awareness and earlier detection of type 1 and type 2 diabetes	21
1.5 Reduce the occurrence of diabetes-related complications and improve quality of life among people with diabetes	23
1.6 Reduce the impact of diabetes among Aboriginal and Torres Strait Islander peoples	26
1.7 Address the needs of disadvantaged and priority groups	28
1.8 Promote research, evidence and data	31
References	33

<http://www.health.gov.au/internet/main/publishing.nsf/Content/ndsag>

FINALE


**Diabetic Retinopathy Screening
 The Population Impact**

25th July 2016

Hugh R Taylor AC
 Harold Mitchell Chair of Indigenous Eye Health
 Melbourne School of Population Health



Diabetic Eye Disease

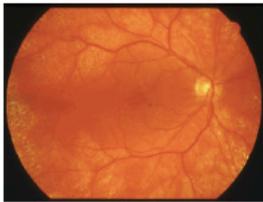
- Diabetes is a huge and growing global problem
- Everyone with diabetes is at risk of developing retinopathy
- Good control is critical but regular screening is important
- Appropriately timed treatment can prevent most blindness
- The demand will continue to increase





Management of Diabetic Eye Disease

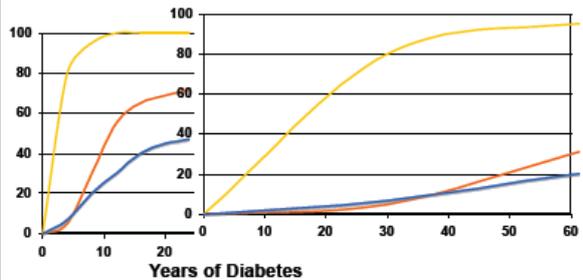
- Treat the person first – Primary Care
 - Control of diabetes, hypertension, lipids
- Screen for eye disease – Primary Care
 - Vision and retinal exam
- Treat the eye
 - Refraction
 - Cataract
 - Glaucoma
- Treat the retinopathy
 - Clinical practice guidelines
 - Thorough treatment
 - Appropriate follow up





Good Control is Important

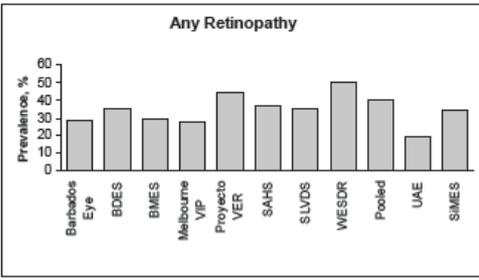
It reduces Annual Incidence and lengthens Life,
 BUT does not necessarily alter Lifetime Risk





Prevalence of Diabetic Retinopathy ~30%

Any Retinopathy

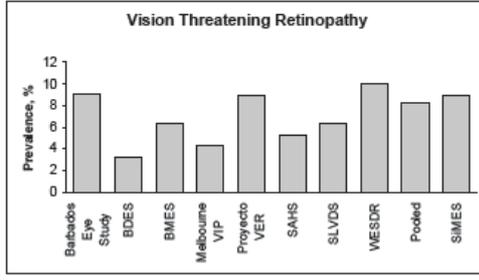


BDES, Beaver Dam Eye Study; BMES, Blue Mountains Eye Study; VIP, Visual Impairment Project; VER, Vision Evaluation Research; SAHS, San Antonio Heart Study; SLVDS, San Luis Valley Diabetes Study; WESDR, Wisconsin Epidemiologic Study of Diabetic Retinopathy;



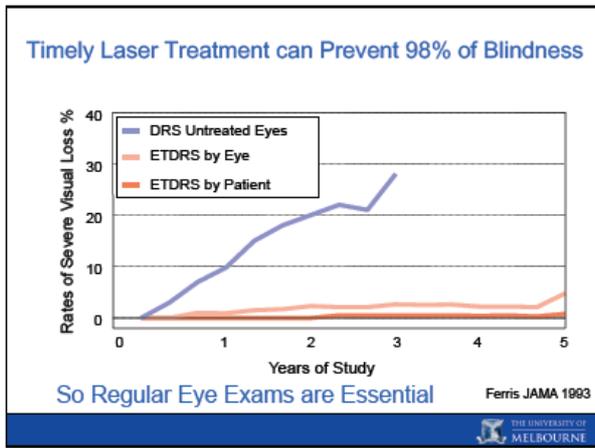
Vision Threatening Retinopathy ~8%

Vision Threatening Retinopathy



BDES, Beaver Dam Eye Study; BMES, Blue Mountains Eye Study; VIP, Visual Impairment Project; VER, Vision Evaluation Research; SAHS, San Antonio Heart Study; SLVDS, San Luis Valley Diabetes Study; WESDR, Wisconsin Epidemiologic Study of Diabetic Retinopathy;

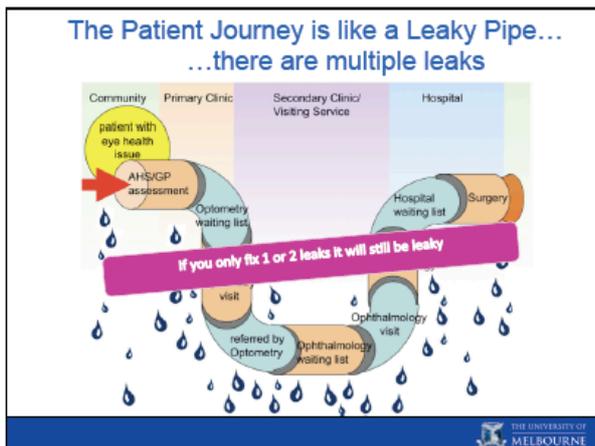
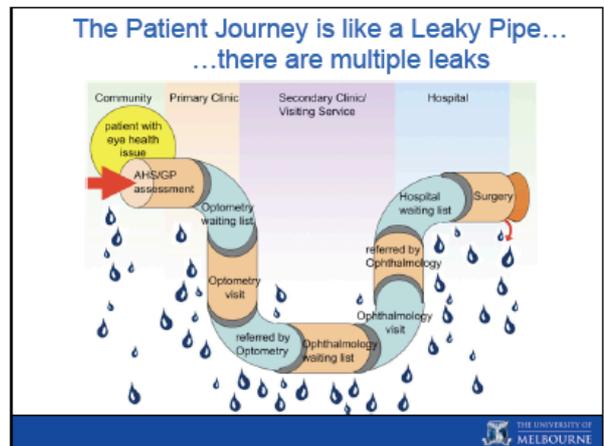




Diabetes

- > 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

THE UNIVERSITY OF MELBOURNE



You have to fix each leak

42 recommendations
Cataract – 35
Diabetic retinopathy – 35
Refractive error – 34
Trachoma – 37

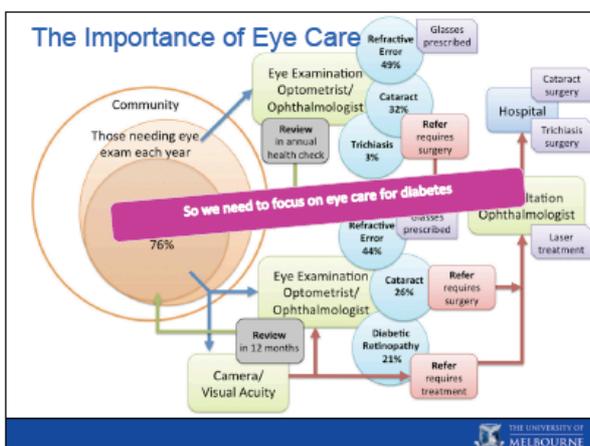
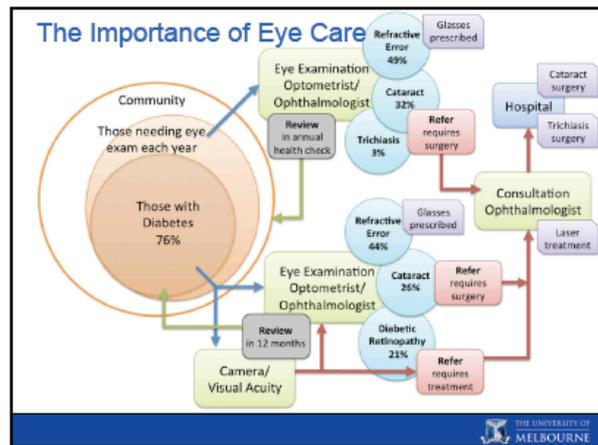
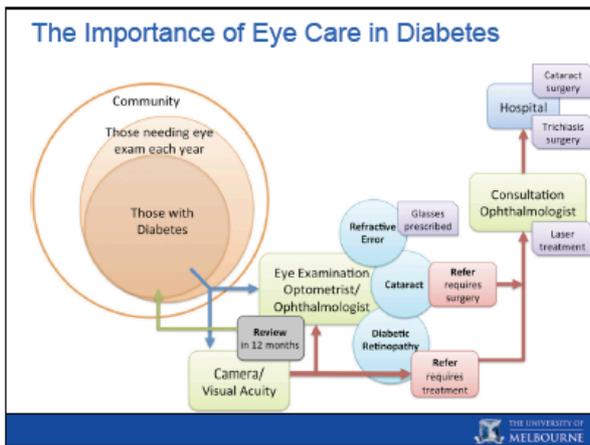
The Roadmap to Close the Gap for Vision

January 2018

THE UNIVERSITY OF MELBOURNE

Condition	Number of Recommendations	Number of Leaks	Number of Leaks Fixed
Cataract	35	35	35
Diabetic retinopathy	35	35	35
Refractive error	34	34	34
Trachoma	37	37	37

THE UNIVERSITY OF MELBOURNE



Best Practice for Indigenous Eye Health

- NHMR guidelines recommend annual retinal examinations for Aboriginal and Torres Strait Islander people with diabetes

"no Indigenous person with diabetes should be allowed to go for more than 12 months without an eye exam"

- Eye checks now mandatory in MBS Item 715; Adult Health Assessment
- But reminders are overlooked in management plans; Patient Incentive Program (PIP) Team care arrangements and GP management plans
- Need to co-ordinate eye services and support patient access

THE UNIVERSITY OF MELBOURNE

What is needed...

- Promote annual eye checks for those with diabetes
- Build on community involvement and ownership
- Develop appropriate health promotion materials and strategies

THE UNIVERSITY OF MELBOURNE

Diabetes Eye Health Promotion Material

- Need to promote annual eye exams for those with diabetes
- Developed with community involvement and ownership

www.iehu.unimelb.edu.au

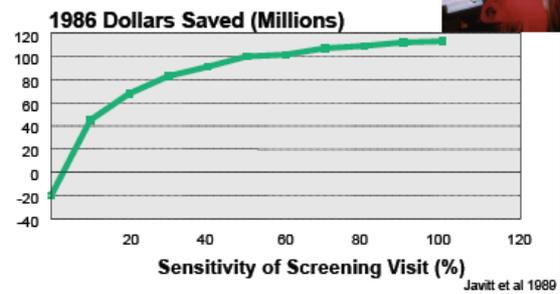
THE UNIVERSITY OF MELBOURNE

Diabetic Retinopathy Referral for further Examination

- Any change in vision
- Vision less than 6/12
- Abnormalities other than microaneurysms
- Cannot examine
- Screening in 2012
 - Australia as a whole 50%
 - Indigenous Australians 20%



Screening with Retinal Photography Sensitivity 84.6%, Specificity 96.4%



Medicare Item Number Non-Mydriatic Photography for Diabetic Retinopathy

- 1994 - request to RACO to submit an application
- 1998 - request supported by Health Minister; rejected by Cabinet
- 2000 - full MSAC application; rejected
- Nov 2008 start a new submission –CCRE,
- Sep 2009 start rewriting - new process,
- Oct 2010 draft submitted, Jun 2011 re-submitted,
- Sep 2011 rejection – another new process,
- Aug 2012 high level meetings with DoHA and MBD start to assist,
- Dec 2012 application submitted; Mar 2013 PASC review,
- Jan 2014 economic evaluation; Oct 2014 review by ESC,
- Nov 2014 MSAC approval,
- May 2016 Budget approval,
- Nov 2016 Implementation!

Summary

- Diabetic eye disease is a huge and growing problem that we must work together to address
- We can stop almost all the vision loss with regular screening
- The new MBS Item number is a real game changer
- We need to work out how to incorporate this into the pathways of care.

Australian Government
Department of Health

INTRODUCTION OF THE NEW MBS ITEMS FOR NON-MYDRIATIC RETINAL PHOTOGRAPHY

8 August 2016 1

Australian Government
Department of Health

How new services are listed

- Before a new service is listed onto the Medicare Benefits Schedule (MBS) it is assessed by the Medical Services Advisory Committee (MSAC) to determine its comparative:
 - Safety,
 - Clinical effectiveness,
 - Cost effectiveness; and,
 - Total cost

8 August 2016 1

Australian Government
Department of Health

MSAC Composition

- The MSAC is an independent non-statutory committee established by the Australian Government Minister for Health in 1998.
- MSAC and its sub-committees are comprised of members from a wide range of clinical disciplines and from fields of health that include health economics, evidence based health care, health policy, and consumers.
- MSAC is a non-legislative committee, and so its advice is not binding. The Minister for Health will decide whether MBS funding will be granted.

8 August 2016 2

Australian Government
Department of Health

MSAC pathway

- MSAC is supported by two sub-committees:
 - The Protocol Advisory Sub-committee (PASC): provides advice on the decision analytic protocol – that is the population, indication, comparator and outcomes to be examined in the health technology assessment (HTA).
 - The Evaluation Sub-committee (ESC): provides advice on the quality, validity and relevance of the health technology assessments for applications being considered by MSAC.
- MSAC is further supported by HTA groups contracted by the Department of Health and clinical experts.
- Public consultation occurs after suitability of the proposed medical service and continue throughout the application's MSAC process.
- The Department accepts all comments on an application and provide them to the Applicant, Assessment Group and MSAC and its sub-committees.

8 August 2016 3

Australian Government
Department of Health

RP-NMRC (App 1181) Key dates through MSAC

- **December 2012:** Application received from Centre for Eye Research Australia
- **August 2013:** consideration at PASC
- **October 2014:** consideration at ESC
- **November 2014:** consideration at MSAC

8 August 2016 4

Australian Government
Department of Health

RP-NMRC (App 1181) Summary of MSAC outcomes

- MSAC supported public funding for bilateral non-mydratric retinal photography for initial or repeat assessment for diabetic retinopathy in patients with medical diagnosed diabetes.
- MSAC agreed that funding should promote uptake where most needed, particularly in primary care in rural and remote settings.
- MSAC identified areas of uncertainty regarding implementation including:
 - The incentives for primary care to invest in the capital and training required to provide this service
 - Ensuring sufficient uptake in areas of most need e.g. rural and remote locations
 - Quality control for the taking and interpretation of the images
 - The need to limit use of RP-NMRC to initial detection of diabetic retinopathy and not for subsequent monitoring of the condition once detected.

8 August 2016 5

Post MSAC consideration

- A stakeholder forum was held in February 2015 to address the implementation issues identified by MSAC
- This forum resulted in amendments to the item descriptor, one of which was to include endocrinologists and diabetologists who are also the primary providers of their patients' diabetes care.
- Later, the descriptor was separated into two after advice from Department of Human Services that the system could not manage item descriptors that included two time requirements in the one descriptor e.g. 12 months between services for Aboriginal and Torres Strait Islanders and 24 months for the general population.
- Once the issues with implementation were resolved, the Department completed an assessment of the financial impact to Government and sought Cabinet agreement on the proposed listing.

New MBS items' intent:

- The service is not intended to supplant the comprehensive eye exam as the best test for diagnosing diabetic retinopathy. It is intended to complement by capturing patients who are not attending the optometrist or ophthalmologist to receive this test.
- Only primary care medical practitioners or specialists who are providing the primary glycaemic management of a patient's diabetes can claim Medicare for this service.
- The practitioner claiming Medicare needs to have interpreted the photograph.
- A trained nurse or technician can take the photograph with a separate financial arrangement made outside of Medicare between the nurse or technician and the medical practitioner.
- Aboriginal and Torres Strait Islanders can receive this service once every 12 months and the general population once every 24 months.
- The patient must already have diabetes.
- The patient cannot already have been diagnosed with diabetic retinopathy.
- Any detection of diabetic retinopathy or images of inadequate quality should be followed by a referral in line with NHMRC guidelines.

Category 1 - DIAGNOSTIC PROCEDURES AND INVESTIGATIONS

MBS 1225

Aboriginal and Torres Strait Islander People: Assessment of visual acuity and bilateral retinal photography with a non-cycloplegic retinal camera, including analysis and reporting of the images for initial or repeat assessment for presence or absence of diabetic retinopathy in a person of Aboriginal and Torres Strait Islander descent with medically diagnosed diabetes if performed:

- By the medical practitioner providing the primary glycaemic management of the patient with diabetes (excluding optometrists and ophthalmologists); and
 - 12 months after the previous retinal photograph.
- This service is not available to patients with:
- An existing diagnosis of diabetic retinopathy; or
 - Visual acuity of less than 6/12 in either eye or a difference of more than two lines of vision between the two eyes at the time of presentation.

Fee: \$20.00

Explanatory notes:

This service is separated into two items, MBS item 1225 and MBS item 1226, in line with NHMRC guidelines' recommended frequency of repeat testing in persons of Aboriginal and Torres Strait Islander descent and the general population.

This item is intended for the provision of retinal photography with a non-cycloplegic retinal camera. Referrals is permitted if adequate photographs cannot be obtained through an unaided pupil.

Presenting distance vision means unaided distance vision or the vision obtained with the current spectacle or contact lenses, if normally worn for distance vision.

Detection of any diabetic retinopathy should be followed by referral to an optometrist or ophthalmologist in accordance with the NHMRC guidelines.

Where images are of inadequate quality for detection of diabetic retinopathy, referral to an optometrist or ophthalmologist for further assessment is indicated.

Category 2 - DIAGNOSTIC PROCEDURES AND INVESTIGATIONS

MBS 1226

Assessment of visual acuity and bilateral retinal photography with a non-cycloplegic retinal camera, including analysis and reporting of the images for initial or repeat assessment for presence or absence of diabetic retinopathy in a person with medically diagnosed diabetes if performed:

- By the medical practitioner providing the primary glycaemic management of the patient with diabetes (excluding optometrists and ophthalmologists); and
 - 24 months after the previous retinal photograph.
- This service is not available to patients with:
- An existing diagnosis of diabetic retinopathy; or
 - Visual acuity of less than 6/12 in either eye or a difference of more than two lines of vision between the two eyes at the time of presentation.

Fee: \$20.00

Explanatory notes:

This service is separated into two items, MBS item 1225 and MBS item 1226, in line with NHMRC guidelines' recommended frequency of repeat testing in persons of Aboriginal and Torres Strait Islander descent and the general population.

This item is intended for the provision of retinal photography with a non-cycloplegic retinal camera. Referrals is permitted if adequate photographs cannot be obtained through an unaided pupil.

Presenting distance vision means unaided distance vision or the vision obtained with the current spectacle or contact lenses, if normally worn for distance vision.

Detection of any diabetic retinopathy should be followed by referral to an optometrist or ophthalmologist in accordance with the NHMRC guidelines.

Where images are of inadequate quality for detection of diabetic retinopathy, referral to an optometrist or ophthalmologist for further assessment is indicated.

DIABETIC RETINOPATHY GRADING
www.dgrading.unimelb.edu.au

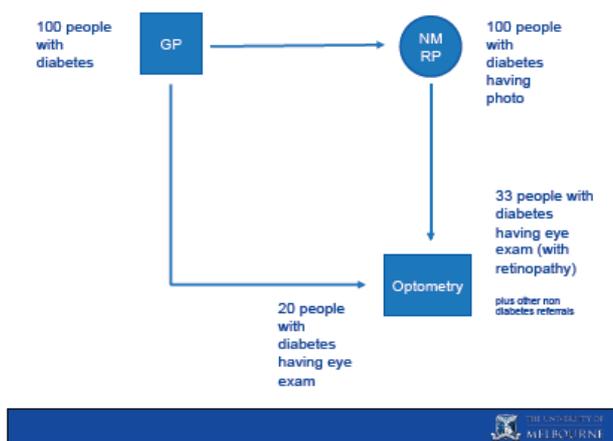
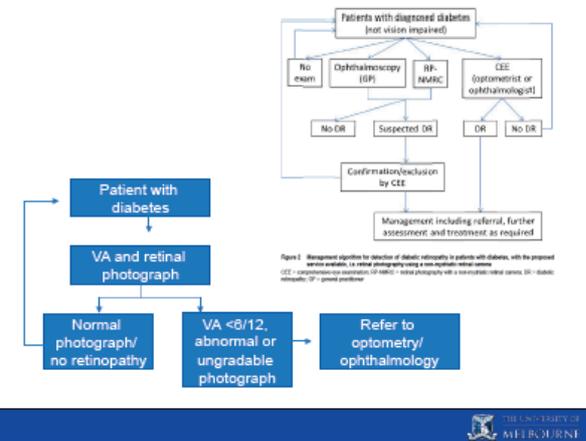
RAHC TRACHOMA MODULE
www.rahc.com.au/learning

RAHC EYE HEALTH AND DIABETES MODULE
www.rahc.com.au/about

TRACHOMA GRADING SELF DIRECTED LEARNING
www.kfu.tunisiab.edu.au/trachom

DIABETIC RETINOPATHY GRADING
New available online and off line!
In English, Chinese, Portuguese, French, Spanish & Urdu
depending on your needs.

Diabetic Retinopathy Screening Card



Number of people with diabetes who have annual retinal examination = Diabetic retinopathy annual screening rate

2008 national rate (NIEHS) 20%

2015 national rate (NEHS) 7%

Chronic disease performance measure at clinic region jurisdiction nation

98% of blindness from diabetes can be prevented by timely detection and treatment

APPENDIX 5: Roundtable attendees

List of Roundtable participants

Surname	First	Organisation
Ah Tong	Brandon	Vision 2020 Australia
Anjou	Mitchell	Indigenous Eye Health, The University of Melbourne
Audehm	Ralph	Department of General Practice, The University of Melbourne
Aylen	Tracy	Royal District Nursing Service
Browne	Samantha	Department of Health, Australian Government
Ceah	Karen	Fred Hollows Foundation
Connolly	Jane	Australian College of Rural and Remote Medicine
Danielson	Jenny	Royal District Nursing Service
Davies	Sarah	Vision 2020 Australia
Furler	John	Department of General Practice, The University of Melbourne
Garside	Stephanie	Department of Health, Australian Government
Gilden	Rosamond	Indigenous Eye Health, The University of Melbourne
Gillor	Guy	Royal Australian and New Zealand College of Ophthalmologists
Gonsalvez	Michelle	Royal Australian College of General Practitioners
Hill	Linda	Fred Hollows Foundation
Holden	Carol	Indigenous Eye Health, The University of Melbourne
Jatkar	Uma	Indigenous Eye Health, The University of Melbourne
Johnson	Greg	Diabetes Australia
Lusis	Nadia	Victorian Aboriginal Community Controlled Health Organisation
Machon	Kirsty	Optometry Australia
Murphy	Brad	Royal Australian College of General Practitioners
Napper	Genevieve	Optometry Australia
Schubert	Nick	Indigenous Eye Health, The University of Melbourne
Stanford	Emma	Indigenous Eye Health, The University of Melbourne
Stilling	Rhonda	Department of Health, Australian Government
Taylor	Hugh	Indigenous Eye Health, The University of Melbourne
Taylor	Kate	Facilitator
Turner	Pat	National Aboriginal Community Controlled Health Organisation
Warner	Mary	Department of Health, Australian Government
Wynne	Carol	Indigenous Eye Health, The University of Melbourne
Zimmet	Paul	Baker IDI