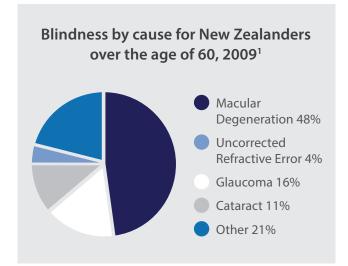
Macular Degeneration Facts



Macular Degeneration (MD) affects central vision resulting in loss of vision and impacts on a person's ability to drive, read, watch television and recognise faces. It is sometimes referred to as 'Age-related Macular Degeneration' or AMD and is the most common cause of blindness in New Zealand.

Except for the effectiveness of managing risk and protective factors, there is no 'cure' for late stage AMD. While most people with wet AMD can obtain highly effective treatments with anti-VEGF agents, some still experience a significant loss of vision or have lost vision before effective treatments became available. For people with dry AMD), there is currently no treatment that can restore lost sight. Loss of vision affects quality of life and levels of independence. The emotional, social and economic impact on quality of life from visual impairment can be severe.

1 in 7 people over 50 will get Macular Degeneration and the incidence increases with age.



- 1 Clear Focus The economic impact of vision loss in New Zealand in 2009, page 3. Prepared by Access Economics Pty Ltd, for Vision 20220, RANZCO and the RNZFB.
- ${\bf 2} \ \ {\sf Extrapolation} \ {\sf from} \ {\sf Australian} \ {\sf data}, \\ {\sf adjusted} \ {\sf to} \ {\sf New} \ {\sf Zealand}.$
- 3 Galaxy Research Report prepared for Macular Degeneration New Zealand April 2012.

The early detection of any form of AMD is crucial. AMD can cause many different symptoms. In its early stage it may go unnoticed. Symptoms should never be dismissed as just a part of 'getting older'. Detecting changes early allows for steps to be taken to slow down the progression of Macular Degeneration.

Macular Degeneration

- Is a chronic disease with no cure; depending on the type of MD, treatment options exist – early detection is crucial if sight is to be saved.
- Causes 48% of blindness in New Zealand.¹
- In New Zealand it is estimated to affect 1 in 7 people over 50 in some way.²
 - 170,000 have early MD
 - 33,400 have late MD
 - 7,000 are legally blind

Incidence increasing

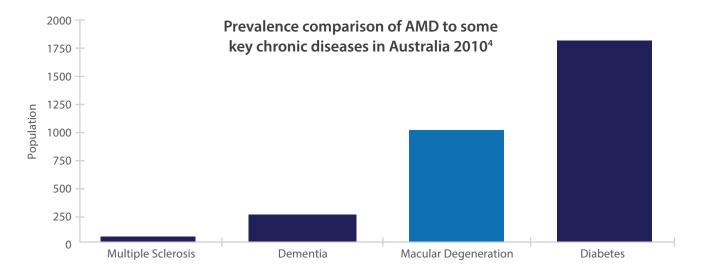
- The incidence increases dramatically with age.
- 1 in 4 people over 80 have vision loss from MD.
- It is estimated the number of people with MD will increase by 70% by 2030.²

Lack of awareness of risk

- Nearly two thirds (69%) of people 15+ years have not heard of Macular Degeneration.³
- Of those most at-risk (50+ years), 47% have not heard of Macular Degeneration.³

Eyes on the Future

"Eyes on the Future – A clear outlook for Macular Degeneration" is a report released by the Macular Disease Foundation Australia. It provides vital information and highlights the potential benefits and real improvement to people's lives that investment in a comprehensive education and awareness programme will make.



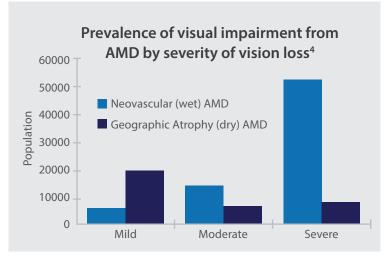
The potential social and economic benefits to be gained by reducing risks, seeking early treatment and having access to the best possible treatment and support services are compelling.

The report prepared by Access Economics and Professor Paul Mitchell updates the knowledge

of the epidemiology of AMD in 2011 (prevalence, incidence, risk and protective factors), reviews prevention and treatment protocols, determines the impact of these on costs, the burden of disease and the cost benefit of treatment. It evaluates barriers to treatment and rehabilitation services.

Fast facts

- Macular Degeneration is three times more common than dementia and half as common as diabetes.⁴
- The main cause of severe vision loss is related to wet AMD where abnormal blood vessels in the retina leak, bleed and form a scar.⁴



^{4 &#}x27;Eyes on the Future - A clear outlook on age-related Macular Degeneration'. Report by Deloitte Access Economics & Macular Disease Foundation, 2011.

Key findings from the report



Barriers to treatment

- A key reason that people with wet AMD do not start treatment (or stop treatment too quickly) is lack of awareness. Greater awareness of AMD and its risk factors are essential to improving prevention, early diagnosis and treatment.
- Compared with Australia the awareness of AMD amongst the over 50's in New Zealand is low. Whereas 83% of Australians over 50 were aware of AMD only 53% of New Zealanders over 50 years had heard of AMD. Moreover of those New Zealanders who knew of AMD 20% didn't realise that AMD affected their eyesight.
- Further efforts need to be made to educate the public about the need for regular eye checks and the benefits of tackling lifestyle factors that can modify the disease; improved diet, smoking cessation and weight reduction.
- The relative lack of appropriately trained eye health professionals often constrains the ability of DHBs to deliver AMD services which can lead to marked regional differences in the access to treatment.
- AMD is a chronic disease requiring frequent, regular and prolonged treatment. A lack of awareness of this amongst health funders, professionals and patients can lead to a lack of compliance to "best" treatment.
- The lack of knowledge about AMD and its treatment amongst GPs and patients could result in low referral rates for assessment and treatment. Even among some eyeprofessionals, there is a lack of understanding of the clinical sequelae of AMD.²

The impact of Macular Degeneration⁴

The impact of AMD on quality of life is equivalent to cancer or coronary heart disease.⁴



2x Risk of falls



2x Rate of social dependence



3x Risk of depression



3yrEarlier admission to nursing home



4-8x
Risk of hip
fracture



Reduced employment

² Extrapolation from Australian data, adjusted to New Zealand.

Key findings continued

The cost of AMD

- In 2009 the economic cost of visual impairment to New Zealand was estimated at \$2.8 billion, with the majority of this representing the monetary value of the loss of well-being. This is equivalent to \$22,195 per person with visual loss due to all causes.
- Although the specific cost of visual impairment from neovascular AMD in New Zealand is currently not known, data from Australia revealed that the cost of visual impairment due to neovascular AMD was A\$3.67 billion.⁴
- The largest potential saving associated with treatment is related to the reduction of the burden of visual loss due to wet AMD (78%). The financial savings included fewer productivity losses from informal care, reduced need for low vision aids and less downstream/alternative treatment for visual impairment.
- Whilst there is currently no effective treatment for dry AMD, adopting strategies that modify the risk factors known to be associated with disease progression, would be expected to lead to substantial cost savings.

Improving the health of older people

This is a priority of the New Zealand Ministry of Health over the medium term:

"The greatest area of projected growth in health spending will apply to maintaining the health and independence of older people. This reflects both the ageing of the population and the expectation that services will improve in quality over time. The Government is committed to providing effective health care, improved front-line services, affordability and quality services and greater dignity for older New Zealanders."

"We need to ensure ready access to services that support people with disabilities and older people and services that support healthy individuals to stay that way." 5

Rehabilitation

The emotional, social and economic impact on quality of life from visual impairment can be severe. AMD was found to predict a 60% increase in mortality risk over an average 11 year period.

- Vision loss impacts on lifestyle and independent aging and is associated with the risks of: falls and fracturing hips; developing and increases in depression; inability to access health services; and admission to nursing homes earlier.
- Low vision rehabilitation is considered the best option for mitigating the impacts if medical treatment is unsuccessful in restoring an appropriate level of vision.
- An estimated 90% of people with vision impairment have useful residual vision and could benefit from rehabilitation services. However, it's estimated that only 20% of people that could benefit from these services, actually use them.

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⁵ Statement of Intent 2012/13 to 2014/15 Ministry of Health. Presented to the House of Representatives pursuant to section 39 of the Public Finance Act 1989.