Investment in Australian eye and vision research

Prevent avoidable vision loss and restore sight through the establishment of a dedicated vision mission within the Medical Research Future Fund of $150 million over 10 years.

Australia has some of the world's leading vision researchers undertaking cutting edge research to prevent avoidable vision loss and improve outcomes for people living with blindness or low vision. Research underway includes:

- The use of artificial intelligence to expand screening for eye disease;
- Ophthalmic testing to support the timely identification of chronic conditions such as dementia, cardiovascular and cerebrovascular disease;
- The application of genomics to enhance diagnosis and treatment; and
- Development of gene therapy and editing that can help restore sight both in Australia and abroad.

In addition to this, The Lancet Global Health Commission has described the connection between dementia, vision loss and other health issues impacting on older people. Local research is required to measure the extent of the impact on the Australian population.

Australian researchers are well placed to develop and deliver these pioneering treatments to prevent vision loss, restore sight and support people experiencing vision impairment or blindness.

While the development of new treatments and technologies is a win for individuals, investment in clinical trials and the translation of pre-clinical innovations is essential to keep Australia, and its researchers at the leading edge.

Vision loss costs the Australian economy $27 Billion per year[1]. By 2030, the number of people experiencing vision loss is predicted to exceed 1.04 million, an unacceptable figure given that 90% is preventable or treatable[2].

We have an opportunity to develop innovative technology to prevent the forecast growth in vision loss and deliver eye care services at greater scale. In doing so, we will improve quality of life for individuals, create jobs and dramatically reduce the economic cost of vision loss to the Australian public.

A recent impact report by the Ophthalmic Research Institute of Australia (ORIA) shows that for every $1 invested in eye health research there was a return of $10 (2009 figures[3]). Despite the returns to be gained, investment in eye health research is relatively low compared to that made in other areas of medical research.

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[1] Access Economics, 2010, Clear Focus: The Economic Impact of Vision Loss in Australia in 2009: A Report prepared for Vision 2020 Australia, Melbourne updated to 2021 dollar values by Health Consult, September 2021.
[2] Vision 2020 and Centre for Eye Research Australia, 2016, The National Eye Health Survey 2016.
[3] Ophthalmic Research Institute of Australia 2019, ORIA Research Funding & Impact, https://oria.org.au/wp-content/uploads/2012/02/ORIA-RESEARCH-IMPACT-REPORT-20191.pdf

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Australia has committed to the improvement of eye health through its sponsorship of the World Health Assembly adoption of the World Report on Vision that calls for further investment in research.

Vision 2020 Australia has led the development of a sector wide research agenda that identifies ten priority areas for immediate investment (see table). This provides a framework for a dedicated vision mission within the Medical Research Future Fund. Creating a dedicated mission will accelerate sight saving treatment, enhance support and give life to Australia's commitment to further investment in research.

Ten point plan to enhance Australian vision research

Focus area	Examples of research questions
Vision science	How do we increase understanding of the function and biology of the visual system from eye to brain and apply this to improve patient care?
Vision for life	How can we reduce the effect of degenerative sight-threatening diseases on quality of life in an ageing population? How can we better support people living with a lifetime burden of eye disease?
Increase the effectiveness of treatment	What are the markers of early-stage disease and disease progression that can inform therapy?
Applying precision medicine to eye disease	How can we use newer individual person specific features to improve testing and diagnosis of sight-threatening diseases?
Pre-clinical & Clinical Trials	How do we use enhanced clinical trials capacity to improve patient care?
Prevention	How do we enhance and embed preventive activities to reduce avoidable vision loss, and strengthen the underlying evidence base?
Screening & early detection	How can we improve detection strategies for sight-threatening disease to identify and treat those at highest lifetime risk of blindness or vision loss?
Enhance service delivery	How can we improve access to and uptake of high-quality eye care services?
Meeting the needs of Aboriginal and Torres Strait Islander Peoples (Closing the Gap)	How do we achieve equity of eye health and vision outcomes for Aboriginal and Torres Strait Islander peoples and embed community leadership and control?
Improving Patient Journey	How do we better understand the impacts of eye and brain disease on vision and quality of life (including social and economic impacts) and manage these?

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