KEY ACTION AREA FIVE: IMPROVING THE EVIDENCE BASE

Objective: Eye health care policy, planning and programs are supported by high quality research and data collection systems.

Australian Government

The Department of Health and Ageing has funded a range of research and data projects to improve the underlying evidence base and to maximise the utility of existing health data collections in regard to eye health and vision care data.

- “A guide to Australian eye health data” was released by the Australian Institute of Health and Welfare in May 2007. This project identified, described and reviewed the key Australian data collections which are relevant to assessing the prevalence and outcomes of eye diseases and injuries and eye health care utilisation. It also provided an opportunity to identify key gaps and priorities in eye health data collections and potential opportunities for further analysis of general health and human services data sources in relation to eye disease and injury.

- Following on from the review of eye health data collections, the Australian Institute of Health and Welfare is currently working on four additional reports, each providing a statistical snapshot of certain elements of eye health in Australia. Each of these reports draws on multiple data sources, consolidating the eye health items, analysing and presenting them for the first time. The first report is expected to be released in July 2008.

Indigenous Eye Health Survey

The Department of Health and Ageing has contributed funding of $199,990 to the Royal Australian and New Zealand College of Ophthalmology Eye Foundation, to help fund the National Indigenous Eye Health Survey. The project aims to obtain definitive and quantitative information regarding the current extent and type of eye disease prevalent in the Indigenous population throughout Australia. The survey includes 30 sites across all states and territories, providing a representative sample of Aboriginal and Torres Strait Islander people.

The prevalence of the main eye conditions causing vision loss including cataract, diabetic retinopathy, refractive error and trachoma/trichiasis will be determined, as will the prevalence of glaucoma and age-related macular degeneration. An additional component of the survey includes a questionnaire that is designed to assess the availability and utilisation of
eye health services and another questionnaire that is designed to assess the quality of life for those with impaired vision. Data collection is expected to be completed by the end of 2008.

**Trachoma Surveillance and Reporting Unit**

As mentioned in Key Action Area 1, OATSIH has provided funding for the establishment of a National Trachoma Surveillance and Reporting Unit to improve overall quality of data collection and reporting of trachoma in Australia.

**Developing an evidence base for children’s vision screening**

The Murdoch Children’s Research Institute has received funding under the Eye Health Demonstration Grants Program to determine the effectiveness of vision screening for children aged birth to 16 years, and if supported by evidence, to provide recommendations on the key components of a national vision screening program for children in Australia.

**Assessment of new medical technologies for eye health**

The Medical Services Advisory Committee (MSAC) is a body that contributes to the underlying evidence base for items related to eye health. Before new medical technologies or procedures can be publicly funded, they are assessed by the MSAC. The MSAC is an independent scientific committee comprising individuals with expertise in clinical medicine, economics and consumer matters. It advises the Minister for Health and Ageing on whether new medical services should be publicly funded based on an assessment of their safety, effectiveness and cost effectiveness, using the best available evidence.

**Cataract surgery registry pilot project**

In Australia cataract surgery is one of the most common surgical procedures. The University of Western Australia has received funding of $148,984 under the Eye Health Demonstration Grants Program to pilot the establishment of a cataract surgery registry in a cross section of hospitals in Western Australia to monitor outcomes and adverse events.

**The Australian Corneal Graft Registry**

The Australian Corneal Graft Registry (ACGR) is an Australia-wide register of human corneal transplants that was established in May 1985 and is based at Flinders Medical Centre in South Australia. Data are voluntarily contributed by 580 ophthalmologists in public and private practices.

The goals of the ACGR are:
- to measure graft survival and visual outcomes after corneal transplantation;
- to investigate risk factors for transplant failure;
• to examine changing patterns of practice; and
• to return amalgamated, de-identified results to all contributing surgeons, eye banks and
  other interested parties.

A report is published every two years and is available at: http://hdl.handle.net/2328/1002

The purpose of the ACGR is to collect information that will inform clinical practice and to
identify risk factors for poor patient outcomes. The ACGR currently contains records of over
14,000 transplants, some of which have been followed for over 15 years. All information is
de-identified, to maintain confidentiality of the database.

The ACGR is funded by the Australian Government Department of Health and Ageing.
Available at: http://som.flinders.edu.au/FUSA/ophthalmology/Aust_registry.htm

Vision related research

The NHMRC has provided vision-related research funding of over $23 million in the
following areas over the past 3 years:

- Blindness $1,622,625
- Cataracts $742,700
- Colour Blindness $887,525
- Cornea Issues $815,791
- Diabetic Retinopathy $4,073,088
- Glaucoma $1,697,612
- Macular Degeneration $2,706,027
- Lens Development $1,017,200
- Myopia $481,000
- Retinal Disorders $3,914,273
- Other $5,265,403

TOTAL $23,423,241

Australian Capital Territory

In 2008 ACT Health has made a major commitment to greatly expanding public
Ophthalmology for the 500,000 people of Canberra and surrounding South Eastern NSW. In
the first instance this expansion is focused on Hospital-based services at Canberra and
Calvary Hospitals. Clinical research projects will be developed as resources become
available.

A clinical research project in early glaucoma detection is proceeding via collaboration
between the ANU Centre for Visual Sciences and Canberra Eye Hospital (Private group
practice).
Extensive, world class, basic visual sciences research is conducted at the ANU Centre for Visual Sciences and ARC Centre of Excellence in Vision Science.

**New South Wales**

The NSW Department of Health (DOH) supported a research proposal by the Centre for Vision Research, University of Sydney, to evaluate the impact of changes to the PHR relating to paediatric eye health, vision surveillance and vision screening. The University was to undertake two international literature reviews regarding preschool vision screening mid 2007. These literature reviews assisted the DOH to develop evidence based protocols for the implementation of the Statewide Eyesight Preschooler Screening (StEPS) program:

a. ‘Literature Review of Models of Service for Preschool Vision Screening for four-year-old Children’

b. ‘Literature Review of Vision Screening Tools for four-year-old Children’

In 2008 the Eye Clinic at the Children’s Hospital at Westmead has increased focus on conducting research projects within the eye clinic. This includes prevention of paediatric eye injury, post operative management of congenital cataract, investigation into optic atrophy and ensuring appropriate waiting periods for urgent paediatric eye referrals.

The Save Sight Institute at Sydney Eye Hospital conducts wide-ranging clinical and lab research of international significance in the fields of glaucoma, eye genetics, ageing, lens biology, retinal development, ageing and eye cancer, retinal therapeutics and electrophysiology. Some of the groundbreaking initiatives of the Institute relate to objective perimetry, cataract prevention and corneal transplantation.

The Sydney Eye Hospital also runs post graduate ophthalmology courses for the nursing staff locally, statewide and internationally. The Hospital collaborates with the universities of Sydney and New South Wales to work on eye research projects, including treatment for macular degenerative diseases, diabetic macular oedema and the detection of optic neuropathology in multiple sclerosis.

**Northern Territory**

Establishment of the NT trachoma surveillance system has been described above.

**Queensland**

**Diabetic Retinopathy Screening Pilot Project**

This is a diabetic retinopathy screening pilot project to test the feasibility and effectiveness of accrediting GPs to interpret retinal photographs and institute appropriate management/referrals plans, with the support and supervision of a partnering ophthalmologist.
South Australia

In relation to children, work is being undertaken to update the Nursing and Midwifery Health Surveillance Standards relating to vision assessment and screening, involving a multi-disciplinary approach based on current evidence. These standards are currently in the consultation phase.

In the Southern Adelaide Health Service clinical trials have been conducted, rare diseases and severe glaucoma registers established and evidence-based ophthalmology workshops conducted.

Health Demonstration Grant Projects projects contribute to evidence base.

Tasmania

Tasmanian Eye Health and Care Initiative

To date services and referral processes have been mapped information has been gathered on services and we already have information on the mapping of services and referral processes.

As mentioned under Key Action Area 2, the project ‘Telemedicine Model to Prevent Blindness from Familial Glaucoma’ is investigating the screening of first-degree relatives of patients with glaucoma.

Current national guidelines for glaucoma management, including screening are being developed by the World Glaucoma Association and the NHMRC. It is likely that they will not be able to recommend population screening for glaucoma except in high risk categories.

The most important high risk category is where there is no routine eye examination in the first-degree relatives of glaucoma patients. Thus an evidence base is required to support the effectiveness and cost of family screening. The data from this current project along with other data from the Glaucoma Inheritance Study in Tasmania will help address this area.

Victoria

Vision Cooperative Research Centre (CRC)

Victoria is a key partner with the federal government in the Vision Cooperative Research Centre (CRC). In order to build Victoria’s capacity for a coordinated approach to eye health and vision loss, Public Health agreed to provide funding of $350,000 over the 7 years ($50,000 per annum) from 2003/04 until 2009/10. This is subject to satisfactory performance.
of the CRC and continued Commonwealth support. The learnings from a number of projects have contributed to Victoria advancing activity in eye health and vision care. These include:

- the evaluation and monitoring of the Vision Initiative;
- delivery of eye care to Aboriginal and Torres Strait Islander communities; and
- the development of appropriate technology including digital retinal cameras for screening of diabetic retinopathy.

**Victorian Population Health Survey (VPHS)**

The Victorian Population Health Survey (VPHS) is an ongoing source of high quality data collection information on the health of Victorians. Information in the report is presented on health and lifestyle, including physical activity, smoking, alcohol consumption, intake of fruit and vegetables, selected health screening, adult obesity, asthma and diabetes prevalence, psychological distress and social networks. Issues addressed in the survey were related to changes in vision, frequency of visits to eye health professionals, known eye health issues, and the wearing of hats and sunglasses in the sun.

Specific eye health questions that were asked in the VPHS in 2005-2007:

- Have you yourself noticed a change in your vision in the last 12 months?
- Have you ever seen someone who specializes in eyes, for example, an optician, optometrist, ophthalmologist (specialist eye doctor) or eye clinic?
- When was your last visit?
- Have you ever had any of the following eye problems?
  - A Cataract?
  - Glaucoma?
  - Diabetic eye disease or diabetic retinopathy?
  - Macular degeneration?

**Western Australia**

**State Health Research Advisory Committee**

WA Health has committed to enhancing the research related to translation of current evidence into practice through a program called the State Health Research Advisory Committee Research Translation Projects. The first round in 2007 resulted in funding for a key project to validate a cost effective telemedicine system comprising of a low-cost easy-to-operate multipurpose imaging device, web-based telemedicine and electronic referral system and computer-aided vision testing.

This system could empower nurses and allied health care professionals (e.g. Aboriginal Health care professionals) to perform screenings. If successfully implemented in WA, the proposed system could help reduce the ophthalmology waitlist by way of closer to home
examination by primary care providers and nurses – an outpatient reform initiative. The full report with health economic evaluation of this project is due shortly.

A further related project has been approved in 2008 specifically addressing early assessment and intervention for indigenous patients with eye disease. This is a priority area for WA and identified in the WA Health Eye Services Development Plan.

Support for development of research institutes in Western Australia

WA State Government has invested in enhancing the emergence of research institutes in Western Australia with a range of initiatives. $50 million has been provided to develop research precincts at the two tertiary hospitals. This has been more than matched by funding from the Commonwealth Government, Universities and philanthropists. Lions Eye Institute is a leading research institute in Western Australia (LEI) and LEI is within the new research precinct at the QE II Medical Centre.

Supportive infrastructure funding is provided to researchers who are successful in winning peer-reviewed grants. Called the Medical and Health Research Infrastructure Fund, this funding provides additional support to researchers and institutes to complete key basic research and health services research projects. LEI is a significant beneficiary of MHRIF funding. As an international leader in basic science and health service research into eye health a key partnership for Western Australia has developed with LEI providing leadership into the development and confirmation of the science behind current policy in eye health. Professor Ian Constable has been instrumental in linking the policy, planning and service delivery to the background science and future development opportunities to improve the provision of eye health services not only in Western Australia but across the world. It is an outstanding model of the benefits of cooperation between clinical and research disciplines in health care.

CONCLUSION

This report has concentrated on eye health and vision care activities undertaken by governments during 2005-2008 in support of the implementation of the National Framework for Action to Promote Eye Health and Prevent Avoidable Blindness and Vision Loss.

It should not be forgotten that many other agencies, including non-government organisations, professional associations and philanthropic bodies, have made a substantial contribution towards meeting the objectives outlined in the Framework.

During the next reporting period, 2008-2011, an evaluation strategy will be instigated to measure national performance against the Framework objectives.