THE WINSTON CHURCHILL MEMORIAL TRUST OF AUSTRALIA

Report by - Alice Downie – 2010 Churchill Fellow

The Bob and June Prickett Churchill Fellowship to Study Eye Banking, in the USA and UK. To Find a Model That Best Suits Tasmania.

I understand that the Churchill Trust may publish this Report, either in hard copy or on the internet or both, and consent to such publication.

I indemnify the Churchill Trust against any loss, costs or damages it may suffer arising out of any claim or proceedings made against the Trust in respect of or arising out of the publication of any Report submitted to the Trust and which the Trust places on a website for access over the internet.

I also warrant that my Final report is original and does not infringe the copyright of any person, or contain anything which is, or the incorporation of which into the Final Report is actionable for defamation, a breach of any privacy law or obligation, breach of confidence, contempt of court, passing off or contravention of any other private right or of any law.

Signed Alice Charlotte Downie Dated: 16/02/11
INDEX

Abbreviations page 3

Introduction page 4

Executive Summary page 5

Programme page 6

Main Body

• Summary of UK Eye Banking System page 7-8
• Summary of USA Eye Banking System page 9-11
• Summary of Australian Eye Banking System page 12

Comparison page 13

Discussion page 14-15

Recommendations page 16

References page 17
# TABLE OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEBT</td>
<td>Certified Eye Banking Technician</td>
</tr>
<tr>
<td>CJD</td>
<td>Creutzfeldt Jakob Disease</td>
</tr>
<tr>
<td>CTS</td>
<td>Corneal Transplant Service</td>
</tr>
<tr>
<td>DMEK</td>
<td>Descemet’s Membrane Endothelial Keratoplasty</td>
</tr>
<tr>
<td>DSEK</td>
<td>Descemet’s Stripping Endothelial Keratoplasty</td>
</tr>
<tr>
<td>DSEAK</td>
<td>Descemet’s Stripping Automated Endothelial Keratoplasty</td>
</tr>
<tr>
<td>EBAA</td>
<td>Eye Banking Association of America</td>
</tr>
<tr>
<td>EBAANZ</td>
<td>Eye Banking Association of Australia and New Zealand</td>
</tr>
<tr>
<td>FDA</td>
<td>Food and Drug Administration</td>
</tr>
<tr>
<td>HEP B</td>
<td>Hepatitis B</td>
</tr>
<tr>
<td>HEP C</td>
<td>Hepatitis C</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HTLV</td>
<td>Human T Lymphocyte Virus</td>
</tr>
<tr>
<td>HTA</td>
<td>Human Tissue Authority</td>
</tr>
<tr>
<td>NHS</td>
<td>National Health Service</td>
</tr>
<tr>
<td>NHSBT</td>
<td>National Health Service Blood and Tissue</td>
</tr>
<tr>
<td>OTAG</td>
<td>Ocular Tissue Advisory Group</td>
</tr>
<tr>
<td>TGA</td>
<td>Therapeutic Goods Administration</td>
</tr>
<tr>
<td>TSANZ</td>
<td>Transplantation Society of Australia and New Zealand</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UK Transplant</td>
<td>United Kingdom Transplant</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
</tbody>
</table>
INTRODUCTION

I studied at the University of Tasmania and completed a Bachelor of Medicine and Bachelor of Surgery in 2006. Since then I have worked in various fields of medicine in Tasmania and Victoria. During my clinical work I have developed an interest in Ophthalmology and subsequently Eye Banking.

Eye banking is the storage and processing of corneas. Early eye banking efforts began in the 1930s and in 1944 Dr R Townley Paton founded the Eye Bank for Sight Restoration in New York. The cornea is the clear part at the front of the eye which can be used for transplantation surgery and other procedures. Eye banks also have the capacity to store other ocular tissues including sclera. Corneas can be stored in a variety of different ways the two most common ways being cold storage (Optisol) and hyperthermic (Organ Culture).

Essentially the process of eye banking is the same around the world. This includes:
1. Consent from a donor next of kin.
2. Eligibility criteria including a medical and social history and infectious disease screen.
3. Obtaining a history around the time of death including quantity of intravenous fluid or blood received for haemo-dilution calculations, which ensures that the viral serological testing is accurate.
4. The collection of ocular tissue by enucleation or removing an in situ corneoscleral rim.
5. Processing and storage of the tissue in an eye bank.
6. Distribution of tissue to a trained corneal surgeon.
7. Transplantation and gift of sight to a recipient.

There are however major differences in the philosophy and logistics of eye banking when comparing UK, USA and Australia and this is what my project focuses on. Specifically I am looking at which model would suit Tasmania best. Tasmania is geographically isolated and performs approximately 50 corneal transplants per annum, with the majority of tissue coming from the Queensland and Victorian Eye Banks. Would we be better to collect and store locally and establish a new eye bank? Or would it be better to collect and store in an already established eye bank interstate.

I would like to thank my referees Dr Graeme Pollock and Dr Paul McCartney as well as support and advice from Dr Anthony Hall and Dr Andrew Turner. I would also like to thank the people who helped me to organise my trip including Mr Jeremey Shuman, Ms Jackie Malling, Mr Frank Larkin, Ms Tracy Lloyd, Prof John Armitage, Dr Isaac Zambrano, Miss Fiona Carly Mr Jake Requard, Mr Dean Vavra, Mr Shawn Wofford, Ms Linda Fraser, Ms Tammi Sharpe, and Mr Tom Good. Thank you also to the Australian eye bankers who assisted me with my survey on my return.

Lastly my biggest thanks is to Mr Bob Prickett for his support and generosity through the Bob and June Prickett Winston Churchill Trust, which gave me the opportunity to learn about such an interesting and special area in Medicine.
EXECUTIVE SUMMARY

Dr Alice Charlotte Downie - Medical Practitioner
131 Glenwood Road RELBIA TASMANIA 7258
acdownie@gmail.com or (+61) 437130287

Project Description
What is the Best Retrieval System for Eye Banking in Tasmania, for Corneal Transplantation Surgery?

Highlights
Moorefields Eye Hospital- Mr Frank Larkin, Ms Tracy Lloyd, and Ms Penny Pavey.
East Grinstead Eye Bank :Mr Tony Ryan.
Manchester Eye Bank: Dr Isaac Zambrano and Miss Fiona Carly.
Bristol Eye Bank: Prof John Armitage, Tony, Val, Paul, Ed, Ronica and Gemma.
North Carolina Eye Bank and Vision Share: Mr Jake Requard and Mr Dean Vavra.
Rochester Eye and Tissue Bank: Ms Linda Fraser and Ms Tammi Sharpe.
Fresno a satellite eye bank for Sight Life: Mr Tom Good.
Hawaii Lion’s Eye Bank and Makana Foundation: Mr Shawn and Dawn Wofford.

Conclusions
My trip demonstrated to me that there are great differences between the philosophy of eye banking between UK, USA and Australia. The UK and Australian system is are both systems that can just support their own populations and they run with relatively low costs, compared to USA which runs with higher costs but generates enough tissue that it can export tissue to other countries.

The option of setting up an eye bank in the Royal Hobart Hospital would be expensive and in view of limited health dollars a more economical solution would be to train the tissue and organ donation coordinators to collect corneas and then send the corneas interstate for processing and storage. Tasmania will also need to address legislation around tissue donation and collection.

Implementation and Dissemination:
• I am preparing a submission for the Tasmanian Minister for Health and the Tasmanian Health Department for a change in legislation to the Tasmanian Human Tissue Act.
• Development of public awareness programs on eye donation to the Tasmanian community.
• I have been accepted to present my findings in a Cornea and External eye disease session at the Asia Pacific Academy of Ophthalmology Congress, to be held in Sydney in March 2011.
• I will also be presenting and discussing my findings with colleagues at the Annual Australia and New Zealand Cornea Society Meeting in Sydney, March 2011.
• I am preparing an article which I plan on submitting for publication in Cornea, a well recognised Ophthalmic Journal.
PROGRAMME

November 8th - 10th    Moorfields Eye Hospital
                       162 City Road
                       London EC1V 2PD

November 11th        East Grinstead Eye Bank
                       Queen Victoria Hospital
                       EAST GRINSTEAD RH19 3DZ

November 16th - 18th Manchester Royal Eye Hospitals
                       Oxford Road
                       Manchester M13 9WL

November 22nd-25th   Bristol Eye Hospital
                       Lower Maudlin Street
                       Bristol BS1 2LX, UK

November 29th – December 1st Vision Share and North Carolina Eye Bank
                       3900 Westpoint Blv, Suite F
                       Winston-Salem NC 27103

December 2nd - 3rd   Rochester Eye & Tissue Bank
                       524 White Spruce Boulevard
                       Rochester NY 14623

December 6th        Fresno- Satellite Eye Bank for SightLife
                       San Joaquin Valley
                       California

December 7th-10th    Hawai‘i Lion's Eye Bank & Makana Foundation
                       614 South Street, Suite 101
                       Honolulu, Hawaii 96813
Summary of United Kingdom System

The United Kingdom (UK) is the 79th largest land size in the world covering approximately 242,900 square km. The population is approximately 62 million people. Across the country, 3500 corneal transplantation grafts are done per year, with over 100 ophthalmology corneal units performing the operations. They have a socialised medical system called the National Health System (NHS). The NHS has a unique system for eye banking which is very centralized, with two main banks in Manchester and Bristol forming the Cornea Transplant Service (CTS). There are also two smaller eye banks at Moorfields Eye Hospital, London and at East Grinstead.

The CTS is set up with 10 eye retrieval teams located at various different places around the country, they collect corneas and send their tissue into either the Manchester or Bristol eye banks. The eye retrieval teams were set up about 5 years ago, with each centre deciding on how they want to organise and run themselves and use their allocated funding. They also have set targets that they must reach in order to continue receiving funding. Interestingly Bristol has an eye retrieval team, however Manchester does not. Manchester solely receives and distributes tissue. When a surgeon requires tissue they make a request to UK Transplant which is a separate institution from Bristol and Manchester Eye Banks. This is so that the Bristol and Manchester surgeons are not given unfair priority to tissue. One of the aims of the CTS is to give surgeons equitable access to ocular tissue.

Moorfields is one of the most famous teaching eye hospitals in the world. It is a tertiary referral hospital with 12 branches around London. Moorfields’ Eye Bank collects and stores corneas separate to the CTS, supplying tissue exclusively to Moorfields’ surgeons. It does however still rely on some tissue being sent down from Bristol and Manchester. It is estimated that Moorfields would carry out approximately 25% of corneal graft operations across the UK and that CTS provides about 90% of all tissues.

East Grinstead is the oldest eye bank in the country. When the eye retrieval teams were set up 5 years ago it joined the scheme and started sending all tissue into Bristol and Manchester, some years later however it withdrew from the scheme as it felt that it was not getting the tissue back that it wanted. Now it provides tissue to the Queen Victorian Hospital where it is based. Excess tissue is sent to Moorfields and CTS eye banks.

To help support the network between the four eye banks is a group called the Ocular Tissue Advisory Group (OTAG) which has a committee which has members from each eye bank as well as some corneal surgeons. They meet monthly to discuss issues and make changes as required. The other authorities involved are the Human Tissue Authority and the EU Tissue and Cells Directive.

For the majority of Corneal Transplants performed across the UK the tissue is donated from UK donors. A small proportion of tissue is imported from overseas, namely the
North Carolina Eye Bank and this is for private patients who are not eligible for NHS funding. There is no export of UK corneas, one of the reasons being the fear of spreading Creutzfeldt Jakob Disease (CJD) and the other is that the country is just self sufficient in supplying and meeting its own needs.

The eye banks in the UK store corneas in both Optisol and organ culture. When corneas are stored in Optisol they will last between 7-14 days and are stored at approximately 4 degrees Celsius and when they are stored in organ culture they will last approximately 28-30 days and are stored at 31-34 degrees Celsius. There are advantages and disadvantages for both systems. The eye banks are all based in teaching hospitals and are involved in research. Geographically the United Kingdom is a much smaller land mass than both Australia and the USA, corneas generally travel by road however there is some air freight when the travel to places like Scotland.
Summary of USA System

The United States of America is the third or fourth largest land size country (depending on definition) covering 9 629 091 square KM. It has a population of 310 million people. It performs approximately 50 000 grafts per year. On top of supporting its own population, it is able to export approximately 30% of donated corneas overseas to other countries in need. The Eye Banking Association of America’s (EBAA) mission statement is to cure corneal blindness worldwide. Some countries would be without corneal tissue without the great efforts of the USA eye donation programs. The range of countries it is able to export to is vast ranging from very poor countries such as Vietnam and Egypt to wealthy countries including Germany and Ireland.

One of the main reasons that the USA is able to collect so many donors is that there is a legal requirement that all acute care hospitals report deaths to the local organ procurement agency in a timely manner. The organ procurement agencies can then refer donors onto the eye banks. This automatic death notification system creates a large donor pool. There are call centres for dealing with the large donor numbers and consent from the next of kin and a medical and social history is usually done over the telephone and could be done by someone who is thousands of kilometres away. Similarly Australia and the UK commonly discuss consent and medical social history with the next of kin over the phone.

Across the country there are approximately 90 eye banks of various different sizes. Majority of eye banks are private not for profit organisations. There are various levels of networking between all the eye banks. The majority of eye banks are members of the EBAA. Some eye banks are separate companies that are not affiliated with any other eye bank, they still have relationships with other eye banks and are able to share tissue. Then there are some eye banks that are satellites of larger eye banks and collect tissue and transfer tissue back to the larger bank for distribution. There are some eye banks that are in a consortium of eye banks which utilize networks to aid in distribution of tissues, particularly overseas. Finally there are some eye banks that are multi tissue banks which store multiple tissue types.

Vision Share is a consortium of 20 different eye banks including SightLife and The North Carolina Eye Bank. Both these eye banks are examples of large eye banks that collect and distribute large numbers of corneas. For some of their distribution they use Vision Share to place their corneas particularly overseas. Vision Share determines the processing fee for that tissue. The processing fee can vary from a few hundred dollars to several thousand dollars. The member’s of Vision Share pay fees which allow them the service of wide spread distribution. As well as SightLife being a member bank of Vision Share it also has quite a large network of banks. It has services Washington state, Northern Idaho, Montana, California’s San Joaquin Valley (Fresno), and Kaiser Permanente in Northern California. It is also involved in helping to establish eye banks overseas for example it assisted in establishing the Ramayamma International Eye Bank, in India.
Fresno eye bank, in California, is an example of a satellite eye bank. It collects and sends tissue, via air, into SightLife a large eye bank based in Seattle. Fresno used to be an independent small eye bank and has recently been taken over by SightLife. Within the town of Fresno there is another tissue bank which also provides corneas to corneal surgeons. One of the main reasons that Fresno joined SightLife is because the other eye bank in the town took over a hospital contract that the Fresno Eye bank had, thus removing a potential donor source, and thus making the eye bank non viable. This phenomenon of other eye banks taking over hospital contracts creates a sort of competition between eye banks and can mean that smaller eye banks are pushed out of the market. This is quite different to Australia and the UK as there is no competitiveness between the banks. In Australia each bank has its own state and community to serve and in the UK the banks are all part of the NHS.

The Rochester Eye and Tissue Bank is an example of a medium size eye bank which not only deals with corneal donation but other tissues as well, such as bone and tendon. It is based in New York State. Some banks deal with multiple tissue types including tendons, bones, skin and heart valves. This has some problems as each tissue type is quite different and requires specific knowledge for use of the particular tissue. It may also be perceived that corneas are seen as “by-product” which has some ethical considerations as they may raise revenue to support the other tissue types.

The Hawaiian eye bank is an example of a smaller independent eye bank which tries to solely collect and distribute tissue to the local community. It is able to do this to some extent but due to surgeon specification of tissue does have some tissue sent in from other banks as well as sending some of its tissue out.

Overall the American system is efficient though costly. The main advantages of the system are:

1) The automatic notification of a death to the organ procurement agency from acute care hospitals, which in turn provides a huge donor pool.
2) Distributions to countries that would not otherwise be able to access corneal tissue and thus would not be able perform corneal graft surgery.
3) Contribution to curing corneal blindness worldwide.

The disadvantages I observed:

1) Difficulties with traceability of tissue when sent overseas.
2) No geographical zoning for eye banks which means that eye banks can target ophthalmologists in other states to use their tissue, creating a sort of competition into the industry which has ethical considerations such as corneas turning into a commodity rather than a gift.
3) The processing fee for each cornea varies depending on where the cornea is going and which eye bank it is coming from. Some countries will receive tissue gratis and others pay considerable amounts.
4) American surgeons have become far more selective to the tissue that they will accept. For example they will put restrictions on age of donor corneas and cell
counts they will accept. This creates problems for the eye banks as reasonable corneas are not being accepted for use. The Cornea Donor Recipient Studyiv and The Australian Corneal Graft Registryv have demonstrated that these factors do not alter outcomes.
Summary of Australian System

Australia is ranked 6th in the world for land mass covering 7,692,091 square kilometres. It has a population of 22 million people. It performs approximately 1500 corneal graft operations per year. It has a very well established eye banking system with the professional societies including the Eye Banking Association of Australia and New Zealand (EBAANZ), the Therapeutic Goods Administration (TGA) and the Transplantation Society of Australia and New Zealand (TSANZ). One of the very special things that Australia has is The Australian Corneal Graft Registry which is a registry of all corneal graft operations performed across Australia. It has been up and running since 1985 and has recorded over 18,500 graft operations. It has meant that Australia has a very important research tool and other countries are able to compare themselves to us. Australia has 5 eye banks in Victoria, South Australia, Western Australia, New South Wales and Queensland. The eye banks vary in size, with Queensland and New South Wales being the biggest. Three out of five eye banks are supported by Lions clubs.

Tasmania has a population of approximately 500,000 people and performs approximately 50 grafts per year. The Tasmanian Human Tissue Act 1985 Section 26 implies that a medical practitioner is the person who collects tissue. This makes things very difficult as medical practitioners are often running late and have limited time, collecting donated eyes would not be their priority. The legislation needs to be updated and in line with the other states so that a trained technician can perform the work, giving it the time and attention it deserves.

The Australian eye banks have good working relationships with each other. They have rules and regulations that differ from UK and USA, one of the rules is that an eye bank cannot approach an interstate ophthalmologist, if that state has its own eye bank. They must go through the eye bank in that state. This is important so that there is no competitive rivalry between the eye banks. This makes Tasmania and the Northern Territory special as they can receive corneas from any bank. The Australian Capital Territory has an agreement with New South Wales and they collect tissue and store the tissue in the New South Wales Eye bank.

In 2009 the Australian Government reviewed organ and tissue donation by setting up the Australian Organ and Tissue Donation and Transplantation Authority they proceeded to write a report on National Eye and Tissue Network Implementation. They did not recommend establishment of new smaller tissue banks due to cost but did not specify eye banks. Eye banks tend to be substantially cheaper to set up with equipment needs. Currently Australia is able to support its own population. Most states work on a schedule system and meet surgeon and patient demands. In Western Australia and New South Wales they work on a waiting list system, and people can be waiting for up to 24 months. It is difficult to analyse supply and demand as there are many factors involved such as availability and number of ophthalmologist able to perform surgeries as well as eye bank capacities looking at staff and space.
## COMPARISON

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>USA</th>
<th>AUSTRALIA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
<td>62 million</td>
<td>310 million</td>
<td>22 million</td>
</tr>
<tr>
<td><strong>Land size</strong></td>
<td>242 900 square KM</td>
<td>9 629 091 square KM</td>
<td>7 692 024 square KM</td>
</tr>
<tr>
<td><strong>Approximate Number of transplants done/ year</strong></td>
<td>3500</td>
<td>50 000</td>
<td>900</td>
</tr>
<tr>
<td><strong>Number of transplants per head of population</strong></td>
<td>1/18 000</td>
<td>1/6000</td>
<td>1/15 000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tasmania 1/10 000</td>
</tr>
<tr>
<td><strong>Professional groups involved</strong></td>
<td>HTA NHS OTAG</td>
<td>EBAA FDA</td>
<td>TGA EBAANZ TSANZ</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>NHS</td>
<td>Private/Lions clubs</td>
<td>Government/Universities/ teaching hospitals/private health insurance/ Lions Clubs</td>
</tr>
<tr>
<td><strong>Storage media</strong></td>
<td>Mixture</td>
<td>Cold Storage</td>
<td>Mixture</td>
</tr>
<tr>
<td><strong>Number of Eye Banks</strong></td>
<td>4</td>
<td>90</td>
<td>5</td>
</tr>
<tr>
<td><strong>Supply and demand</strong></td>
<td>Country is self sufficient</td>
<td>Excess supply</td>
<td>Country is self sufficient</td>
</tr>
<tr>
<td><strong>Export/Import</strong></td>
<td>Import some from North Carolina Eye Bank No Export</td>
<td>No Import 25-30% exportation internationally</td>
<td>New Zealand- they are part of the EBAANZ</td>
</tr>
<tr>
<td><strong>Notification system</strong></td>
<td>Eye Retrieval Teams</td>
<td>Mandatory reporting from Acute hospitals</td>
<td>Automatic notification systems for WA, SA and QLD. NSW and VIC based on referral system.</td>
</tr>
<tr>
<td><strong>Who does the retrieval</strong></td>
<td>Trained Technician</td>
<td>Trained Technician</td>
<td>Trained Technician</td>
</tr>
</tbody>
</table>
DISCUSSION

There are radical differences in the philosophies of eye banking between UK, USA and Australia. Both systems reflect their health care systems, with the American system being more privatised, the UK system socialised, and the Australian system a mixture of both. Interestingly the figures reflect this as well with America performing 1/6000 grafts per capita, Australia 1/15000 and UK 1/18000. The USA has a more entrepreneurial system with large cornea turnover and export. Primarily the USA eye banks are privately owned not for profit organisation and each company supports a large workforce. The UK system is cost efficient and provides just enough corneas to service the country. Similarly Australia is providing just enough to support its own population. All countries are involved in research and medical advancements. In UK and Australia it is the people working in the eye banks doing the research, whereas in America the eye banks support research by providing research grants and by providing tissue to research groups. In America the people working in the eye banks are mainly trained at running successful business.

There are differences in the number of operations done per head of population when comparing the three countries. America does 1/6000, UK 1/18000 and Australia 1/15 000. This could be explained by a number of different reasons such as

1. There may be different patterns of disease. For example if you look at Tasmania it has quite a high population of people who suffer from keratoconus, a hereditary condition which effects the shape of the cornea so that it bulges rather than being evenly curved.

2. Americans are treating corneal disease more aggressively with operations. This may be because tissue is more accessible or because the American medical system tends to intervene early in most diseases including eye disease.

3. It could be argued that Australia and the UK tend to intervene later and have a more conservative approach, which means that they tend to have longer waiting lists. One of the Australian and United kingdom philosophies being that if you are managing with one good eye then it is reasonable to leave the other eye alone, as all operations carry risk and sometimes things don’t go according to plan.

The diseases that are screened for are similar for all three countries with slight variations. HIV, HEP B, HEP C and SYPHILIS are always screened for. Some places add in Human T Lymphocyte virus and other immunological tests. The standard of care and practice was also comparable for all three countries as was the very high standard of infection control, auditing and quality assurance.

Finally it seems that all three countries have a system that is working effectively to treat their own populations. America is able to support its self and many other countries. It is difficult to know if the American system is sustainable in supporting so many different
Alice Charlotte Downie

countries. Spread of disease and traceability of tissue is a concern. America has made a successful business and market out of corneas, keeping in mind that you can’t trade in organs but it is legitimate to recover costs.
RECOMMENDATIONS

- Legislation in Tasmania needs to be addressed so that a trained technician can retrieve tissue rather than a medical practitioner.
- A death audit of the Royal Hobart Hospital and Launceston General Hospital to gain a further understanding of donor pool and numbers.
- Once the legislation has been addressed it would be ideal to train the existing tissue coordinators to be retrieval officers.
- Approach Lions Club in Tasmania to see what they can contribute. The Lion’s clubs around the world have contributed in various different ways. Some make a one off payment or buy a piece of equipment for an eye bank and other clubs offer ongoing financial support.
REFERENCES


---

i
vi Williams KA, Lowe MT, Bartlett CM, Kelly L and Coster DJ. The Australian Corneal Graft Registry 2007 Report
vii Wikipedia, The Free Encyclopedia