

GLAUCOMA NZ POSITION PAPER

The Challenge of Glaucoma

'The Challenge of Glaucoma' outlines pathways to intervention in our community to prevent visual loss and blindness from glaucoma.

This document, 'The Challenge of Glaucoma', outlines what can be done, what Glaucoma NZ has done, and most importantly what an intelligent individual could expect to be done if he passed through any of the pathways outlined. Refinements will be made but the broad pathways have been outlined - pathways that comprehensively cover the entire community.

The pathways focus on where people are in their understanding of eye health, and the actions they may or may not have taken about eye health. The key perspective taken is that of an intelligent individual placed along anyone of these pathways.

The document also outlines the intervention strategies that Glaucoma NZ has initiated and promoted along these pathways. A more complete outline of all Glaucoma NZ activities from 2003 to 2007 can be found in the Glaucoma NZ document 'Review 2007'.

The mission statement of Glaucoma NZ is to eliminate glaucoma blindness from our community.

The Glaucoma Slide from Eye Health to Blindness

An important feature of glaucoma is its long asymptomatic incubation period from eye health through the development of established glaucoma to advanced and symptomatic glaucoma. This slow development occurs in most people who are affected by glaucoma. There is a long time during which the individual at risk can be identified and regular assessment planned to detect glaucoma early, and to decide when best to treat to stabilise the condition and prevent disability occurring later in life.

Glaucoma NZ recognises that there are three groups of individuals in the community within this asymptomatic period prior to developing glaucoma. (Groups 1, 2 and 3) Those with established glaucoma fall into a further two groups: the asymptomatic and the symptomatic. There are therefore five groups in the community namely:

- 1 People who are totally unaware about eye health.
- 2 People with an initial concern about their own health (general or eye).
- 3 People identified with glaucoma risk factors or markers.
- 4 People who have established glaucoma but it is still asymptomatic.
- 5 People who have glaucoma that has caused symptoms.

The Totally Unaware

People who are totally unaware about eye health, and possibly general health issues, often have never had an eye examination. They may have no risk of developing glaucoma, they may have identifiable risk factors for glaucoma or they may have established glaucoma that is asymptomatic.

What pathways can be used to encourage these people to present for an eye examination? One pathway to the totally unaware individual is through community-wide awareness programmes ranging from nationwide advertising to local events including Glaucoma NZ public meetings. Glaucoma NZ has initiated a number of nation-wide events e.g. The Mayor's For Sight Campaign and The Postcard Campaign. Glaucoma NZ has also linked to commercial TV advertising for nationwide coverage including the Health Diary series. During these events media coverage has been documented, but the clinical effectiveness of these campaigns cannot be measured. Like all non-directed advertising, it is a costly exercise without a measurable cost effectiveness. Glaucoma NZ is not in a position, nor does it give undue importance to extensively use this pathway for glaucoma awareness in our community. However Glaucoma NZ will work with any organisation that wants to promote glaucoma awareness to the wider community.

Another pathway to the totally unaware is to proclaim our message through organisations and institutions. Glaucoma NZ has promoted glaucoma awareness through service organisations, sports groups and most importantly through large-scale employers such as Telecom and IAG insurance group. We have promoted glaucoma awareness through the Canterbury District Health Board to all its employees. This is the largest employer in the South Island having over 8000 on its staff. Initiatives of this kind require minimal resource input. Again the clinical effectiveness cannot be measured but the cost effectiveness, compared to any other pathway to the wider community, is high. We encourage the use of large-scale employers and other organisations to spread the message of glaucoma awareness.

Glaucoma awareness is a message that, in the end, requires the individual to accept it and act on it for it to be effective. People need first to know that glaucoma is the number one preventable cause of visual loss. Therefore Glaucoma NZ promotes its message of 'The Glaucoma Eye Examination: 45 + 5' to the wider community whenever the opportunity arises.

Glaucoma NZ Strategy

Limited funds and resources may be used for community-wide awareness campaigns, but Glaucoma NZ should focus on developing links to organisations that will spread the message to their own members and workers.

The Concerned Person

Glaucoma NZ has initiated a drive to have Eye Health considered whenever someone requests a Routine General Health Check.

The person concerned about their general health will seek a routine check up even though there are no particular health complaints. There are no symptoms of ill health or disease. The 'Concerned Person' is in essence asking "What may kill me, Doc?"

What may harm me?" In eye health that translates to cancer kills you, glaucoma blinds you! The concerned person can rightfully expect these conditions to be addressed when presenting for a routine general health check.

The Glaucoma NZ philosophy is guided by the expectations an intelligent individual would expect in any given situation. A person presenting for a routine general health check, would expect the check up to include glaucoma, given the knowledge we hold as eye care professionals about this disease. The 'Well Person Clinic' is dominated by consideration for cancer, rightly so, and by cardiovascular risks. Glaucoma NZ believes that risks to eye health should also be considered in any general health check up. The risk of glaucoma blindness should be approached just as we currently address cardiovascular risk prior to the onset of disease. One is life threatening, the other sight threatening. Both risks would be of concern to the individual presenting for a routine health check, if the individual had the knowledge of glaucoma which we have as professionals.

The main pathway to reach the concerned person is through their General Practitioner. Glaucoma NZ has initiated an Education and Awareness Programme for General Practitioners. Over fifteen percent of actively practicing General Practitioners have enrolled in our programme. The Glaucoma NZ programme increases awareness about glaucoma, promotes the '45 + 5 Glaucoma Eye Examination', promotes understanding of the glaucoma risk factors / markers of the disease to identify individuals who require closer follow up, and addresses the role General Practitioners have in glaucoma care.

Glaucoma NZ Strategy

Involvement of General Practitioners is critical to Glaucoma NZ achieving its goal: to eliminate blindness from glaucoma. Glaucoma NZ will give greater attention to General Practitioner Education and Awareness.

Another pathway to the concerned person is through optometry. Many people present to optometrists for eye care either for refractive errors or because of symptomatic eye disease. Optometrists have skills to detect established glaucoma and all the risk factors / markers for glaucoma. It is appropriate that General Practitioners refer patients to optometrists to detect ocular risk factors and to detect established glaucoma. Glaucoma NZ has provided in-depth education about glaucoma to optometrists for the past five years.

However we recognise that not everyone attends an optometrist. The pathway through General Practitioners is likely to more comprehensively cover the community. The General Practitioner can direct people appropriately to Ophthalmology Departments for a government funded eye examination.

People in New Zealand should have choice in their quest for a routine eye examination. Optometry provides a good service and one that is very important to detect glaucoma. However it is too expensive for some people. The best alternative is the development of nurse-led clinics allied to Eye Departments. Such clinics will bring major additional advantages to clinical management within these departments.

Glaucoma NZ provides an educational package for glaucoma nurses and encourages the further development of glaucoma clinics. However, real progress in this area requires the enthusiastic input of the Departments' eye specialists.

Achieving a well run nurse-led glaucoma clinic will have major advantages in providing experienced ophthalmic nurses for other areas of eye care within the department.

Glaucoma NZ Strategy

Glaucoma NZ promotes the development of nurse-led glaucoma clinics allied to Eye Departments, both as a pathway to detecting glaucoma and its risk factors, and also to support glaucoma care within Departments.

Government funding for routine eye examinations, on referral from a General Practitioner, should be available through Eye Departments.

3 The At Risk Person

The 'At Risk Person' for the development of glaucoma has identifiable risk factors but has not yet developed 'Established Glaucoma'. Evidence based medicine supports a short list of risk factors for both open angle and closed angle glaucoma.

Risk factors fall into two groups: those identified without an eye examination and those that require an eye examination. The first group, those identifiable without an eye examination, may be known to the person or may be elicited by a General Practitioner. Identifying these risk factors heightens the need for a glaucoma eye examination and for closer follow up. The second group of risk factors can only be elicited by an eye examination, which includes a slit lamp examination. Currently eye departments, optometrists and eye specialists in private practice provide this service.

The nurse-led clinic as described above can provide a government paid pathway to the detection of glaucoma and its risk factors.

The Risk Factors are:

FOR OPEN ANGLE GLAUCOMA

Identified without an eye examination

Age

Family History

High myopia

Steroid use

Previous eye trauma

Identified with an eye examination

Intraocular pressure

Central corneal thickness

Optic disc structure

Eye pathology

FOR ANGLE CLOSURE

Age

Race

Family history

Hypermetropia

Shallow anterior chamber / angle

Identifying these factors selects those people who deserve closer attention to the early detection of glaucoma. The list does not include ill-health that may aggravate glaucoma damage in someone who has established glaucoma e.g. hypertension, diabetes, migraine, Raynaud's phenomena. People with these conditions required the same monitoring as people who do not have these conditions.

Glaucoma NZ Strategy

Glaucoma NZ promotes the known risk factors / markers for glaucoma to all professionals who are involved in glaucoma care. Well-directed research is required to more accurately identify people at risk of developing glaucoma.

4 The Person with Asymptomatic Glaucoma

A diagnosis of glaucoma requires assessment of damage to the optic disc with appropriate visual field loss. The optic disc can be assessed by clinical examination and by optic disc scanning. The pathways to a diagnosis of glaucoma are the same as those for the detection of glaucoma risk factors.

Glaucoma NZ in promoting the '45 + 5 Glaucoma Eye Examination' places emphasis on the dual role of this examination: the detection of risk factors and the detection of established glaucoma. A high quality examination that fulfils both roles will provide early intervention for people with glaucoma. Early intervention combined with best practice management of glaucoma will dramatically reduce glaucoma blindness. However detecting glaucoma early with certainty is often difficult. The wide-spread use of optic disc and nerve fibre scanning may detect glaucoma early but may also lead to over diagnosis and excessive use of these modalities.

The ability to detect glaucoma at an early stage in the disease, by use of the clinical examination supported by appropriate use of modern technology, requires continuing education of professionals.

Glaucoma NZ Strategies

Glaucoma NZ will continue to address accurate early detection of glaucoma through its professional educational programmes.

Research into the early detection of glaucoma in New Zealand should be strongly supported.

5 The Person with Symptomatic Glaucoma

People with symptoms due to glaucoma fall into two groups:

- a) Those with advanced visual loss from glaucoma that has been present for a long time.
- b) Those with acute symptoms due to angle closure or the recent onset of eye pathology (the secondary glaucomas)

People often present with advanced loss of eyesight from a wide variety of eye diseases including cataract. Advanced visual loss from glaucoma indicates that extensive damage has occurred to the optic nerve. This damage cannot be restored. Retaining the remaining nerve fibres and vision is a challenge. In addition the

markedly cupped optic disc is at great risk of inducing a retinal vein occlusion: a medical event that will usually mean loss of the remaining vision. Early diagnosis of glaucoma is the key to preventing this disastrous visual outcome. That is why Glaucoma NZ is here.

If the visual loss is due to glaucoma then the person should be seen with some urgency. However if it is due to cataract alone, then vision can be restored at any time in the future. If glaucoma is overlooked and the referral inappropriately states a diagnosis of cataract, then irreversible damage to eyesight can result before the assessment occurs.

People who develop acute eye symptoms usually present early. Acute angle closure glaucoma is an eye emergency that requires the urgent attention of an eye specialist. The risk of developing angle closure can be assessed in the Routine Glaucoma Eye Examination.

Glaucoma secondary to eye pathology often has a semi-acute onset of symptoms. The presence of eye pathology should be sought in a Routine Glaucoma Eye Examination.

The Glaucoma NZ recommendation of the '45 + 5 Glaucoma Eye Examination' addresses those conditions that may, at a later time, lead to acute symptoms. Many of these conditions initially have symptoms because of a high eye pressure. With appropriate treatment, glaucoma often does not become established.

Glaucoma NZ Strategy

Glaucoma NZ's professional education will continue to stress that the routine eye examination should include the assessment of angle closure risk and the presence of eye pathology that may lead to a raised eye pressure and glaucoma.

Summary

To achieve our mission, the elimination of glaucoma blindness, given current knowledge of glaucoma and the experience gained by Glaucoma NZ over six years, we identify the following pathways to intervention:

1 Glaucoma Awareness

Awareness of glaucoma campaigns to the public are best directed through other organisations. General advertising and media attention seeking events are expensive and short lived. Their effectiveness cannot be measured. There are more effective ways to use Glaucoma NZ resources and funds.

2 Glaucoma as a part of routine health checks

Glaucoma NZ will promote, with vigour, the philosophy that attention to eye health should be part of any routine general health check, any "well health" clinic, and promoted to any person presenting infrequently to a health care provider. This philosophy has a foundation in the reasonable expectations any individual would have given the knowledge of glaucoma that is held by the profession. General Practitioners provide the majority of routine health checks and are the key to getting the message of glaucoma to people who take their health seriously.

3 Glaucoma as first consideration

Glaucoma should always be considered when a person first presents with any eye complaint including visual loss. Eye services should give a high priority to

referrals that indicate any possibility of glaucoma. Glaucoma NZ should continue to work towards a greater awareness about glaucoma by all health professionals to achieve this goal.

4 **An assessment for both glaucoma risk factors and established glaucoma should occur whenever an adult presents for any eye health service.** It is a value added service to the benefit of the patient or client. It is an opportunity that should not be missed

5 **Identification of glaucoma risk factors / markers**

Identification of glaucoma risk factors / markers assures that enhanced attention is given by professionals to people at risk of developing glaucoma. Glaucoma NZ should continue to promote the value of identifying risk by all those involved in glaucoma care to the level of their ability. Glaucoma NZ sees a place for nurse-led clinics in risk factor identification as well as the more traditional routes of optometrist or eye specialist. Anyone who has had an eye examination should be informed of his or her own risk factors for glaucoma.

6 **Assessment of angle closure risk and eye pathology**

Any eye examination should include assessment of glaucoma risk including angle closure.

7 **The glaucoma eye examination**

Glaucoma NZ should continue to refine the key elements of a glaucoma examination and the appropriate place for diagnostic modalities towards making an accurate diagnosis of early glaucoma.

8 **Education for improved compliance**

Glaucoma NZ should continued to promote best eye care for those with glaucoma especially through enhanced education of the person with glaucoma to improve compliance and prevent further visual loss.

9 **Research**

Glaucoma NZ should promote research into glaucoma and the delivery of glaucoma care. Research is the key to future progress towards elimination of glaucoma blindness and visual disability.

The challenge that glaucoma presents to all those involved in the prevention of blindness and visual loss cannot be underestimated. There are no simple answers. However, any individual disabled by glaucoma blindness can rightfully ask, "Was everything done that can be done?" No progress can be made if the challenge is considered too difficult or that we have failed to date to outline a programme to address glaucoma blindness.

The key focus taken by Glaucoma NZ is the expectation that an intelligent individual would have to glaucoma assessment and prevention: what he or she could rightfully expect from well-trained professionals providing high quality eye services throughout the community.

Glaucoma NZ has taken up the challenge but it is one for all eye care professionals. The true glaucoma specialist is he or she who is committed to work on the challenge of glaucoma in the whole community. There is a place in glaucoma eye care for all eye care professionals, all of whom see people, patients and clients who may be at risk. Glaucoma NZ provides the framework through which all professionals may work. We welcome participation.