

Changes and transformations: how technology is changing glaucoma

Technology seems to be transforming our lives everyday – and it's helping to make leaps and bounds in diagnosing, understanding, and treating glaucoma. Here, Dr Jesse Gale shares his insights into some of the most recent developments in glaucoma research, and how technology will continue to shape the treatment of glaucoma in exciting ways.

The ongoing relationship between technology and glaucoma

Over the years, the increased power of technology has allowed eye health professionals to understand and assess the condition of the eye at greater depth. Consider diagnosing glaucoma – 15 years ago, an optical coherence tomography scan (OCT) was very new and low quality. Now, the newest machines allow professionals to do 200,000 scans a second, and achieve resolution almost able to see

individual living cells in the eye. Developments in this technology continue at an amazing pace, with angiography, artificial intelligence, tissue labelling, and 3D modelling.

Technology is also allowing for new approaches to medical devices. I'm working with design and engineering students at Victoria University to use open source software and 3D printers so professionals can eventually make their own medical devices. We've managed to produce a pupilometer for only \$300 using this technology, although it's still a work in progress. This is a first step in hopefully making eye health equipment more cost effective and opening up services in poorer parts of the world.

Speeding up research

Exciting research is happening in New Zealand right now on electrophysiology – the measuring of electrical signals from the surface of the eye. In regards to glaucoma, it can provide an idea of whether the optic nerve is under additional stress. The test is not as clean and tidy as we'd like at the



Dr Jesse Gale - Ophthalmologist

moment, but the area has huge potential. Historic glaucoma trials have often taken 5 to 10 years, but now some pilot studies are emerging where treatment with new drugs can be seen to have an effect on improving electrophysiology stress signals in just a month. This could allow many drugs to be tested more quickly and cheaply, accelerating the development of the most promising treatments.

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Looking forward to the future

Technology – as well as the researchers and developers harnessing its potential – will continue to not only improve our understanding of glaucoma, but also the ways in which it is treated. A dream project I'm helping to work towards is a networked electronic record that will hopefully create a common record for eye problems across New Zealand. If we were all contributing to the same record from all our hospitals and practices there would be so many potential benefits: improving communication between staff, reducing wasted travel and duplication of tests,

amazing research possibilities, opening the door to smarter models of care, and innovations such as reminders for patients about treatment and appointments, or even home monitoring.

Emerging technologies mean exciting times in the world of glaucoma. Clever people from around the world are coming together and creating opportunities to make things better for those with glaucoma – meaning people can expect quicker, easier and better treatment and management in the future.



Dr Jesse Gale - Ophthalmologist

Dr Jesse Gale is an ophthalmologist based in Wellington. He's particularly interested in finding new ways to manage glaucoma, and how glaucoma and other optic nerve problems are linked.

Eyedrop Aids

Using eye drops can be a challenge for many patients, young or old. AutoDrop[®] and AutoSqueeze[™] have been developed to make self-administration as simple as possible – helping to improve patient compliance and reducing reliance on others to help with this task.

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Autosqueeze

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You can now purchase these from Glaucoma New Zealand through our website www.glaucoma.org.nz or phone 0800 452 826.

Thank you!

Thank you to Pub Charity for their continued support of the printing and mailing of Eyelights and to Maurice Paykel Charitable Trust, as well as the Community Organisation Grants Scheme in Auckland, Coastal Otago, Kahungunu ki Heretaunga, and Whangarei/Kaipara. You all make it possible for us to support so many people living with glaucoma!



Congratulations to our winner!

Thanks to everyone who filled in the survey sent with our last newsletter – we're still collating the results, but they'll be hugely helpful in helping us improve our services.

Congratulations to **Gwen Pauling**, who was the winner of our \$100 Westfield voucher prize.



General Manager Ana Lee moves onto the Royal Commission

Ana Lee finished as our General Manager in April this year. She's sharing what she's moved onto.

It was a surreal experience to spend my last day at Glaucoma NZ as General Manager – by shutting down my laptop from my dining room three weeks after New Zealand went into lockdown. I want to thank all the volunteers who came forward to support many new initiatives during my time leading the cause. And to the members who, when sharing their journeys, inspired me continuously and ignited the need for a worthwhile charity like Glaucoma NZ to prevent unnecessary blindness.

I have taken up a once-in-a-lifetime opportunity as a Senior Community Engagement Advisor, raising awareness and supporting participation in the Royal Commission of Inquiry into Historical Abuse in Care.

The Commission is investigating and reporting on what happened to children, young people and vulnerable adults in state care and faith-based institutions between the years 1950-1999. It also has discretion to look outside of these dates. The Inquiry is independent of the Government and is led by a chair and four commissioners.

It was set up in response to calls from survivors and supporters for an independent inquiry into abuse in state care. The Government extended the inquiry to include faith-based organisations. The settings in which abuse may have

occurred include: in children's homes; homes in which children were fostered or adopted out; in facilities for youth justice and psychiatric/mental health care; in any disability care or facility; at health camps; and at any school or early childhood centre. Survivors of abuse in police cells, court cells or police custody, or in transport between different care facilities are included in this inquiry, as are those who suffered abuse while in the care of a church or religious group of any religion or faith. Aged care residential facilities and prisons, however, are not included in this inquiry.

Talking with the Royal Commission is a unique opportunity to give voice to survivors and their journeys. For that reason, we are also interested in hearing from those who were witnesses to abuse. This could be a family member of someone who experienced abuse or were a staff member or volunteer in state or faith-based institutions who

witnessed the abuse. Abuse can be physical, sexual, emotional, psychological and neglect.

We understand that these stories are hard to tell. If you or someone you know is interested or wants to share their story, our Community Engagement team and I can work with individuals, their families or with organisations that they may be involved with to talk about how we can best support them to tell their story.

Helping us learn about what happened in care and the affect it had on survivors, their family and community, will help us make it safer for children, youth, and vulnerable adults in care today and into the future. The Royal Commission also provides all survivors who register with wellbeing support.

For further information you can contact Ana at ana.lee@abuseincare.org.nz or phone 027 223 1193.

Thank you Ana

"Ana has made invaluable contributions to GNZ on so many levels. Her energy and passion for GNZ and its members permeated all the activities she initiated. Ana spearheaded the GNZ community programme including establishing local support groups and increasing the educational lectures to community organisations. Through Ana's efforts GNZ has given hundreds of community lectures to corporates, educational groups, and the public.

The Board of GNZ will always be grateful to Ana for her commitment and dedication. We wish her the best and know she will be successful in all her future plans."

– Professor Helen Danesh-Meyer, Chairperson Glaucoma New Zealand



Laser-focused on treatment: Andrew's glaucoma story

Managing his eye health has been an ongoing process for Wellingtonian Andrew Lord. With a family connection to both glaucoma and cataracts, trying out treatments and learning as much about the conditions as he can has held him in good stead the past few years.

Andrew was diagnosed with glaucoma about 6 years ago, after a check-up at Specsavers revealed his eye pressure was higher than expected. "It wasn't entirely a surprise," recalls Andrew. "My mother had glaucoma so I'd been aware of the condition and the family link for quite a while."

Trying out treatments

An initial eyedrop treatment managed Andrew's glaucoma for several years and stopped his eye pressure getting any worse. He visited the specialist every 6 months for a check-up, and his specialist was very happy with the condition of his eyes. Last year however, his eye pressure began increasing again slightly.

It was then that the possibility of SLT – a Selective Laser

Trabeculoplasty – was brought up with Andrew. He was a little bit cautious about the laser treatment, but remembers feeling reasonably confident that it was the right thing.

"Of course you've only got two eyes – so you don't want to lose anything!" Andrew laughs. "But I remember thinking that if it was being done in the public health system, it has to certainly be approved and effective."

Initially starting with just the one eye, Andrew found the first session painless enough to do both eyes at once. All in all, he had 30 laser shots in each eye.

"The laser was a little bit painful, and more so as you got closer to the nerves," Andrew recalls. "But the pain was nothing worse than a pinprick."

After his laser session, he put on some special sunglasses that block out larger amounts of light than typical ones, and went on his way! Back at work he pulled his office blinds to make the room more comfortable and got on with his to-do list – amazed to think he'd had laser treatment only a short while earlier! His eyes got a little sore and a bit sensitive as the night went on; the next day though, his eyes felt back to normal. To combat some of the discomfort Andrew

felt, he recommends being as prepared as you can.

"Arrange someone to look after you on the day and perhaps pick you up if you need. It's important to have a support system in place to keep you comfortable."

Understanding and managing glaucoma

Andrew has been a member of Glaucoma New Zealand since he was diagnosed. Someone at the hospital mentioned GNZ and he jumped online to find out more.

"As patients and being newly diagnosed, everything about glaucoma is new and can be quite overwhelming," he says. "Reading about glaucoma and keeping up to date with what's going on is helpful in understanding more about the condition and what's going on in your eyes."

For someone who is newly diagnosed with glaucoma, or perhaps wanting to figure out if laser treatment is appropriate for them, Andrew advises to always go with your doctor's advice and that if laser is an option for you, then go for it.

"It might be a little painful, but it's worth it to control your glaucoma as much as you can," he says. "If you can get your pressure under control then that's wonderful."

A no-brainer: Alex's experience with laser treatment

For Alex Baker, who was diagnosed with glaucoma 9 years ago, laser treatment seemed like the obvious option to go for once it was recommended to him. 6 years after his first laser experience and only 1 top-up later, his eyes are better than ever, and his eye pressure remains completely under control. For him, it makes life unbelievably simple.

Discovering glaucoma

Alex's glaucoma diagnosis came as a complete shock. He had heard of glaucoma, but didn't properly know what it was. Working as a lawyer and then a real estate agent, he'd always been a busy bee and had been putting off an eye check for ages. But when he began having trouble with his vision, Alex booked himself in knowing he needed glasses.

When he did get himself checked, his optometrist was concerned about Alex's eye pressure levels and referred him to an ophthalmologist immediately. There, he found out he did indeed have glaucoma, and while it was at a relatively early stage, he'd need to get treatment started right away.

"I was only in my late 40s and had absolutely no idea about having glaucoma at all," Alex recalls. "It's quite scary to think that if I'd continued to put off my eye test,

things could have turned out quite differently."

A no-brainer to go for laser

Alex initially started on eyedrops, and alternated between a few different types before finding one that was really successful in managing his eye pressure. With 6 monthly checks and sticking to his regular drops, Alex's glaucoma was kept right under control.

When Alex was first diagnosed, laser still wasn't a widely available treatment option. But three years after his diagnosis, our very own Helen Danesh-Meyer suggested a new laser treatment to him that she thought would be effective. Alex had always thought remembering to constantly administer eye drops was a bit of a nuisance and liked the idea of not having to worry about that, so jumped at the opportunity to try laser surgery.

"After finding out it would be covered by my medical insurance as well, it felt so simple that it was an absolute no-brainer to go for it."

Making life simple

Going into his laser treatment, Alex wasn't fearful, but cautious.

"I had heard of eye laser treatment for other conditions, so was familiar with the idea but was still a little unsure of what to even expect," says Alex. "As much as people tell you about it, you never fully know what it's like."



Alex recalls his bilateral LST being so painless and easy it was almost forgettable.

"I went in on a Saturday morning, and half an hour later I was out and feeling absolutely fine. I remember my eyes feeling a little dry and tight but not at all painful."

Alex feels immensely fortunate that the procedure was completely successful, immediately lowering his eye pressure levels and keeping them low for the next 5 years. Last year, the pressure in his right eye went up again slightly but after another quick laser session, it's back to normal. Next year it will be time for another session on his left eye, but Alex has no hesitation at all. Not only does he not have to worry about eye drops anymore, but he only has to make time for specialist appointments once a year.

"It makes life unbelievably simple."

Life since laser

Now that he's got his own glaucoma under control, Alex is super conscious of getting the word out about the condition to others and getting involved in the

community. He's a regular at the Auckland Central support group, and tries his best to keep up-to-date with development in glaucoma research and what's going on.

"It's quite shocking that I still come across people who have never even heard of glaucoma or haven't had their eyes checked," he says. "I'd always had eye health at the back of my mind because of family members and their eye problems, but things could turn out quite

differently for those who don't have vision on their radar."

And for those who've been newly diagnosed with glaucoma, Alex recommends a few deep breaths. "Glaucoma is something not to worry about, but to be conscious of. If you're sticking to your treatment plan and taking medication, you're doing the best you can to prevent any deterioration."

"If laser is an appropriate option,

then I would say to absolutely go for it," recommends Alex. "The only downside of laser is that it doesn't give you the amazing lashes you get with eye drops!"

While laser treatment might not be a suitable option for everyone and all types of glaucoma, your ophthalmologist will have an idea of what could work for you. Have a chat at your next appointment to discuss how your treatment is going.

WAYS YOU CAN SUPPORT GLAUCOMA NEW ZEALAND

Will you make a gift that lasts longer than a lifetime?

Including a gift (bequest) to Glaucoma New Zealand in your Will is a powerful way to make a positive difference to the outcomes of those with glaucoma and their families, far beyond your lifetime.

Huge thanks to the families and estates of Johan Fairlie Hibbert and Martin Wayne Taylor, who this year both left a gift in their Wills to Glaucoma New Zealand – your generosity will help us continue to make an impact for years to come.

People leave bequests of all sizes and no gift is too small. Whatever the size of your bequest, please be assured it will make a real difference to those with glaucoma, and the services Glaucoma NZ provide.

Contact us on info@glaucoma.org.nz to find out more or request a bequest form.

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Books are now completely digital and can be used in multiple cities during a 12-month period from date of purchase.

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For New Readers

To those of you who have recently joined Glaucoma NZ, we welcome you!

If you have not got a copy of our comprehensive booklet on glaucoma please let us know and we will send one out to you.

We are here to help and we care about your journey with glaucoma, so please reach out anytime you need by free phoning **0800 452 826** or emailing info@glaucoma.org.nz



Making a difference one frame at a time: a thank you to the team at Cassidy Eyecare

For some people, advocating for glaucoma awareness and supporting those with the condition is driven by personal experience – many become inspired after seeing a loved one experience glaucoma or being diagnosed themselves. For others, getting involved in Glaucoma New Zealand comes from wanting to make a difference in any way they can. Troy and Stephanie Cassidy are some of those Kiwis.

Troy and Stephanie have been regular donors to Glaucoma New Zealand for several years now. At their two optometrist clinics – Cassidy Eyecare in New Lynn and Te Atatū – they not only help spread the word about glaucoma, but also raise invaluable funds that help us do the work we do.

The couple have owned their clinics for over a decade now, celebrating 10 years in business this April. West Auckland born and bred, Stephanie and Troy worked in the optical industries of Australia and the UK before deciding to bring their skills home. With almost 30 years of experience between them in the eye health field, they've certainly seen their fair share of eye conditions over the years.

Troy and Stephanie have been involved with Glaucoma New Zealand for some time now. They attend our conferences for eye health professionals and regularly complete the online courses we run for professionals to stay up to date on the latest developments in glaucoma.

After working a lot with glaucoma in their practices and becoming more familiar with the ins and outs of the condition, they wanted to do their little bit to give something back to those battling glaucoma in New Zealand.

"We know how debilitating glaucoma can be, so wanted to try and contribute in our own way," says Troy.

For every frame purchased at either of Cassidy Eyecare's two centres, the team donate \$2 to Glaucoma New Zealand. Their contributions every month enable us to provide our free resources, organise our patient and professional symposiums, run our support groups and free support phone line, and spread awareness about glaucoma.

"We find that many people are somewhat aware of glaucoma, but are sketchy on what it actually means and what the condition involves," says Troy. "Glaucoma doesn't have any obvious symptoms for a long time, and the



Troy and Stephanie Cassidy

only way for people to head it off is to get their eyes tested.

"It's nice to donate to a mutual body that has no commercial interest at all – Glaucoma New Zealand operates from a purely public health perspective and want to spread the word about glaucoma," says Troy. "We also prefer to donate to a New Zealand charity so that our contributions stay in the country and help out locals." We'd like to thank Troy and Stephanie, as well as the whole team at Cassidy Eyecare, for their invaluable support of Glaucoma New Zealand over the years. It's great to have so many allies with us in our fight to save Kiwis' sight from glaucoma. It's often the small, consistent contributions that can make the biggest difference. Here's to Troy and Stephanie!

Would you or your practice like to regularly contribute like Troy and Stephanie? Get in touch at info@glaucoma.org.nz to have a chat about how you can get involved – we'd love to have your support in our fight to prevent blindness from glaucoma.



Christmas cards are back again!

Our beloved Glaucoma NZ Christmas cards are back for 2020, with six different fabulous Kiwi Christmas images. All proceeds coming directly to Glaucoma New Zealand.

Send your friends and family holiday wishes while supporting a good cause, or make a difference when sending out cards from your business this Christmas (custom messages can be organised for orders of 10 packs and over).

Order via the enclosed form, on our website, or by phone 0800 452 826.

12
cards in
each pack
just \$20



Thank you to everyone who donated to our Annual Appeal!

This year our Annual Appeal theme was 'Don't lose sight of family' – focusing on raising awareness that having a first degree relative with primary open angle glaucoma doubles your chance of developing it yourself.

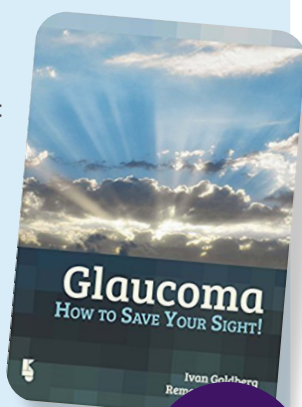
We hope you used the appeal as a conversation starter to talk with your family about their eye health, get tested, and give your loved ones the best chance of saving their sight.

Thank you to everyone who donated as part of our Annual Appeal – your support is essential to helping us continue our work towards preventing blindness from glaucoma.



Read your way to saving sight

Available on our website is the fantastic book *Glaucoma: How to save your sight*, written by Ivan Goldberg and Remo Susanna Jr. In it, you can learn about treatments, common myths, forms of glaucoma, and more. 50% of the proceeds from your purchase of the book are donated to Glaucoma New Zealand to continue our sight saving work.



\$27*

Find your local support group

Our support groups are happening when they can depending on alert levels across the country. They're a fantastic opportunity to share your experience, build connections, and get support from people who understand. All dates and locations for the year can be found by going to our website

www.glaucoma.org.nz
or free phoning our helpline 0800 452 826.

