News Release

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NHS Greater Glasgow and Clyde

Major funding announced to develop new technology to detect sight threatening disease

NHS Greater Glasgow and Clyde together with a leading Scottish medical technology company and two Universities have been awarded major funding for research into a new technology that could detect early visual loss in people with long-term conditions.

Scientists and clinicians from NHS Greater Glasgow and Clyde along with industrial partner Optos and Strathclyde and Kent Universities have been awarded £1.1m from Innovate UK and Optos to develop a new imaging technology that could show eye disease earlier than current devices can.

This exciting technology is aimed at detecting and monitoring eye disease at a very early stage. The first clinical studies will involve the leading causes of blindness (Age-Related Macular Degeneration, Glaucoma and Diabetic Retinopathy).

Research teams from the Medical Devices Unit (a specialist medical technology centre within NHS Greater Glasgow and Clyde) and the Dunfermline-based company Optos along with experts from Strathclyde and Kent Universities are collaborating on a new device that will put them at the forefront of the fight to detect early visual loss.

The teams are developing a new laser technology which will be able to monitor the function of the cells in the eye.

Alexander Weir, Technical Operations Manager at the Medical Devices Unit, said: “It is critical that the NHS works closely with partners, both in the development of new technology and in the delivery of robust clinical evidence, to ensure that we can provide effective solutions for the NHS.”

The teams are working with colleagues in the specialist NHS centre for eye research at Glasgow Centre for Ophthalmic Research to deliver the new technology.

Dr Graeme Williams, one of the Consultant Ophthalmologist working with the Glasgow Centre, commented: “I am really excited about this innovative research which could provide early detection of sight threatening disease, allowing for more effective management of the conditions.”

Derek Swan, Senior Director of Research at Optos, added: “We recognise the value of innovative imaging technology in the detection and management of eye disease. This initiative aims to introduce significant enhancements in imaging technology, offering the prospect of detecting those diseases at a much earlier stage. We also welcome this

collaborative approach to research, enhancing the efficiency and delivery of clinically demonstrated, cutting edge technologies to the NHS."

Clinical trials of the new technology are due to be completed by early 2017. A successful outcome will see a further £9m invested to develop a fully licensed medical device by the end of 2018.

Welcoming the news of the development is Mr Ross Kerr, 72, from Fife.

Ross, who is married with two children, was originally diagnosed with Type 2 diabetes in 1984.To help maintain his health to avoid complications due to diabetes Ross attends a six-monthly diabetic check. It was at one of these appointments that a problem was identified with one of his eyes in 1996.

Although these eye-problems were mild to start with, Ross went onto require laser treatment in 2002 and 2008 for diabetic macular oedema. He was then treated with intravitreal injections in 2013 and thankfully it has improved his sight in the affected eye.

Ross said: "This development is really exciting. Most people receive their eye check-ups in their local communities or at their local clinic so if there is some new technology available which will help detect problems earlier then this can only be a good thing.

"Technology is always improving so it is great news to hear that the NHS is working alongside technology companies to come up with new devices for the NHS which could make such a difference to people's health.

"From experience I know that the earlier eye problems are detected then the earlier you can get the right treatment to hopefully stop it getting worse or even reverse the damage."

ENDS

Notes to editors

- Type 1 diabetes accounts for approximately 10 per cent of all adults with diabetes and is treated by daily insulin injections, a healthy diet and regular physical activity. Type 1 diabetes can develop at any age but usually appears before the age of 40, and especially in childhood. It is the most common type of diabetes found in childhood.

- Type 2 diabetes usually appears in people over the age of 40, though in South Asian people, who are at greater risk, it often appears from the age of 25. It is also increasingly becoming more common in children, adolescents and young people of all ethnicities. Type 2 diabetes accounts for between 85 and 95 per cent of all people with diabetes and can initially be managed with lifestyle intervention in the form of a healthy diet and increased physical activity. In addition to this, medication and/or insulin are often required.

  In Type 2 diabetes there is a reduced response to insulin,, so the cells controlling blood glucose levels are only partially unlocked and glucose builds up in the blood

Diabetic retinopathy is damage to the retina of the eye caused by high glucose levels in diabetes which can eventually lead to blindness. It affects up to 80 percent of all patients who have had diabetes for 10 years or more.

Further details

www.medicaldevicesunit.org

www.gcor.org.uk

www.optos.com

www.strath.ac.uk

www.kent.ac.uk

www.innovateuk.org

For further information either telephone **0141 201 4429** or email **press.office@ggc.scot.nhs.uk .**