



HIGHLAND DES TEAM (DIABETIC EYE SCREENING) SPOTLIGHT ON TECHNOLOGY

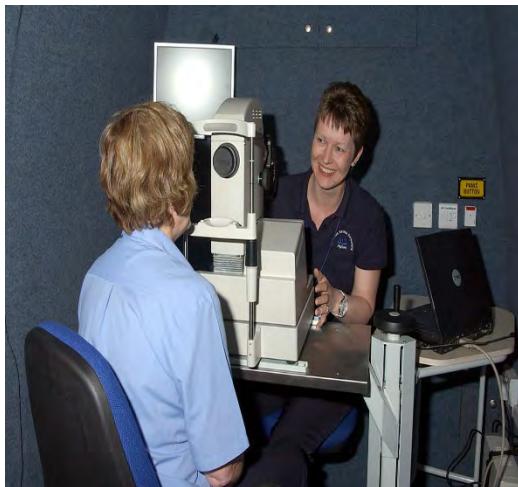


The Diabetic Eye Screening Programme in NHS Highland is always looking for ways to make the service as accessible as possible to our patients throughout the region. At present, our small team visits more than 35 areas across North Highland and Argyll & Bute in order to see just under 23,000 people annually, and this means that over the years we have had to come up with the most innovative ideas to transport bulky equipment safely to areas so that patients travelling long distances to appointments is minimized, particularly given that some people require eye drops which can blur vision and impede safe driving, or are travelling alone.

We were the first, and are still the only Health Board in Scotland to provide a visiting OCT (Optical Coherence Tomography) service in areas where there is no access to a machine and this entailed adapting a highly sensitive calibrated machine for travelling across our challenging terrain. We are also the only Health Board in Scotland to base our service from inception in 2004 to operate using a non-network dependent database that can extract our clinic information safely whilst working in community premises and then uploading that data when back at base and connected to the NHSH network. Over the years, network stability has vastly improved throughout the region however, this contingency working continues to provide us with the most flexible and robust service, regardless of access to networks. We would not have been able to sustain this without the continued support of our e-Health colleagues in turning around problematic machines quickly and helping us to overcome logistical issues where network compatibilities were poor.

Below is a picture gallery of changes to our equipment over time:

SELF-CONTAINED MOBILE UNIT (2004-2007)





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SMALL TRANSPORT VAN WITH TAIL-LIFT (2007-2020)

ADAPTED WHEELCHAIR VAN WITHOUT TAIL-LIFT (2020-PRESENT)



ADAPTED VAN FOR OCT AND CAMERA TRANSPORT (2018-PRESENT)





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These photos show how we had to adapt vehicles to transport our equipment over time to make travelling more staff and patient friendly when being seen. However, the equipment itself has remained bulky and difficult to transport until last year.

In April 2025 DES Highland was fortunate to secure funding from the Scottish Government to allow us to purchase confocal camera technology for use within the screening programme. This was after a prolonged campaign to highlight the difficulties unique to NHS Highland demographics to see people in rural areas effectively and, also an attempt to reduce our environmental impact by not having to rely on non-efficient adapted vehicles to transport equipment.

As a result, NHS Highland is the first Health Board in the UK and Scotland to actively use this technology called “DRSPlus” within DES. Affectionately nicknamed “The Penguin” by our local team. This machine folds into a wheeled flight-case that can be transported in a car and the retinal images captured are much clearer without the need for eye drops in almost every instance.

DRSPlus Camera (aka “The Penguin”) 2025-Present





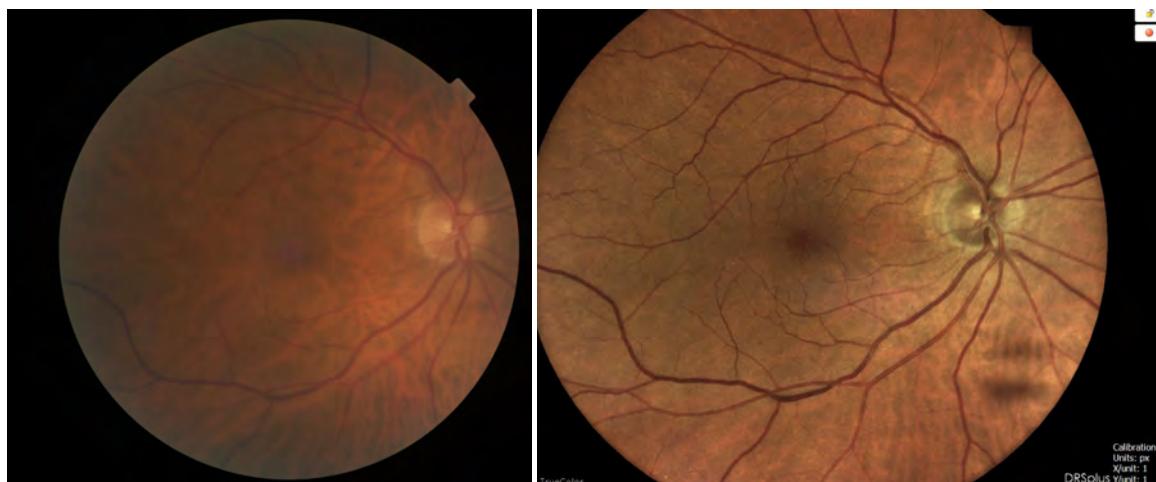
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DRSPlus Camera packed into a flight-case for transport



Below is an example of someone screened in 2024 (left image) and the same eye in 2025 (right image). This person had eye drops in 2024 and didn't require them in 2025 with a much clearer image produced by the DRSPlus.





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Once we purchased the DRSPlus in 2025, our e-Health colleagues were again drafted in to help us set up the camera for use within a screening programme as it had never been configured to work in this manner before over secure network capture, etc. NHS Highland have been instrumental in providing the Scottish National Screening Oversight Team (SOAS) with help and guidance to allow other Health Boards to purchase this camera and configure for use throughout Scotland. The Highland DES team are actively supporting other areas by highlighting any limitations that may arise with the new equipment. We are also contributing and reporting on a National Scottish project currently monitoring the new bank of images being captured by the DRSPlus for updating the automatic grading software used within DES.

In the last couple of weeks, DES Highland was delighted to receive the news from our EPAG colleagues in capital planning that we have been successful in starting a programme of replacing our old technology for this new equipment. This will allow us to continue to provide our patients with an accessible diabetic eye screening service with an overall much more reliable and cost-effective mode of delivery. DES Highland would not be in this enviable position without the continued support of our eHealth and EPAG colleagues.