

## Telehealth Case Study

<b>Sector:</b>	<b>Rehabilitation</b>
<b>NHS Partner:</b>	<b>Abertawe Bro Morgannwg University Health Board</b>
<b>Application:</b>	<b>Video Conferencing</b>



### The Programme Outline

The Rehabilitation Engineering Unit (REU) is based at Morriston Hospital in Swansea. One of the main REU services creates and maintains bespoke wheelchairs and postural support systems for people with disabilities across many rural South West Wales. The REU uses a range of innovative technologies to scan the shape of patients and create appropriately contoured surfaces for people who may spend many hours in the same position. The aim of this attention to detail is that the users experience greater comfort, function, mobility, and a reduction in pressure sores- caused by continuous pressure on the skin.

Although some of the REU patients are able to get to the hospital, the REU runs four vehicles delivering services to those patients who are unable to get to hospital, which means that highly skilled practitioners spend significant time driving rather than seeing patients. As a result, the REU sought to find a solution that would reduce the number of visits required through the use of video calls into the home of the patients, their day care centre or school from the clinician's desktop. This would still allow them to see the seating position of the patient and any reported problems without the patient having to travel. As an extension of the solution it was desirable to have a mobile system that could be taken into the patient's home by a nurse or trained user to enable video calling and detailed analysis of a clinical data.

### The Challenges

The NHS firewall which is configured to block video streams was the main hurdle to overcome. The firewall meant that video conferencing calls could not get out from the secure NHS N3 network to the patient's home. While a range of VPN solutions were considered, the performance of these was found to be inconsistent.

A proposal was put forward by HTL which used standards-based video solutions in a form which best suited the requirement. In this solution the patient and specialist would meet on a specially provisioned "video bridge". In this way no changes would be required to the NHS network, and no compromises on data security would be made.

After undergoing a number of tests, the department, HTL and the regional data security team reviewed the proposal for data integrity and passed the application for use. HTL installed the system and provided on site support to create a number of different endpoints adapted to the specific needs of the patients.



## The Programme Results and Outcomes

Martin Ace was one of the first patients in Wales to have an appointment with NHS experts over the internet. Mr Ace, who was paralysed from the neck down in a traffic accident 17 years ago, has spent the past six years travelling to and from Morriston Hospital to see experts at the rehabilitation engineering unit. But now common problems for wheelchair users like Mr Ace, including pressure ulcers, can be monitored without patients having to leave their homes. Mr Ace said: "I think it's a great idea. It is reassuring for patients that you could have access to an expert just by using the internet."

Nigel Shapcott, Head of the REU at Abertawe Bro Morgannwg University Health Board, said: "It's an exciting step forward. The important issue for the NHS is that it needs to be secure because we're discussing confidential details over a normal broadband connection. "We've now got the equipment to ensure it is safe, and the ability to video-conference with various consultants and health professionals at the same time. We know that people would prefer to stay in their own homes and communities, and not have the extra stress of travelling many miles to a set location."

## Next steps and the future

With the secure webcam consultation having been proven to work effectively, health and IT equipment will begin to be installed in patients' homes, schools, care homes, day-care centres and GP surgeries across Swansea.

Pathways to other departments have been opened enabling a greater number of professionals across Wales to use the system to make video calls to the outside world. The project continues to grow and evolve.

Nigel Shapcott, said "We have received absolutely excellent project and technical support from Home Telehealth since the outset of the project. We have also had excellent support for the equipment identification, testing and procurement side of the project. This has been a really good team to work with and I strongly recommend them as an organisation who are flexible and who can deliver."



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