

S5GConnect
Dumfries

Healthcare Case Study - 5G Connected Ambulance

S5GConnect Dumfries is The Scotland 5G Centre's **first rural hub**, focusing on sectors such as remote healthcare. This use case highlights the power of 5G, **bringing the diagnosis station to the patient**, and how this could be applied to the South of Scotland and other remote and rural areas where the population struggle to access healthcare services.

New ways of delivering healthcare

The 5G Connected Ambulance provides an innovative new way to connect patients, ambulance staff and remote medical experts in real time. This real-time connectivity brings great potential to the delivery of critical NHS services and capabilities, helping first responders to act quickly in an emergency and opening up **new opportunities for remote diagnosis and preventative healthcare**.

In addition, the 5G Connected Ambulance introduces the potential to deliver healthcare in other settings such as residential care homes and people's own homes where they may feel more comfortable.

The 5G difference

The 5G-enabled immersive technology allowed the clinician to perform procedures remotely through the transmission of high definition images with low latency. The remote procedures with the use of a **VR headset, joystick and haptic glove** could not have been done securely and quickly without the use of 5G connectivity to connect the clinician to the paramedic in the ambulance.

Breakthrough benefits achieved

- Through the 5G Connected Ambulance, paramedics are able to send high resolution 360° images in real time and make reliable and secure video calls to aid diagnosis; doctors can receive diagnostic examinations, such as Ultrasound examinations using a Haptic Glove, from the scene or in transit before the patient arrives at the hospital, **optimising the treatment time**.
- Paramedics can also **instantly review a patient's healthcare history** and apply required procedures when wearing AR-equipped glasses.
- The Connected Ambulance **helps A&E to prioritise the most urgent cases** so that hospital preparations can be made ahead of the patient's arrival, reducing the number of patients attending hospitals unnecessarily, conducting on site treatment where appropriate.

5G HEALTHCARE USE CASE

University Hospitals Birmingham NHS Trust, West Midlands 5G, BT Plc



The 5G connect ambulance allowed patient out-of-hospital testing from a remote specialist close to their home and family.



Using a commercial 5G service, a remotely located clinician was able to conduct an ultrasound using a haptic glove worn by one of the medical responders on-site, and the remote clinician could interpret the findings in real-time enabling remote diagnosis.



- High quality ultrasound imaging
- Large instant transmission of files
- Real-time assessment

5G

5G technology makes an off-site real-time ultrasound become a reality

5G high capacity and low latency

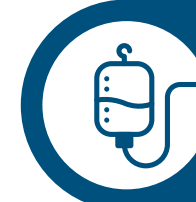
5G Connected Ambulance

This trial was the UK's first showcase of how 5G and augmented reality could offer remote diagnostic solutions for the healthcare sector



This innovation will enable thousands of possibilities for the future of healthcare technology.

Robert Franks
West Midlands 5G



SUPPORT

Support remote delivery of complex treatments and assessments.



ENABLE

Enable healthcare staff to provide care at the scene of an incident, in transit or on arrival at hospital.



SAVE TIME

Save time and resources while improving patient outcomes.



REDUCE

Reduce the number of patients attending hospitals unnecessarily and to improve the speed of diagnosis.

Connect with us

Find out how S5CConnect Dumfries can support your business.

- Contact: Andy Todman at andy.todman@scotland5gcentre.org
- Visit our website <https://scotland5gcentre.org/>

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