



Healthcare
Improvement
Scotland

SHTG
Advice on health
technologies

Plain Language Summary

vCreate Neuro for the diagnosis and management of adults and children with epilepsy and other neurological disorders (Final Report)

SHTG Assessment | August 2022

What is epilepsy?

Epilepsy is a common condition where sudden bursts of electrical activity in the brain cause seizures or fits. There are lots of possible symptoms of epilepsy seizures, including uncontrollable shaking or losing awareness of things around you. Treatments to help people have fewer seizures, or to stop having seizures completely, include medication and surgical procedures.

What is vCreate Neuro?

vCreate Neuro is a web application that enables patients or their carers to share smartphone-recorded videos and other information about an epilepsy seizure with their clinical team. The videos act as visual aid to assist clinical teams with diagnoses and management advice.

Patients (adults and children) who either may have had their first seizure, or are already diagnosed with epileptic seizures, will be asked to register for the vCreate Neuro service. Patients or their carers are then required to access the web application via a webpage on an internet-enabled device, record a suspected seizure when it happens, and upload the video for the clinician to review and respond at a later point in time (this type of interaction between a patient and a clinician when there are breaks in time is called asynchronous).

Why is this important?

The aim of vCreate Neuro is to improve people's access to services, speed up and improve diagnoses, while reducing the number of clinic visits and investigations required.

Video recordings of seizures play an increasingly important role in epilepsy diagnosis and management. Prior to the introduction of vCreate Neuro, there were no secure, managed systems for sharing videos with clinical teams in neurology departments in NHSScotland. Patients may have used unapproved routes for sharing videos, for example email and WhatsApp, or wait to show videos at their in-person appointments. This can delay diagnosis and treatment, and risks unsecure storage of sensitive data.

vCreate Neuro provides a secure video messaging service that enables patients or carers to share short recorded videos and relevant information with clinical teams.

What we did

We looked at the published evidence to examine if using an asynchronous service like vCreate Neuro would be advantageous or not in delivering care to patients (adults and children) with epilepsy and other neurological disorders.

We analysed survey responses from clinicians and patients or their carers who had used the vCreate Neuro service. We also conducted in-depth interviews with clinicians and parents of children with epilepsy who had used the service. We wanted to find out how easy vCreate Neuro was to use, how it affected people's care and how it affected the relationship between patients and clinicians.

We assessed whether the availability of vCreate Neuro would save NHSScotland money and resources when compared with existing in-person referral pathways where patients are referred by their general practitioner or from hospital emergency departments prior to being seen by neurology specialists. We also assessed whether the use of vCreate Neuro was influenced by peoples' socioeconomic status.

What we found

We found evidence that smartphone-recorded videos from patients or carers are a reliable complementary tool for clinical staff to use in diagnosing and treating patients who experience seizure-like episodes.

Clinicians and patients or carers who had been using vCreate Neuro found it to be beneficial. Patients and clinicians found it easy to use and noted how the service saved time and resources. For example, clinicians reported that use of vCreate Neuro reduced the time between referral and diagnosis. The availability of vCreate Neuro had a positive impact on the clinician-patient or carer relationship. We found that using vCreate Neuro may result in potential resource savings for NHSScotland. A person's socioeconomic status did not affect how much a person used vCreate Neuro.

What is our conclusion?

Used alongside existing services for diagnosis and treatment, vCreate Neuro appears to add value to the delivery of care for people with epilepsy in Scotland.

What next?

Our work will be used to inform the Scottish Government's decision making on the nationwide use of vCreate Neuro.

This plain language summary has been produced based on SHTG Assessment – vCreate Neuro, August 2022, [on our webpage here](#).