

Video-EEG – Hospital or Seer Medical?



Video-EEG monitoring is a comprehensive test used to diagnose suspected seizures. It combines electroencephalogram (EEG) recording with video recording, and in most cases also includes electrocardiogram (ECG) recording.



Previously, video-EEG was only available through the hospital, but is now widely accessible through Seer Medical's home-based diagnostic testing service.

There are several types of testing available for diagnosing suspected seizures that can be as short as 20 minutes or as long as two (2) weeks.

The following terms are sometimes used interchangeably to refer to the same multi-day test that is completed in hospital – usually in an epilepsy monitoring unit (EMU) – or in the home.

- **Long-term** monitoring describes monitoring that lasts more than 24 hours
- **Ambulatory** monitoring or ambulatory EEG (sometimes written as AEEG) describes the use of portable and wearable EEG monitoring devices, allowing the person being tested to move freely during monitoring

Seer Medical is an Australian company that is now taking this previously difficult to access service and making it widely accessible as an in-home service.

Home-based monitoring is helping to reduce the barriers to in-hospital testing which can include long wait lists and restrictive stay requirements through to apprehension and distress a hospital stay can cause a patient.

Seer Medical's service allows for patients to keep a level of normality to their life during monitoring and can lead to better results as normal event triggers are present during monitoring in their normal home environment. Hospital monitoring has been known to reduce the yield in some patients as they are in an unfamiliar environment without their normal triggers. As a result, patients can be left upset and frustrated with testing that has not provided any clear answers or direction for their healthcare providers.

Seer Medical monitoring and reports

Seer Medical monitoring and reports help to distinguish between epileptic and non-epileptic events and differentiate them from:

- Syncope / fainting (Please ensure ECG is selected on referral form)
- Panic attacks
- Parasomnia
- Narcolepsy with cataplexy
- Migraine
- Psychogenic non-epileptic events/seizure
- Generalised vs focal seizure

Seer Medical's service is suitable for children from the age of four (4).

Hospital or Seer Medical?

Referring your patient for hospital testing or at-home testing will depend on your patients' individual needs. Some cases require hospital testing and are not recommended for Seer Medical monitoring.

Hospital monitoring is commonly preferred when:

- Daily check-ins by a doctor or medical staff are required
- Testing the effects of reduced seizure medication is required
- Sleep-deprived monitoring is required
- Pre-surgery evaluation is required

If these do not apply to your patient, there are some significant benefits and differences to what has previously been offered by hospital inpatient monitoring.



	Hospital	Seer Medical
Accessibility		
Waitlist	6 months – 1 year*	4-6 weeks^
Location	Epilepsy monitoring units (EMUs) usually only in major cities	Clinics in all major cities and in several regional areas
Living conditions		
Location	Stay in hospital	Connection at a Seer Medical clinic, then stay at home for monitoring
Family & Visitors	During visiting hours**	Be with family at home and have flexibility to have visitors at any time
Freedom of movement	Most EMUs require patients to remain in bed for the duration of their monitoring	Free to move around within view of the camera
Sleep	In a hospital bed	In own bed
Bathing/showers	Sponge bath or light wash allowed. No bathing or showers.	Sponge bath allowed with belt system Showers allowed with Seer Sense® and harness systems
Supervision	One (1) accompanying person required at all times	Recommended, but not required for those who do not normally require supervision or caretaking
Testing conditions		
Video	Yes – Affixed to ceiling of hospital room	Yes – Set up in room of choice and can be moved when needed
EEG	Yes	Yes
ECG	Yes	Yes
Electrode adhesive	Collodion only	Collodion WaterTabs® – Based on availability and suitability
Self-disconnection	No	Yes – With WaterTabs®
Reliability of testing	The unfamiliar hospital environments can be difficult for people with learning difficulty or with challenging behaviour, leading to unsatisfactory video-EEG recording in hospital ¹	Video quality of home monitoring is comparable to in-patient monitoring, and in some cases, is found to be superior to in-hospital video quality ² . EEG/ECG data quality is the same as in-patient data quality ³
Technical support	Usually 24/7 with staff on site	Phone support available Monday to Friday – 9:00am-10:00pm AET (Melbourne/Sydney) Saturday and Sunday – 9:00am-5:00pm AET (Melbourne/Sydney)

Seer Medical referral process

Referrals can be completed online [here](#).

Alternatively, paper referrals and letters can be submitted to refer@seermedical.com or by speaking to your local Seer Medical business development manager for further assistance.

Patient support materials are available on request to help explain in detail the service you are referring your patient for.

We look forward to helping you and your patients in the near future.

seer medical

*Waitlists vary depending on the hospital and may be longer due to COVID-19.

^4-6 weeks waitlists for permanent clinics. Waitlists for visiting clinics are dependent upon referral numbers and the demand. Please see our website or contact us for more information

**Visiting hours and conditions vary depending on the hospital

¹ Brunnhuber, F. et. al, (2020) Past, Present and Future of Home video-electroencephalographic telemetry: A review of the development of in-home video-electroencephalographic recordings, *Epilepsia*, 61(1), <https://doi.org/10.1111/epi.16578>

² Biswas, S., Luz, R., & Brunnhuber, F., (2016) Home Video Telemetry vs inpatient telemetry: A comparative study looking at video quality, *Clinical Neurophysiology Practice*, 1, 38-40, <https://doi.org/10.1016/j.cnp.2016.05.001>

³ Kandler, R., Ponnusamy, A., & Wragg, C. (2017) Video ambulatory EEG: A good alternative to inpatient video telemetry?. *Seizure*, 47, 66-70. <https://doi.org/10.1016/j.seizure.2017.02.010>