

Continuous EEG, Clearer Decisions, and Care Close to Home for the Tiniest of Patients



Continuous pediatric teleEEG gave one hospital team the evidence it needed to avoid unnecessary and potentially risky treatment and transfer for a premature newborn.

The Case

After a complicated emergency delivery, a premature newborn required therapeutic cooling and continuous neurologic monitoring to detect seizures and monitor encephalopathy and possible brain injury.

Continuous EEG was needed to answer three questions:

1. Are unseen seizures happening?
2. How severe is any brain abnormality?
3. Is the brain getting better or worse?

The hospital was managing gaps in neurologist coverage for EEG readings, including pediatric interpretation. It could perform the continuous study, but it needed the specialized expertise to follow the recording, recognize meaningful changes, and help guide care over time.

Access TeleCare's teleEEG team provided the essential coverage.

The Care Experience

An Access TeleCare teleNeurologist followed the newborn's EEG through therapeutic cooling and rewarming over approximately four days of continuous monitoring.

The early recordings showed significant cerebral dysfunction. They did not, however, show seizures. Even when the newborn displayed movements that appeared concerning, the EEG confirmed that those events were not seizure activity.

Without continuous monitoring, the observed movements could have prompted treatment for presumed seizures – treatment that would have carried a risk of slowing down the child's natural neurological development. Instead, the care team had objective evidence to continue observing the newborn without adding antiseizure medication.

As rewarming progressed, the EEG began to tell a more encouraging story. Brainwave activity became more continuous and organized, showing improvement rather than further deterioration.

The Result

No electrographic seizures were recorded during the four-day monitoring period, and the care team could see how the newborn's brain function was changing, distinguishing concerning movements from seizures, and making treatment decisions based on evidence rather than uncertainty.

With pediatric teleEEG interpretation available when it was needed, the hospital also avoided unnecessary and disruptive transfer solely for specialty reading support. For the family, that meant one less stressor during an already frightening time. Their baby remained with the hospital team providing care, and most importantly, close to the parents.

Key Outcomes



Closed a critical pediatric EEG neurologist coverage gap



Monitored a critically ill newborn through cooling and rewarming over approximately four days



Avoided antiseizure treatment that could have had adverse developmental effects



Coordinated care across outpatient, delivery, postpartum, and NICU teams



Kept the newborn close to family and the established care team

"Continuous EEG allowed us to separate what looked concerning at the bedside from what was actually happening in the brain. With remote monitoring of the continuous EEG, we detected no seizures, and, as the baby was rewarmed, we saw the background neurological activity begin to improve. That helped the team avoid potentially risky treatment the newborn did not need and continue care without an unnecessary transfer."

Dr. Annie Tsui

Chief Medical Officer, Neurology
Access TeleCare

