REMOTE EEG MONITORING PROGRAM FOR NEONATES

Children's Hospital of Philadelphia®
Division of Neurology

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Neonatal seizures are common and difficult to identify clinically because the majority are subclinical. Accurate and timely identification of seizures is extremely important to avoid the unfavorable neurobehavioral outcomes associated with high seizure burden.

The Epilepsy Program at Children's Hospital of Philadelphia (CHOP) has an experienced team of EEG technologists and electroencephalographers who are skilled in continuous-electroencephalography (CEEG), the gold standard of seizure detection, diagnosis and treatment. Our team provides a remote CEEG monitoring service for neonatal intensive care units that do not have local CEEG services.

Our program offers real-time, remote CEEG monitoring and interpretation by our experienced EEG technologists and electroencephalographers. This allows neonates to remain hospitalized in centers that can meet their overall medical needs and alleviates the safety risks associated with transferring critically ill neonates between hospitals for the sole purpose of performing CEEG.

BENEFITS OF REMOTE CEEG

- Expands access to CEEG, the gold standard of seizure diagnosis and treatment
- Allows neonates to receive optimal care locally, thus avoiding the risks of transport
- Helps guide decisions to treat (or not treat) with anti-seizure medications
- Improves prognostic discussions with patient families

WORKFLOW

STEP 1: A neonatologist at the hospital identifies a neonate who should undergo CEEG based upon clinical concerns, and an EEG technologist at the hospital initiates CEEG monitoring.

STEP 2: The EEG technologist at the hospital notifies the EEG technologist at CHOP of the initiated study.

STEP 3: The CHOP EEG technologist screens the EEG in real-time.

STEP 4: If seizures are identified, then the CHOP EEG technologist immediately notifies CHOP's on-call attending electroencephalographer.

STEP 5: The electroencephalographer interprets the study and discusses patient management with the neonatologist. This process repeats as seizure management occurs.

STEP 6: A final report is generated in the electronic medical record.

PARTNER WITH US
For more information or to set up a group meeting with our team, call **215-590-5118.**

DIAGRAM OF WORKFLOW FOR REMOTE EEG MONITORING
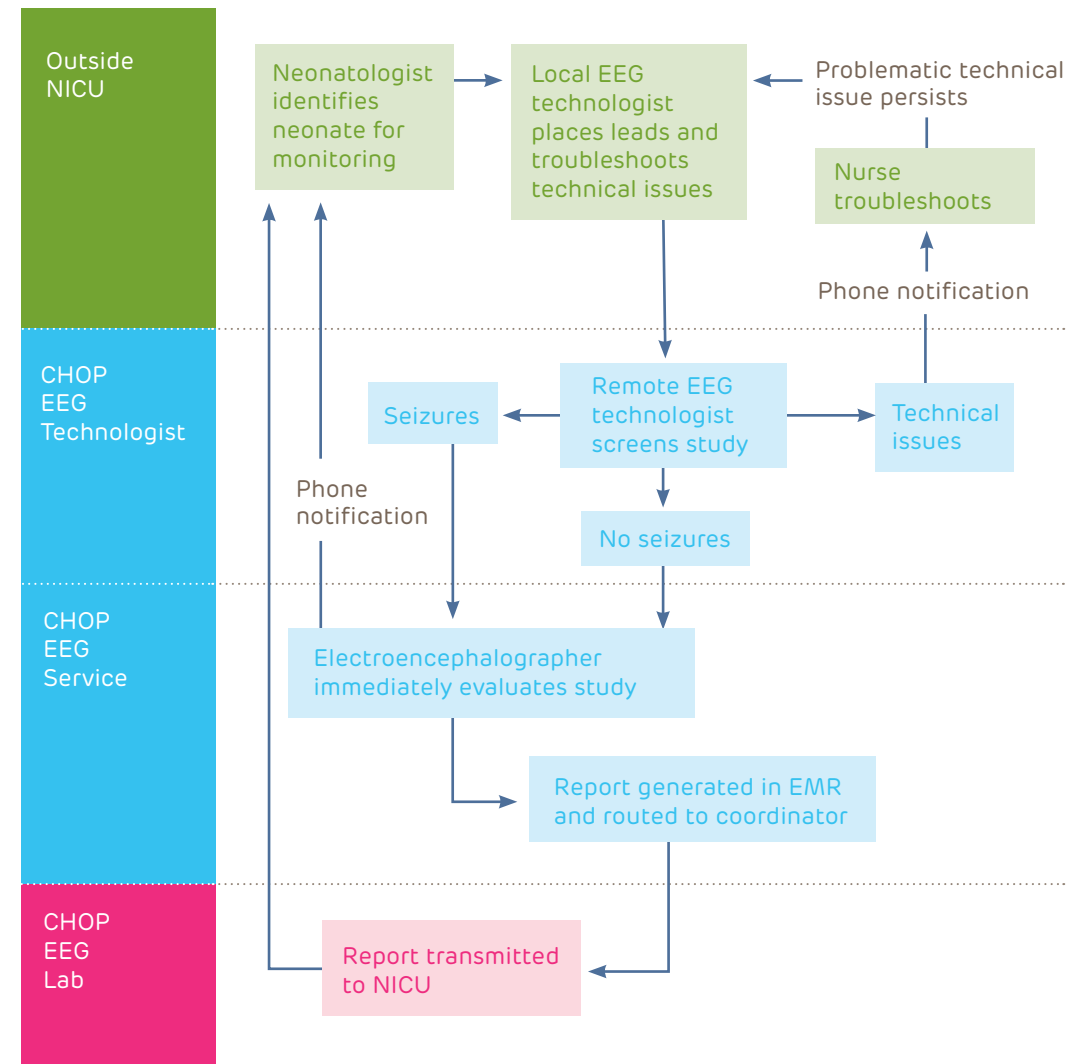
Workflow diagram for remote EEG monitoring. Green indicates work performed at the hospital, blue indicates work performed remotely at our institution by EEG technologists and electroencephalographers, and red indicates administrative work within our institution.

TECHNICAL REQUIREMENTS

Our team works with hospitals to develop the workflow and onboard the program. It typically takes about six months to get the program set up.

The hospital must have EEG equipment and EEG technologists available on-site or on-call to initiate the study and troubleshoot technical difficulties. The hospital must have a Citrix system that can provide remote access to the EEG software. We can help guide equipment purchases and setup, and we can provide guidance to EEG technologists who don't have substantial experience with neonates.