Routine (Short Term) EEG Pathway

Evidence-Based Outcomes Center

Inclusion Criteria

All patients
(ED, Floor and ICU patients)

Exclusion Criteria

Epilepsy Monitoring Unit - EMU patients

Diagnosis/Therapeutic treatment for which EEG is needed
Note: There are limited indications for routine (short term) EEGs in the hospital, please review Long Term Monitoring Guidelines to determine whether the patient diagnosis merits LT monitoring.
(See Indications for continuous EEG monitoring)

Are any of the following True?

- Critically ill Patient
- After Hours
- Needs same day results

Yes

No

Use Inpatient EEG Order Set !

Call Neurology

Enter Order using DCMC EEG Order Set

STAT EEG

Urgent EEG

Non Urgent EEG

- Non-Critical Patient
- Performed 8am to 5pm
- May not be read until the next day

Neurology calls EEG Lab to alert technician x-88546

Tech at bedside w/in 15 minutes

Tech at bedside w/in 2 hrs.

Tech at bedside w/in 6 hrs.

Tech contacts Neurology +/- Epilepsy once EEG is running

Neurology alerts team to findings

Report in COMPASS by end of next day

Continuous (Long Term) EEG Monitoring

Evidence-Based Outcomes Center

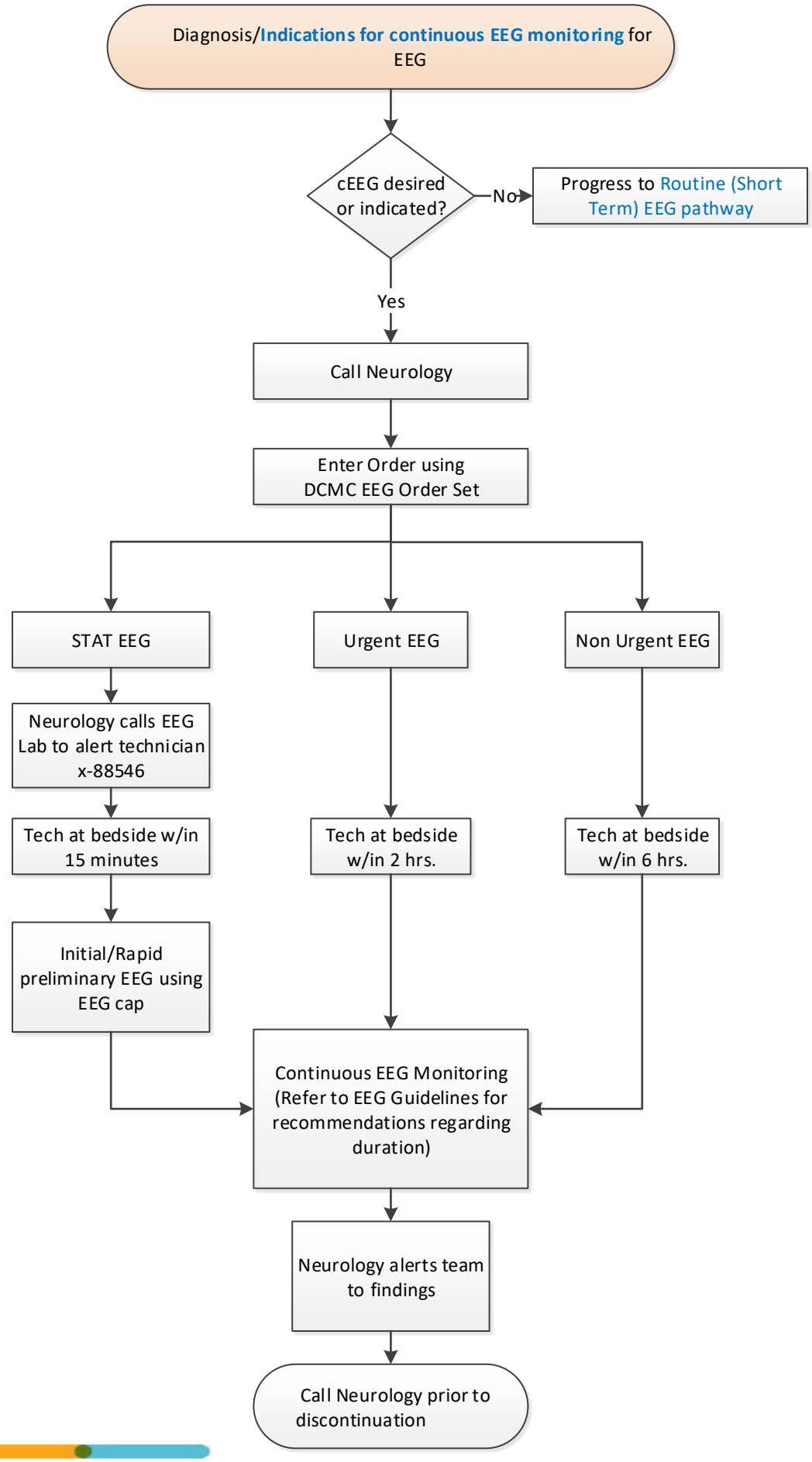
Inclusion Criteria

All patients
(ED, Floor and ICU patients)

Exclusion Criteria

-Epilepsy Monitoring Unit - EMU patients

Use Inpatient EEG Order Set !



Continuous EEG Monitoring Guidelines by Indication

Children

Indication	Priority	Recommended Minimum Duration (hrs)
Persistent abnormal mental status[1] following convulsive seizures or status epilepticus	Stat	24-48[2,3]
Suspected or confirmed acute supratentorial brain injury[4] with altered mental status	Stat	24-48[2]
Unexplained fixed or fluctuating altered mental status[5]	Stat	24-48[2,6]
Pharmacologic paralysis (including ECMO) with risk for seizures[7]	Urgent	24-48[2,8]
Therapeutic hypothermia following HIE or cardiac arrest	Urgent	During cooling, hypothermia, rewarming and for 24 hrs after achieving normothermia[2]
Cardiopulmonary bypass	Urgent	For minimum 48 hrs after off bypass
Paroxysmal events suspected to be seizures[9]	As clinically indicated	For minimum 24-48 hrs or until events recorded [2,10,11]
Critically ill children with abnormal findings on routine or urgent EEG[12]	Urgent	24-48[2]

Call Neurology prior to ordering any continuous EEG studies.
Stat priority = tech to bedside within 15 min. Urgent priority = tech to bedside within 2 hrs. Routine priority = tech to bedside within 6 hrs.

Neonates

Indication	Priority	Recommended Minimum Duration (hrs)
Following any clinically evident seizure(s)	Stat	24-48[2]
Suspected or confirmed supratentorial brain injury[13]	Stat	24-48[2]
Unexplained fixed or fluctuating altered mental status[5]	Stat	24-48[2,6]
Pharmacologic paralysis (including ECMO) with risk for seizures[7]	Urgent	24-48[2,8]
Therapeutic hypothermia following HIE or cardiac arrest	Urgent	During cooling, hypothermia, rewarming & for 24 hrs after achieving normothermia[2]
Cardiopulmonary bypass	Urgent	For minimum 48 hrs after off bypass
Paroxysmal events suspected to be seizures[9]	As clinically indicated	For a minimum of 24-48 hours or until events are recorded[2,10,11]
Suspected or confirmed inborn errors of metabolism or genetic syndrome [14]	As clinically indicated	24-48 hours[2]

Weaning seizure medications with a history of NCS/NCSE[15]	As clinically indicated	24-48 hours[2]
Call Neurology prior to ordering any continuous EEG studies. Stat priority = tech to bedside within 15 min. Urgent priority = tech to bedside within 2 hrs. Routine priority = tech to bedside within 6 hrs.		

1. *Defined as no improvement in mental alertness in 10 minutes OR no return to baseline mental status by 60 minutes after seizure/status epilepticus has stopped*
2. *If interictal epileptiform or periodic discharges present on EEG, should be monitored for a minimum of 48 hours.*
3. *If a history of epilepsy, should be monitored for a minimum of 48 hours*
4. *Including intracranial hemorrhage, moderate to severe TBI, CNS infection, brain tumors, hypoxia/ischemia (including acute ischemic stroke and status-post CPR), sepsis related encephalopathy*
5. *Including agitation, lethargy, aphasia, neglect, obtundation and coma*
6. *If patient comatose, should be monitored for a minimum of 48 hours*
7. *Including cardiac or pulmonary risk factors (including severe persistent pulmonary hypertension, congenital heart defects requiring early surgery using cardiopulmonary bypass) or a history of seizures/epilepsy*
8. *Patients on ECMO should be monitored for a minimum of 48 hours*
9. *Including clinical events (e.g. sustained gaze deviation, tremulousness, posturing, shivering or jerking) or paroxysmal changes in vital signs (e.g. apneas, oxygen desaturations, tachycardia, increases in intracranial pressures)*
10. *Pushbutton by ICU RN required.*
11. *If risk factors for seizures present (e.g. pulmonary or cardiac conditions, history of brain injury or seizure) or if interictal epileptiform discharges or periodic discharges present, monitoring should be continued for a minimum of 48 hours or until events are recorded. Multiple events may be needed*
12. *Including new epileptiform or periodic discharges or lateralized rhythmic delta activity*
13. *Including hemorrhage (SAH, ICH, IVH), TBI (NAT and birth trauma), CNS infection, sepsis-related encephalopathy, suspected HIE (not on hypothermia)*
14. *Including dysmorphology, abnormal preliminary genetic or metabolic screening tests, or CNS malformations of neuroimaging*
15. *In neonates/children with acute acquired brain injury (e.g., arterial ischemic stroke or hypoxic-ischemic encephalopathy), seizures are unlikely to recur soon after the resolution of the acute phase. Conversely, neonates at a high risk for seizure recurrence (e.g., cerebral dysgenesis or malformations, tuberous sclerosis or neonatal epilepsy syndromes) may have a relapse of seizures if medications are withdrawn*

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Approved by the Continuous Monitoring EEG Workgroup Team

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