

International League Against Epilepsy (ILAE)

Primary Care Task Force of the Education Council

Epilepsy Competencies & Learning Objectives for Primary Health Care

6 Domains | 26 Competencies | 85 Learning Objectives

1.0 Diagnosis

1.1 Define what is a seizure and epilepsy?

- 1.1.1 Demonstrate working knowledge of what is an epileptic seizure.
- 1.1.2 Demonstrate working knowledge of what is an acute symptomatic (provoked) and unprovoked seizure.
- 1.1.3 Demonstrate working knowledge of what is epilepsy.
- 1.1.4 Demonstrate working knowledge of what is status epilepticus and life-threatening seizure clusters.

1.2 Demonstrate working knowledge of the main causes of acute symptomatic (provoked) seizures in children and adults.

- 1.2.1 Recognize febrile seizures in children and distinguish between simple and complex febrile seizures.
- 1.2.2 Recognize the main causes of acute seizures in children and adults (e.g., stroke, trauma, infections, toxins, drugs, hypertension, metabolic and electrolyte derangements).

1.3 Demonstrate working knowledge of the main causes of focal and generalized epilepsies in children and adults.

- 1.3.1 Demonstrate working knowledge of infectious (e.g., parasitic, bacterial, viral), structural (e.g., birth insults, trauma, stroke, tumours) and metabolic (e.g., hypoglycaemia) causes of epilepsy.
- 1.3.2 Demonstrate working knowledge of when to suspect a genetic cause of epilepsy (e.g., absence, myoclonic, generalized tonic clonic).

1.4 Identify and describe the semiology (clinical features) of epileptic seizures using standardized ILAE terminology and classification systems.

- 1.4.1 Extract semiology information from patient history.
- 1.4.2 Extract semiology information from home video recordings.
- 1.4.3 Recognize clinical features which suggest focal vs. generalized onset.
- 1.4.4 Recognize clinical features of motor seizures (e.g., tonic clonic, myoclonic, tonic, etc) and non-motor seizures (e.g., absence, focal with impaired awareness, etc).

1.4.5 Recognize clinical features of focal and generalized convulsive status epilepticus.

1.5 Recognize common seizure mimics.

1.5.1. Recognize common seizure mimics that do not require active intervention (e.g. night terrors, breath-holding spells, day-dreaming, sleep myoclonus).

1.5.2 Recognize common seizure mimics that may require active intervention but do not require antiseizure medication/s (e.g., psychogenic nonepileptic seizures (PNES), syncope, migraine).

1.5.3 Recognize clinical features of seizure mimics that pose high risk and may be treatable (e.g., irregular pulse, cardiac arrhythmias, blood pressure abnormalities, sweating, chest pain).

1.6 Demonstrate working knowledge of relevant aspects of the clinical examination in newly diagnosed seizures and epilepsy.

1.6.1 Identify neurological abnormalities (e.g., focal deficits, impaired awareness, abnormal head circumference, etc).

1.6.2 Identify systemic abnormalities (e.g., skin lesions, organomegaly, hypertension, cardiovascular abnormalities, etc).

1.6.3 Describe common activating manoeuvres to trigger seizures (e.g., hyperventilation, visual stimuli, startle, etc.).

1.7 Decide which initial lab tests should be ordered in patients with epilepsy or recurrent seizures.

1.7.1 Demonstrate working knowledge of when to obtain blood tests (e.g., blood glucose, calcium, electrolytes).

1.7.2 Demonstrate working knowledge of when to obtain brain neuroimaging, e.g. CT or MRI.

1.7.3 Demonstrate working knowledge of when to obtain an electrocardiogram.

1.7.4 Demonstrate working knowledge of when to obtain an electroencephalogram (EEG).

1.8 Demonstrate working knowledge of implications of test results and pathways to care according to the regional setting.

1.8.1 Recognize when blood test results will support management decisions.

1.8.2 Recognize when brain imaging results will support management decisions.

1.8.3 Recognize when electrocardiogram results will support management decisions

1.8.4 Recognize when EEG results will support management decisions.

2.0 Counselling

2.1 Understand and address the culturally appropriate aspects and consequences of the diagnosis of epilepsy, including stigma.

- 2.1.1. Provide culturally appropriate examples of the experience of stigma.
- 2.1.2. Recognize and address the impact of epilepsy on quality of life in the appropriate cultural context.

2.2 Provide guidance on specific issues related to epilepsy.

- 2.2.1 Provide guidance on social issues including school integration, work, marriage, legal, and related matters.
- 2.2.2 Provide guidance regarding lifestyle matters, such as driving, sports, alcohol, stress, sleep, recreational drug use, antiseizure medication non-adherence, avoiding burn injury, falls (from heights) and drowning.
- 2.2.3 Provide guidance regarding first aid during a seizure such as positioning, breathing, timing, avoiding injuries and crowding.
- 2.2.4 Provide guidance regarding need for emergency medical care (e.g., prolonged seizures, seizure clusters, lack of recovery, breathing difficulties).
- 2.2.5 Provide guidance to people with epilepsy regarding self-management (e.g., knowing about their disease, understanding disease treatment, laboratory tests, reliable sources of information and other available resources as community services, non-governmental organizations, etc.).

2.3 Communicate information about the causes and consequences of the specific type of epilepsy.

- 2.3.1 Provide guidance regarding culturally-determined misconceptions regarding epilepsy (e.g., spiritual or religious origins and witchcraft, contagiousness, insanity).
- 2.3.2 Provide guidance regarding the avoidance of harmful practices (e.g., exposure to fire, blood-letting, scarification, exposure to hazardous substances).
- 2.3.3 Educate people with epilepsy, their families and the public about the causes and frequency of epilepsy.
- 2.3.4 Demonstrate working knowledge and provide guidance regarding common measures to prevent epilepsy (e.g., latrines, pig farming and handwashing to prevent neurocysticercosis, safety belt or helmet to prevent traumatic brain injury, prenatal care to prevent birth injuries, etc).
- 2.3.5 Educate people with epilepsy and their families about the disease specifics (e.g. prognosis, risk factors for seizure worsening, risk of death etc.).
- 2.3.6 Educate people with epilepsy and their families on serious consequences of epilepsy (e.g. accidents, injury and death, including sudden unexpected death in epilepsy (SUDEP)) and measures to decrease these risks.

2.4 Counsel women with epilepsy of childbearing age about the implications and management of epilepsy.

- 2.4.1 Provide guidance regarding contraception and interaction with antiseizure

medications.

2.4.2 Provide guidance regarding pregnancy, including teratogenicity of the various antiseizure medications (e.g. valproate).

2.4.3 Provide guidance regarding post-partum activities e.g. breastfeeding and child care.

2.5 Demonstrate working knowledge regarding issues related to elderly with epilepsy (e.g., comorbidities and drug interactions).

2.6 Provide counselling specific to children with epilepsy and their parents (e.g. lifestyle, cognitive function, parenting).

2.7 Communicate to patients and carers the diagnosis of non-epileptic events and the need for different treatment.

3.0 Pharmacological Treatment

3.1 Demonstrate working knowledge about common antiseizure medications.

3.1.1 Demonstrate working knowledge regarding benefits and risks of antiseizure medication (e.g., common and serious adverse effects).

3.1.2 Identify indications for common antiseizure medications according to seizure type.

3.1.3 Demonstrate working knowledge about common interactions between antiseizure medications and other drugs (e.g. oral contraceptives, antibiotics, treatment of tuberculosis, human immunodeficiency virus, etc.).

3.1.4. Demonstrate working knowledge about the role and limitations of antiseizure medications' levels monitoring.

3.2 Recommend appropriate therapy based on epilepsy presentation.

3.2.1 Recommend appropriate therapy according to seizure type.

3.2.2 Choose the appropriate antiseizure medication and dosage in elderly patients.

3.2.3 Choose the appropriate antiseizure medication and dosage in children.

3.2.4 Choose the appropriate antiseizure medication and dosage in women who are in childbearing age or pregnant.

3.2.5 Recommend individualized titrations of optimal dosing for patients including starting and discontinuing medication

3.2.6 Communicate information regarding the antiseizure drug regimen (e.g., long term treatment, what to do with missed dosages, what to do in the setting of diarrhoea and vomiting).

3.2.7 Implement good practices on pharmacological treatment (e.g. monitoring adherence, scheduling, dosing).

3.3 Implement appropriate management strategies for the main causes of epilepsy according to local/regional setting (e.g. infective causes, metabolic, toxins, etc.).

3.4 Identify patients who are drug resistant according to the current ILAE definition.

3.5 Demonstrate knowledge of when patients are in remission.

3.5.1 Advise patients about lifestyle issues and need for continued medication when they achieve remission.

3.6 Demonstrate the ability to provide initial management of patients with uncontrolled seizures.

3.6.1 Know how to manage common causes for breakthrough seizures.

3.6.2 Recognise when to reassess the diagnosis.

3.6.3 Know when revision of antiseizure medication regimen is needed, following the first trial (choice of medication, dosage, adherence, etc.).

4.0 Referral

4.1 Demonstrate working knowledge about management of patient referral to a higher level of care.

4.1.1 Recognize when to refer (e.g. failure to control seizures, epilepsy with significant neurological abnormality, psychiatric or somatic comorbidity, genetic counseling, intellectual disability etc.).

4.1.2 Know how to access information about referral options within the health care system.

4.1.3 Know how to triage the referral (e.g., urgency, type of service, level of care) within the available health care system.

4.1.4 Communicate appropriate referral information to a higher level of care.

4.1.5 Communicate to the patient and caregivers the rationale for referral and the actions required.

5.0 Emergencies

5.1 Demonstrate the ability to implement emergency treatment plans for children and adults in and outside the hospital setting.

5.1.1 Recognize the conditions or elements that constitute an emergency.

5.1.2 Implement emergency management for prolonged or sequential / clustered seizures .

5.1.3 Recognize that altered level of consciousness may be related to seizures and take appropriate action.

5.1.4 Appropriately manage or advise regarding risk of or actual injuries.

5.1.5 Appropriately manage or advise regarding drug intoxication or adverse reactions.

5.1.6 Implement initial management for psychiatric emergencies (e.g. psychosis, self-harm, harm to others, agitation, suicidal ideation, etc.).

5.1.7 Demonstrate working knowledge of local guidelines and resources for the management of emergencies.

5.2 Demonstrate the ability to manage focal and generalized convulsive status epilepticus in children and adults.

- 5.2.1 Implement emergency management (e.g., Airway Breathing Circulation, emergency first line drugs, laboratory work up, cardio-respiratory monitoring).
- 5.2.2 Recognize when to refer to a higher level of care.
- 5.2.3 Recognize and manage common causes or precipitants of status epilepticus (e.g., non-adherence to medication, intoxication, metabolic and electrolyte disturbances, infection, etc.).

6.0 Comorbidities

6.1 Demonstrate the ability to recognize and provide initial management of common psychiatric comorbidities.

- 6.1.1 Recognize psychiatric comorbidities, such as depression, anxiety, psychosis , alcohol and substance abuse, suicidality, behavioural disorders.
- 6.1.2 Institute initial management in accordance with WHO mhGAP, including referral when appropriate.

6.2 Demonstrate the ability to recognize and provide initial management of common somatic multi-morbidities.

- 6.2.1 Recognize somatic multi-morbidities that are important in the management of people with epilepsy (e.g. diabetes, hypertension etc).
- 6.2.2 Institute appropriate initial management of multi-morbidities in individuals with epilepsy.
- 6.2.3 Institute appropriate management of epilepsy in the presence of multi-morbidities.

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