



World Health
Organization

WHO guidelines for management of **EPILEPSY**

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WHO

2nd International workshop on Onchocerciasis-
associated epilepsy
20.09.2023



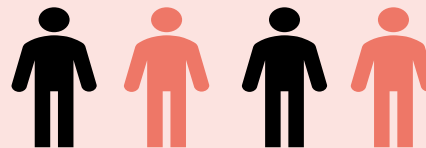
Epilepsy



- > 50 million people worldwide have epilepsy
- 7.6 people per every 1000 will have epilepsy at some point in their life
- An estimated 125 000 deaths each year are related to epilepsy

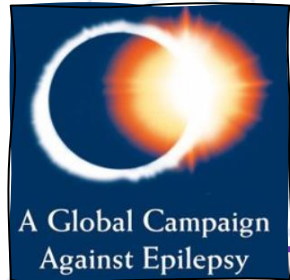


- Treatment gap of >75% in most low-income countries
- 0.03 neurologists per 100 000 population in LMIC
- Access to antiseizure medicines is uneven
- About half of all people with epilepsy have comorbid conditions



- Risk of premature death is x 3 times that of the general population
- Increased risk of injury due to seizures
- Increased risk of mental health conditions
- Reduced prospects of completing schooling and being employed

Key initiatives in reducing the epilepsy burden



A Global Campaign
Against Epilepsy

Global Campaign
Against Epilepsy
formed by
WHO/ILAE/IBE

1997

2005

2012

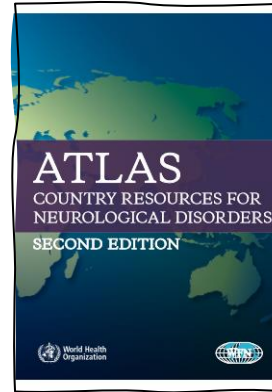
2015

2017

2019

2022

Launch of the WHO
Programme on
reducing the epilepsy
treatment gap

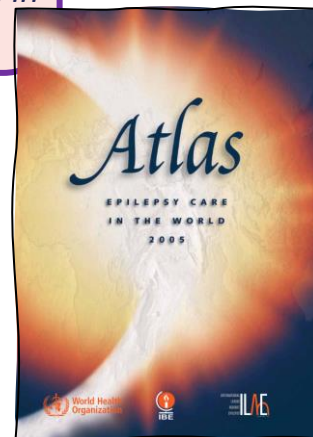


WHO Atlas for
neurological
disorders, 2nd
edition



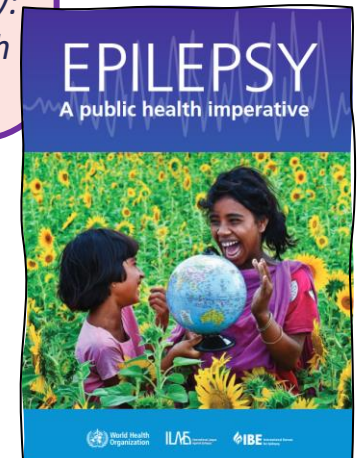
Intersectoral global action
plan on epilepsy and other
neurological disorders

WHO Atlas
*Epilepsy care in
the world*



WHA Resolution on
the global burden
of epilepsy

Global epilepsy
report *Epilepsy:
a public health
perspective*





Department of Mental Health and Substance Use



Dévora KESTEL



Brain Health

Tarun DUA



*On behalf of
WHO's Brain
Health Unit*



Zahiri MALIK



Neerja CHOWDHARY

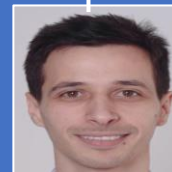


Chiara SERVILI



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Gergana Manlova



Rodrigo CATALDI

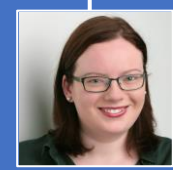


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The Intersectoral global action plan on epilepsy and other neurological disorders was adopted in May 2022



75th World Health Assembly



Vision

- A world in which **brain health is valued, promoted** and protected across the life course;
 - **neurological disorders are prevented, diagnosed and treated**, and premature mortality and morbidity are avoided;
 - **people affected by neurological disorders** and their carers attain the **highest possible level of health** with equal rights, opportunities, respect and autonomy.
-

Goals

- To **reduce the stigma, impact and burden** of neurological disorders, including associated mortality, morbidity and disability, and
- to **improve the quality of life** of people with neurological disorders, their carers and families.



5 strategic objectives

Proposed actions for:

- Member States
- WHO Secretariat
- International and National Partners

10 global targets:

Countries can set their own national targets, taking into account national circumstances and challenges



Prioritization and governance

- Advocacy
- Policy, plans and legislation
- Financing



Diagnosis, treatment and care

- Care pathways
- Medicines, diagnostics & other health products
- Health workers' capacity, training and support
- Carer support



Promotion and prevention

- Promoting healthy behaviour across life
- Infectious disease control
- Preventing head/spinal trauma
- Reducing environmental risks
- Promotion of optimal brain development in children and adolescents



Research, innovation and information systems

- Investment in research
- Data and information systems



Public health approach to epilepsy

- Access to services for epilepsy
- Engagement and support for people with epilepsy
- Epilepsy as an entry point



5

Strategic objective 5

To strengthen the public health approach to epilepsy

Global targets

Global target 5.1:

By 2031, countries will have increased service coverage for epilepsy by 50% from the current coverage in 2021.

Global target 5.2:

80% of countries will have developed or updated their legislation with a view to promote and protect the human rights of people with epilepsy by 2031.

5.1 Access to services for epilepsy

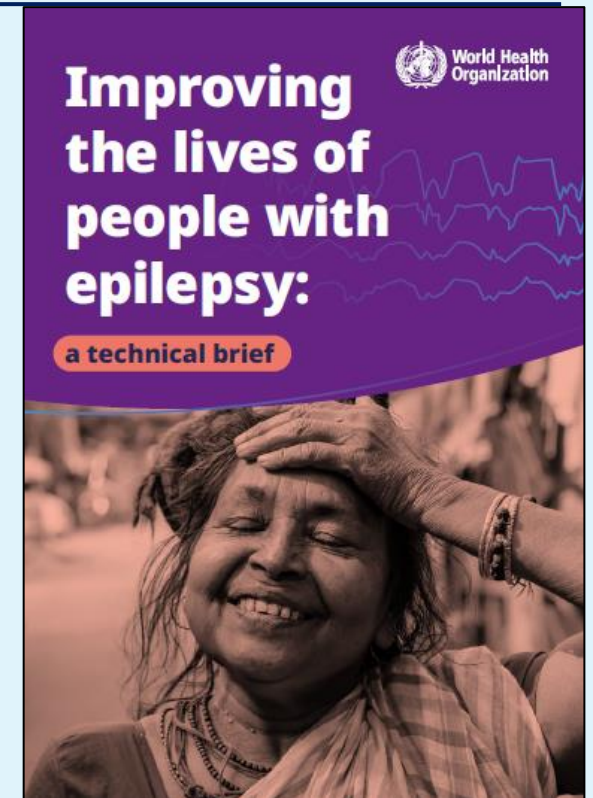
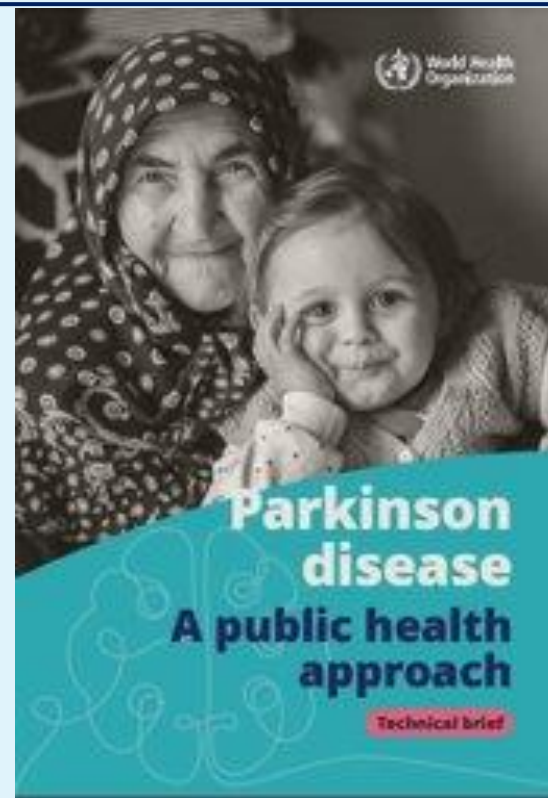
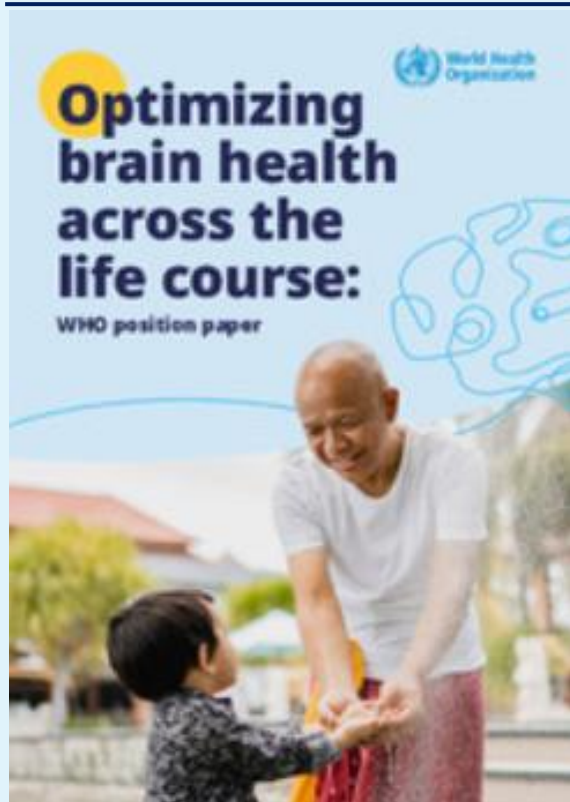
- Development of **models of care** that promote high-quality people-centred primary care, including referral and specialist services, **monitoring and evaluation**;
- **Training** of the health and care workforce in management and prevention;
- Improving **medicine** access, availability and affordability.

5.2 Engagement and support for people with epilepsy

- Support **policies and laws** for persons living with epilepsy, improve public attitudes, reduce stigma;
- **Involve people with epilepsy**, their carers and organizations in advocacy, policy, planning, legislation, service provision, monitoring and research in epilepsy;
- **Providing information that empowers people with epilepsy** to make informed choices and decisions about their care.

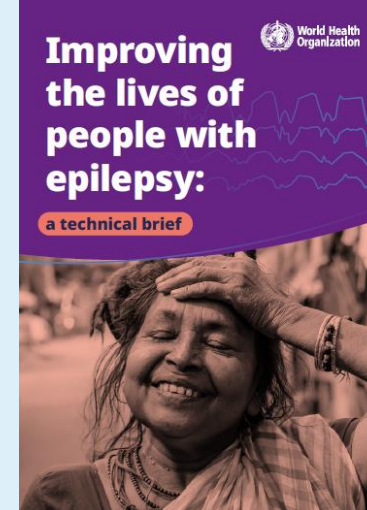
5.3 Epilepsy as an entry point for other neurological disorders

- **Expansion of epilepsy services** including health workforce capacity, epilepsy diagnostics, procurement systems to **other conditions**



Tools to support implementation of the Intersectoral global action plan

Improving the lives of people with epilepsy: a technical brief



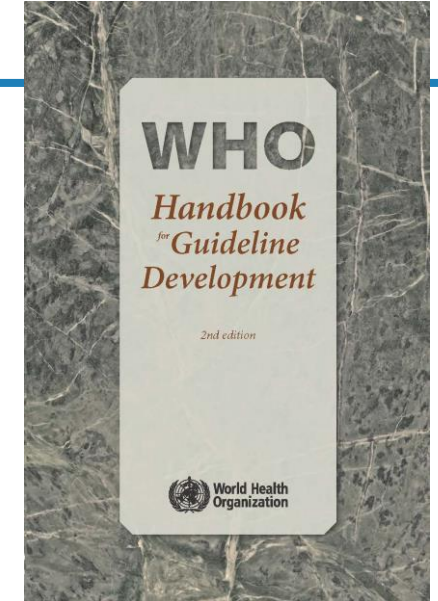
- Based on the **guiding principles** of IGAP, including gender, equity and human rights
- Uses the model of levers, or domains, from the **Operational framework for primary health care** by WHO and UNICEF, to list clear actions to be taken for epilepsy care
- Each lever has actions listed on the **policy level** and the **operational level**
- For each lever, there are **resources, case studies,** and **stakeholders** listed who are best positioned to take these actions
- Actions should be **customized** according to the local setting and needs

Levers for change

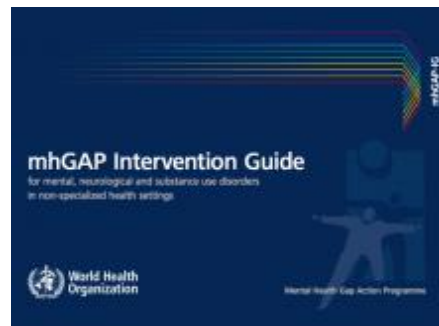
- *Political commitment and leadership*
- *Governance and policy frameworks*
- *Funding and allocation of resources*
- *Engagement of community and other stakeholders*
- *Models of care*
- *Healthcare workforce*
- *Medicines and other health products*
- *Monitoring and evaluation*
- *Research*
- *Systems for improving quality of care*
- *Digital technologies for health*

15 years of mhGAP: Overview of milestones

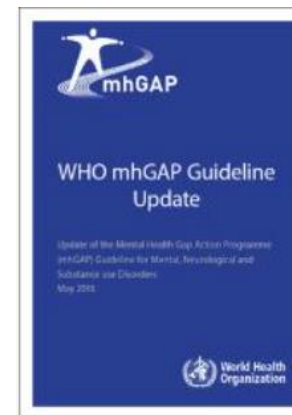
- The Mental Health Gap Action Programme (mhGAP) was launched in 2008 to support scaling up services for priority MSD conditions, including epilepsy
- The primary audience for the mhGAP guideline are non-specialized health workers at first and second-level health-care facilities.
- An algorithm-based intervention guide was launched in 2010, followed by guideline and IG updates in 2015 and 2019.
- Guideline is currently being updated with launch planned for November 2023



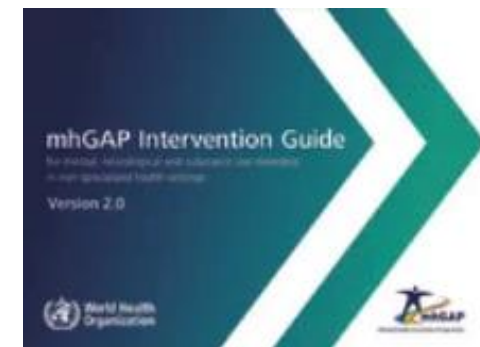
2008



2010



2015

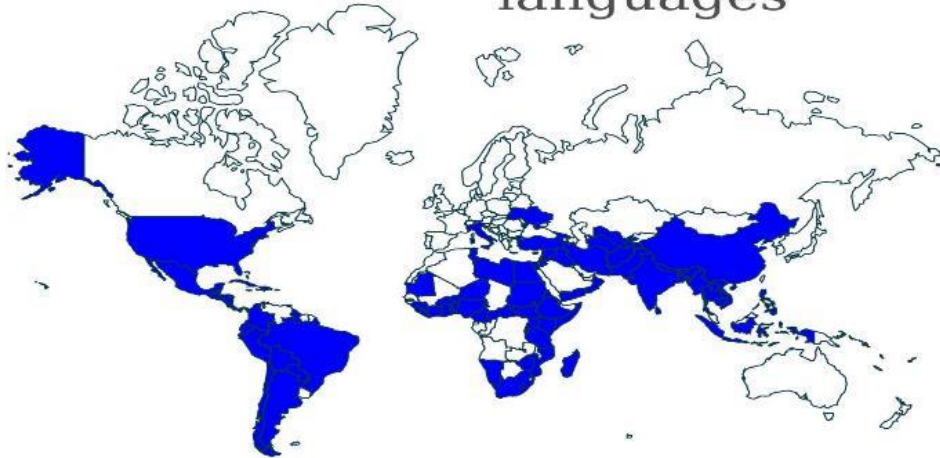


2019

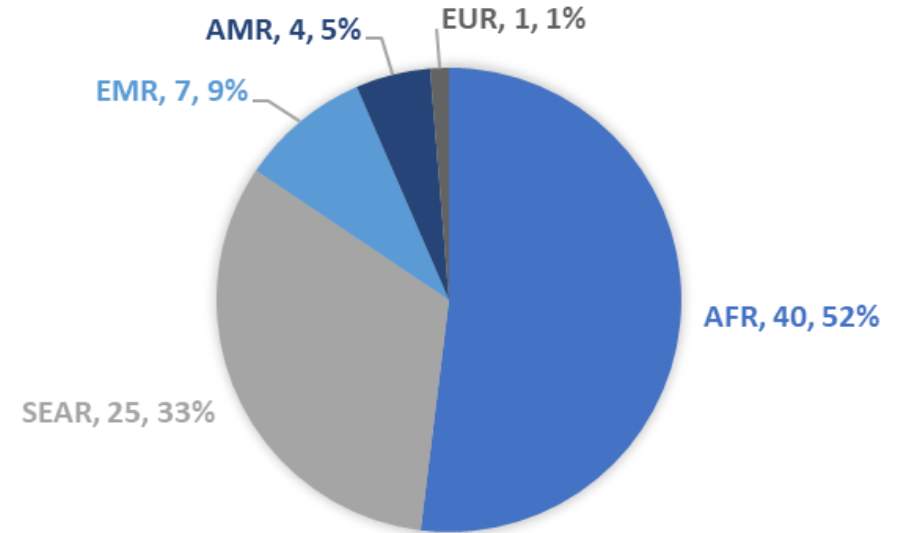
mhGAP impact



mhGAP-IG has been used in more than 100 countries in all WHO regions & translated in more than 20 languages



MHGAP BY REGION



Review > Evid Based Ment Health. 2021 Apr 26;24(3):124-130.
doi: 10.1136/ebmental-2021-300254. Online ahead of print.

WHO mental health gap action programme (mhGAP) intervention guide: updated systematic review on evidence and impact

Roxanne Keynejad ¹, Jessica Spagnolo ^{2 3}, Graham Thornicroft ⁴

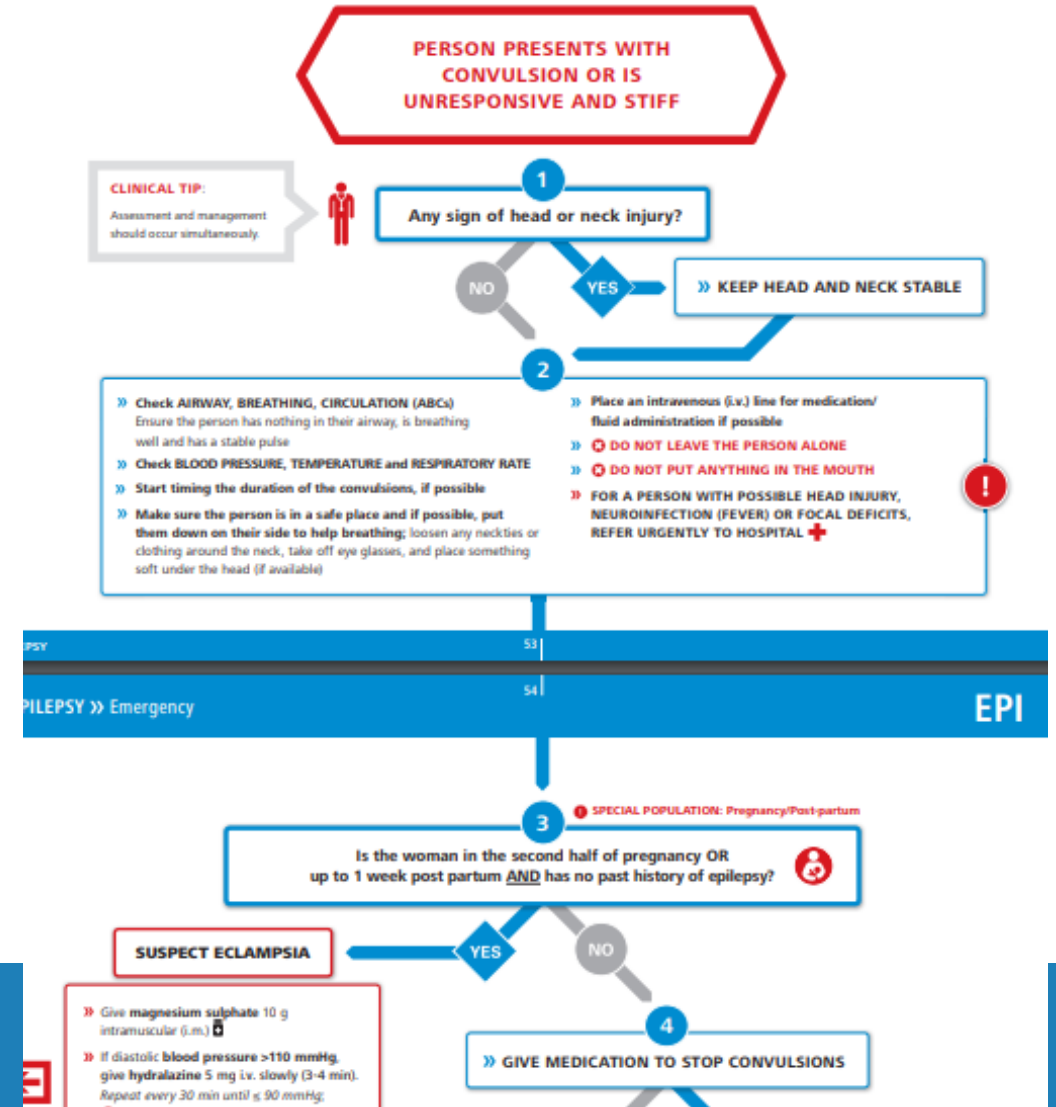


mhGAP epilepsy and seizures module



- Includes recommendations on assessment and treatment of acute and chronic generalized seizures in adults and children
- Recommendations for specific populations
 - women and girls of childbearing potential
 - adults and children with HIV
 - individuals with intellectual disability.

! EPI » EMERGENCY



mhGAP: 2015 recommendations

Evidence-based recommendations for management of epilepsy and seizures in non-specialized health settings

- Anti-epileptic medications for management of acute convulsive seizures when no intravenous access is available
- First-line anti-epileptic medication for management of acute convulsive seizures, when intravenous access is available
- Anti-epileptic medications for management of established status epilepticus
- Antiepileptic drug treatment after first unprovoked seizure
- Standard antiepileptic drugs (phenobarbital, phenytoin, carbamazepine, valproic acid) for management of convulsive epilepsy in adults and children
- Anti-epileptic medications for adults and children with HIV
- Anti-epileptic medicines for medication resistant convulsive epilepsy
- Management of epilepsy in women of child bearing age
- Antiepileptic drug therapy in individuals with intellectual disability and epilepsy
- When to discontinue antiepileptic drug treatment in adults and children
- Pharmacologic Interventions for prophylaxis of recurrence of febrile seizures
- The role of diagnostic tests in the management of seizures and altered consciousness, particularly by non-specialists in low and middle income countries
- Diagnosis of convulsive epilepsy by non-specialist health care providers
- Role of EEG in management of convulsive epilepsy
- Role of neuroimaging in management of convulsive epilepsy
- Psychological interventions in adults and children with epilepsy

<https://www.who.int/publications/i/item/9789241549417>

mhGAP epilepsy questions in 2023 update

EPI1: In adults with established status epilepticus, i.e. seizures persisting after the first line agent (Benzodiazepine-resistant status epilepticus), which anti-seizure medications are associated with better clinical outcomes (stopping seizures and with less adverse effects)?

EPI2: In children with established status epilepticus, i.e. seizures persisting after the first line agent (Benzodiazepine-resistant status epilepticus), which anti-seizure drugs are associated with better clinical outcomes (stopping seizures and with less adverse effects)?

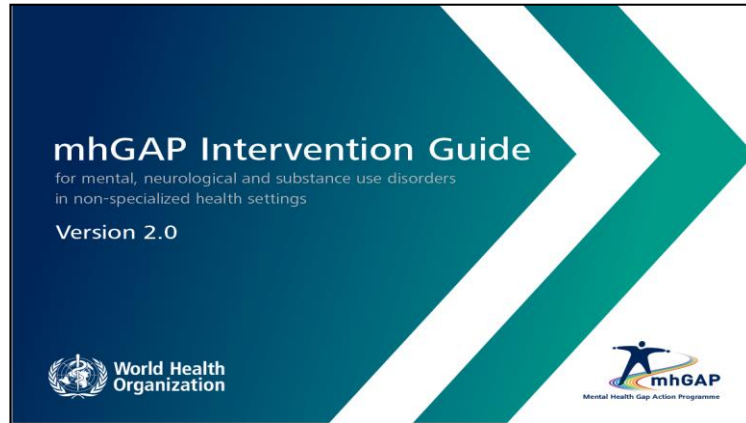
EPI3: For adults and children with epilepsy, which anti-seizure medications are effective and safe?

EPI4: What is the effectiveness and safety of anti-seizure medications in women of childbearing age?

EPI5: Which interventions are effective in preventing epilepsy related mortality including sudden unexpected death of someone with epilepsy (SUDEP)?

Next steps: Update of mhGAP derivative products

(will all be updated following November 2023 launch of guidelines)



Key changes in 2023 update:

1. Inclusion of intravenous levetiracetam for established status epilepticus (now on EML) in adults and children
2. Revision of anti-seizure medications for adults and children to include levetiracetam (now on EML)
3. Strong recommendation against use of sodium valproate in women and girls of childbearing potential due to risk of teratogenic effects
4. New recommendation on use of nocturnal supervision for prevention of SUDEP

Improving access to medicines for neurological disorders



I - Landscape analysis

Understand barriers, identify opportunities, and gather information on development, availability, distribution, provision, and use of medicines for neurological disorders especially in LMICs

II - Global approach

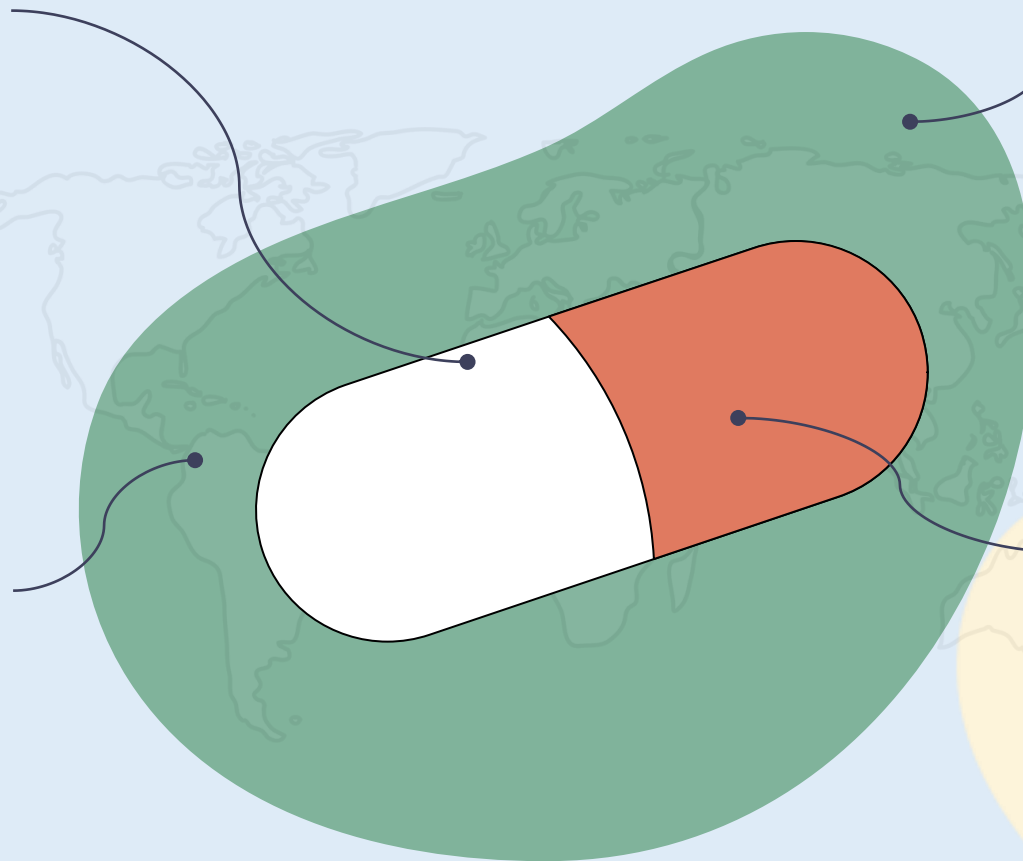
Based on a global consultation, develop an approach to increase access to medications for neurological disorders including for epilepsy and Parkinson disease

III - Updating EMLs

The recent update of the WHO Model Essential Medicines List includes the addition of three medicines for treatment of Multiple Sclerosis and the addition of Levetiracetam for treatment of epilepsy

IV - Country projects

Demonstration projects in two proposed countries in Africa to understand barriers and identify interventions to improve access



Country work

Ghana & United Republic of Tanzania

- Two-day workshop with representation from policy makers, PLE, service providers, civil society, and other groups
- Epilepsy advocacy meeting to raise the profile of epilepsy in the country and discuss improving access to medicines for neurological disorders
- **Ghana:**
 - WHO is currently supporting efforts to improve awareness of neurological disorders, and consequently demand for medicines
 - update of national standard treatment guidelines and national EML
- **Tanzania:**
 - Establishment of a National Epilepsy Committee
 - Identifying challenges and actions to improving access to medicines for neurological disorders;





Thank you

