The WHO guidelines on meningitis diagnosis, treatment and care

A critical tool in outbreak preparedness and response

Dr Lorenzo Pezzoli

Team Lead

Meningitis and Epidemic Bacterial Diseases

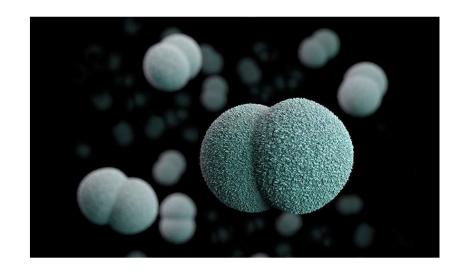
WHE/WHO





Bacterial meningitis - A Global, Deadly Threat

- Meningitis can strike anyone, anywhere.
- Caused by many pathogens, with bacterial meningitis being the most deadly
- Each year:
 - 2.5 million cases of all meningitis
 - 1.6 million cases are bacterial, causing 240,000 deaths
- Acute bacterial meningitis strikes fast and hard
 - 1 in 6 people die − often within 24 hours
 - 1 in 5 survivors live with long-term disability
- The highest burden in young children, and Africa's "meningitis belt"
- Heavy toll on families, especially in low-resource settings
 Organization





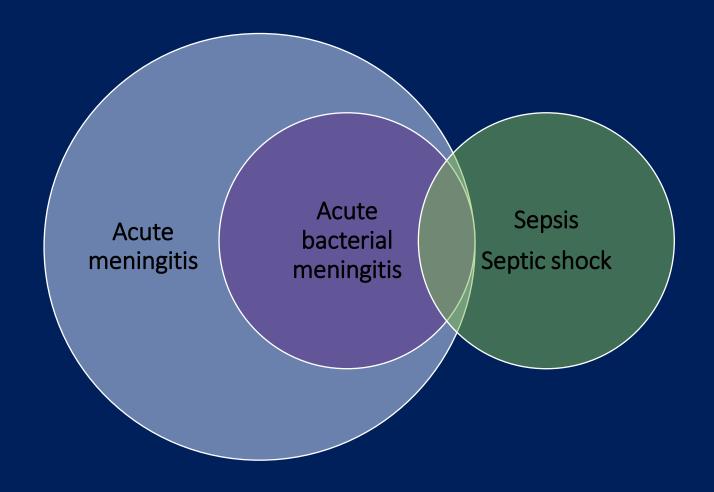
Acute meningitis



Clinical syndrome marked by the abrupt onset of inflammation of tissues surrounding the brain and spinal cord, called *leptomeninges* (pia mater and arachnoid).



Acute meningitis





Prognosis

Acute bacterial meningitis

Acute viral meningitis

High fatality rate (10-20%)

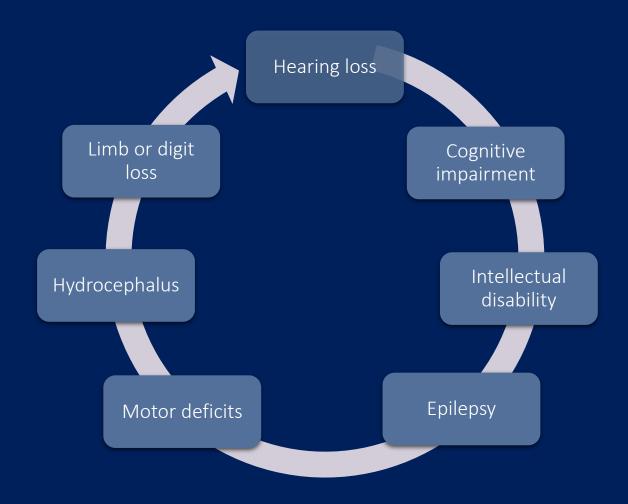
Very low fatality rate

High risk of sequalae (20%)

Very low risk of sequalae



Disease complications and sequelae





Defeating Meningitis by 2030 Roadmap

Towards a world free of meningitis

- ➤ Eliminate bacterial meningitis epidemics
- > Reduce cases by 50% and deaths by 70% from vaccine-preventable bacterial meningitis
- > Reduce disability and improve quality of life after meningitis due to any cause

• Implementation guided by the WHO Meningitis Technical Task Force (TTF)

- ➤ Global experts and representatives from countries, partners, and affected communities
- Ensuring technical coherence, country relevance, and unified action

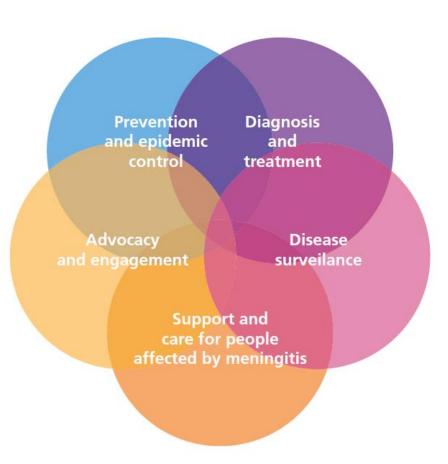
Four focus pathogens

- > Neisseria meningitidis
- > Streptococcus pneumoniae
- > Haemophilus influenzae
- > Streptococcus agalactiae (Group B Streptococcus)

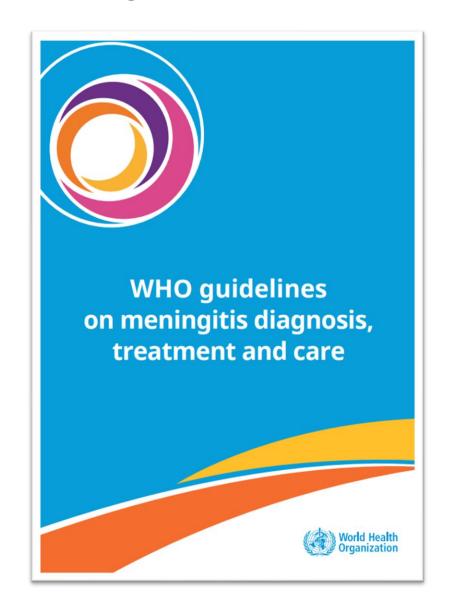
Cross-Divisional Collaboration

- ➤ UCN/MSD/BRH leading on clinical care and neurological sequelae
- ➤ UHL/IVB leading on immunisation and vaccine strategies
- ➤ WHE/EPM leading on outbreak preparedness and response, as part of the Roadmap Secretariat

• Five interconnected pillars



Meningitis



First-ever comprehensive WHO guidelines on meningitis diagnosis, treatment and care

Applicable globally, including in low-resource and emergency settings Based on 21 systematic reviews

Containing 37 recommendations and hundreds of remarks and implementation considerations on:

- Diagnosis (laboratory investigations and cranial imaging)
- Antibiotic therapy
- Adjunctive treatment
- Supportive care
- Management of sequelae



Available here: https://www.who.int/publications/i/item/9789240108042

Correctly identifying patients is the starting point of the Defeating Meningitis by 2030 Global Roadmap, and its five interconnected pillars

- Every epidemic starts with someone falling ill in the community
- What happens next can determine not just their fate, but the fate of many others in their community.
- Diagnosis and treatment are at the heart of both saving lives and stopping the spread.
- This new guideline are much more than clinical tools.
- They are foundational to epidemic response.
- Because when we correctly identify the cause of meningitis:
 - We give patients the right treatment
 - We avoid unnecessary or ineffective antibiotics
 - We trigger the right public health response
 - We guide vaccination using the right vaccine, matched to the pathogen and its serogroup or serotype

The Way Forward

- In 2025, 22 countries in the African meningitis belt reported nearly 6,000 suspected cases and over 300 deaths.
- Countries like Nigeria and Ghana have already implemented these guidelines in their outbreak responses.
- Our collective task is to
 - Disseminate these guidelines widely.
 - Train healthcare workers in their application.
 - Support countries in integrating them into national health strategies.
- We can only do that with the support of countries, civil society, and partners

Thank you very much!

Together, we can....

