

# PICO

- A way of characterizing a trial
- A way of designing a systematic review
- A way of identifying/searching for a systematic review
- A way of structuring a question for a recommendation

- 

Do steroids work in patients with TB meningitis? Design a research study

Steroids for TBM?

# Steroids for TBM?

- Design: RCT
- Participants: patients with TB meningitis
- Intervention: steroids
- Outcome: death or disability

# RCT of adults

- 274 to steroids
- 271 to placebo
- 87 died
- 112 died

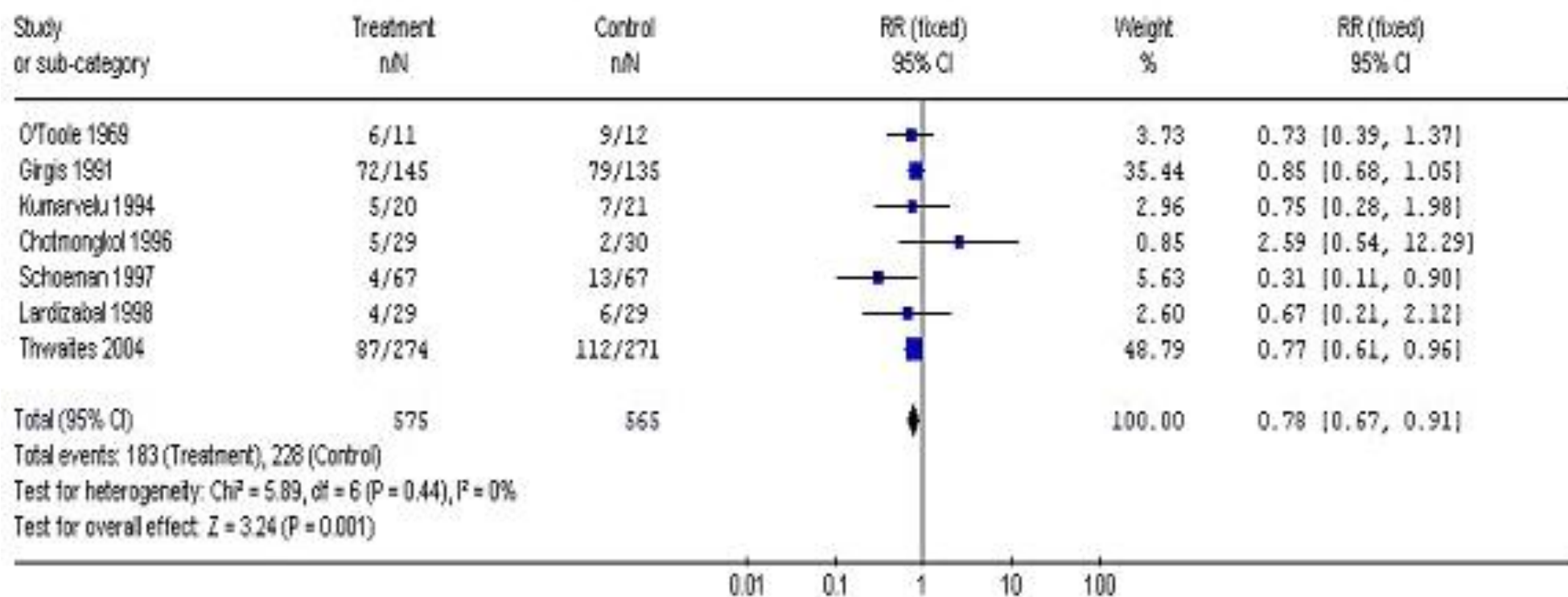
**Relative Risk 0.69;  
95% confidence intervals 0.52 to 0.92**

# Steroids for TBM: PICO for systematic review

- Design: systematic review
- Inclusion : ` RCTs
- Participants: patients with TB meningitis
- Intervention: steroids
- Outcome: death or disability

**Figure 1.**

Comparison: 01 Any steroid vs control  
 Outcome: 01 Death



PICO to drive a  
recommendation





# INDEX-TB GUIDELINES

Guidelines on extra-pulmonary tuberculosis for India

Initiative of  
Central TB Division  
Ministry of Health and Family Welfare, Government of India

**Participants:** Adults or children with tuberculous meningitis on tuberculosis (TB) chemotherapy

**Settings:** Hospital care

**Intervention:** Any corticosteroid

**Comparison:** Placebo or no corticosteroid

Outcomes	Illustrative comparative risks (95% CI)		Relative effect (95% CI)	Number of participants (trials)	Quality of the evidence (GRADE)
	Placebo	Corticosteroid			
Follow-up to 2 to 24 months					
Death	41 per 100	31 per 100 (27 to 36)	RR 0.76 (0.66 to 0.87)	1318 (9 trials)	⊕⊕⊕⊕ high <sup>1, 2, 3, 4, 5</sup>
Disabling neurological deficit	8 per 100	7 per 100 (6 to 10)	RR 0.92 (0.71 to 1.20)	1295 (8 trials)	⊕⊕⊕⊖ <sup>6, 7, 8</sup> low
Follow-up to 5 years					
Death	47 per 100	44 per 100 (37 to 53)	RR 0.93 (0.78 to 1.12)	545 participants (1 trial)	⊕⊕⊕⊖ <sup>9, 10</sup> moderate
Disabling neurological deficit	15 per 100	14 per 100 (7 to 25)	RR 0.91 (0.49 to 1.69)	244 (1 trial)	⊕⊖⊖⊖ <sup>10, 11, 12</sup> very low

\*The assumed risk is from the median control group risk across studies. The corresponding risk (and its 95% CI) is based on the assumed risk in the comparison group and the relative effect of the intervention (and its 95% CI).

CI: confidence interval; RR: risk ratio; TB: tuberculosis.

# 6

## Recommendations for use of corticosteroids in EPTB

### 6.1 In treating tuberculous meningitis in HIV-negative people

Tuberculous meningitis (TBM) is a life-threatening condition affecting adults and children, which can leave survivors with a range of neurological disabilities. The causes of death and disability in TBM are multifactorial. The main pathological mechanisms are persistent or progressive raised intracranial pressure with or without hydrocephalus, arachnoiditis and involvement of optic nerves or optic chiasma leading to visual deficit, cranial neuropathies and vasculitis of the cerebral blood vessels, leading to stroke.

Steroids are thought to reduce inflammation, improve blood flow and reduce cerebral oedema and intracranial pressure. However,

the risks associated with steroids include immunosuppression, which is a major concern in the context of an infectious disease, GI bleeding, hyperglycaemia and hypertension, among others. Several randomized controlled trials have been conducted on the effect of corticosteroids in managing TBM. The conclusions from these trials, seen individually, appear inconsistent. One trial (Thwaites G.E., 2004) showed that dexamethasone increases survival rate, but it also raised two questions; do patients who survive because of dexamethasone therapy tend to be left with severe disability, and are there differential effects among subgroups of patients with different degrees of disease severity?

The guideline group reviewed evidence from the updated Cochrane review "Corticosteroids for managing tuberculous meningitis" (Prasad, 2016).

Recommendation	Steroids are recommended for TBM in HIV-negative people. Duration of steroid treatment should be for at least 4 weeks, with tapering as appropriate.
Strength of recommendation	Strong
Evidence	Corticosteroids reduce death from TBM from 41 per 100 people to 31 (27 to 36) per 100 people (nine studies, 1318 participants, high quality evidence). These studies were conducted in a variety of settings, and only one included HIV-positive people (n = 98).  Disabling neurological deficit is not common in survivors, and steroids may have little or no effect on this outcome (RR 0.92, 95% CI 0.71 to 1.20; eight trials, 1295 participants, low quality evidence).
Panel's view on advantages of using steroids	Reduced mortality from TBM



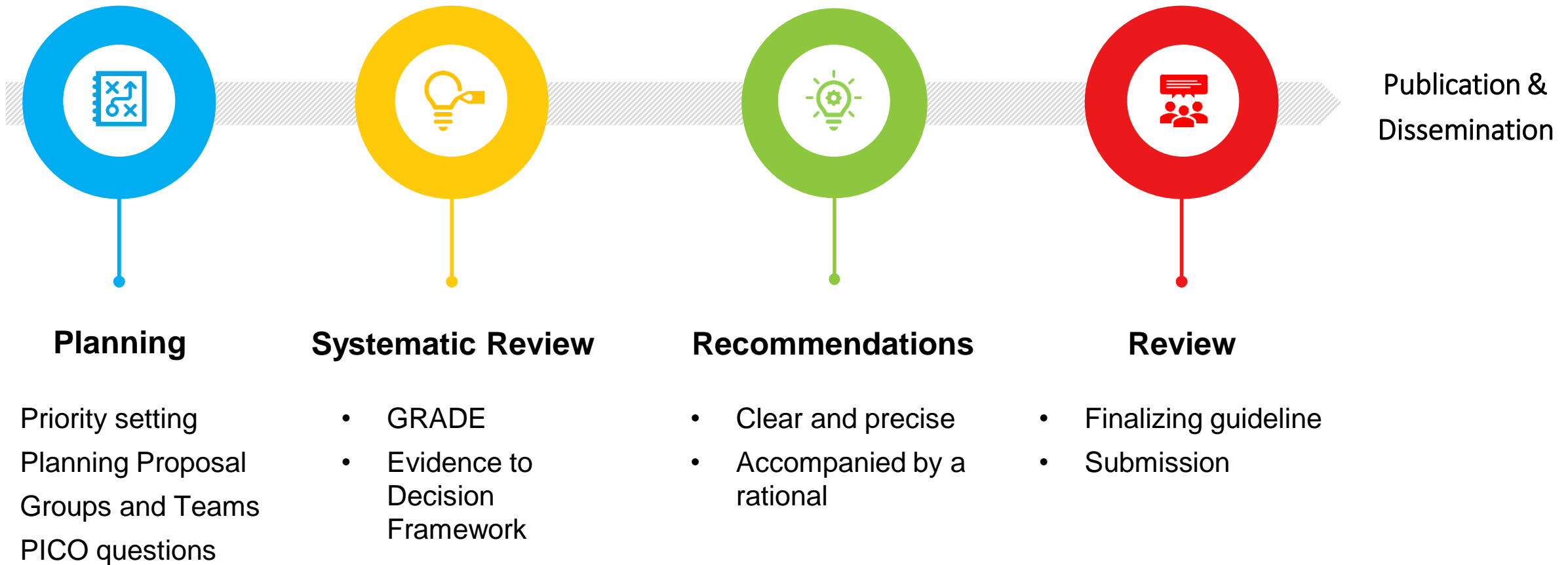
# First Meeting of the Guideline Development Group for treatment of patients with cystic echinococcosis



- Bernadette Abela-Ridder & Katrin Bote  
Department of the Control of Neglected Tropical Diseases

06 April 2022

# Guideline Development Overview



# WHO Guideline Development Cystic Echinococcosis

## Evidence Summaries

17 August 2022

Dr Rebecca Kuehn, Dr Vittoria Lutje, Professor Paul Garner

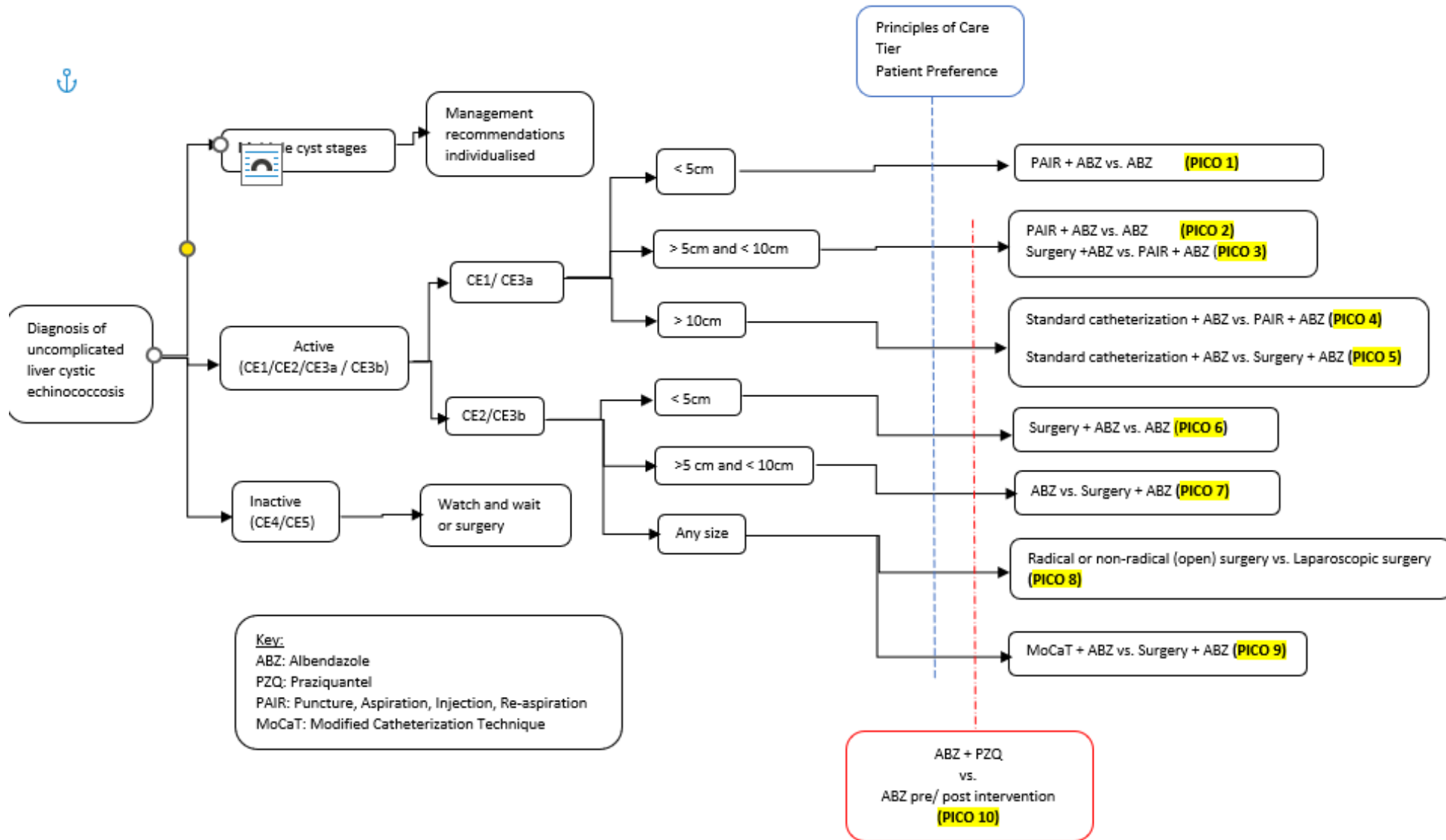
**Systematic Review production and management team**

**Cochrane Infectious Diseases Group**

**Liverpool School of Tropical Medicine**

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