FRONTLINE FIVE EM

Chlorhexidine and VAP

Journal Club Guide

A step-by-step critical appraisal worksheet for emergency medicine and critical care

Anushapreethi S, et al. Critical Care. 2026;30:553. Published October 29, 2026. doi:10.1186/s13054-026-06217-0

Study design	Pragmatic cluster-randomized AB/BA crossover trial
Population	1,035 ventilated adults across six medical ICUs in one Indian tertiary hospital; 10,024 ventilator-days
Comparison	Standardized toothbrushing, moisturization, and suction with twice-daily 0.12% chlorhexidine versus the same bundle without chlorhexidine
Reported result	VAP incidence was 18.8 versus 16.9 per 1,000 ventilator-days; adjusted IRR 1.08 (95% CI 0.84-1.38; P=.56). Twenty-eight-day mortality was also not significantly different.

STEP 1 - Frame the question

Write the PICO or descriptive research question in one sentence.

STEP 2 - Test the design

Was this design appropriate for the question? Identify the strongest protection against bias and the biggest remaining threat.

STEP 3 - Examine the population

Who was included and excluded? How closely do these patients and settings resemble your ED or ICU?

STEP 4 - Interrogate the outcomes

Was the primary outcome patient-centered? Separate the prespecified primary result from secondary, subgroup, or surrogate findings.

STEP 5 - Interpret effect and uncertainty

Record the absolute risks, relative effect, confidence interval, and whether the study excluded a clinically important benefit or harm.

STEP 6 - Identify limitations

List selection bias, confounding, measurement limitations, missing data, power, and external-validity concerns.

STEP 7 - Decide what changes

What should change today, what should only prompt discussion, and what requires confirmation?

FINAL APPRAISAL

Bottom line in one sentence; evidence certainty (high/moderate/low); and whether you would teach, read, or change practice.