

■ SUPPLEMENTARY MATERIAL 1: ELECTRONIC DATABASE SEARCH STRATEGY

1. PubMed / MEDLINE

("Dexmedetomidine"[MeSH Terms] OR "dexmedetomidine"[Title/Abstract] OR "Precedex"[Title/Abstract] OR "alpha-2 agonist"[Title/Abstract])

AND

("Propofol"[MeSH Terms] OR "propofol"[Title/Abstract] OR "Diprivan"[Title/Abstract])

AND

("Sepsis"[MeSH Terms] OR "sepsis"[Title/Abstract] OR "septicemia"[Title/Abstract] OR "septic shock"[Title/Abstract] OR "toxemia"[Title/Abstract])

AND

("Respiration, Artificial"[MeSH Terms] OR "mechanical ventilation"[Title/Abstract] OR "ventilator"[Title/Abstract] OR "Intensive Care"[MeSH Terms] OR "intensive care"[Title/Abstract] OR "ICU"[Title/Abstract] OR "critical care"[Title/Abstract])

Filters: English, Published from 2010-01-01 to 2026-05-31

2. Embase

#1 'dexmedetomidine'/exp OR dexmedetomidine:ab,ti OR precedex:ab,ti OR 'alpha-2 agonist':ab,ti

#2 'propofol'/exp OR propofol:ab,ti OR diprivan:ab,ti

#3 'sepsis'/exp OR 'septic shock'/exp OR sepsis:ab,ti OR 'septic shock':ab,ti OR septicemia:ab,ti

#4 'artificial ventilation'/exp OR 'mechanical ventilation':ab,ti OR 'intensive care'/exp OR 'intensive care':ab,ti OR icu:ab,ti

#5 #1 AND #2 AND #3 AND #4

Filters: English language, Publication Year 2010 to 2026

3. Cochrane Central Register of Controlled Trials (CENTRAL)

#1 MeSH descriptor: [Dexmedetomidine] explode all trees

#2 (dexmedetomidine OR Precedex OR "alpha-2 agonist"):ti,ab,kw

#3 #1 OR #2

#4 MeSH descriptor: [Propofol] explode all trees

#5 (propofol OR Diprivan):ti,ab,kw

#6 #4 OR #5

#7 MeSH descriptor: [Sepsis] explode all trees

#8 (sepsis OR "septic shock" OR septicemia):ti,ab,kw

#9 #7 OR #8

#10 MeSH descriptor: [Respiration, Artificial] explode all trees

#11 ("mechanical ventilation" OR ventilator OR "intensive care" OR ICU):ti,ab,kw

#12 #10 OR #11

#13 #3 AND #6 AND #9 AND #12

Filters: Publication Year 2010 to 2026

4. Scopus

TITLE-ABS-KEY ((dexmedetomidine OR precedex OR "alpha-2 agonist")) AND TITLE-ABS-KEY ((propofol OR diprivan)) AND TITLE-ABS-KEY ((sepsis OR "septic shock" OR septicemia)) AND TITLE-ABS-KEY (("mechanical ventilation" OR ventilator OR "intensive care" OR icu))

Filters: PUBYEAR > 2009 AND PUBYEAR < 2027 AND LIMIT-TO (LANGUAGE , "English")

5. Web of Science (Core Collection)

TS=(dexmedetomidine OR precedex OR "alpha-2 agonist") AND TS=(propofol OR diprivan) AND TS=(sepsis OR "septic shock" OR septicemia) AND TS=("mechanical ventilation" OR ventilator OR "intensive care" OR ICU)

Filters: Language: English. Time span: 2010-01-01 to 2026-05-31.

6. ClinicalTrials.gov & WHO-ICTRP (Clinical Registries)

Condition: Sepsis OR Septic Shock

Intervention: Dexmedetomidine AND Propofol

(Results filtered manually for mechanical ventilation/ICU settings).