PRISMA 2020 Checklist — Supplementary Material

Ullah S. Infection prevention and control in public hospitals in Pakistan: a systematic review of practices, compliance, healthcare-associated infections and barriers. medRxiv preprint (supplementary file).

PRISMA 2020 Checklist — completed

Manuscript: Infection prevention and control in public hospitals in Pakistan: a systematic review and meta-analysis of healthcare-associated infection burden, infection-control practice and facility capacity

Location basis: all locations below are given against the journal-formatted manuscript, **MANUSCRIPT_JHI_FORMAT_V3.md**, verified against its text on 30 October 2026. (This checklist was regenerated in the controlled fix pass; the previous version had been scored against superseded draft V6 and misgraded several items.)

Scoring (main checklist, row level): Fully addressed: **20** · Partially addressed: **10** · Not addressed: **1** (item 24, registration — knowingly pending; PROSPERO registration follows the author's read-through, after which the register name and number will be inserted in §2.1 and the Summary).

The abstract checklist (PRISMA for Abstracts) is graded separately in Table 2 against the V3 Summary: Fully **7** · Partially **4** · Not addressed **1** (registration).

Table 1 — PRISMA 2020 main checklist

Item — Topic — Grade — Location / note (V3)

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1 — Title — Fully — Title page and title identify a systematic review and meta-analysis

2 — Abstract — — — Graded in Table 2 (PRISMA for Abstracts) against the Summary

3 — Rationale — Fully — §1 paragraphs 1–2

4 — Objectives — Fully — §1 final paragraph (question and sector scope explicit)

5 — Eligibility criteria — Fully — §2.1 — PICO-S, sector-verification rule, and eligible designs including case–control and qualitative studies

6 — Information sources — Partially — §2.2 — PubMed, Google Scholar and PakMediNet named with the search date; per-database query dates not itemised for the supplementary interfaces

7 — Search strategy — Fully — §2.2, with the PubMed string printed verbatim in full

8 — Selection process — Partially — §2.3 — single-reviewer screening with automation assistance declared; no second reviewer (stated as a limitation in §4)

9 — Data collection process — Partially — §2.4 — extraction fields and verification described; extraction by one reviewer with AI assistance under human verification (declared)

10a — Outcomes — Fully — §2.4 — all outcome domains and their definitions listed

10b — Other variables — Fully — §2.4 — including setting, sector-verification and design fields

11 — Risk of bias (methods) — Fully — §2.5 — JBI checklist suite named per design, with the declared percentage banding convention

12 — Effect measures — Fully — §2.6 — proportions with 95% CIs; descriptive outcomes as medians/ranges (no comparative effect measures, by design)

13 — Synthesis methods — Partially — §2.6 — pre-set pooling rule, DerSimonian–Laird model on Freeman–Tukey transformed proportions, software now versioned (Python 3; NumPy 1.26.4; SciPy 1.11.4); τ^2 and 95% prediction intervals now reported in §3.6; heterogeneity explored narratively rather than by formal subgroup analysis

14 — Reporting bias assessment — Partially — Discussed narratively in §4 Limitations; no funnel plot or Egger test (only three studies in the primary meta-analysis)

15 — Certainty assessment — Partially — §2.6 — GRADE not applied, stated explicitly; confidence handled narratively

16a — Study selection (flow) — Fully — Figure 1 (submitted as FIGURE1_PRISMA.png, which carries the full breakdown of the 131 full-text exclusions) and §3.1; the exclusion breakdown is also given in the figure legend

16b — Excluded studies — Partially — §3.1 and Figure 1 — exclusion reasons given as aggregate counts; no per-study exclusion list with reasons

17 — Study characteristics — Fully — §3.2 and Table II (all 105 studies)

18 — Risk of bias (results) — Fully — §3.9 and Table II (final column, per study)

19 — Results of individual studies — Fully — §3.3–§3.8 and Table II

20 — Results of syntheses — Fully — §3.6 — pooled estimates with 95% CIs, I^2, τ^2 and 95% prediction intervals; §4 interpretation

21 — Reporting biases (results) — Partially — §4 — narrative discussion only

22 — Certainty of evidence (results) — Partially — §4 — narrative confidence statements; no GRADE summary table

23a — Interpretation — Fully — §4 paragraph 1 and §5 Conclusions

23b — Limitations of the evidence — Fully — §4 Limitations paragraph

23c — Limitations of the review processes — Fully — §4 Limitations paragraph — including the single-reviewer design and the disclosure that the JPMA/JCPSP hand-search and reference-mining were not separately logged

23d — Implications — Fully — §4 final paragraphs and §5

24 — Registration and protocol — **Not addressed (knowingly pending)** — No protocol was registered before the review was conducted and no registration statement yet appears in the manuscript. PROSPERO registration is the next step after the author's read-through; the register name and number will then be inserted in §2.1 and the Summary

25 — Support — Fully — Funding section ("This research received no specific grant…"); the Summary also carries "Funding: None."

26 — Competing interests — Fully — "Competing interests" section — none declared

27 — Availability of data and code — Partially — Data availability statement names the extraction data and the meta-analysis scripts; no public repository DOI yet

Table 2 — PRISMA for Abstracts checklist, graded against the V3 Summary (249 words of the 250-word JHI cap)

— Item — Grade — Note (V3 Summary)

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A1 — Title — Fully — Identifies the report as a systematic review with meta-analysis

A2 — Objectives — Partially — The question (IPC in Pakistan's public-sector hospitals, sector-verified) is stated in Background; no explicit PICO elements

A3 — Eligibility criteria — Fully — Public-sector hospital studies in Pakistan with sector verification (Background/Methods); design and date limits in §2.1

A4 — Information sources — Partially — PubMed named with its yield (806 records) and the last search date (29 October 2026); Google Scholar and PakMediNet named without per-source yields in the Summary (§2.2 gives full detail)

A5 — Risk-of-bias methods — Fully — JBI checklists named in Methods, with the declared banding convention (§2.5 gives the full suite)

A6 — Synthesis methods — Fully — Pre-set pooling rule stated, including why IPCAF total score was not pooled (only study-level medians available)

A7 — Included studies — Partially — 105 studies and the design mix stated; the participant total (63 studies, 20,163 participants) is given in §3.2 and Table II, not in the Summary

A8 — Synthesis results — Partially — HAI pooled estimate with 95% CI, I^2 and 95% prediction interval, and the paediatric sensitivity estimate; SSI summarised as range and median (the pooled SSI estimate is labelled a secondary summary in the full text); hand-hygiene figures; IPCAF band

A9 — Limitations — Fully — Limitations paragraph present in the Summary

A10 — Interpretation — Fully — Conclusions paragraph

A11 — Funding — Fully — "Funding: None." in the Summary; Funding section in the declarations

A12 — Registration — Not addressed — Registration pending — see item 24

Notes. (1) The full-length master draft (MANUSCRIPT_DRAFT_V8.md, for the medRxiv preprint) carries the longer structured Abstract and is the version to re-grade if the preprint is posted first. (2) Item 24 / A12 is the single not-addressed item, by design and sequencing: the protocol was not registered before the review, and PROSPERO registration is scheduled immediately after the author's read-through of the final text. (3) One included study (a hand-hygiene compliance survey at Mardan Medical Complex) could not be verified against the published record and is identified by description in §3.2 rather than by a reference entry; it is counted in the flow and characteristics and contributed no outcome data.