Qeios

Peer Review

Review of: "Integrated Determinants of Persistent Wild Poliovirus Transmission in Pakistan and Afghanistan: The Roles of Cross-Border Mobility, Hard-to-Reach Populations, and Micro-Transmission Hotspots, 2010-2025"

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Dear Qeios Team,

Thanks again for the opportunity to review this preprint—it's a timely piece on the stubborn WPV1 transmission in Pakistan and Afghanistan, and I appreciate the authors' effort to weave together epidemiology, genomics, and program realities.

The review hangs together well as a scoping exercise, faithfully following PRISMA-ScR with a logical flow from cross-border links (that striking 85% genetic overlap) to immunity shortfalls in nomads and IDPs, hotspots like Quetta and Karachi, and the operational headaches everyone knows too well. The tables are effective summaries, especially the one on hotspots, and tying WPV1 persistence to the cVDPV2 headache is spot-on—it's a real strategic bind. Public health recommendations, like border-synced campaigns and routine system boosts, land practically.

A few constructive points to elevate it further:

On methods: It's clear on search terms and databases, but adding specifics on data extraction would make it bulletproof. For instance, mention using a standardized form (e.g., piloted Excel sheet) capturing fields like study design, sample size, key metrics (coverage %, seroprevalence), and bias risks. Kappa stats for reviewer agreement on screening/full-text would be gold—I have seen these in strong polio reviews (e.g.,

GPEI implementation syntheses). A basic quality appraisal, even narrative (e.g., noting surveillance reports' limitations in conflict zones), fits scoping without meta-analysis.

Results could punch harder with trends: Beyond tables, a simple line graph of OPV3 coverage vs. case counts (2010-2025) in core districts, or bar charts of seroprevalence drops in high-risk groups, would visualize the gaps. Pull in modeling nuggets—like Kalkowska et al.'s projections showing proactive SIAs could end transmission by 2022-23 if immunity hits die-out thresholds, but reactive ones drag it out (with Pakistan-Afghan specifics). Latest WHO data (28 WPV1 cases through Sep 2025: 4 Afghan, 24 Pakistani) could update the intro for freshness.

Minor nits: Table 1 caption mismatch (OPV2 vs. nOPV2 but lists mOPV2/tOPV); consistent date formats; ensure all 52 refs are post-2010 as screened.

This is strong work that sharpens focus for the endgame—no ethical issues or fatal flaws.

Recommendation: Accept with minor revisions. Polish those details, and it's publication-ready.

Best Regards,

Dr. Mohammad Yousuf Mubarak

Declarations