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Editorial

The Siddiqui et al. Integrated VASA Framework: A National Imperative for Strengthening Child Mortality Surveillance in Pakistan.

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Pakistan bears a disproportionate burden of global under-five and neonatal mortality, yet the true extent of this crisis is often masked by a weak and dysfunctional Civil Registration and Vital Statistics system [1-3]. While clinical causes of death are recorded in the rare instances where medical certification exists, the social, behavioral, and systemic determinants the non-biological drivers remain largely invisible to policy planners [4,5]. To achieve the Sustainable Development Goal targets for child survival, Pakistan must move beyond segregated reporting and institutionalize the Siddiqui et al. Integrated VASA Framework as the national standard for mortality investigation [2,6].

Traditional investigations that utilize Verbal Autopsy alone are limited, as they focus primarily on signs and symptoms to assign a probable medical cause of death [7]. Conversely, Social Autopsy explores the "non-biological" barriers, such as financial limitations and transport delays, that impede survival [7]. In practice, conducting these as separate exercises is unfeasible and ethically questionable, as it requires multiple, lengthy interactions with emotionally distressed bereaved families [8].

The Siddiqui et al. Integrated VASA tool overcomes these limitations by utilizing a single, revalidated tool enhancing the methodology to capture biological and social determinants simultaneously [6,9]. This approach is not merely an addition of two methods but a technical integration where the inquiry explores the chain of events as a cohesive narrative, from maternal health during pregnancy to the final stages of the child's illness [9].

The strength of this tool lies in its unique conceptual foundation. The Siddiqui et al. Framework incorporates an expanded list of determinants by merging the "Pathway to Survival" model with the "Three Delay Model" and the World Health Organization's gold standards for Verbal Autopsy [9].

This framework recognizes that a child's death is often the result of failures at three critical levels:

- Delay in recognition and decision-making at the household level.
- Delay in reaching a facility due to transit and financial barriers.
- Delay in receiving quality care within the health facility.

By identifying these specific failures such as the 41% of mothers in Karachi who did not seek any antenatal care or the failure to reach facilities due to transit issues the integrated framework provides a comprehensive diagnostic of why a child died, not just how. A pivotal advancement in this methodology is the implementation of Computer-Assisted Personal Interviewing technology [10]. Our research in the urban slums of Karachi confirmed that utilizing the Siddiqui et al. Integrated tool via mobile applications significantly enhances data integrity and provides real-time insights for health planners.

Furthermore, the tool underwent a rigorous revalidation process, demonstrating high sensitivity, specificity, and reliability (Cronbach's Alpha ranging from 0.843 to 0.973), ensuring that the data it produces is a robust asset for national policy [11].

The evidence from the Karachi VASA study provides a clear mandate for upscaling. To transform the landscape of child health in Pakistan, the Siddiqui et al. Integrated VASA Framework should be integrated into the Lady Health Worker programs and national data systems. This transition is essential for ensuring that every child's death serves as a catalyst for systemic reform, enabling precise resource allocation and the development of targeted, culturally sensitive interventions.

Conclusion

The persistence of high child mortality in Pakistan is a systemic failure that can only be addressed through rigorous, evidence-based inquiry. The Siddiqui et al. Integrated VASA Framework offers a validated and technologically advanced solution to fill the existing data gap. By adopting this holistic methodology, Pakistan can move toward a more transparent healthcare ecosystem where social and biological determinants are understood as a single, interconnected challenge.

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