Evaluating the Primary Health Care implementation strategy in Brazil and its effects on child mortality

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Introduction: There is ample evidence describing the association between primary health care (PHC) and maternal and child health (MCH) outcomes. However, this addresses predominantly single components or selective PHC packages. Understanding what a comprehensive PHC intervention such as the Brazilian Family Health Strategy (FHS) consists of and how its components are correlated is essential to assess its impact and accurately support its implementation. Objective: PHC is a complex intervention. To contribute to developing a comprehensive PHC model, we aim to capture the relationship between its components and identify the pathways through which it impacts child mortality. Methodology: We used a mixed methodology approach: qualitative methods to review Brazilian legislation and scientific literature on PHC and MCH; in-depth review of the PHC Access and Quality Improvement Programme (PMAQ-AB) survey to identify questions relevant to MCH-related services. The selected questions were used to define indicators, and these were combined through different statistical approaches (Latent Class Analysis and Confirmatory Factor Analysis) to create PHC components. Results: An encounter between Donabedian’s triad of structure-process-result and the PHC Performance Improvement framework resulted in a complex theoretical model, including Building Blocks influencing Clusters of MCH services, which, in turn, affect child mortality rates. The final model consisted of four PHC Building Blocks (Planning and Organization, Facility Infrastructure, General Supplies, and Referral and Regulation) affecting three PHC Clusters of Services (Antenatal Care, Child Care, and Immunization), which directly or indirectly influence child mortality. The effect of Antenatal Care (ANC) quality is modeled as being mediated by an adequate number of ANC visits, as well as birth-weight. In our model, child birth-weight and mother’s education directly affect the outcome. Conclusions: The combination of qualitative and quantitative approaches was relevant to identifying and measuring the complexity of this comprehensive PHC model. Additionally, we identified a list of indicators and created seven main PHC components that affect a group of PHC-sensitive causes of death in childhood. These findings can support the implementation of PHC interventions focusing on reducing child mortality. However, given PHC complexity, it is necessary to continue exploring methodological approaches to measure the components and their relationships.