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Post-Flood Disaster Impact of Perinatal Health Care Coverage on Birth Outcomes in the Rainforest Interior of Suriname

L F Soares¹, ED van Eer², B Jubitana², AR Gokoel³, ML Lichtveld¹, CWR Zijlmans^{1,3}

¹Tulane University School of Public Health and Tropical Medicine, Global Environmental Sciences Department, New Orleans, USA

²Medical Mission Primary Health Care Suriname, Suriname

³Scientific Research Center Suriname / Academic Hospital Paramaribo, Paramaribo, Suriname

Email: lsoares@tulane.edu

Abstract

Objective: To determine potential differences in the coverage of perinatal care provided by the Medical Mission Primary Health Care Suriname's (MM) for the indigenous population in the tropical rainforest interior of Suriname following the May 2006 flood disaster, and the impact on birth outcomes.

Design and Methods: MM perinatal health database was used, comparing 1,419 infants born two years post-flood to 1,474 infants born two years pre-flood. For areas not affected by the flood within the MM service area, 896 additional post-flood births were compared to 907 pre-flood births. Binary variables measured included coverage of at least four antenatal care (ANC) visits, skilled birth attendant (SBA) at delivery, neonatal data (ND) regarding the condition of the child at four weeks, and prevalence of low birth weight (LBW), preterm birth (PTB), low 5 minute interval Apgar score (1-6), stillbirth (SB), and neonatal mortality (NM).

Results: There were statistically significant increases in ANC coverage (74.1% to 79.5%, $p=0.001$) and SBA (77.0% to 84.1%, $p<0.001$) in the post disaster period. In unaffected areas there was decrease in ANC coverage (68.0% to 62.9%, $p=0.026$), and no significant change in SBA coverage (83.0% to 80.0%, $p=0.234$). There were no significant changes in poor birth outcome prevalence in both affected and non-affected areas.

Conclusion: In the aftermath of severe flooding in the interior of Suriname that affected 60% of the indigenous population, MM coverage of perinatal health care remained high and in some regions improved. These changes did not impact poor birth outcome prevalence.