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REDUCING NEONATAL MORTALITY IN ABS GENERAL HOSPITAL, YEMEN.

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Abstract

Background and objectives: Since 2015, MSF OCBA has supported Abs General Hospital (AGH) with an 88-bed capacity neonatal ward. In the recent years, annual admissions in the service escalated to an average of 3000 but with persistently high inpatient neonatal mortality rates, usually above 20%. Main causes of mortality in 2022 were prematurity (45%), perinatal asphyxia (21%) and sepsis (20%). To tackle this problem we performed an initial mortality analysis and used it to develop a workplan, which was then implemented during March – April 2023. The plan focused on improving compliance with zero-separation practices and adherence to neonatal care protocols and on reducing nosocomial infection. Specific activities, among many, included ensuring enough space for mothers to stay with their newborns in the ward and implementing a breastfeeding group with weekly meetings. Here we present our assessment of whether and how these measures may have affected neonatal mortality.

Methods: Inpatient mortality rates of pre- and post-implementation period were compared from aggregated monthly data in MSF´s Health Management Information System (HMIS). We conducted analysis stratified by year and by predefined periods – pre-implementation periods: January to August 22 and September 22 to February 23 (reference period) and post-implementation period: May to December 23. Mortality rate ratios (MRR) were calculated using negative binomial regression adjusted for month of admission.

Results: 1050 neonatal deaths and 5733 exits were included in the analysis period. Our data showed a 24% decrease in overall neonatal mortality (MRR = 0.76, 95%CI 0.60-0.95, p=0.02) during the post-implementation period compared to the reference period, with the reduction affecting all three main causes of mortality equally (prematurity accounted for 46% of all deaths post-implementation, sepsis 21%, and perinatal asphyxia 20%). A significant decrease in mortality (26%) was seen in 2023 when compared to 2022 (MRR = 0.74, 95%CI 0.65-0.85, p<0.05).

Conclusions: Neonatal mortality is usually an important challenge in MSF settings. Here we describe some low-cost strategies that have likely contributed to reducing inpatient mortality. A comprehensive approach to neonatal care with involvement of locally-hired staff seems essential for good outcomes and continuity. This experience provides valuable insights for healthcare professionals working in similar settings.

Ethics statement

This study: Fulfils the exemption criteria set by the MSF ERB and was approved for submission by the OCBA Medical Director.