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Assessing the Association between Water, Sanitation, and Hygiene in Health Facilities and Maternal Sepsis in Ghana's Brong-Ahafo Region: A Cross-Sectional Survey

A, m, a, S, e, r, w, a, a, M, e, n, s, a, h, ,, E, f, u, a, A, d, o, m, a, k, o, ,, M, a,
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| Abstract

Maternal sepsis is a leading cause of mortality and morbidity in sub-Saharan Africa. Inadequate water, sanitation, and hygiene (WASH) conditions in healthcare facilities are a recognised risk factor for infections, but direct evidence linking facility-level WASH to maternal sepsis in low-resource settings remains limited. This study aimed to assess the association between the availability of basic WASH services in health facilities and the incidence of maternal sepsis among women delivering in those facilities in Ghana's Brong-Ahafo Region. A cross-sectional survey was conducted across a representative sample of health facilities providing maternity services. Data were collected via structured facility audits to assess WASH infrastructure and a retrospective review of clinical records to identify post-delivery maternal sepsis cases. Logistic regression analysis was used to examine the association. Facilities lacking basic water services had 2.3 times higher odds of reporting maternal sepsis cases compared to those with basic services. Only 35% of facilities met the criteria for basic hygiene, defined by the availability of handwashing stations with soap and water at key points of care. Deficiencies in WASH infrastructure within health facilities are significantly associated with a higher incidence of maternal sepsis. Improving WASH conditions is a critical component of strategies to reduce maternal infections. Prioritise investments to ensure all maternity facilities have continuous access to basic water, sanitation,

and hygiene services. Implement regular WASH monitoring and reinforce staff training on infection prevention and control protocols. Maternal sepsis, Water sanitation and hygiene (WASH), Healthcare-associated infection, Health facilities, Ghana, Cross-sectional study This research provides empirical evidence from a Ghanaian context on the link between facility WASH and maternal health outcomes, supporting the integration of WASH standards into maternal healthcare quality improvement initiatives.
