ABSTRACT

Characteristics of Pregnant Women Identified as Near-miss and Factors Related to Maternal Deaths in Saint Lucia: A Review of Case Records

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This study investigated factors related to maternal deaths and near-miss in St. Lucia, utilizing an adapted conceptual framework from Thaddeus and Maine, the Maternal Morbidity Measurement and the WHO Near-miss Conceptual Frameworks. It included all maternal deaths from 2006-2015 (n=23), along with near-miss (n=111) and potential near-miss (n=121) from 2011 to 2015. Uncomplicated pregnancies for the year 2015 were used for comparison. Data was captured on standard WHO questionnaires and analyzed using Chi square, ANOVA, T-tests and Logistic Regression. 47.8% of maternal deaths were misclassified and were not documented as maternal deaths within the national maternal mortality database. The main causes for misclassification were lack of pregnancy information on death certificates and coding errors. Most misclassified deaths occurred at home or non-maternity hospital units; were postpartum, in early pregnancy or died undelivered. Advanced maternal age and being unemployed, were significantly associated with mortality, $p<0.05$. Direct maternal deaths predominated, 65%. Embolic events, hypertensive pregnancy disorders, postpartum haemorrhage (PPH) and ectopic pregnancy, were the main causes of maternal deaths. The main causes of near-miss were hypertensive disorders of pregnancy, PPH and ectopic pregnancies. Cesarean section was 3 times as likely and preterm births, 6 times as likely for pregnancies with Severe Maternal Outcomes ($p<0.001$). Newborn outcomes were best for uncomplicated pregnancies and worsened as the severity of maternal complications increased ($p<0.001$). The Type 1 outperformed the Type 2 hospital on antibiotic prophylaxis for near-miss cesareans, $p=0.0047$. Recommendations included broadening the source of maternal death data to include mortuary records, non-obstetric hospital wards, hospital death registers, along with the Registry and Ministry of Health. Practitioners should be educated on coding for maternal deaths. Near-miss surveillance should be implemented, and greater education is needed for reproductive aged women, on warning signs in pregnancy.

Keywords: maternal deaths; maternal mortality; near-miss; nearmiss; Saint Lucia; Merlene Fredericks James.