Title: Factors Contributing to Maternal Mortality at the Phebe Hospital from 2013 to 2017

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What problem was addressed: High maternal death in Liberia continues to pose a major challenge to our health system despite numerous interventions by the Government of Liberia at all levels aimed at reducing maternal deaths. A rough data review of maternal death at the Phebe Hospital from 2013 to 2016 showed no significant downward trend in maternal death. This study was done to identify factors contributing to maternal death at Phebe Hospital and suggest recommendations for its improvement.

What was done: A four year retrospective review of maternal death occurring at the Phebe Hospital from the period 2013 to 2017 using hospital records (maternal death charts) was proposed. From maternal death charts, presenting complaints, treatment course, and cause of death must be analyzed and recorded. Also, a prospective hospital maternal audit team comprising of key stakeholders (Nursing Director, Head of Obstetrics Ward, Head of Labor Room, and I) was established to carry out current maternal death audits during the study period June to December 2017. The audit was done based on the standard Liberian Ministry of Health audit form which considers the following factors; age, Antenatal visit, parity, gravidity, risk factors, mode of transportation, use of partograph, time to receive treatment from time of arrival, time of doctors intervention, among others.

Results: Maternal death charts from 2013 to 2016 at the Phebe Hospital could not be found for review and analysis due to flooding in the basement in which these charts have been kept, thereby impeding the retrospective study as proposed. As a result, no conclusion could be made as to the actual contributing factors to death as well as the quality of care.

A prospective 2017 maternal death audit showed a total of eleven (11) maternal deaths.

Of the eleven deaths, four were of indirect causes (36.4%), while seven were of direct causes (63.6%).

Of the seven direct causes; two resulted from Severe Eclampsia, two from post-partum hemorrhage one from ruptured uterus, one post-surgical complication following C-section from retained second twin (infection) and one from severe anemia in term pregnancy.

The audit considered all seven of these cases to be avoidable with appropriate clinical measures.

Among the indirect causes, two resulted from acute respiratory tract infection, one from an unknown drug reaction and one from chronic infection in pregnancy. The audit again considered all four of these cases to be avoidable with use of appropriate clinical measures.

The main delays observed in the audit were, delay in accessing and receiving care.

Challenges: The greatest challenge faced was the difficulty in retrieving maternal death charts during the period under review, 2013 to 2016. With the absence of such record, no substantial evidence could be generated from this period to identify factors contributing to maternal death at

the Phebe Hospital. The audit of prospective cases provided some clues to the actual causes of maternal death and necessary preventive measures to institute.

Improvements Implemented:

1. Improvement in the hospital record keeping system (complete separation of maternal death charts from others and better filing system, in preparation to computerized one).
2. Strengthening “Hospital Maternal Audit Committee” to audit all death in the shortest possible time.
3. Appointing a separate Labor Room Head (a midwife) whose function is a direct supervisor of the labor ward, making sure midwives are properly supervised and all labor ward approved protocols are followed.
4. A clerk has also been assigned to the OB/GYN ward to assist with additional record keeping.

What was learned: The high percentage of avoidable death highlights the need for strategic training programs to be started to reduce maternal deaths including timely clinical measures (use of magnesium sulfate, prevention and care of post-partum hemorrhage, use and action based on partograph, and access to hysterectomy when needed for direct causes). There is also a need to conduct a community-based assessment to further determine causes contributing to the delay in accessing health care.