

Evaluation of an intervention package to reduce adverse pregnancy outcomes in low resource settings (The EmONC Trial of the Global Network)

Department: Community Health Sciences

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Background:

Fetal and neonatal mortality rates in low-income countries are at least 10-fold greater than in high-income countries. These differences have been related to poor access to and poor quality of obstetric and neonatal care.

Methods:

This trial tested the hypothesis that teams of health care providers, administrators and local residents can address the problem of limited access to quality obstetric and neonatal care and lead to a reduction in perinatal mortality in intervention compared to control locations. In seven research sites in five low-income and one middle-income country, we performed a cluster randomized trial of a package of interventions that included community mobilization focusing on birth planning and hospital transport, community birth attendant training in problem recognition, and facility staff training in the management of obstetric and neonatal emergencies. The primary outcome was perinatal mortality at ≥ 28 weeks gestation.

Results:

Despite extensive effort in all sites in each of the three intervention areas, no differences emerged in the primary or any secondary outcome between the intervention and control clusters. In both groups, the mean perinatal mortality was 40.1/1,000 births ($P = 0.9996$). Neither were there differences between the two groups in outcomes in the last six months of the project, in the year following intervention cessation, nor in the clusters that best implemented the intervention.

Conclusions:

This cluster randomized comprehensive, large-scale, multi-sector intervention did not result in detectable impact on the proposed outcomes. While this does not negate the importance of these interventions, we expect that achieving improvement in pregnancy outcomes in these settings will require substantially more obstetric and neonatal care infrastructure than was available at the sites during this trial, and without them provider training and community mobilization will not be sufficient. Our results highlight the critical importance of evaluating outcomes in randomized trials, as interventions that should be effective may not be. (306 words)