Impact of PRONTO Training in Emergency Obstetric and Newborn Care on 24 Hour Neonatal Mortality

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Background

◆ In Kenya, neonatal mortality accounts for 60% of infant mortality(I).
♂ One third of these deaths are intra-partum complications due to birth asphyxia
♂ Enhancing the capacity of health facilities to provide routine and emergency obstetric and neonatal care (EmONC) can prevent birth asphyxias.
◆ The USAID Global Health Initiative (GHI) Kenya strategy 2011-2014 emphasized on improvement of Maternal Newborn and Child Health (MNCH) outcomes by accelerating support for Human Resources for Health, particularly health facility providers(II)
◆ PRONTO developed a simulation and team training program for low-resource settings to address the major barriers to provision of sustainable quality EmONC.

Study goal and objective

◆ The overall goal was to evaluate the effectiveness of PRONTO simulation and team training in EmONC in Kisii a rural Kenyan setting.
◆ Primary objective was to determine the impact of PRONTO training on 24 hour neonatal mortality in health facilities.

Methods

◆ A cluster randomized trial design
◆ Hypothesis : PRONTO training will improve 24 hour neonatal mortality.
◆ Participating health facilities randomized into two arms: PRONTO training and standard of care.
◆ Intervention effect : difference in change of 24 hour NMR from baseline to 18 months between matched intervention and control clinics.

RESULTS

Baseline IR/1000 live births | Post-intervention IR/1000 live births
---|---
Neonatal mortality | | |
Intervened | Control | p-value | Intervened | Control |
IR (95%CI) | IR (95%CI) | | IR (95%CI) | IR (95%CI) |
7.75 | 4.34 - 12.79 | 12.43 | 7.59 - 19.2 | 12.89 | 9.79 - 16.66 | 0.169 | 19.92 | 15.72 - 24.89 | 0.012 |
Perinatal mortality | | |
12.95 | 8.9 - 18.72 | 16.27 | 10.9 - 23.37 | 15.89 | 12.67 - 19.89 | 0.392 | 23.54 | 19.18 - 28.61 | 0.009 |

CONCLUSION

- Marked reduction in neonatal and perinatal mortality in intervention clinics post-PRONTO training was demonstrated
- We have disseminated results to Ministry of Health and a task force constituted that is working on incorporating simulation in EmONC package for delivering the training

Literature cited


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Mortality Outcomes

- 170 neonatal deaths, 68 fresh still-births and 4 maternal deaths during study period
- No difference in neonatal and perinatal mortality comparison at baseline
- Marked reduction in neonatal and perinatal mortality in intervention clinics post-PRONTO training