

Effect of Newborn Resuscitation Training on Health Worker Practices in Pumwani Hospital, Kenya.

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Abstract

Background Birth asphyxia kills 0.7 to 1.6 million newborns a year globally with 99% of deaths in developing countries. Effective newborn resuscitation could reduce this burden of disease but the training of health-care providers in low income settings is often outdated. Our aim was to determine if a simple one day newborn resuscitation training (NRT) alters health worker resuscitation practices in a public hospital setting in Kenya. Methods/principal findings: We conducted a randomized, controlled trial with health workers receiving early training with NRT (n = 28) or late training (the control group, n = 55). The training was adapted locally from the approach of the UK Resuscitation Council. The primary outcome was the proportion of appropriate initial resuscitation steps with the frequency of inappropriate practices as a secondary outcome. Data were collected on 97 and 115 resuscitation episodes over 7 weeks after early training in the intervention and control groups respectively. Trained providers demonstrated a higher proportion of adequate initial resuscitation steps compared to the control group (trained 66% vs control 27%; risk ratio 2.45, [95% CI 1.75-3.42], $p < 0.001$, adjusted for clustering). In addition, there was a statistically significant reduction in the frequency of inappropriate and potentially harmful practices per resuscitation in the trained group (trained 0.53 vs control 0.92; mean difference 0.40, [95% CI 0.13-0.66], $p = 0.004$). Conclusions/significance: Implementation of a simple, one day newborn resuscitation training can be followed immediately by significant improvement in health workers' practices. However, evidence of the effects on long term performance or clinical outcomes can only be established by larger cluster randomised trials.