

Innovative Training of a Multidisciplinary Team for Newborn Resuscitation

P Ramesh Menon¹, Vijin V¹, Prasad KN¹

Introduction

Millennium Development Goal 4 (MDG4) is a global target for reducing Under 5 mortality rate (U5MR) by two thirds (United Nations, 2000). Though Kerala has the lowest Perinatal Mortality rate in India, it contributes to a large proportion of the "unconquered" U5MR" (AIIMS, n.d.). Training of health care providers involved in newborn survival will help reduce neonatal mortality rate (NMR). Knowledge and skills for newborn resuscitation are different among nursing and medical staff and students, in the institution. Effective health care involves a multi-layered workforce working cohesively as a team rather than as individuals acting in a disconnected manner. Doctors, nurses, allied health professionals should, therefore, acquire, even during their training, the skills of working together in community or hospital settings (Baker *et al.*, 2005; ANI, 2012). The role of effective teamwork in accomplishing complex tasks is well accepted in many domains. Similarly, there is some evidence that outcomes in health care may depend on effective team performance.

Objectives

To improve knowledge and skill levels in nursing and medical staff and students in neonatal resuscitation programme (NRP).

Methodology

Five separate heterogeneous groups were selected (n=33 volunteers). Each team (members ≥ 6) comprised nursing and medical students, staff nurses and doctors (interns and resident trainees). No participant had exposure to NRP training in the past 3 months.

During the sessions, team building activities and mock sessions of resuscitation "as it happens" were done. They were sequentially (1 team/ month from May - Sep 2011) given training in the programme module of Navjaat

Sishu Suraksha Karyakram (© IAP and GOI; Newborn safe survival programme - NCHRC, n.d.) It included an abridged 3.5 hour session including a) video demonstration (resuscitation of term /preterm /meconium stained baby), b) interactive session followed by c) hands on experience as a team. Knowledge of participants and skill of teams were assessed using a pre-test validated questionnaire (18 items) and checklist (5 headings) respectively. The improvement in knowledge and team skill was assessed using a post test. Ethics clearance was obtained.

Results

Team characteristics (n=33) – Females (n=25; 75.8%) participants were more (8 male; 24.2%). The gender difference was pre-existent in the population of nursing and medical staff and students. The majority (75.8%) were under 26 years of age. No delivery had been attended in previous year by 78.8%. Majority (88%) had no NRP training in the past. Knowledge score of individual participants increased with an average of 1.79 (points out of 18) {T-test=2.92; P= 0.003 for one-tailed test since all scores increased}. Skill score of teams increased on an average by 96 %. Skill score increased at least by 45.8 points (58%) in post-test. {Wilcoxon rank test = -2.032; P = 0.03 for one-tailed test}. Group I had the highest pretest score and gained the least. The training aimed at imparting only the basic knowledge and skills needed for neonatal resuscitation. The staff nurse (group leader) in Group1 had NRP training in the previous year.

Conclusions

Significant increase in knowledge of individual participants and improvement in resuscitation skill of the team occurs in a heterogeneous team (consisting of medical and nursing staff and students) of health care providers (to a newborn) when given a standardized modular

training on NRP. Given the interdisciplinary nature of the work and the necessity of cooperation among the workers who perform it, it is likely that teamwork plays an important role in ensuring safe survival of newborn babies.

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