Context: High infant mortality rate, lack of medical facilities, and lack of trained health workers are among the health problems besetting Cambodia. In 2004, the Neonatal Resuscitation Skills Training Program was launched. In 2006, this study was conducted to assess the impact of the NR Skills Training Program on the competence of the health workers in terms of their theoretical knowledge and practical skills. It compared the knowledge retention and practical skills of the early and late trainees, and determined whether the NR training course has brought about some changes in the birthing practices of the health care professionals of Cambodia.

Results: The neonatal resuscitation theoretical knowledge of the trainees before the training was very low, (mean= 43.85). Immediately after the training it has significantly improved (mean= 85.16). After the lapse of time, their theoretical knowledge have deteriorated to below average (mean = 58.78). Theoretical knowledge retention of medical doctors (79.44), medical assistants (69.0), and nurses (68.12) were higher than the midwives (57.68). Difference between the pre-test and post-test scores was significant with p-value = 0.00 (one-tailed). The difference between the post-test and post-course follow-up scores was significant with p=0.00 (one-tailed). Late trainees have higher theoretical knowledge retention (62.48) compared to the early trainees (56.12). The difference between their knowledge retention was significant at p=0.01.

The practical skills of the trainees were below average (mean=70.45). Medical doctors (77.55) and nurses (73.0) have higher practical skills than medical assistants (64.8) and midwives (70.45). There was no significant difference between the practical skills of early (71.23) and late (69.39) trainees (p-value = 0.201). The practical skills of trainees with experience using the bag and mask after the training and those who have not tried using it do not differ (p-value =0.180). There was only a slight relationship between the theoretical knowledge and practical skills of the trainees (r = 0.429 with p=0.00).

Almost all health facilities in Cambodia have inadequate neonatal resuscitation equipment and supplies. The bag and mask was very effective device in helping distressed babies. The neonatal resuscitation skills training has provided the trainees with new knowledge and skills that changed their old birthing practices. There were areas of the course that need to be reviewed in order to strengthen the theoretical knowledge of the trainees. There were gaps in the practical skills of the trainees which need to be improved.
Conclusions: The Neonatal Resuscitation Program has tremendous impact on the knowledge improvement of the health care professionals in Cambodia. However, both theoretical knowledge and practical skills of the trainees deteriorate over time. Their theoretical knowledge was found to decline faster than their practical skills, which means, the retention of psychomotor skills was higher than the retention of theoretical knowledge. The late trainees have higher theoretical knowledge retention compared to the early trainees, but the practical skills of both groups do not differ with the lapse of time. There was only a slight correlation between theoretical knowledge and practical skills of the respondents. The below average competence was attributed to the lack of post-training support and supervision; unavailability of resuscitation manikins and equipment at health facilities; educational level of the midwives; some trained health workers not working in delivery related services; and the preference of pregnant women to be assisted by traditional birth attendants (TBAs) over midwives during delivery.

NR Refresher courses are needed. Neonatal resuscitations should be made compulsory to all health workers directly working in delivery related services including traditional birth attendants. It should be made an integral part of midwifery and LSS training curriculum.

Key Words: Neonatal Resuscitation; Skills training; Health care professionals.