

van de Ven J, van Baaren GJ, Fransen AF, van Runnard Heimeel PJ, Mol BW, Oei SG. Cost-effectiveness of simulation-based team training in obstetric emergencies (TOSTI study). [Eur J Obstet Gynecol Reprod Biol.](#)

INTRODUCTION: Multi-professional team training is frequently applied in obstetrics. We aimed to evaluate the cost-effectiveness of obstetric multi-professional team training in a medical simulation center.

MATERIAL AND METHODS: We performed a model-based cost-effectiveness analysis to evaluate four strategies for obstetric team training from a hospital perspective (no training, training without on-site repetition and training with 6 month or 3-6- 9 month repetition). Data were retrieved from the TOSTI study, a randomized controlled trial evaluating team training in a medical simulation center in 24 obstetric units in the Netherlands. We estimated the direct and indirect costs of team training in a medical simulation center with and without on-site repetition training. We then calculated the incremental cost-effectiveness ratio (ICER), which represent the costs to prevent the adverse outcome, here (I) the composite outcome of obstetric complications and (II) specifically neonatal trauma due to shoulder dystocia.

RESULTS: Mean costs of a one-day multi-professional team training in a medical simulation center were €25 546 to train all personnel of one hospital, while on-site, repetition training costed €9035 per half-day. A single training in a medical simulation center was less effective and more costly compared to strategies that included repetition training. Compared to no training, the ICERs to prevent a composite outcome of obstetric complications were €3432 for a single repetition training course on-site six months after the initial training and €5115 for a three monthly repetition training course on-site after the initial training during one year. When we considered neonatal trauma due to shoulder dystocia, a three monthly repetition training course on-site after the initial training had an ICER of €22 878.

CONCLUSIONS: Multi-professional team training in a medical simulation center is cost-effective in a scenario where the repetition training sessions are performed on-site.