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Authors: Ronja Ocker<sup>1</sup>, Elke Mattern<sup>2</sup>, Sabine Striebich<sup>3</sup>, Theresa Oganowski<sup>2</sup>, Rainhild Schäfers<sup>2</sup>, Gregor Seliger<sup>1</sup>, Gertrud M. Ayerle<sup>3</sup>

<sup>1</sup> University Hospital and Polyclinic of Obstetrics, Halle (Saale)

<sup>2</sup> Department of Applied Health Sciences, hsg — University of Applied Sciences, Bochum

<sup>3</sup> Institute of Health and Nursing Science, Martin Luther University Halle-Wittenberg, Halle (Saale)

## **Effects of the birthing room environment on vaginal births and client-centred outcomes in women at term planning a vaginal birth: a multicentre RCT**

### **Background + Objective**

In Germany there are high caesarean section rates compared with other European countries [1]. While in Ethiopia the overall national caesarean section rate is low (2%), in the capital Addis Ababa it is comparatively high (21.4%)[2].

A caesarean section is associated with an increased risk for maternal morbidity and mortality [3]. In order to increase vaginal birth (VB) rates the multicenter RCT “BE-UP” tests the effect of a redesigned birthing room on the probability of VB (primary efficacy endpoint) in 17 hospitals [4]. Theoretically, the trial is based on theories (sociology of technology, symbolic interactionism) and results of international research.

### **Methodology**

Since April 2018, 3,800 pregnant women will be randomized to the intervention group (redesigned birthing room: no central delivery bed but materials and aids to promote mobility and upright maternal posture) or the control group (usual delivery room) in 17 obstetric hospitals in Germany. Inclusion criteria include singleton pregnancy in cephalic position, at least 37 + 0 weeks of gestation and a planned vaginal birth. In both groups, midwives and physicians professionally care for the parturients during their labor and childbirth. During birth, the position and mobility of the laboring woman, obstetric interventions, and obstetric outcomes are documented. Continuous monitoring ensures data quality. Three months postpartum, patient-relevant outcome parameters (secondary outcomes) and health economic data are collected. Following the randomization phase, the job satisfaction of midwives and physicians working in both birthing room models (intervention; control) will be assessed.

In the parity stratifying data analysis, methods of descriptive as well as interference statistics (multivariate regression analyses) are used.

The 3-year trial was submitted to the Federal Ministry of Education and Research (BMBF; project number KS2014-66) competition for research funding titled "Clinical studies with high relevance for patient care" (2016) and recommended for funding.

## **Results**

The primary outcome is the rate of vaginal births. Secondary outcomes include the woman's self-efficacy during childbirth, the rate of medical interventions, maternal and perinatal morbidity, and health status of mother and child 3 months postpartum. The health economic analysis will provide information about the cost-effectiveness ratio.

## **Conclusion**

If the BE-UP trial provides proof of the independent effect of the intervention and, moreover, demonstrates an efficient cost-effectiveness ratio, this intervention has a high potential to be implemented nationwide in the hospitals' obstetric departments at low cost and with little effort. Results on midwives' and physicians' job satisfaction may be the basis for adjustments to workplace design.

## **References:**

1. Macfarlane AJ, Blondel B, Mohangoo AD, Cuttini M, Nijhuis J, Novak Z, et al. Wide differences in mode of delivery within Europe: risk-stratified analyses of aggregated routine data from the Euro-Peristat study. *BJOG : an international journal of obstetrics and gynaecology*. 2016;123(4):559-68.
2. Yisma E, Smithers LG, Lynch JW, Mol BW. Cesarean section in Ethiopia: prevalence and sociodemographic characteristics. *J Matern Fetal Neonatal Med* 2017:1–6. <https://doi.org/10.1080/14767058.2017.1401606> PMID: 29103331
3. American College of Obstetricians and Gynecologists. Safe Prevention of the Primary Cesarean Delivery. *Obstetric Care Consensus* 2014;1:1-19.
4. Ayerle, G.M., et al., Effects of the birthing room environment on vaginal births and client-centred outcomes for women at term planning a vaginal birth: BE-UP, a multicentre randomised controlled trial. *Trials*, 2018. 19(1): p. 641.

## **Keywords:**

clinical trial / redesigned delivery room / changes of the birth environment

Ronja Ocker, University Hospital and Polyclinic of Obstetrics, Halle/Saale,

[ronja.ocker@uk-halle.de](mailto:ronja.ocker@uk-halle.de)

Elke Mattern, Department of Health Sciences, hsg – University of Applied Sciences, Bochum,

[Elke.Mattern@hs-gesundheit.de](mailto:Elke.Mattern@hs-gesundheit.de)

Sabine Striebich, Institute of Health and Nursing Science, Martin Luther University Halle-Wittenberg,

[sabine.striebich@medizin.uni-halle.de](mailto:sabine.striebich@medizin.uni-halle.de)

Theresa Oganowski, Department of Applied Health Sciences, hsg – University of Applied Sciences,  
Bochum

[Theresa.Oganowski@hs-gesundheit.de](mailto:Theresa.Oganowski@hs-gesundheit.de)

Rainhild Schaefers, Department of Applied Health Sciences, hsg – University of Applied Sciences,  
Bochum

[Rainhild.Schaefers@hs-gesundheit.de](mailto:Rainhild.Schaefers@hs-gesundheit.de)

Gregor Seliger, University Hospital and Polyclinic of Obstetrics, Halle/Saale

[gregor.seliger@uk-halle.de](mailto:gregor.seliger@uk-halle.de)

Gertrud M. Ayerle, Institute of Health and Nursing Science, Martin Luther University Halle-  
Wittenberg, Halle/Saale

[gertrud.ayerle@medizin.uni-halle.de](mailto:gertrud.ayerle@medizin.uni-halle.de)