

E02

## Normal birth rates before and after the merging of maternity wards in Iceland A retrospective cohort study on the short- and long-term impact of inter-professional preventative measures

IS: Tíðni eðlilegra fæðinga fyrir og eftir sameiningu íslenskra fæðingardeilda:  
Afturvirk ferilrannsókn á skammtíma- og langtímaáhrifum þverfræðilegra fyrirbyggjandi aðgerða

Ragnhildur Anna Ólafsdóttir, RN, RM, MSc, Midwife<sup>1</sup>, Sigurveig Ósk Pálsdóttir, RN, RM, MSc, Midwife<sup>1</sup>, Ólöf Ásta Ólafsdóttir, RN, RM, PhD, Professor emerita<sup>2</sup>, Emma Marie Swift, RM, PhD, Associate Professor<sup>2,3</sup>, **Berglind Hálfhánsdóttir**, RN, RM, PhD, Associate Professor<sup>2</sup>

<sup>1</sup> National University Hospital of Iceland

<sup>2</sup> Faculty of Nursing and Midwifery, School of Health Sciences, University of Iceland

<sup>3</sup> Reykjavik Birth Center

**Introduction:** In 2014 the National University Hospital of Iceland (NUHI) merged its mixed-risk Labor and Delivery unit with a low-risk midwifery-led unit for healthy women. Inter-professional preventative countermeasures were implemented since there was a known threat of cultural contamination between the high-risk and normal birth environments. The aim of the study was to assess whether the hospital's goal of protecting normal birth rates had been achieved in the short- and long-term, and to support further development of labor services.

**Methods:** A retrospective cohort study of all women who had singleton births at NUHI labor and delivery units in three 2-year periods, before and after the unit merger, in the years 2012-2013, 2015-2016, and 2018-2019. The primary outcome, normal birth rates, was adjusted for confounding variables using logistic regression analysis. Other outcome variables were analyzed using descriptive statistics, t-test and Chi-square test.

**Results:** The rate of normal births, both with and without artificial rupture of membranes, increased significantly in 2015-2016, after the unit merger and accompanying countermeasures. The rate of individual obstetric interventions decreased significantly, except for induction rates, which increased significantly. Normal birth rates were either maintained or increased 2018-2019. The rates of epidurals and episiotomies had nevertheless started to increase.

**Conclusions:** Although healthy women still benefit from low-risk birth settings, it is possible to increase the rates of normal birth for all women within a mixed-risk hospital setting by implementing targeted countermeasures. However, it is necessary to maintain awareness of the possible effects of a high-risk environment on normal births.

**Keywords:** Normal birth, interdisciplinary birth units, birth outcomes, midwifery.