

# STAN, a clinical audit: the outcome of 2 years of regular use in the city of Varberg, Sweden.

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Welin AK, Norén H, Odeback A, Andersson M, Andersson G, Rosén KG.

Department of Obstetrics and Gynaecology, Varberg Hospital, Varberg, Sweden.  
[anna-karin.welin@telia.com](mailto:anna-karin.welin@telia.com)

**OBJECTIVE:** To monitor and analyze (audit) the introduction of the STAN methodology in a district hospital.

**DESIGN:** Retrospective study covering the total population of deliveries at term during 2004 and 2005.

**MATERIAL AND METHODS:** 1,875 out of 3,193 term pregnancies (59%) were monitored using the STAN fetal heart monitor (Neoventa Medical, Moelndal, Sweden) and the associated clinical guidelines. Cord metabolic acidosis, neonatal outcome, and rates of operative deliveries for fetal distress were recorded.

**RESULTS:** The overall cesarean section rate was significantly reduced in the STAN group. Emergency (crash) cesarean sections were significantly reduced from 1.51% to 0.27% in the cardiotocography- and STAN-monitored groups, respectively (OR 0.18, 95% CI 0.07-0.49). When cesarean section was performed only because of non-reassuring cardiotocography, cord acid base was significantly higher, 7.26 versus 7.19 ( $p < 0.01$ ), as compared to when STAN guidelines were followed. Total population rates for operative deliveries for fetal distress and cesarean section rates were 6.7% and 3.5% respectively. The corresponding metabolic acidosis rate was 0.5%.

**CONCLUSION:** High STAN usage in a busy labor ward setting provided an outcome equaling that noted previously in a larger academic unit, demonstrating the safe implementation of the STAN methodology in a nonacademic unit.