

# Implementation of new intra partum fetal monitoring in a Danish Hospital: Impact on the rate of operative delivery and neonatal outcome

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**Background:** Several randomized controlled trials (RCT) have reported a decrease of operative delivery rate along with a decrease of intra partum fetal asphyxia with the use of intra partum cardiotocography (CTG) in combination with automatic analysis of the fetal ECG (STAN). The method was implemented in October 2004 at Rigshospitalet, University Hospital of Copenhagen.

**Methods:** Data from all deliveries with a gestational age of 36 completed weeks or more and a fetus in cephalic presentation were included. The rates of operative delivery and umbilical cord pH were studied from 2005- 2007 and compared with rates before the introduction of the method.

**Results:** Between 2005-2007 the number of deliveries increased from 2633/year to 3129/year. Use of STAN for fetal monitoring during labour increased from 22.3% in 2005 to 42.9% in 2007. During the described period, a 22% decrease was observed in the total rate of emergency caesarean section in the studied population. Operative delivery with vacuum extraction for fetal distress decreased by 6%. A 16% decrease of umbilical artery pH < 7.05 was observed during the same period despite a decrease in the use of scalp sampling.

**Conclusion:** Our results confirm that use of STAN for fetal monitoring during labour, reduces the rate of acute caesarean section without increasing the risk for intrapartum asphyxia.