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Poster Abstract

Evaluation of an adverse outcome index for the quality of obstetric care delivered by multidisciplinary care chains

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Abstract:

Introduction: Over the last few years obstetric professionals in primary, secondary, and tertiary care in the Netherlands have been encouraged by health authorities and insurers to build partnerships, to improve the medical outcomes of perinatal care. To establish the effects of these efforts, functional rather than professional outcome measures are required, covering performance of the entire perinatal care chain. We evaluated the feasibility of the Adverse Outcome Index (AOI), developed by Mann et al [1], to evaluate medical outcomes of three obstetric care chains, including primary, secondary and tertiary caregivers and hospitals, in the Netherlands. We investigated in particular if AOI scores could be calculated based on data currently collected in routine obstetric care. This measure focusses on intrapartum care, where serious adverse events result from insufficient teamwork and communication barriers across obstetric professionals.

Theory and Methods: The AOI is defined as the percentage of deliveries with one or more of ten specified adverse events affecting both mother and child. These adverse events are: maternal death, intrapartum or neonatal death >2500g, uterine rupture, maternal ICU admission, return to OR, birth trauma, admission to NICU >2500g, Apgar <7 at five minutes, blood transfusion, and 3th and 4th degree perineal tears. The AOI thus includes items with different clinical importance; therefore a Weighted Adverse Outcome Score (WAOS) has been developed which we used as a secondary measure. We collected data on >26.000 singleton deliveries between 2009 and 2011 under care of practitioners from 18 independent midwifery practices, 3 university hospitals and 1 general hospital. Data were obtained from electronic patient records. Deliveries before the 32th week and of children with severe congenital anomalies were excluded. Two modifications were

made to the AOI to adapt it to the Dutch context: we used severe post-partum hemorrhage instead of blood transfusion, and NICU admission after 37 weeks instead of NICU admission >2500g.

Results: The average AOI was 9% (range: 7%-12%) and the average WAOS was 3,6 (range: 2,7-4,9). The outcomes contributing most to the AOI of the study population were: severe post-partum hemorrhage (3,5%), NICU admission (2,1%), 3th and 4th degree perineal tears (1,9%), and low Apgar scores (1,6%).

Conclusion: AOI scores can be calculated from data currently collected in routine obstetric care. AOI scores may be promising measures to evaluate the medical outcomes of intrapartum care delivered by multidisciplinary obstetric care chains in the Netherlands. To compare AOI scores between obstetric care chains, differences in quality of data registration need to be properly addressed.

Keywords

outcome measures, multidisciplinary care chains, intrapartum care

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References

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Presentation available at http://www.integratedcarefoundation.org/content/guided-poster-walks-2