Preterm Birth Rate at 6 Centres for Perinatal Medicine in Baden-Württemberg – Potential to Reduce Prematurity

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Background The Federal Joint Committee of Germany defined structural and staff requirements for the care of preterm and term infants as a proxy measure for quality. Neonatal outcome has been evaluated as a quality marker for a long time. While Germany has one of the highest preterm birth rates in Europe, no data exist on centre-specific preterm birth rates.

Methods Over 2 years, all pregnant women admitted to 6 centres for perinatal medicine in Baden-Württemberg at a gestational age between 22 + 0 and 31 + 6 weeks were eligible (n = 2972). Preterm birth rate before 32 wks of gestation was evaluated if at least one of the following secondary inclusion criteria was present within 24 hrs after admission: 1) premature rupture of membranes, 2) cervical length less than 25 mm, or 3) more than 3 contractions of at least 30-sec duration within a 30-min period. Neonatal outcome could be documented for 70.6 % of infants.

Results Of the women who met at least one secondary inclusion criterion (n = 1325), 21.1 % (n = 279) delivered 344 preterm infants before 32 weeks. The preterm birth rate was between 16.8 % and 27.9 % (11.1 % difference). If the centre with the lowest preterm birth rate is the reference univariate, multiple logistic regressions showed significantly twice as high preterm birth rate for two of the remaining five centres. Premature rupture of membranes was the strongest predictor for preterm delivery (OR 56.5: 95 % CI 33.2–96.2). A lower preterm birth rate was not associated with a worse neonatal outcome.

Conclusion Relevant differences between six centres for perinatal medicine could be found for the preterm birth rate in a well-defined population of high-risk pregnancies. This remains true even when adjusted for the defined inclusion criteria. Efforts should be directed towards strategies to reduce the preterm birth rate rather than to increase the minimum limit for preterm births at centres for perinatal medicine in Germany because the latter may act as an erroneous incentive and discount centres successfully preventing preterm birth. We need an official guideline on how to reduce the preterm birth rate. The significant 5 % reduction in the preterm birth rate that is conceivable based on the results of this study (difference 11.1 %) could help to reduce the number of preterm infants by up to 2,400 per year in Germany (about 25 %).

Limitations This is an observational study and the results are descriptive in nature.

Conclusion Preterm birth rate should become a quality indicator for perinatal care. Key takeaways

- The preterm birth rate showed relevant differences in 6 centres for perinatal medicine.
- The preterm birth rate should be recognized as a measure of quality management in prenatal care.
- A reduction of the preterm birth rate has great potential to significantly reduce the number of preterm infants.
- A lower preterm birth rate was not associated with a worse neonatal outcome.
- A guideline on how to prevent preterm births is strongly recommended.