

## Childhood outcomes after induction of labour or expectant management for preterm prelabour rupture of membranes

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### Objective

We previously compared induction of labour (IoL) or expectant management (EM) for preterm prelabour rupture of membranes between 34<sup>+0</sup> and 36<sup>+6</sup> weeks of gestation (late PPRM) and showed no differences in the risk of neonatal sepsis. In this follow-up study we compare long-term effects of these interventions on women's offspring.

### Methods

In this follow-up study of the randomized controlled PPRMEXIL trials we report on singletons complicated by late PPRM and randomised to IoL or EM, at 10-12 years of age (Netherlands Trial Register 6953). Main outcomes were cognition, motor function and behaviour, assessed with respectively the Wechsler Intelligence Scale for Children-V (WISC-V), Movement Assessment Battery for Children-2 (M-ABC) and Child Behaviour Checklist (CBCL). Secondary outcomes were sensory processing, respiratory problems, educational attainment and general health, assessed with parent report questionnaires. Mild delay was defined as -1 standard deviation (SD) or corresponding percentile, severe delay as -2 SD. All analyses were done in complete cases.

### Results

All 711 women and surviving children with a singleton pregnancy who had been randomised were invited for follow-up, of which 248 children (35%) participated (IoL=127, EM=121). Baseline characteristics between groups were comparable, except for smoking during pregnancy and parental education. A mild delay of the WISC-V full scale IQ score was seen in 7/122 (5.7%) children after IoL versus 12/120 (10.0%) after EM (RR 0.57, 95% CI 0.23 to 1.41). A mild delay in M-ABC total score was seen in 42/122 (34.4%) after IoL versus 55/120 (45.8%) after EM (RR 0.75, 95% CI 0.55 to 1.03). The CBCL total problem was mildly abnormal in 37/125 (29.6%) children after IoL vs 33/118 (28.0%) after EM (RR 1.05, 95% CI 0.71 to 1.57). There were also no statistical differences in severe delay for domains assessed. Secondary outcomes were comparable between groups, except for hospital admissions (no hospital admissions in 73/126 (57.9%) children after IoL vs 52/121 (43.7%) children after EM, (RR 1.35, 95% CI 1.05 to 1.74)).

### Conclusion

In women with late PPRM, childhood outcomes in children 10 to 12 years of age did not differ after induction of labour versus expectant management.