**Supplementary Table 1.** Latent Class Growth Mixture models results.

| Nb. Latent classes | Polynomial  degree | Log-Likelihood | BIC | % Participants per class | Mean posterior probabilities | Posterior probabilities > 0.7 (%) |
| --- | --- | --- | --- | --- | --- | --- |
| 2 | Cubic | -610271.8 | −610320.8 | 52.68/47.32 | 0.95/0.95 | 94.22/93.45 |
| 3 | Cubic | -603874.5 | −603948.6 | 27.02/48.25/24.74 | 0.91/0.90/0.92 | 89.02/88.12/89.68 |
| 4 | Cubic | -601561.6 | −601660.4 | 26.93/26.90/22.72/23.44 | 0.91/0.80/0.79/0.91 | 87.31/70.60/68.22/88.35 |
| 5 | Cubic | -599577.5 | −599701.0 | 14.31/30.28/18.43/21.59/15.40 | 0.88/0.82/0.79/0.79/0.90 | 83.65/74.72/67.13/67.70/85.23 |
| 6 | Cubic | -598090.9 | −598239.2 | 7.47/21.88/16.47/19.13/13.41/21.64 | 0.87/0.77/0.78/0.78/0.88/0.79 | 80.68/65.16/66.30/65.70/84.94/67.71 |
| 7 | Cubic | -597391.0 | −597564.0 | 5.52/19.42/17.50/16.11/20.00/8.93/12.49 | 0.86/0.76/0.79/0.77/0.75/0.86/0.75 | 80.92/62.37/68.31/65.75/61.09/80.40/60.00 |

Reported are: the number of latent class considered, the polynomial form of the model, the maximum Log-Likelihood , the Bayesian information Criterion (BIC), and for models with 2 or more classes, the a-posteriori classification of subjects in each class (%), the mean of posterior probabilities in each latent class, and the % of subjects classified in each class with a posterior probability above 0.7.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Supplementary Table 2.** The associations of SBP trajectories with adverse maternal outcomes | | | | | | | | Maternal outcomes | Low-stable | Low delayed-increasing | Low reverse-increasing | Medium reverse-increasing | Medium-stable | High-stable | | Trajectory 4  (n=3893) | Trajectory 1  (n=1521) | Trajectory 2  (n=4454) | Trajectory 3  (n=3352) | Trajectory 5  (n=4404) | Trajectory 6  (n=2729) | | Gestational hypertension (n, %) | 8 (0.53%) | 57 (1.28%) | 205 (6.12%) | 15 (0.39%) | 50 (1.14%) | 357 (13.08%) | | Model 1 | 1.00 (reference) | 1.37 (0.58-3.23) | 3.35 (1.90-5.93) | 16.84 (9.95-28.51) | 2.97 (1.67-5.30) | 38.91 (23.15-65.39) | | Model 2 | 1.00 (reference) | 1.42 (0.52-3.85) | 3.34 (1.72-6.48) | 17.25 (9.35-31.80) | 2.48 (1.25-4.93) | 36.56 (19.90-67.17) | | Model 3 | 1.00 (reference) | 1.70 (0.63-4.63) | 1.15 (0.58-2.26) | 3.16 (1.66-6.02) | 1.07 (0.53-2.14) | 5.28 (2.76-10.10) | | Preeclampsia/eclampsia (n, %) | 10 (0.66%) | 28 (0.63%) | 30 (0.89%) | 25 (0.64%) | 46 (1.04%) | 43 (1.58%) | | Model 1 | 1.00 (reference) | 1.02 (0.49-2.14) | 0.98 (0.57-1.68) | 1.40 (0.82-2.38) | 1.63 (1.00-2.66) | 2.48 (1.51-4.07) | | Model 2 | 1.00 (reference) | 1.37 (0.63-2.95) | 1.07 (0.59-1.96) | 1.52 (0.84-2.75) | 1.72 (0.99-3.00) | 2.17 (1.21-3.90) | | Model 3 | 1.00 (reference) | 1.50 (0.69-3.24) | 0.81 (0.43-1.55) | 0.93 (0.47-1.87) | 1.36 (0.76-2.43) | 1.23 (0.60-2.53) | | Model 1 was unadjusted; | | | | | | | | Model 2 was adjusted for maternal age at delivery (in years, continuous), early pregnancy BMI (Kg/m2, continuous), gestation, parity, presence of GDM; | | | | | | | | Model 3 was additionally controlled for SBP (mmHg, continuous) at the first visit, and SBP measurement times (continuous) during pregnancy, based on model 2. | | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 3. The associations of SBP trajectories with adverse fetal outcomes.** | | | | | | |
| Fetal outcomes | Low-stable | Low delayed-increasing | Low reverse-increasing | Medium reverse-increasing | Medium-stable | High-stable |
| Trajectory 4  (n=3893) | Trajectory 1  (n=1521) | Trajectory 2  (n=4454) | Trajectory 3  (n=3352) | Trajectory 5  (n=4404) | Trajectory 6  (n=2729) |
| Pre-term delivery (<37) (n, %) | 61 (4.01%) | 216 (4.85%) | 187 (5.58%) | 150 (3.85%) | 234 (5.31%) | 185 (6.78%) |
| Model 1 | 1.00 (reference) | 1.04 (0.77-1.41) | 1.27 (1.03-1.57) | 1.47 (1.18-1.84) | 1.40 (1.14-1.73) | 1.82 (1.46-2.26) |
| Model 2 | 1.00 (reference) | 1.04 (0.76-1.42) | 1.28 (1.03-1.60) | 1.37 (1.08-1.72) | 1.36 (1.09-1.70) | 1.63 (1.28-2.07) |
| Model 3 | 1.00 (reference) | 0.94 (0.68-1.31) | 1.15 (0.91-1.47) | 1.29 (0.97-1.71) | 1.32 (1.03-1.68) | 1.52 (1.12-2.07) |
| Model 4 | 1.00 (reference) | 0.95 (0.68-1.32) | 1.15 (0.91-1.47) | 1.29 (0.98-1.72) | 1.31 (1.03-1.67) | 1.53 (1.12-2.08) |
| Early-term delivery (37-38) (n, %) | 531 (34.91%) | 1691 (37.97%) | 1287 (38.39%) | 1253 (32.19%) | 1597 (36.26%) | 1061 (38.88%) |
| Model 1 | 1.00 (reference) | 1.13 (1.00-1.28) | 1.29 (1.18-1.41) | 1.31 (1.19-1.45) | 1.20 (1.09-1.31) | 1.34 (1.21-1.48) |
| Model 2 | 1.00 (reference) | 1.14 (1.00-1.30) | 1.35 (1.23-1.49) | 1.37 (1.23-1.52) | 1.22 (1.10-1.34) | 1.39 (1.24-1.56) |
| Model 3 | 1.00 (reference) | 1.11 (0.97-1.27) | 1.26 (1.13-1.40) | 1.26 (1.11-1.43) | 1.18 (1.06-1.31) | 1.26 (1.10-1.46) |
| Model 4 | 1.00 (reference) | 1.12 (0.97-1.28) | 1.25 (1.12-1.39) | 1.27 (1.12-1.44) | 1.17 (1.05-1.30) | 1.30 (1.13-1.50) |
| Small for gestational age (n, %) | 170 (11.18%) | 436 (9.79%) | 367 (10.95%) | 351 (9.02%) | 379 (8.61%) | 283 (10.37%) |
| Model 1 | 1.00 (reference) | 1.27 (1.05-1.54) | 1.10 (0.95-1.27) | 1.24 (1.06-1.45) | 0.95 (0.82-1.11) | 1.17 (0.99-1.38) |
| Model 2 | 1.00 (reference) | 1.14 (0.93-1.41) | 1.07 (0.91-1.25) | 1.31 (1.11-1.55) | 1.09 (0.93-1.29) | 1.52 (1.27-1.82) |
| Model 3 | 1.00 (reference) | 1.15 (0.93-1.42) | 1.00 (0.84-1.18) | 1.18 (0.96-1.44) | 1.04 (0.87-1.23) | 1.34 (1.08-1.68) |
| Model 4 | 1.00 (reference) | 1.14 (0.93-1.41) | 1.01 (0.85-1.20) | 1.17 (0.96-1.43) | 1.05 (0.89-1.25) | 1.32 (1.06-1.65) |
| Low birth weight (n, %) | 22 (1.45%) | 119 (2.67%) | 84 (2.51%) | 85 (2.18%) | 101 (2.29%) | 93 (3.41%) |
| Model 1 | 1.00 (reference) | 0.66 (0.41-1.06) | 1.23 (0.93-1.63) | 1.15 (0.85-1.56) | 1.05 (0.79-1.41) | 1.58 (1.17-2.13) |
| Model 2 | 1.00 (reference) | 0.63 (0.38-1.03) | 1.26 (0.94-1.69) | 1.16 (0.84-1.60) | 1.13 (0.83-1.54) | 1.68 (1.21-2.33) |
| Model 3 | 1.00 (reference) | 0.57 (0.34-0.94) | 1.16 (0.84-1.59) | 1.11 (0.76-1.64) | 1.09 (0.78-1.52) | 1.62 (1.07-2.45) |
| Model 4 | 1.00 (reference) | 0.57 (0.34-0.94) | 1.16 (0.84-1.59) | 1.11 (0.75-1.63) | 1.09 (0.78-1.51) | 1.64 (1.08-2.48) |
| Model 1 was unadjusted; | | | | | | |
| Model 2 was adjusted for maternal age at delivery (in years, continuous), early pregnancy BMI (Kg/m2, continuous), gestation, parity, presence of GDM; | | | | | | |
| Model 3 was additionally controlled for SBP (mmHg, continuous) at the first visit, and SBP measurement times (continuous) during pregnancy, based on model 2;  Model 4 was additionally controlled for infant sex(boys, girls) and presence of hypertensive disorders in pregnancy (including GH, PE and eclampsia), on the basis of Model 3. | | | | | | |

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| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Supplementary Table 4.** Reclassification and Discrimination Statistics of adverse maternal and perinatal outcomes based on SBP trajectory | | | | | | | | | | | Clinical outcomes | Model | C statistics | |  | Continuous NRI, % | |  | IDI, % | | | Estimate (95% CI) | *P* value |  | Estimate (95% CI) | *P* value | Estimate (95% CI) | *P* value | | GH | Model 3 | 0.835 (0.818 to 0.852) |  |  | Reference |  |  | Reference |  | | Model 3+ trajectory categories | 0.859 (0.844 to 0.874) | <0.001 |  | 14.25 (0.53 to 0.68) | <0.001 |  | 2.98 (0.002 to 0.01) | 0.003 | | PTD | Model 4 | 0.833 (0.823 to 0.842) |  |  | Reference |  |  | Reference |  | | Model 4+ trajectory categories | 0.834 (0.824 to 0.843) | 0.151 |  | 4.76 (0.09 to 0.22) | <0.001 |  | 2.63 (0.0002 to 0.002) | 0.009 | | ETD | Model 4 | 0.665 (0.657 to 0.673) |  |  | Reference |  |  | Reference |  | | Model 4+ trajectory categories | 0.666 (0.658 to 0.674) | 0.038 |  | 2.83 (0.01 to 0.07) | <0.001 |  | 4.36 (0.001 to 0.002) | <0.001 | | SGA | Model 4 | 0.655 (0.642 to 0.668) |  |  | Reference |  |  | Reference |  | | Model 4+ trajectory categories | 0.657 (0.643 to 0.670) | 0.171 |  | 3.12 (0.03 to 0.13) | 0.002 |  | 2.94 (0.0002 to 0.001) | 0.003 | | LBW | Model 4 | 0.665 (0.657 to 0.658) |  |  | Reference |  |  | Reference |  | | Model 4+ trajectory categories | 0.666 (0.658 to 0.674) | 0.038 |  | 3.59 (0.08 to 0.26) | 0.0003 |  | 2.77 (0.0004 to 0.002) | 0.006 | | NRI, net reclassification improvement; IDI, integrated discrimination index; CI, confidence interval; GH, gestational hypertension; ETD, early-term delivery; PTD, pre-term delivery; SGA, small for gestational age; LBW, low birth weight. | | | | | | | | | | | Model 3 included maternal age at delivery (in years, continuous), early pregnancy BMI (Kg/m2, continuous), gestation, parity, presence of GDM, SBP (mmHg, continuous) at the first visit, and SBP measurement times (continuous) during pregnancy;  Model 4 was additionally controlled for infant sex(boys, girls) and presence of hypertensive disorders in pregnancy (including GH, PE and eclampsia), on the basis of Model 3. | | | | | | | | | | |