Supplementary tables

Table S1. Associations between background characteristics and body mass index category in two cohorts in Matlab, Bangladesh.

|                  | MNCH                  | PreSSMat               |
|------------------|-----------------------|------------------------|
|                  | Underweight | Normal-weight | Overweight | P-value* | Underweight | Normal-weight | Overweight | P-value* |
| Maternal age     |             |             |           |          |             |             |           |          |
| <20              | 219 (22.8)  | 785 (19.9)  | 31 (5.2)  | <0.001   | 201 (34.6)  | 443 (18.4)  | 51 (6.5)  | <0.001   |
| 20-24            | 381 (39.6)  | 1317 (33.4) | 139 (23.4)|           | 212 (36.5)  | 763 (31.7)  | 185 (23.4)|           |
| 25-29            | 207 (21.5)  | 980 (24.8)  | 191 (32.2)|           | 98 (16.9)   | 644 (26.8)  | 241 (30.5)|           |
| ≥30              | 155 (16.1)  | 866 (21.9)  | 232 (39.1)|           | 70 (12.0)   | 554 (23.0)  | 313 (39.6)|           |
| Parity           |             |             |           |          |             |             |           |          |
| 0                | 397 (41.3)  | 1417 (35.9) | 110 (18.5)| <0.001   | 342 (58.9)  | 900 (37.4)  | 145 (18.4)| <0.001   |
| 1-2              | 498 (51.8)  | 2161 (54.7) | 394 (66.4)|           | 220 (37.9)  | 1371 (57.0) | 553 (70.0)|           |
| ≥3               | 67 (7.0)    | 370 (9.4)   | 89 (15.0) |           | 19 (3.3)    | 133 (5.5)   | 92 (11.6) |           |
| Education (year) |             |             |           |          |             |             |           |          |
| 0                | 136 (14.1)  | 515 (13.0)  | 66 (11.1) | <0.01    | 75 (12.9)   | 266 (11.1)  | 66 (8.4)  | <0.05    |
| 1-5              | 273 (28.4)  | 1125 (28.5) | 130 (21.9)|           | 99 (17.0)   | 436 (18.1)  | 123 (15.6)|           |
| >10              | 553 (57.5)  | 2308 (58.5) | 397 (66.9)|           | 407 (70.1)  | 1702 (70.8) | 601 (76.1)|           |
| Wealth quintile  |             |             |           |          |             |             |           |          |
| 1- Poorest       | 180 (18.7)  | 584 (14.8)  | 58 (9.8)  | <0.001   | 109 (18.8)  | 407 (16.9)  | 91 (11.5) | <0.001   |
| 2                | 170 (17.7)  | 711 (18.0)  | 80 (13.5) |           | 125 (21.5)  | 450 (18.7)  | 97 (12.3) |           |
| 3                | 205 (21.3)  | 775 (19.6)  | 99 (16.7) |           | 144 (24.8)  | 476 (19.8)  | 130 (16.5)|           |
| 4                | 199 (20.7)  | 904 (22.9)  | 140 (23.6)|           | 94 (16.2)   | 535 (22.3)  | 192 (24.3)|           |
| 5-Wealthiest     | 208 (21.6)  | 974 (24.7)  | 216 (36.4)|           | 109 (18.8)  | 536 (22.3)  | 280 (35.4)|           |

MNCH, Maternal, Neonatal, and Child Health; PreSSMat, Preterm and Stillbirth Study, Matlab

Body mass index category: underweight (<18.5 kg/m²), normal-weight (18.5-24 kg/m²), and overweight (≥25 kg/m²)

*level of significance by χ² tests
Table S2. Association between background factors and pregnancy complications of MNCH cohort in Matlab, Bangladesh

|                      | PIH      |          | CS       | Perineal tear (2nd degree or more)* | PPH†       |
|----------------------|----------|----------|----------|-------------------------------------|------------|
|                      | No (%)   | Yes (%)  | P-value† | No (%)   | Yes (%)  | P-value† | No (%)   | Yes (%)  | P-value† |
| Maternal age         |          |          |          |          |          |          |          |          |          |
| <20                  | 987 (95.4) | 48 (4.6) | <0.001   | 846 (81.7) | 189 (18.3) | 0.786 | 819 (96.8) | 27 (3.2) | <0.05   | 817 (96.6) | 29 (3.4) | 0.732 |
| 20-24                | 1759 (95.8) | 78 (4.2) |          | 1496 (81.4) | 341 (18.6) |          | 1460 (97.6) | 36 (2.4) |          | 1439 (96.2) | 57 (3.8) |          |
| 25-29                | 1286 (93.3) | 92 (6.7) |          | 1132 (82.1) | 246 (17.9) |          | 1116 (98.6) | 16 (1.4) |          | 1094 (96.6) | 38 (3.4) |          |
| ≥30                  | 1159 (92.5) | 94 (7.5) |          | 1038 (82.8) | 215 (17.2) |          | 1022 (98.5) | 16 (1.5) |          | 1007 (97.0) | 31 (3.0) |          |
| Parity               |          |          |          |          |          |          |          |          |          |          |          |          |
| 0                    | 1826 (94.9) | 98 (5.1) | 0.121    | 1468 (76.3) | 456 (23.7) | <0.001 | 1413 (96.3) | 55 (3.7) | <0.001 | 1408 (95.9) | 60 (4.1) | 0.222 |
| 1-2                  | 2878 (94.3) | 175 (5.7) |          | 2573 (84.3) | 480 (15.7) |          | 2535 (98.5) | 38 (1.5) |          | 2491 (96.8) | 82 (3.2) |          |
| ≥3                   | 487 (92.6) | 39 (7.4) |          | 471 (89.5) | 55 (10.5) |          | 469 (99.6) | 2 (0.4) |          | 458 (97.2) | 13 (2.8) |          |
| Education (year)     |          |          |          |          |          |          |          |          |          |          |          |          |
| 0                    | 659 (91.9) | 58 (8.1) | <0.01    | 639 (89.1) | 78 (10.9) | <0.001 | 633 (99.1) | 6 (0.9) | <0.01   | 620 (97.0) | 19 (3.0) | 0.739 |
| 1-5                  | 1440 (94.2) | 88 (5.8) |          | 1336 (87.4) | 192 (12.6) |          | 1317 (98.6) | 19 (1.4) |          | 1291 (96.6) | 45 (3.4) |          |
| >10                  | 3092 (94.9) | 166 (5.1) |          | 2537 (77.9) | 721 (22.1) |          | 2467 (97.2) | 70 (2.8) |          | 2446 (96.4) | 91 (3.6) |          |
| Wealth quintile      |          |          |          |          |          |          |          |          |          |          |          |          |
| 1- Poorest           | 771 (93.8) | 51 (6.2) | 0.293    | 727 (88.4) | 95 (11.6) | <0.001 | 715 (98.3) | 12 (1.7) | 0.052   | 705 (97.0) | 22 (3.0) | 0.453 |
| 2                    | 910 (94.7) | 51 (5.3) |          | 840 (87.4) | 121 (12.6) |          | 830 (98.8) | 10 (1.2) |          | 815 (97.0) | 25 (3.0) |          |
| 3                    | 1024 (94.9) | 55 (5.1) |          | 886 (82.1) | 193 (17.9) |          | 870 (98.2) | 16 (1.8) |          | 850 (95.9) | 36 (4.1) |          |
| 4                    | 1181 (95.0) | 62 (5.0) |          | 1019 (82.0) | 224 (18.0) |          | 993 (97.4) | 26 (2.6) |          | 978 (96.0) | 41 (4.0) |          |
| 5- Wealthiest        | 1305 (93.3) | 93 (6.7) |          | 1040 (74.4) | 358 (25.6) |          | 1009 (97.0) | 31 (3.0) |          | 1009 (97.0) | 31 (3.0) |          |

PIH, pregnancy-induced hypertension; CS: cesarean section; PPH, postpartum hemorrhage
†significance level by $\chi^2$ tests
*analysis limited to all vaginal delivery
Table S3. Association between background factors and pregnancy complications of PreSSMat cohort in Matlab, Bangladesh

|          | **PHI** |          |          | **CS** |          |          | **Perineal tear (2nd degree or more)** |          | **PPH*** |
|----------|---------|---------|---------|--------|---------|---------|--------------------------------------|---------|--------|
|          | No      | Yes     | P-value† | No     | Yes     | P-value† | No | Yes                  | P-value† | No    | Yes     | P-value† |
| Maternal age | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | n (%) | n(%)<0.01 | 0.739 |
| <20      | 652 (93.8) | 43 (6.2)  | 373 (53.7) | 322 (46.3)  | 365 (97.9) | 8 (2.1)  | 367 (98.4) | 6 (1.6)  | <0.01 |<0.01 |<0.01 |<0.01 |
| 20-24    | 1111 (95.8) | 49 (4.2)  | 558 (48.1) | 602 (51.9)  | 536 (96.1) | 22 (3.9) | 546 (97.8) | 12 (2.2) | <0.01 |<0.01 |<0.01 |<0.01 |
| 25-29    | 945 (96.1) | 38 (3.9)  | 524 (53.3) | 459 (46.7)  | 514 (98.1) | 10 (1.9) | 511 (97.5) | 13 (2.5) | <0.01 |<0.01 |<0.01 |<0.01 |
| ≥30      | 868 (92.6) | 69 (7.4)  | 524 (55.9) | 413 (44.1)  | 520 (99.2) | 4 (0.8)  | 510 (97.3) | 14 (2.7) | <0.01 |<0.01 |<0.01 |<0.01 |
| Parity   |          |<0.073 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |
| 0        | 1303 (93.9) | 84 (6.1)  | 655 (47.2) | 732 (52.8)  | 638 (97.4) | 17 (2.6) | 641 (97.9) | 14 (2.1) | <0.01 |<0.01 |<0.01 |<0.01 |
| 1-2      | 2046 (95.4) | 98 (4.6)  | 1163 (54.2) | 981 (45.8)  | 1138 (97.9) | 25 (2.1) | 1139 (97.9) | 24 (2.1) | <0.01 |<0.01 |<0.01 |<0.01 |
| ≥3       | 227 (93.0) | 17 (7.0)  | 161 (66.0) | 83 (34.0)  | 159 (98.8) | 2 (1.2)  | 154 (95.7) | 7 (4.3)  | <0.01 |<0.01 |<0.01 |<0.01 |
| Education (year) | 0.926 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |
| 0        | 387 (95.1) | 20 (4.9)  | 227 (55.8) | 180 (44.2)  | 223 (98.2) | 4 (1.8)  | 222 (97.8) | 5 (2.2)  | <0.001 |<0.001 |<0.001 |<0.001 |
| 1-5      | 624 (94.8) | 34 (5.2)  | 404 (61.4) | 254 (38.6)  | 397 (98.3) | 7 (1.7)  | 395 (97.8) | 9 (2.2)  | <0.001 |<0.001 |<0.001 |<0.001 |
| >10      | 2565 (94.6) | 145 (5.4) | 1348 (49.7) | 1362 (50.3)  | 1315 (97.6) | 33 (2.4) | 1317 (97.7) | 31 (2.3) | <0.001 |<0.001 |<0.001 |<0.001 |
| Wealth quintile | 0.097 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |<0.001 |
| 1- Poorest | 563 (92.8) | 44 (7.2)  | 388 (63.9) | 219 (36.1)  | 379 (97.7) | 9 (2.3)  | 377 (97.2) | 11 (2.8) | <0.001 |<0.001 |<0.001 |<0.001 |
| 2        | 645 (96.0) | 27 (4.0)  | 409 (60.9) | 263 (39.1)  | 399 (97.6) | 10 (2.4) | 399 (97.6) | 10 (2.4) | <0.001 |<0.001 |<0.001 |<0.001 |
| 3        | 712 (94.9) | 38 (5.1)  | 391 (52.1) | 359 (47.9)  | 382 (97.7) | 9 (2.3)  | 384 (98.2) | 7 (1.8)  | <0.001 |<0.001 |<0.001 |<0.001 |
| 4        | 783 (95.4) | 38 (4.6)  | 397 (48.4) | 424 (51.6)  | 385 (97.0) | 12 (3.0) | 387 (97.5) | 10 (2.5) | <0.001 |<0.001 |<0.001 |<0.001 |
| 5-Wealthiest | 873 (94.4) | 52 (5.6)  | 394 (42.6) | 531 (57.4)  | 390 (99.0) | 4 (1.0)  | 387 (98.2) | 7 (1.8)  | <0.001 |<0.001 |<0.001 |<0.001 |

PHI, pregnancy-induced hypertension; CS: cesarean section; PPH, postpartum hemorrhage

*analysis limited to all vaginal deliveries
†significance level by χ² tests
Table S4. Matrix indicating the association of background characteristics with outcomes in each cohort in Matlab, Bangladesh.

|                      | MNCH cohort          | PreSSMat cohort       |
|----------------------|----------------------|-----------------------|
|                      | Pregnancy-induced hypertension | Cesarean section | Perineal tear | Postpartum hemorrhage | Pregnancy-induced hypertension | Cesarean section | Perineal tear | Postpartum hemorrhage |
| Maternal age          | √                     | x                    | √            | x                     | √                     | √                    | x            | x                     |
| Parity               | √                     | √                    | √            | x                     | √                     | √                    | x            | x                     |
| Education            | √                     | √                    | √            | x                     | x                     | √                    | x            | x                     |
| Wealth quintile      | x                     | √                    | √            | x                     | √                     | √                    | x            | x                     |

Table S5. Distribution of outcome of interest between included and not included in the analyses in two cohorts.

|                      | Pregnancy-induced hypertension | Cesarean section | Perineal tear | Postpartum hemorrhage |
|----------------------|---------------------------------|------------------|---------------|-----------------------|
|                      | Yes | No | P-value* | Yes | No | P-value* | Yes | No | P-value* | Yes | No | P-value* |
| Included in analysis | 511 (5.5) | 8767 (94.5) | 0.749 | 2787 (30) | 6491 (70) | <0.001 | 139 (2.1) | 6352 (97.9) | 0.594 | 200 (3.1) | 6291 (96.9) | 0.652 |
| Not included in analysis | 168 (5.4) | 2968 (94.6) | 686 (21.9) | 2450 (78.1) | 57 (2.3) | 2393 (97.7) | 71 (2.9) | 2379 (97.1) |

*level of significance by χ² test