**Table 1.** Number of newborns by place of birth and reported obstetric complications around birth in 9 low and middle-income countries between 2005 and 2013.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Country, survey years*** | ***N livebirths*** | ***Early neonatal deaths*** | ***Place and attendance at birth, n (%)*** | | | ***Complications, n (%)*** | | |
| ***Home without SBA*** | ***Home with SBA*** | ***Health facility*** | ***Prolonged labour*** | ***Infection*** | ***Convulsions*** |
| Bangladesh 2007 | 4 846 | 72 | 3 713 (76.7) | 202 (4.2) | 916 (18.9) | 352 (7.3) | 133 (2.7) | 101 (2.1) |
| Colombia 2010 | 14 429 | 104 | 1 147 (8.0) | 113 (0.8) | 13 138 (91.0) | 3 145 (21.8) | 683 (4.7) | 200 (1.4) |
| Honduras 2011 | 8 635 | 86 | 280 (3.3) | 1 365 (15.8) | 6 964 (80.6) | 937 (10.8) | 1 863 (21.6) | 1 018 (11.8) |
| Indonesia 2012 | 15 068 | 156 | 2 798 (18.7) | 3 681 (24.4) | 8 521 (56.5) | 4 587 (30.4) | 1 004 (6.7) | 228 (1.5) |
| Mali 2006 | 8 554 | 205 | 4 123 (48.3) | 367 (4.3) | 4 027 (47.1) | 1 330 (15.5) | 648 (7.6) | 238 (2.8) |
| Niger 2006 | 5 603 | 77 | 3 163 (56.4) | 858 (15.3) | 1 539 (27.5) | 640 (11.4) | 293 (5.2) | 118 (2.1) |
| Peru 2011 | 7 951 | 60 | 930 (11.7) | 238 (3.0) | 6 724 (84.6) | 1 039 (13.1) | 263 (3.3) | 89 (1.1) |
| Philippines 2013 | 5 253 | 47 | 1 378 (26.2) | 548 (10.4) | 3 297 (62.8) | 1 192 (22.7) | 88 (1.7) | 178 (3.4) |
| Sao Tome and Principe 2008/2009 | 1 419 | 12 | 248 (17.5) | 52 (3.7) | 1 104 (77.8) | 201 (14.2) | 57 (4.0) | 40 (2.8) |
| Total | 71 758 | 819 | 17 780 (24.8) | 7 424 (10.4) | 46 230 (64.4) | 13 423 (18.7) | 5 032 (7.0) | 2 210 (3.1) |

SBA-Skilled Birthing Attendant.

**Table 2**. Maternal characteristics in births with and without reported complications among 71 758 livebirths

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | ***All births*** | ***Births with no complications*** | | ***Births with complications*** |
|  |  | N | n (%) | | n (%) χ² |
| Maternal Age (years) | 15-19 | 6 240 | 4 697 | (75.3) | 1 543 (24.7) <0.001 |
|  | 20-24 | 16 991 | 12 701 | (75.7) | 4 290 (25.2) |
|  | 25-29 | 18 143 | 13 729 | (75.7) | 4 414 (24.3) |
|  | 30-34 | 14 391 | 10 988 | (76.3) | 3 403 (23.6) |
|  | 35-39 | 9 756 | 7 622 | (78.1) | 2 134 (21.9) |
|  | 40-44 | 4 917 | 3 848 | (78.3) | 1 069 (21.7) |
|  | 45-49 | 1 291 | 1 041 | (80.6) | 250 (19.4) |
| Birth order | 1 | 21 506 | 14 990 | (69.7) | 6 516 (30.3) <0.001 |
|  | >1 | 50 252 | 39 651 | (78.9) | 10 601 (21.1) |
| Preceding birth interval (months) | <18 | 2 707 | 2 190 | (80.9) | 517 (19.1) <0.001 |
|  | 18-23 | 5 022 | 4 080 | (81.2) | 942 (18.8) |
|  | 24-35 | 12 462 | 10 113 | (81.1) | 2 349 (18.9) |
|  | >35 | 30 061 | 23 225 | (77.2) | 6 836 (22.8) |
| Place of residence | Urban | 33 056 | 24 073 | (72.8) | 8 983 (27.2) <0.001 |
|  | Rural | 38 702 | 30 568 | (79.0) | 8 134 (21.0) |
| Education | No education | 14 617 | 12 543 | (85.8) | 2 074 (14.2) <0.001 |
|  | Primary | 21 693 | 16 098 | (74.2) | 5 595 (25.8) |
|  | Secondary | 26 981 | 19 498 | (72.3) | 7 483 (27.7) |
|  | Higher | 8 464 | 6 499 | (76.8) | 1 965 (23.2) |
| Wealth Index | poorest | 19 249 | 15 066 | (78.3) | 4 183 (21.7) <0.001 |
|  | poorer | 16 218 | 12 416 | (76.6) | 3 802 (23.4) |
|  | middle | 13 859 | 10 506 | (75.8) | 3 353 (24.2) |
|  | richer | 12 043 | 9 070 | (75.3) | 2 973 (24.7) |
|  | richest | 10 389 | 7 583 | (73.0) | 2 806 (27.0) |
| Place of delivery | home | 17 780 | 16 401 | (92.2) | 1 379 (7.8) <0.001 |
|  | home with SBA | 7 424 | 5 712 | (76.9) | 1 712 (23.1) |
|  | health facility | 46 230 | 32 252 | (69.8) | 13 978 (30.2) |

**Table 3.** Odds ratios (95% Confidence Intervals) of early neonatal deaths for prolonged labour, infection and convulsions compared to births

with no reported complications.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Country, survey years*** | ***Prolonged labour,*** | | | ***Infection*** | | | ***Convulsions*** | | |
| OR (95% CI) unadjusted | OR (95% CI) adjusteda,b | | OR (95% CI) unadjusted | OR (95% CI)  adjusteda,b | | OR (95% CI) unadjusted | OR (95% CI)  adjusteda,b | |
|  |  |  |  |  |  |  |  |  |  |
| Bangladesh 2007 | 3.8 (2.0-6.9) | 3.0 | (1.4-5.6) | 4.8 (2.2-10.4) | 4.2 | (1.8-8.9) | 1.5 (0.4-3.4) | 1.1 | (0.2-4.5) |
| Colombia 2010 | 1.3 (0.8-2.1) | 1.2 | (0.7-2.0) | 2.3 (1.2-4.4) | 2.2 | (1.2-4.2) | 2.2 (0.7-7.3) | 2.1 | (0.5-6.5) |
| Honduras 2011 | 2.3 (1.3-4.2) | 2.1 | (1.3-3.5) | 1.4 (1.0-2.9) | 1.5 | (0.9-2.4) | 2.5 (1.4-4.2) | 2.1 | (1.3-3.6) |
| Indonesia 2012 | 0.7 (0.5-1.1) | 0.8 | (0.5-1.3) | 1.9 (1.0-3.1) | 2.0 | (1.1-3.5) | 2.3 (0.8-4.9) | 2.2 | (1.1-6.3) |
| Mali 2006 | 1.6 (0.9-2.3) | 1.9 | (1.1-2.7) | 2.0 (1.0-3.0) | 2.2 | (1.2-3.4) | 2.7 (1.8-5.0) | 2.8 | (1.6-4.7) |
| Niger 2006 | 2.1 (1.4-4.3) | 2.0 | (1.2-4.9) | 2.8 (1.3-6.1) | 2.6 | (1.1-6.0) | 5.1 (2.2-9.9) | 5.0 | (2.0-12.2) |
| Peru 2011 | 0.8 (0.3-2.0) | 0.9 | (0.6-2.1) | 3.3 (1.8-7.4) | 3.3 | (1.2-7.6) | 5.1 (1.5-16.8) | 5.1 | (1.8-17.1) |
| Philippines 2013 | 0.7 (0.3-1.5) | 0.7 | (0.4-1.7) | 6.6 (2.9-15.1) | 7.4 | (2.9-19.3) | 2.2 (0.8-6.3) | 2.2 | (0.9-8.1) |
| Sao Tome and Principe 2008/09 | 0.4 (0.1-3.6) | 0.8 | (0.2-5.6) | 2.9 (0.4-17.8) | 3.1 | (0.4-27.2) | \* |  | \* |
| **Pooled** | **1.3 (1.1-1.6)** | **1.7** | **(1.2-2.2)** | **2.2 (1.7-2.8)** | **2.6** | **(2.1-3.5)** | **2.3 (1.8-3.1)** | **2.4** | **(2.1-3.8)** |

a Pooled analysis adjusted for place of birth, wealth, maternal age, sex of infant, birth order, birth spacing, maternal education, rural\urban residence, sample unit and country as random effect.

b Single-country analysis adjusted for place of birth, wealth, maternal age, sex of infant, birth order, birth spacing, maternal education, rural\urban residence, and sample unit as random effect

\*unable to calculate OR as zero cases in early neonatal mortality group.

**Table 4**. Adjusted Odds Ratios for early neonatal death for place and attendant at birth

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***Non-SBA Home vs home based with SBA births*** | | | | ***Home based with SBA deliveries vs health facility based births*** | | | | ***Non-SBA Home deliveries vs health facility based births*** | | | |
|  | ***OR (95%CI) da,b*** | | ***OR (95%CI) c,d*** | | ***OR (95%CI) a,b*** | | ***OR (95%CI) c,d*** | | ***OR (95%CI) a,b*** | | ***OR (95%CI) c,d*** | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bangladesh 2007 | 0.8 | (0.2-2.0) | 0.9 | (0.2-3.4) | 0.6 | (0.2-2.4) | 0.7 | (0.2-2.3) | 0.5 | (0.2-1.2) | 0.5 | (0.2-1.2) |
| Colombia 2010 | 0.6 | (0.1-2.9) | 1.8 | (0.2-21.5) | 2.2 | (0.5-9.5) | 2.2 | (0.6-9.7) | 2.1 | (0.9-5.4) | 2.3 | (0.9-5.9) |
| Honduras 2011 | 1.3 | (0.3-4.1) | 1.1 | (0.3-3.8) | 1.6 | (0.7-2.7) | 1.7 | (0.9-3.1) | 1.9 | (0.6-5.3) | 2.2 | (0.8-6.2) |
| Indonesia 2012 | 1.2 | (0.6-2.2) | 0.9 | (0.4-1.6) | 0.9 | (0.6-1.4) | 0.9 | (0.5-1.6) | 1.0 | (0.6-1.8) | 1.0 | (0.6-1.9) |
| Mali 2006 | 1.0 | (0.4-2.5) | 1.2 | (0.5-2.7) | 1.0 | (0.4-2.0) | 1.2 | (0.5-2.6) | 0.9 | (0.6-1.3) | 1.2 | (0.7-1.8) |
| Niger 2006 | 0.8 | (0.3-1.4) | 0.7 | (0.2-1.3) | 0.6 | (0.3-1.5) | 1.1 | (0.4-3.5) | 0.6 | (0.2-1.3) | 0.7 | (0.2-3.3) |
| Peru 2011 | 1.9 | (0.4-8.1) | 2.4 | (0.4-11.7) | 1.7 | (0.4-8.0) | 1.8 | (0.5-7.9) | 3.3 | (1.3-7.8) | 3.4 | (1.3-8.3) |
| Philippines 2013 | 2.4 | (0.5-13.4) | 1.9 | (0.5-6.7) | 0.4 | (0.1-1.7) | 0.4 | (0.1-1.6) | 0.7 | (0.3-1.6) | 0.7 | (0.3-1.6) |
| Sao Tome and Principe 2008/09 | 0.2 | (0.1-4.6) | 0.3 | (0.2-4.7) | 3.0 | (0.3-27.6) | 3.0 | (0.3-27.3) | 0.8 | (0.1-5.7) | 1.2 | (0.2-9.6) |
| **Pooled** | **1.0** | **(0.6-1.5)** | **1.1** | **(0.5-1.8)** | **1.1** | **(0.5-1.7)** | **1.2** | **(1.0-2.1)** | **1.1** | **(0.8-1.6)** | **1.3** | **(1.1-1.9)** |

a Pooled analysis adjusted for household wealth, maternal age, sex of infant, maternal education, birth order, birth spacing, rural\urban residence, sample unit and country as random effect.

b Single-country analysis adjusted for household wealth, maternal age, sex of infant, maternal education, birth order, birth spacing, rural\urban residence, and sample unit as random effect.

c Pooled analysis adjusted for household wealth, maternal age, sex of infant, maternal education, birth order, birth spacing, rural\urban residence, sample unit and country as random effect, and for reported obstetric complications.

d Single-country analysis adjusted for household wealth, maternal age, sex of infant, maternal education, birth order, birth spacing, rural\urban residence, and sample unit as random effect, and for reported obstetric complications.