

**Table S1.** ICD-PM tabulation using South African data for perinatal cause of death and maternal condition separated by timing of death

| MATERNAL CONDITION   | PERINATAL CAUSE OF DEATH                          |   |  |  |                                      |            |     | TOTAL (%) |
|--|---|---|--|--|--------------------------------------|------------|-----|-----------|
|  | M1: Complications of placenta, cord and membranes | M2: Maternal complications of pregnancy | M3: Other complications of labour and delivery | M4: Maternal medical and surgical conditions | M5: No maternal condition identified | Other      |     |           |
| <b>ANTENATAL DEATH</b>   |   |   |  |  |                                      |            |     |           |
| A1: Congenital malformations, deformations and chromosomal abnormalities |   |   |  |  | 9                                    |            | 9   | (2.6)     |
| A2: Infection  |   |   |  | 1  |                                      |            | 1   | (0.3)     |
| A3: Antepartum hypoxia   | 72  | 2                                       | 1  | 95   | 9                                    | 2          | 181 | (52.6)    |
| A4: Other specified antepartum disorder                                  | 2   |   |  | 1  |                                      |            | 3   | (0.9)     |
| A5: Disorders related to fetal growth                                    |   |   |  | 2  | 2                                    |            | 4   | (1.2)     |
| A6: Fetal death of unspecified cause                                     |   |   |  | 20   | 124                                  | 2          | 146 | (42.4)    |
| TOTAL (%)  | 74<br>(21.5)                                      | 2<br>(0.6)                              | 1<br>(0.3)                                     | 119<br>(34.6)                                | 144<br>(41.9)                        | 4<br>(1.2) | 344 |           |

## INTRAPARTUM DEATH

|  |                            |                            |                            |                            |                          |              |
|--|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|--------------|
| I1: Congenital malformations,<br>deformations and chromosomal<br>abnormalities |                            |                            |                            |                            | 2                        |              |
|  |                            |                            |                            |                            |                          | (2.7)        |
| I2: Birth trauma   |                            |                            |                            |                            |                          |              |
| I3: Acute intrapartum event  | 17                         | 15                         | 14                         | 22                         | 1                        | 69<br>(93.2) |
| I4: Infection  |                            |                            |                            |                            |                          | 2            |
|  |                            |                            |                            |                            |                          | (2.7)        |
| I5: Other specified intrapartum<br>disorder                                    |                            |                            |                            |                            |                          |              |
| I6: Disorders related to fetal growth  |                            |                            |                            |                            |                          |              |
| I7: Intrapartum death of unspecified<br>cause                                  |                            |                            |                            | 1                          |                          | 1            |
|  |                            |                            |                            |                            |                          | (1.4)        |
| <b>TOTAL (%)</b>   | <b>17</b><br><b>(22.9)</b> | <b>15</b><br><b>(20.3)</b> | <b>17</b><br><b>(20.3)</b> | <b>24</b><br><b>(32.4)</b> | <b>1</b><br><b>(1.4)</b> | <b>74</b>    |

NEONATAL DEATH

|  |    |    |    |    |                                 |
|--|----|----|----|----|---------------------------------|
| N1: Congenital malformations,<br>deformations and chromosomal<br>abnormalities |    | 1  | 11 | 1  | <b>13</b><br><b>(4.8)</b>       |
| N2: Disorders related to fetal<br>growth                                       |    |    |    |    |                                 |
| N3: Birth trauma   |    |    |    |    |                                 |
| N4: Complications of intrapartum<br>events                                     |    |    |    |    |                                 |
| N5: Convulsions and disorders of<br>cerebral status                            | 9  | 14 | 8  | 38 | <b>69</b><br><b>(25.5)</b>      |
| N6: Infection  |    |    |    |    |                                 |
|  | 3  | 2  |    |    | <b>5</b><br><b>(1.8)</b>        |
| N7: Respiratory and cardiovascular<br>disorders                                | 18 | 29 | 16 | 30 | 1<br><b>94</b><br><b>(34.7)</b> |

|  |           |            |           |           |            |
|--|-----------|------------|-----------|-----------|------------|
| N8: Other neonatal conditions            | 3         | 2          | 3         |           | <b>8</b>   |
|  |           |            |           | (2.9)     |            |
| N9: Low birth weight and prematurity     | 7         | 59         | 13        |           | <b>79</b>  |
|  |           |            |           | (29.2)    |            |
| N10: Miscellaneous                       |           |            |           |           |            |
| N11: Neonatal death of unspecified cause |           | 1          |           | 1         | <b>3</b>   |
|  |           |            |           | (1.1)     |            |
| <b>TOTAL (%)</b>                         | <b>40</b> | <b>107</b> | <b>41</b> | <b>80</b> | <b>271</b> |
|  | (14.8)    | (39.5)     | (15.1)    | (29.5)    | (1.1)      |

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**Table S2.** ICD-PM tabulation using UK data for perinatal cause of death and maternal condition separated by timing of death

| MATERNAL CONDITION   | PERINATAL CAUSE OF DEATH                          |   |  |  |                                      | TOTAL (%)      |  |
|--|---|---|--|--|--------------------------------------|----------------|--|
|  | M1: Complications of placenta, cord and membranes | M2: Maternal complications of pregnancy | M3: Other complications of labour and delivery | M4: Maternal medical and surgical conditions | M5: No maternal condition identified |                |  |
| <b>ANTENATAL DEATH</b>   |   |   |  |  |                                      |                |  |
| <b>INTRAPARTUM DEATH</b>   |   |   |  |  |                                      |                |  |
| A1: Congenital malformations, deformations and chromosomal abnormalities | 118   | 391                                     | 2  | 38   | 432                                  | 981<br>(22.4)  |  |
| A2: Infection  | 2   |   |  |  |                                      | 2<br>(0.05)    |  |
| A3: Antepartum hypoxia   |   |   |  |  |                                      |                |  |
| A4: Other specified antepartum disorder                                  | 30  | 5                                       |  | 9  | 61                                   | 105<br>(2.4)   |  |
| A5: Disorders related to fetal growth                                    | 279   | 28                                      | 3  | 97   | 238                                  | 645<br>(14.7)  |  |
| A6: Fetal death of unspecified cause                                     | 687   | 70                                      | 14   | 231  | 1642                                 | 2644<br>(60.4) |  |
| <b>TOTAL (%)</b>   | <b>1116<br/>(25.5)</b>                            | <b>494<br/>(11.3)</b>                   | <b>19<br/>(0.4)</b>                            | <b>375<br/>(8.6)</b>                         | <b>2373<br/>(54.2)</b>               | <b>4377</b>    |  |

|  |                     |                     |                    |                     |                       |                       |
|--|---------------------|---------------------|--------------------|---------------------|-----------------------|-----------------------|
| I1: Congenital malformations, deformations and chromosomal abnormalities | 5                   | 1                   | 2                  | 1                   | 4                     | <b>13<br/>(2.8)</b>   |
| I2: Birth trauma   | 2                   |                     |                    |                     | 3                     | <b>5<br/>(1.1)</b>    |
| I3: Acute intrapartum event  | 148                 | 9                   | 4                  | 8                   | 127                   | <b>296<br/>(64.8)</b> |
| I4: Infection  |                     |                     |                    |                     |                       |                       |
| I5: Other specified intrapartum disorder                                 | 1                   |                     |                    |                     |                       | <b>1<br/>(0.2)</b>    |
| I6: Disorders related to fetal growth                                    | 12                  | 1                   |                    | 6                   | 5                     | <b>24<br/>(5.3)</b>   |
| I7: Intrapartum death of unspecified cause                               | 56                  | 8                   | 1                  | 15                  | 38                    | <b>118<br/>(25.8)</b> |
| <b>TOTAL (%)</b>   | <b>224<br/>(49)</b> | <b>19<br/>(4.2)</b> | <b>7<br/>(1.5)</b> | <b>30<br/>(6.6)</b> | <b>177<br/>(38.7)</b> | <b>457</b>            |

#### NEONATAL DEATH

|  |    |     |   |    |     |                        |
|--|----|-----|---|----|-----|------------------------|
| N1: Congenital malformations, deformations and chromosomal abnormalities | 78 | 247 | 3 | 50 | 781 | <b>1159<br/>(27.4)</b> |
| N2: Disorders related to fetal growth                                    | 3  | 1   | 2 | 2  | 6   | <b>14<br/>(0.3)</b>    |
| N3: Birth trauma   |    |     | 1 | 3  | 7   | <b>11<br/>(0.3)</b>    |
| N4: Complications of intrapartum events                                  | 31 | 1   | 3 | 4  | 35  | <b>74<br/>(1.7)</b>    |
| N5: Convulsions and disorders of cerebral                                | 7  |     | 2 | 1  | 16  | <b>26<br/>(0.6)</b>    |

status

|  |                       |                       |                       |                      |                        |                        |
|--|-----------------------|-----------------------|-----------------------|----------------------|------------------------|------------------------|
| N6: Infection                                | 7                     | 1                     | 2                     | 4                    | 48                     | <b>62<br/>(1.5)</b>    |
| N7: Respiratory and cardiovascular disorders | 40                    | 24                    | 4                     | 22                   | 195                    | <b>285<br/>(6.7)</b>   |
| N8: Other neonatal conditions                | 15                    | 6                     | 2                     | 8                    | 72                     | <b>103<br/>(2.4)</b>   |
| N9: Low birth weight and prematurity         | 365                   | 94                    | 691                   | 51                   | 137                    | <b>1338<br/>(31.6)</b> |
| N10: Miscellaneous                           |                       | 3                     |                       |                      | 17                     | <b>20<br/>(0.5)</b>    |
| N11: Neonatal death of unspecified cause     | 294                   | 72                    | 15                    | 107                  | 653                    | <b>1141<br/>(27)</b>   |
| <b>TOTAL (%)</b>                             | <b>840<br/>(19.8)</b> | <b>449<br/>(10.6)</b> | <b>725<br/>(17.1)</b> | <b>252<br/>(5.9)</b> | <b>1967<br/>(46.5)</b> | <b>4233</b>            |

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