

**Appendix 1: Final model details**

The final logistic model to predict survival at 28 days for each of the three stages of care is as follows.

*Survival* is survival to 28 days of life

*Gestation* is the baby's gestational age in completed weeks

*Birthweight* is the baby's birthweight in grams

*Multiplicity* is 0 for singleton births and 1 otherwise

**Model 1: Babies alive at onset of labour**
$$\text{Logit}(\text{Survival}) = \beta_0 + \beta_1 * (\text{Birthweight}/1000)^{-2} + \beta_2 * (\text{Gestation})^{-2} + \beta_3 * (\text{Gestation})^{-2} * \ln(\text{Gestation}) + \beta_4 * \text{Multiplicity} + \beta_5 * \text{Multiplicity} * \text{Birthweight} + \beta_6 * \text{Gestation} * \text{Multiplicity}$$

**Coefficients**  $\beta_0$ : -1.5056412;  $\beta_1$ : -0.35756955;  $\beta_2$ : 42438.23;  $\beta_3$ : 13865.879;  $\beta_4$ : 0.65555131;  $\beta_5$ : 0.00075761;  $\beta_6$ : 0.0144124

**Model 2: Babies receiving active survival focused care**
$$\text{Logit}(\text{Survival}) = \beta_0 + \beta_1 * \ln(\text{Birthweight}/1000) + \beta_2 * \ln(\text{Birthweight}/1000)^2 + \beta_3 * \text{Gestation}^{-2} + \beta_4 * \text{Multiplicity} + \beta_5 * \text{Multiplicity} * \text{Birthweight} + \beta_6 * \text{Gestation} * \text{Multiplicity}$$

**Coefficients**  $\beta_0$ : 8.4231188;  $\beta_1$ : 0.45646377;  $\beta_2$ : -1.2870236;  $\beta_3$ : -4207.6619;  $\beta_4$ : -0.48652448;  $\beta_5$ : 0.00098267;  $\beta_6$ : 0.00289392

**Model 3: Babies admitted to neonatal care**
$$\text{Logit}(\text{Survival}) = \beta_0 + \beta_1 * \ln(\text{Birthweight}/1000) + \beta_2 * (\text{Birthweight}/1000)^{0.5} + \beta_3 * \text{Gestation}^{-1} + \beta_5 * \text{Multiplicity} + \beta_6 * \text{Gestation} * \text{Birthweight} + \beta_7 * \text{Multiplicity} * \text{Birthweight} + \beta_8 * \text{Gestation} * \text{Multiplicity}$$

**Coefficients**  $\beta_0$ : 33.552105;  $\beta_1$ : 8.954789;  $\beta_2$ : -22.325092;  $\beta_3$ : -289.95836;  $\beta_4$ : -0.49235337;  $\beta_5$ : 0.00008494;  $\beta_6$ : 0.001155;  $\beta_7$ : -0.01368192;  $\beta_8$ : -0.01368192