

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 β_0 : -1.5056412; β_1 : -0.35756955; β_2 : 42438.23; β_3 : 13865.879; β_4 : 0.65555131; β_5 : 0.00075761; β_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 β_0 : 8.4231188; β_1 : 0.45646377; β_2 : -1.2870236; β_3 : -4207.6619; β_4 : -0.48652448; β_5 : 0.00098267; β_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 β_0 : 33.552105; β_1 : 8.954789; β_2 : -22.325092; β_3 : -289.95836; β_4 : -0.49235337; β_5 : 0.00008494; β_6 : 0.001155; β_7 : -0.01368192; β_8 : -0.01368192