

**ESM Results 1. Additional statistical results - Assessment of model fit:**

*Type 2 v MODY logistic regression model:*

The optimal Type 2 diabetes model provided a considerable decrease in Deviance compared with the null (Deviance difference =755.8 on 7df,  $p < 0.0001$ ). The model appeared to fit the data well with no evidence for lack of fit using the Hosmer-Lemeshow statistic ( $GOF_{HL} = 3.3$  on 8df,  $p = 0.9$ ) and dispersion parameter ( $\phi = 0.02$ ). The probit link function provided no better fit for the model over the logit link.

*Type 1 v MODY logistic regression model:*

The best Type 1 v MODY model provided a considerable decrease in Deviance compared with the null (Deviance difference =343.52 on 5df,  $p < 0.0001$ ). The model appeared to fit the data well with no evidence for lack of fit using the Hosmer-Lemeshow statistic ( $GOF_{HL} = 12.7$  on 8df,  $p = 0.12$ ) and dispersion parameter ( $\phi = 0.8$ ). The probit link function provided no better fit for the model over the logit link.