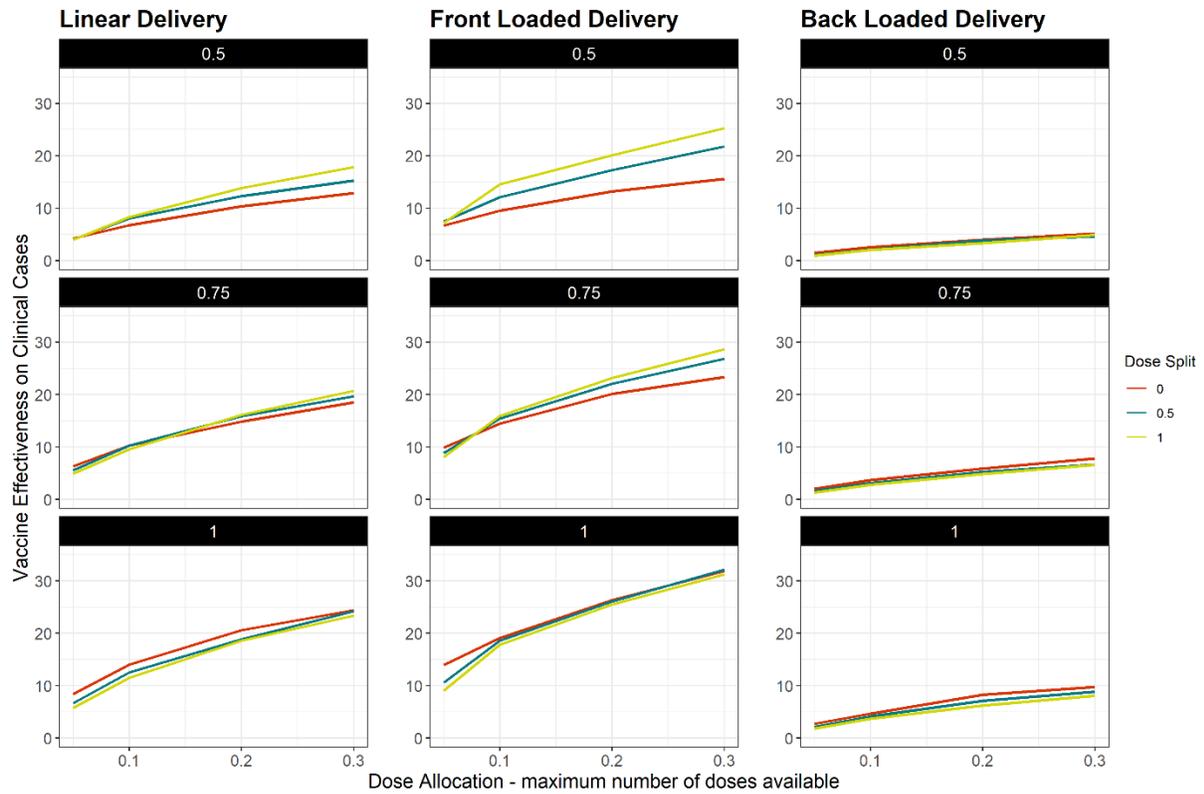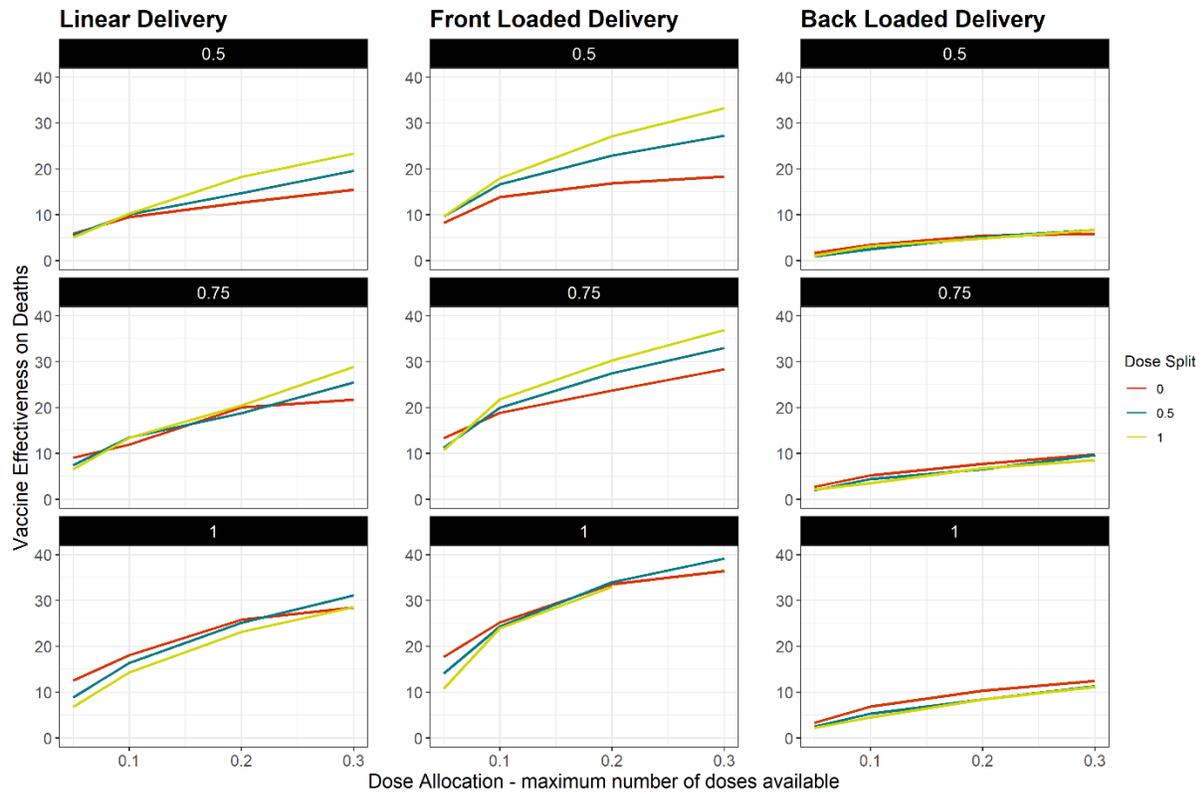**Supplementary Fig. 1: Impact of vaccine delivery speed, dose split, and dose availability on vaccine effectiveness as a measure of reduction in clinical cases.**
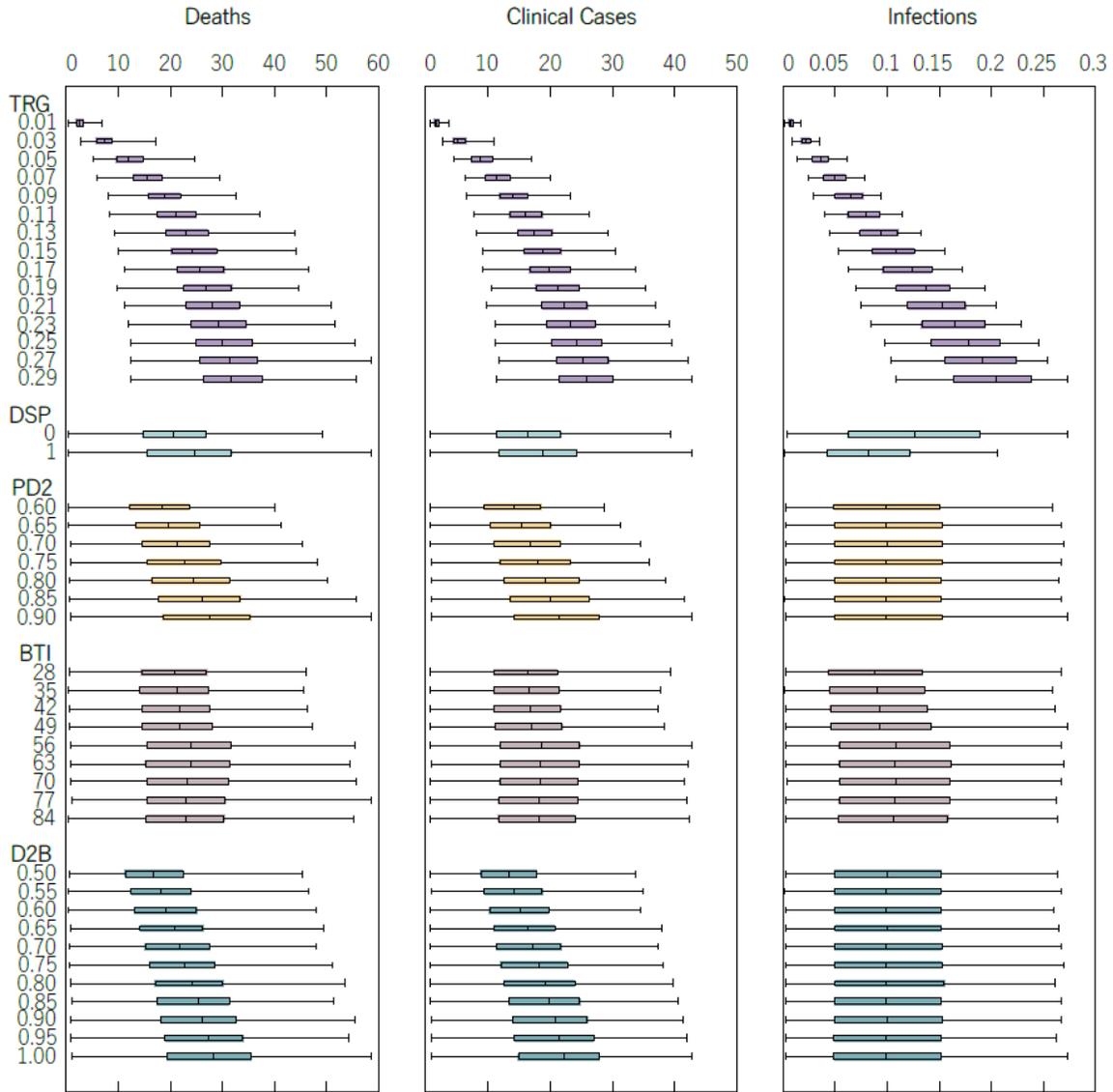

The white number on the black background in each panel defines the vaccine efficacy of the first dose relative to the second dose. Lines represent the mean effectiveness calculated using all runs, where the parameters are those defined by each figure, irrespective of all remaining parameters. Lines are coloured according to the dose split, i.e. the proportion of individuals receiving two vaccine doses. These results are based on the UK population structure.

Supplementary Fig. 2: Impact of vaccine delivery speed, dose split, and dose availability on vaccine effectiveness as a measure of reduction in deaths.
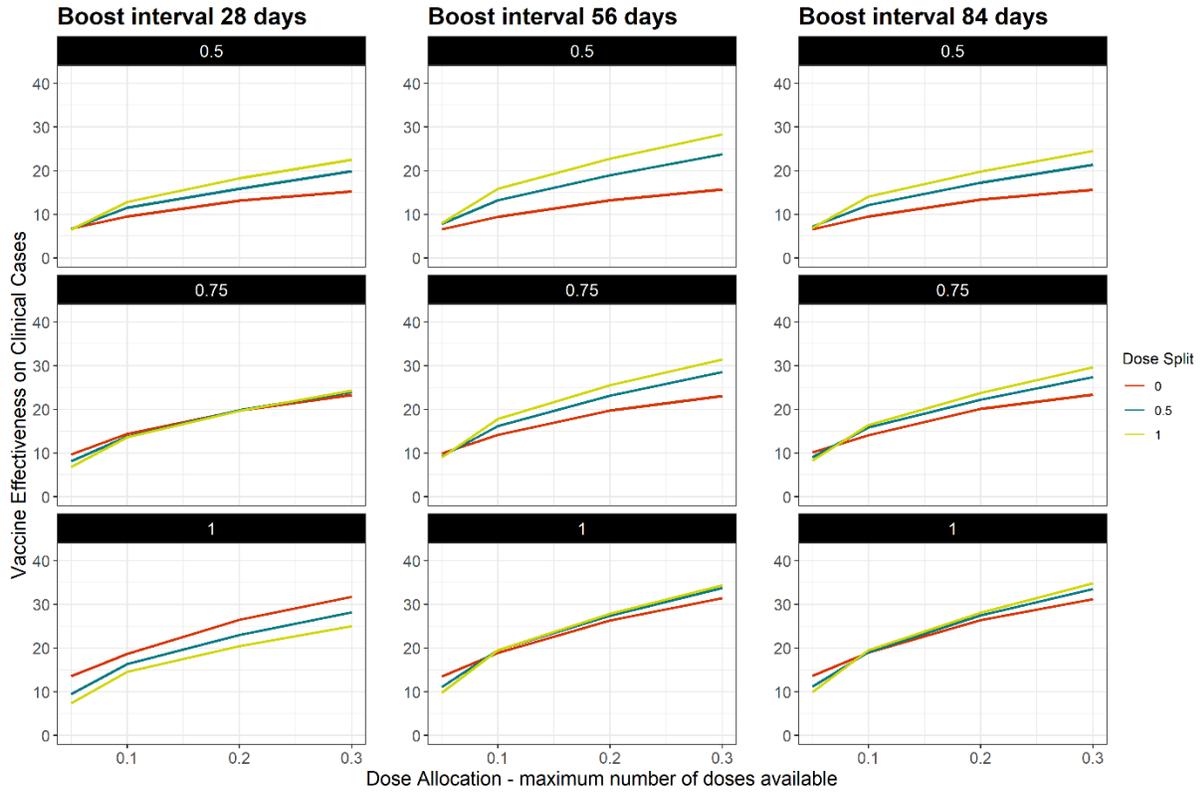

The white number on the black background in each panel defines the vaccine efficacy of the first dose relative to the second dose. Lines represent the mean effectiveness calculated using all runs, where the parameters are those defined by each figure, irrespective of all remaining parameters. Lines are coloured according to the dose split, i.e. the proportion of individuals receiving two vaccine doses. These results are based on the UK population structure.

Supplementary Fig. 3: Detailed sensitivity analysis of vaccine effectiveness for the most sensitive parameters, based on UK data.
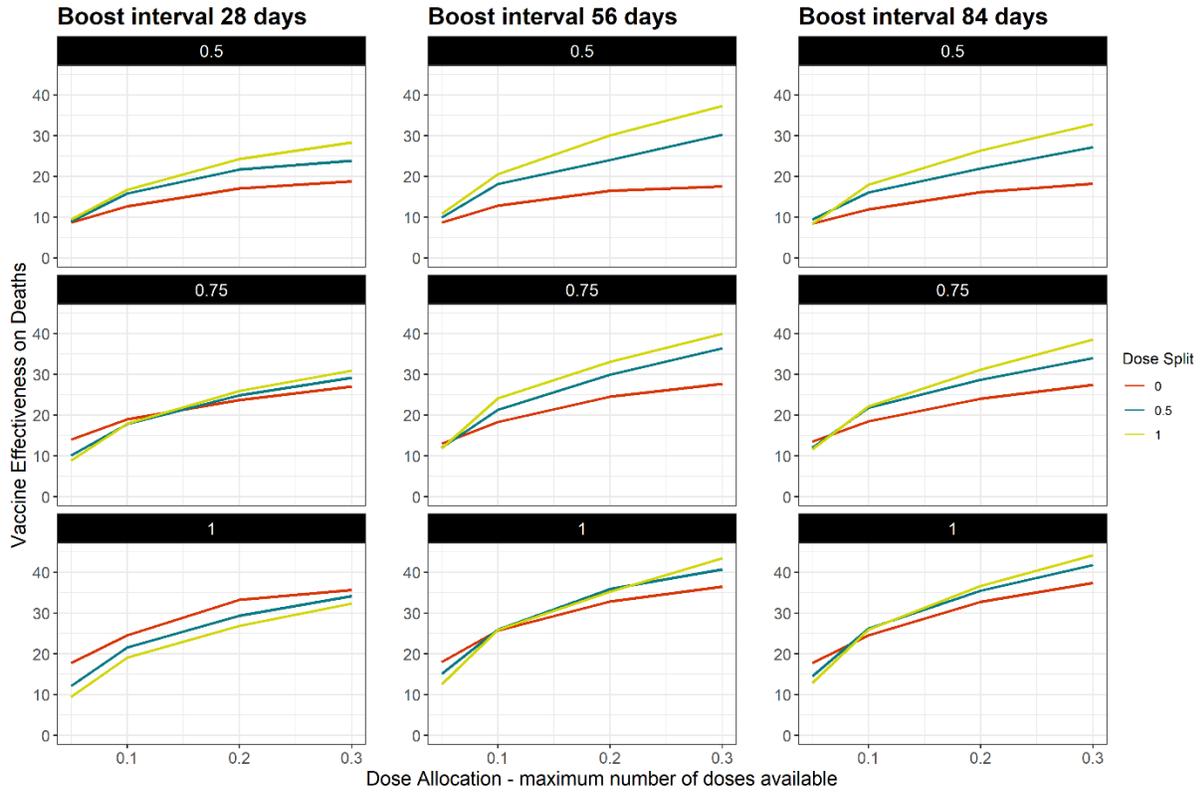

The boxplots show the median and interquartile ranges of the predicted vaccine effectiveness on each of the outcomes for specific parameters. They were generated by aggregating all model simulations for each of the parameters, with each boxplot summarizing the variance in predicted vaccine efficacy for all possible combinations of the other parameters.

Supplementary Fig. 4: Impact of vaccine booster dose interval on vaccine effectiveness as a measure of reduction in clinical cases.


The white number on the black background in each panel defines the vaccine efficacy of the first dose relative to the second dose. Lines represent the mean effectiveness calculated using all runs, where the parameters are those defined by each figure, irrespective of all remaining parameters. Lines are coloured according to the dose split, i.e. the proportion of individuals receiving two vaccine doses. These results are based on the UK population structure.

Supplementary Fig. 5: Impact of vaccine booster dose interval on vaccine effectiveness as a measure of reduction in deaths.

The white number on the black background in each panel defines the vaccine efficacy of the first dose relative to the second dose. Lines represent the mean effectiveness calculated using all runs, where the parameters are those defined by each figure, irrespective of all remaining parameters. Lines are coloured according to the dose split, i.e. the proportion of individuals receiving two vaccine doses. These results are based on the UK population structure.

Supplementary Fig. 6: Vaccine delivery speed.
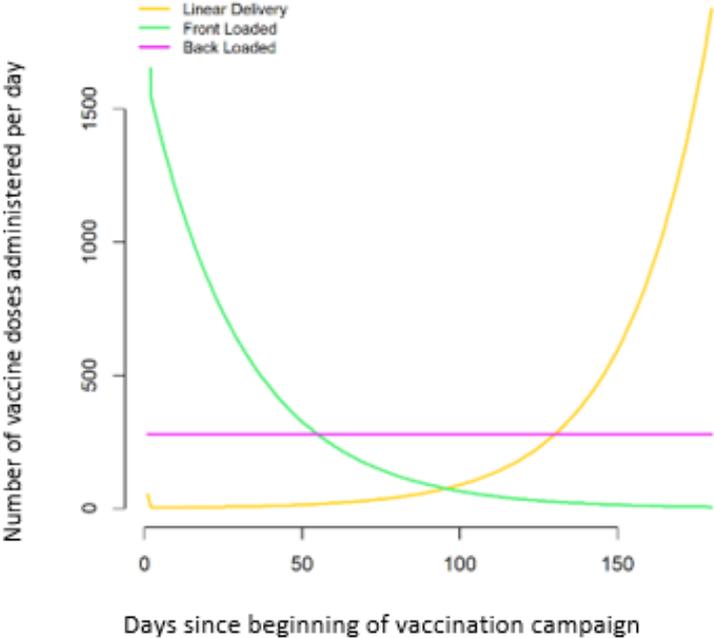
The figure shows the number of vaccine doses administered over the course of the vaccination campaign (6 months).