

COVID-19 Scenario Modeling Hub Report

15 June, 2021
Scenario Modeling Hub Team¹

Executive Summary

This report presents the results of the sixth round of projections from the COVID-19 Scenario Modeling Hub. A consortium of nine modeling groups convened to generate week ahead projections of COVID-19 cases, deaths, and hospitalizations for a period of six months (weeks ending 2021-06-05 to 2021-11-27), given four scenarios. A full list of contributors is included at the end of the report. See the table on the next page for an overview of the scenarios included in this round. Detailed scenario descriptions and setting assumptions are provided [here](#).

Key Takeaways From Sixth Round

- In the scenarios with a 60% more transmissible variant, we expect a national wave of cases to grow over the summer, peaking around mid-September to early October (which is also when schools open, and seasonal effects might kick in).
- Increasing vaccination coverage from 75% to 86% nationally by November 30 tempers the wave slightly and causes it to drop more quickly, but does not prevent it.
- At the state level, the effect of the wave is expected to be strongest in those states with a high susceptible fraction, and lower rates of vaccination.
- The transmission advantage of new variants has a larger impact on future cases than does increasing vaccination levels from 75% to 86%, with resurgences projected in the case of a 60% increase in transmissibility, but not projected as likely in the case of a 20% increase.
- There is increased uncertainty in the high transmissibility variant scenarios, both with regards to the magnitude and the timing of the resurgence
- Higher levels of vaccination coverage prevent cases and save lives regardless of the transmissibility of the variant.

Note: this report is based on planning scenarios not forecasts. Many of these scenarios may not be likely to happen given that individuals and governments will likely react to large surges in cases, and other critical events.

¹Compiled by Justin Lessler, Rebecca Borcherding, Emily Howerton, and Claire Smith.

Round 6 Scenarios

Scenario Differences

See more detailed notes for each scenario below	Low Impact Variant (low transmissibility increase, no immune escape)	High Impact Variant (high transmissibility increase, no immune escape)
High Vaccination (Low hesitancy)	<p>Scenario A</p> <p>Vaccination:</p> <ul style="list-style-type: none"> - Coverage saturates at 86% nationally among the vaccine-eligible population* by November 30, 2021** - VE is 50%/90% for Pfizer/Moderna against currently circulating variants (1st/2nd dose) - J&J no longer used <p>Variant:</p> <ul style="list-style-type: none"> - 20% increased transmissibility as compared with B.1.1.7 for B.1.617+ variant. 5% prevalence of B.1.617+ nationally on May 29. 	<p>Scenario B</p> <p>Vaccination:</p> <ul style="list-style-type: none"> - Coverage saturates at 86% nationally among the vaccine-eligible population* by November 30, 2021** - VE is 50%/90% for Pfizer/Moderna against currently circulating variants (1st/2nd dose) - J&J no longer used <p>Variant:</p> <ul style="list-style-type: none"> - 60% increased transmissibility as compared with B.1.1.7 for B.1.617+ variant. 5% prevalence of B.1.617+ nationally on May 29.
Low Vaccination (High hesitancy)	<p>Scenario C</p> <p>Vaccination:</p> <ul style="list-style-type: none"> - Coverage saturates at 75% nationally among the vaccine-eligible population* by November 30, 2021** - VE is 50%/90% for Pfizer/Moderna against currently circulating variants (1st/2nd dose) and 60% for JJ (1 dose) - J&J no longer used <p>Variant:</p> <ul style="list-style-type: none"> - 20% increased transmissibility as compared with B.1.1.7 for B.1.617+ variant. 5% prevalence of B.1.617+ nationally on May 29. 	<p>Scenario D</p> <p>Vaccination:</p> <ul style="list-style-type: none"> - Coverage saturates at 75% nationally among the vaccine-eligible population* by November 30, 2021** - VE is 50%/90% for Pfizer/Moderna against currently circulating variants (1st/2nd dose) and 60% for JJ (1 dose) - J&J no longer used <p>Variant:</p> <ul style="list-style-type: none"> - 60% increased transmissibility as compared with B.1.1.7 for B.1.617+ variant. 5% prevalence of B.1.617+ nationally on May 29.

* Vaccine-eligible population. The eligible population for vaccination is presumed to be individuals aged 12 years and older through the end of the projection period.

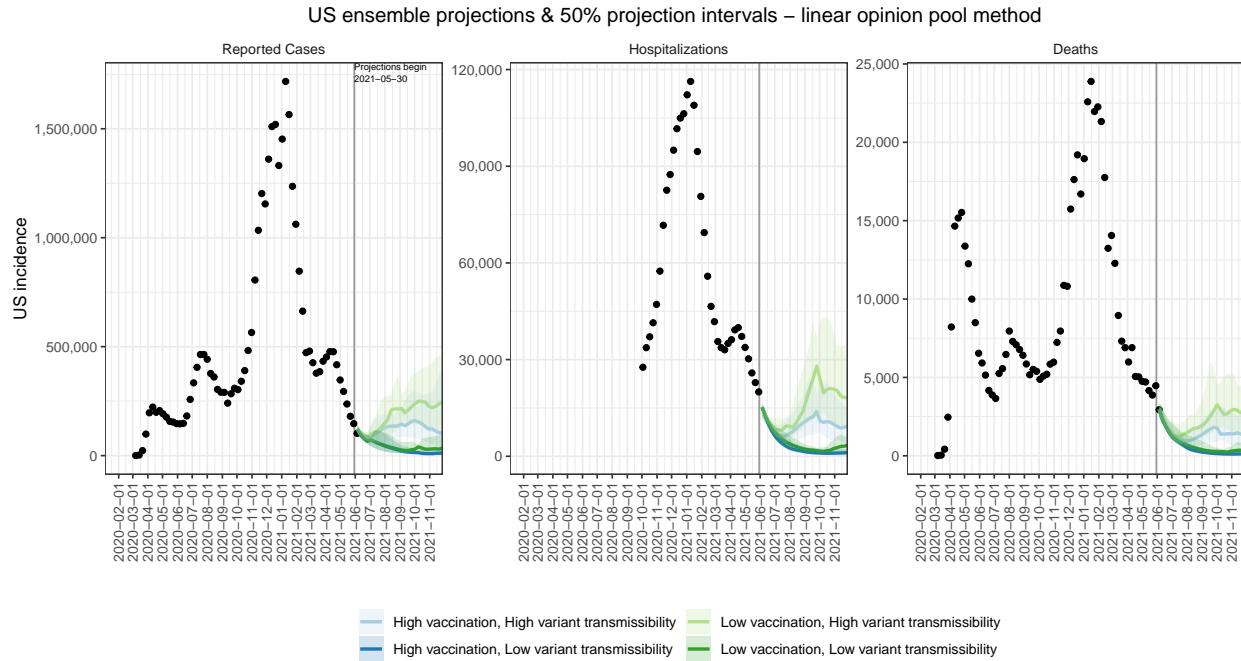
** Vaccine hesitancy expected to cause vaccination coverage to slow and eventually saturate at some level below 100%. The saturation levels provided in these scenarios are National reference points to guide defining hesitancy, though the speed of that saturation and heterogeneity between states (or other geospatial scales) and/or age groups are at the discretion of the modeling team. The high vaccination 86% saturation is defined using the current estimates from the Delphi group ([link](#), updated from Round 5). The low saturation estimate of 75% is the lowest county-level estimate from the U.S. Census Bureau's Pulse Survey from Apr 14-26, 2021 data ([link](#)), which is updated from Round 5.

Figure 1: Round 6 Scenario Specifications

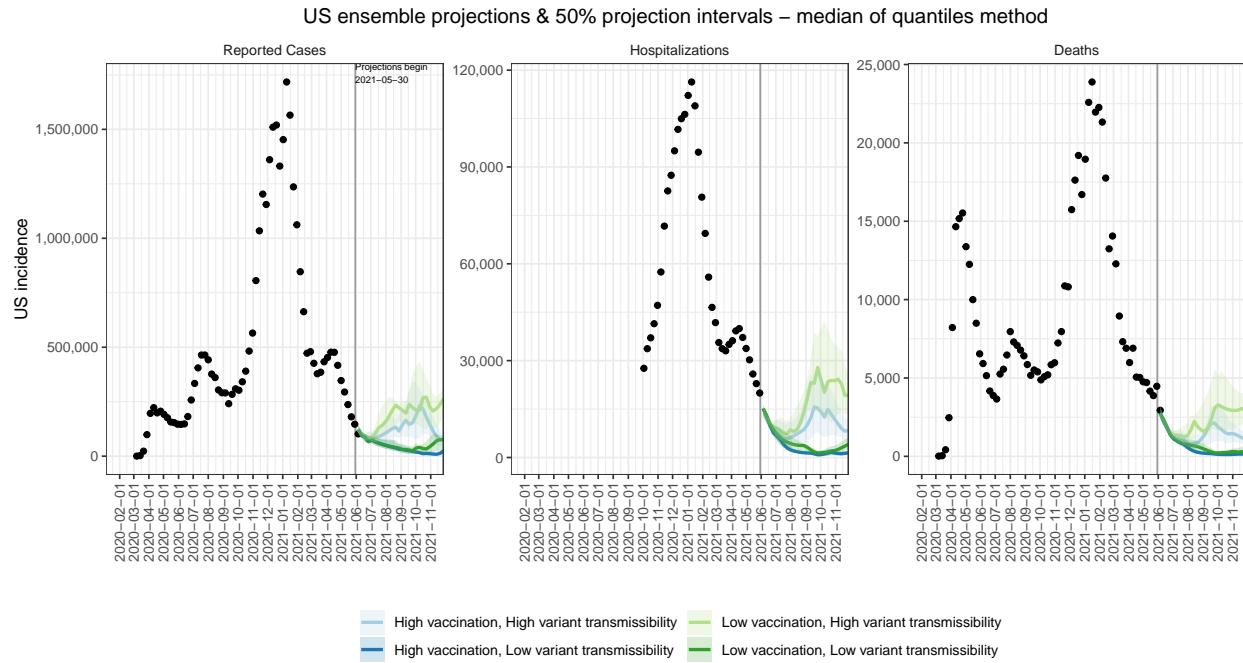
National ensemble projections

We are in the process of changing the method we use to aggregate model results. Our new method is intended to more fully capture the uncertainty associated with the projections across teams and is shown below. For comparability with previous reports, we have otherwise used the original method throughout this report and plan to fully shift our methods in the next round.

Ensemble projections for national cases, hospitalizations and deaths separated by scenario using the new method (linear opinion pool).

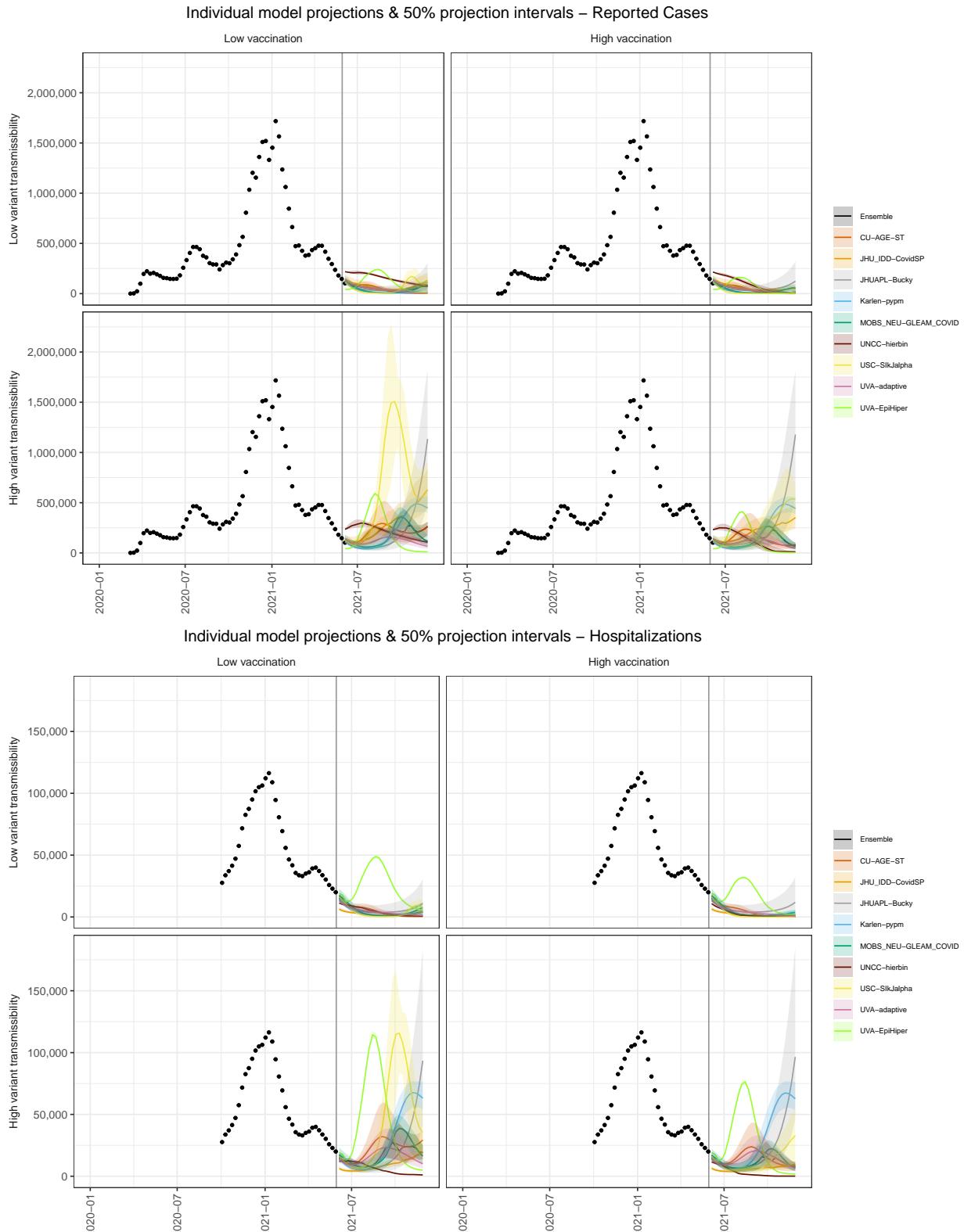


Ensemble projections for national cases, hospitalizations and deaths separated by scenario using the original method (median of quantiles).

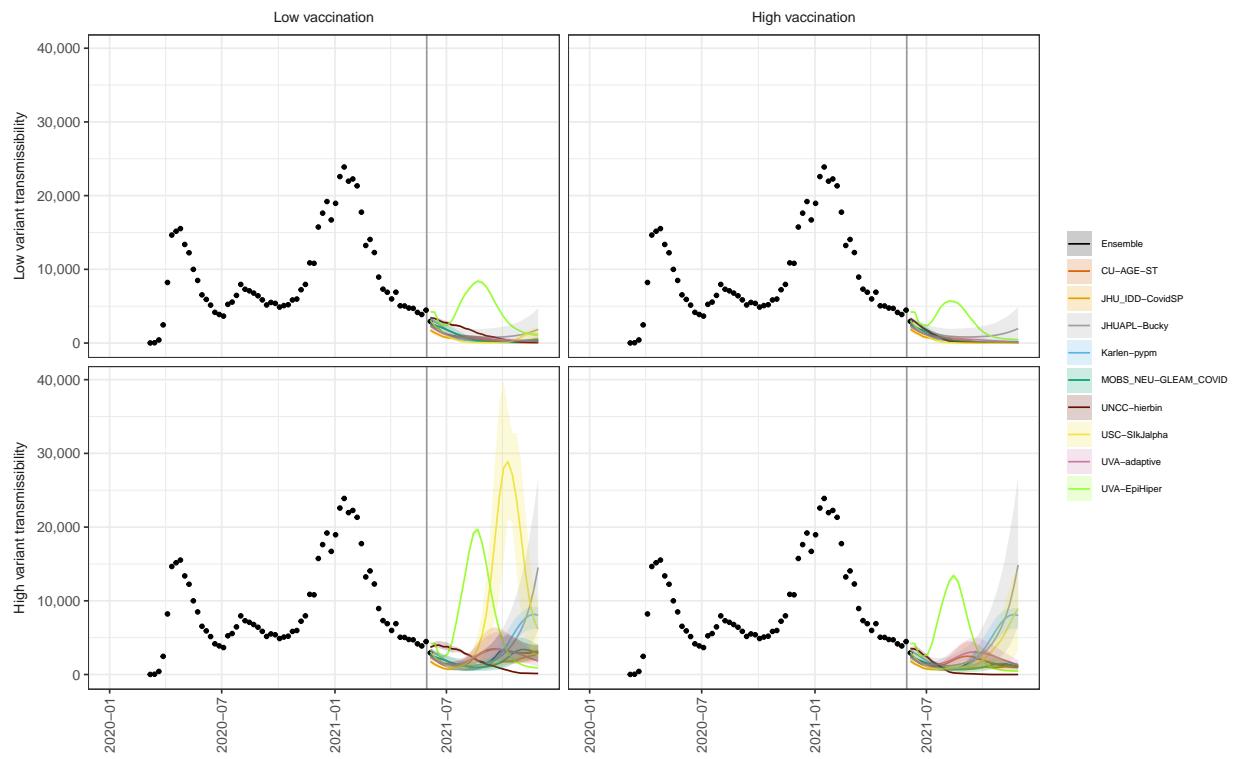


National individual model projections

Individual model projections and ensemble by scenario for national cases, hospitalizations, and deaths.

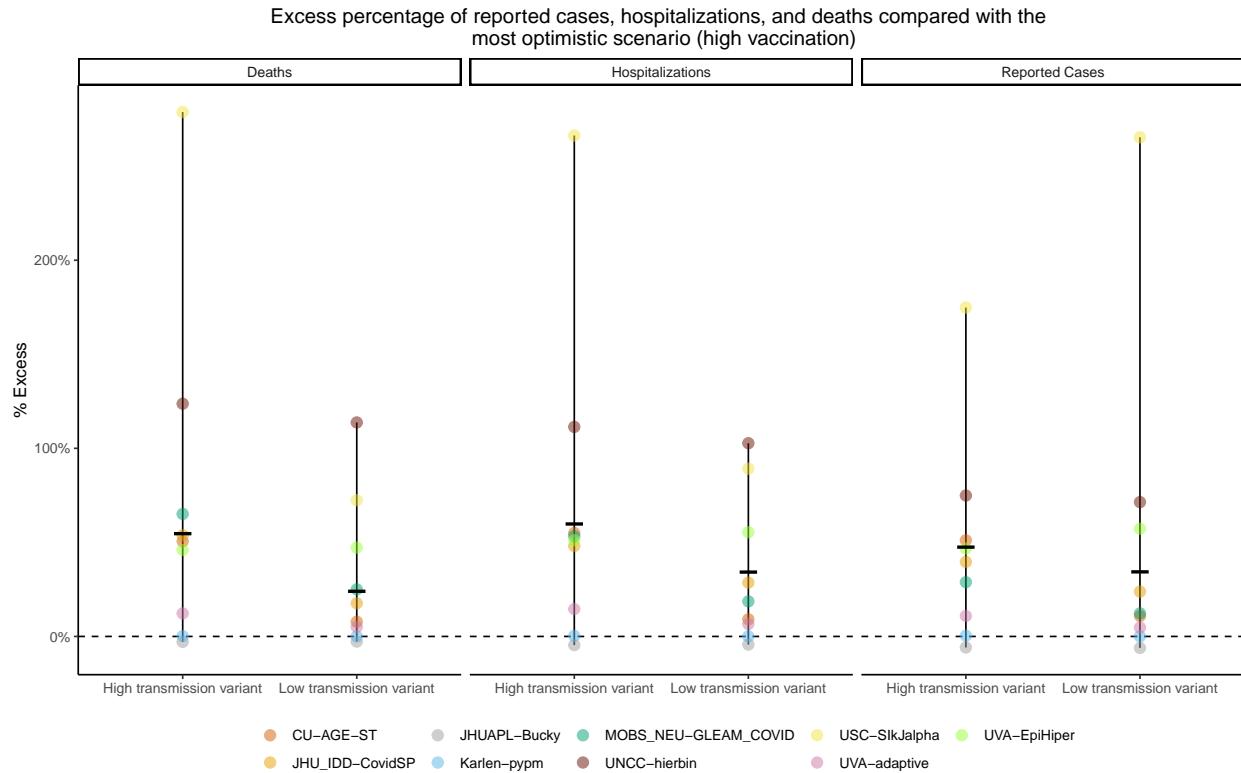


Individual model projections & 50% projection intervals – Deaths



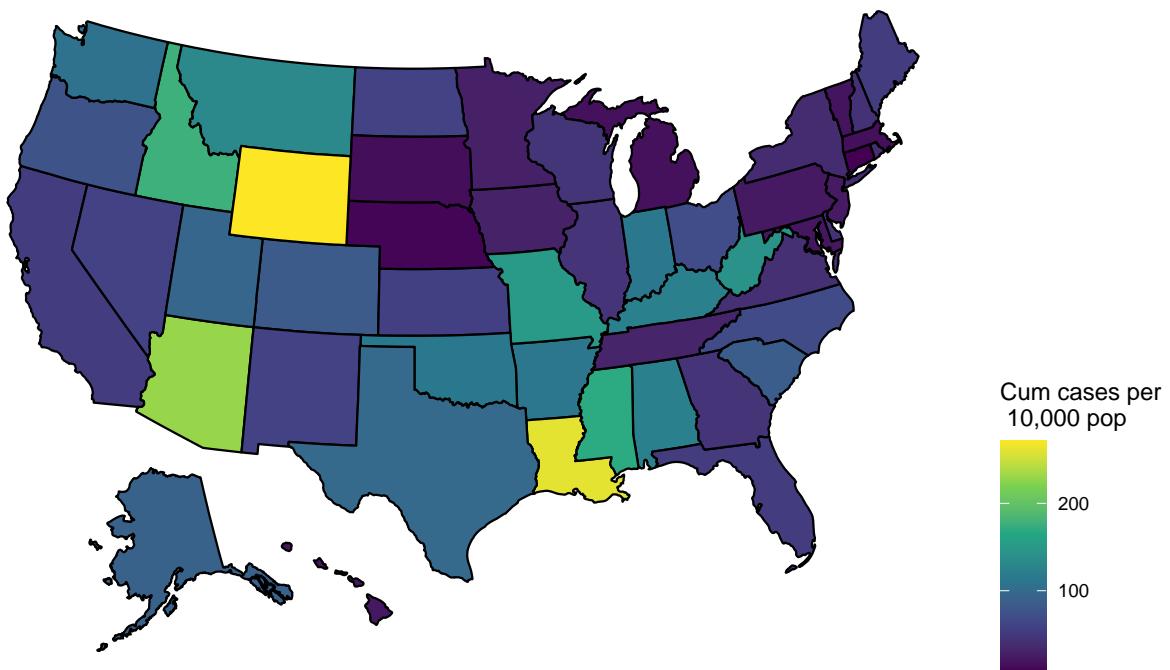
Scenario comparison

Reported cases, deaths, and hospitalizations averted in the high vaccination scenarios for each variant transmissibility assumption.

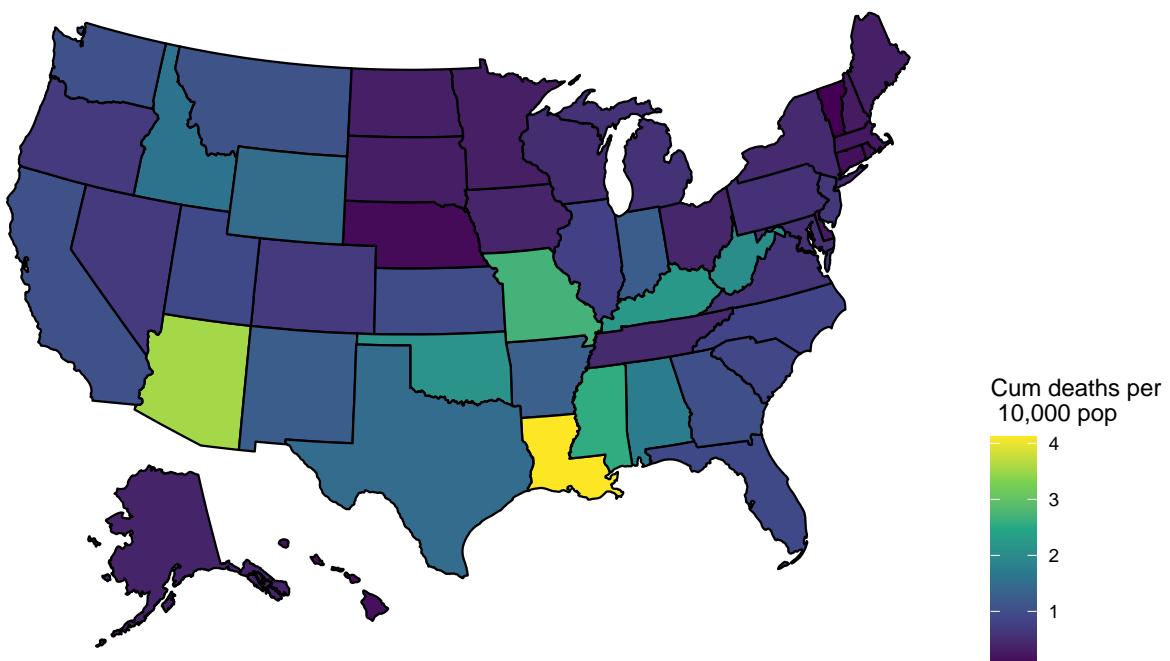


Risk maps

Cumulative reported cases per 10,000 population in low vaccination,
high transmissibility variant scenario: May 30, 2021 to November 27, 2021

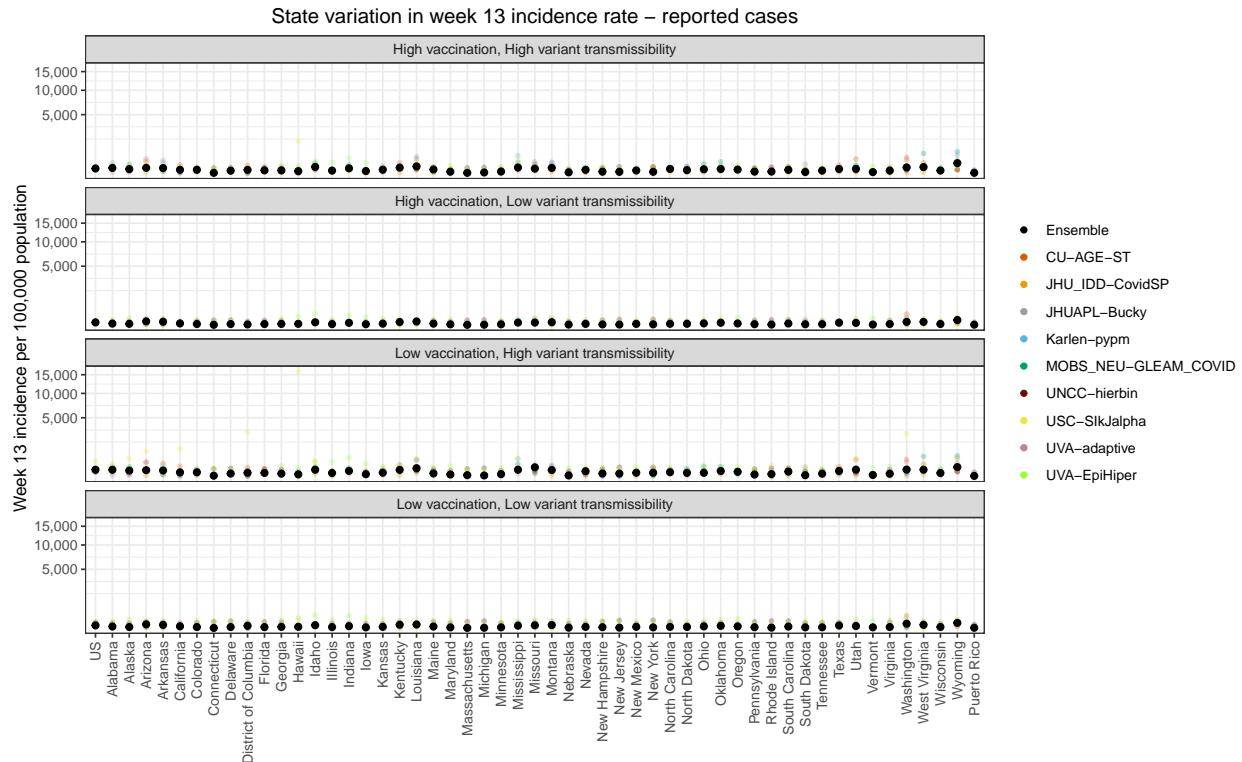


Cumulative deaths per 10,000 population in low vaccination,
high transmissibility variant scenario: May 30, 2021 to November 27, 2021

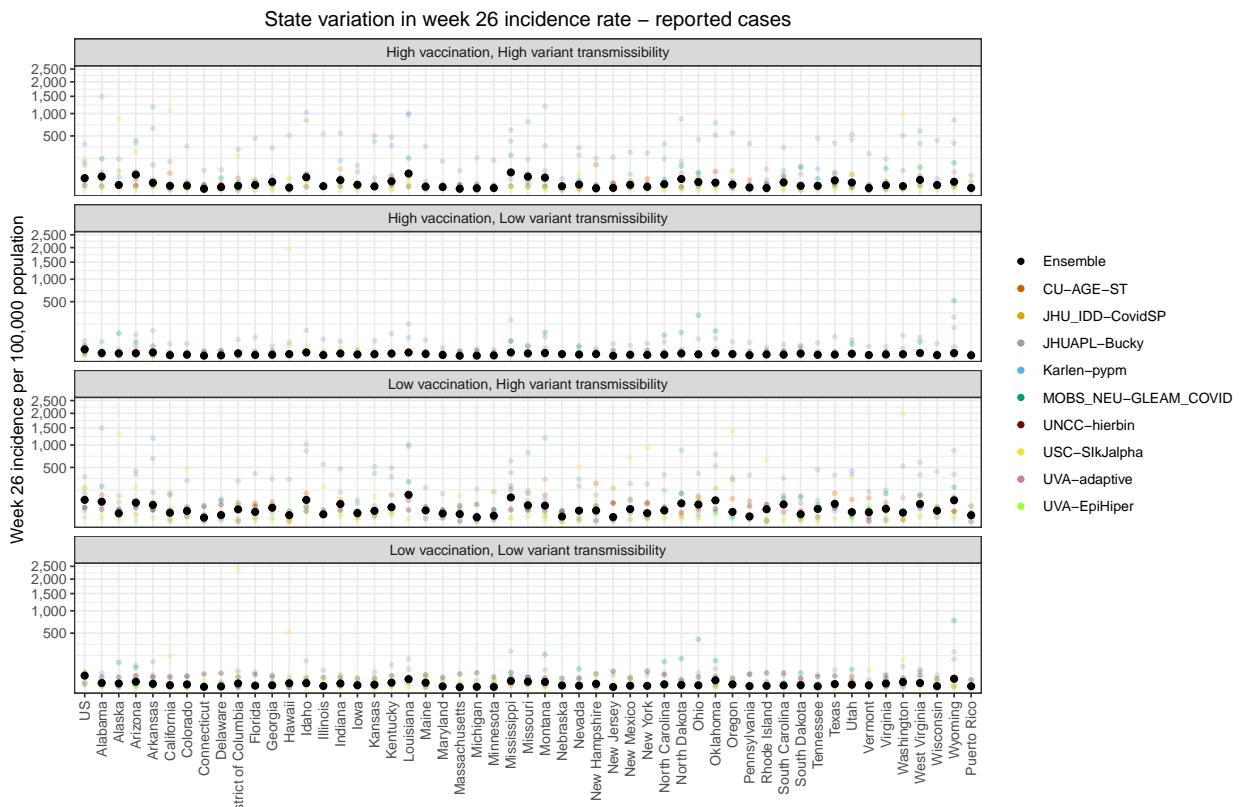


State-level deviation from national

Individual model and ensembles projections for state-level case incidence per 100,000 population at week 13.

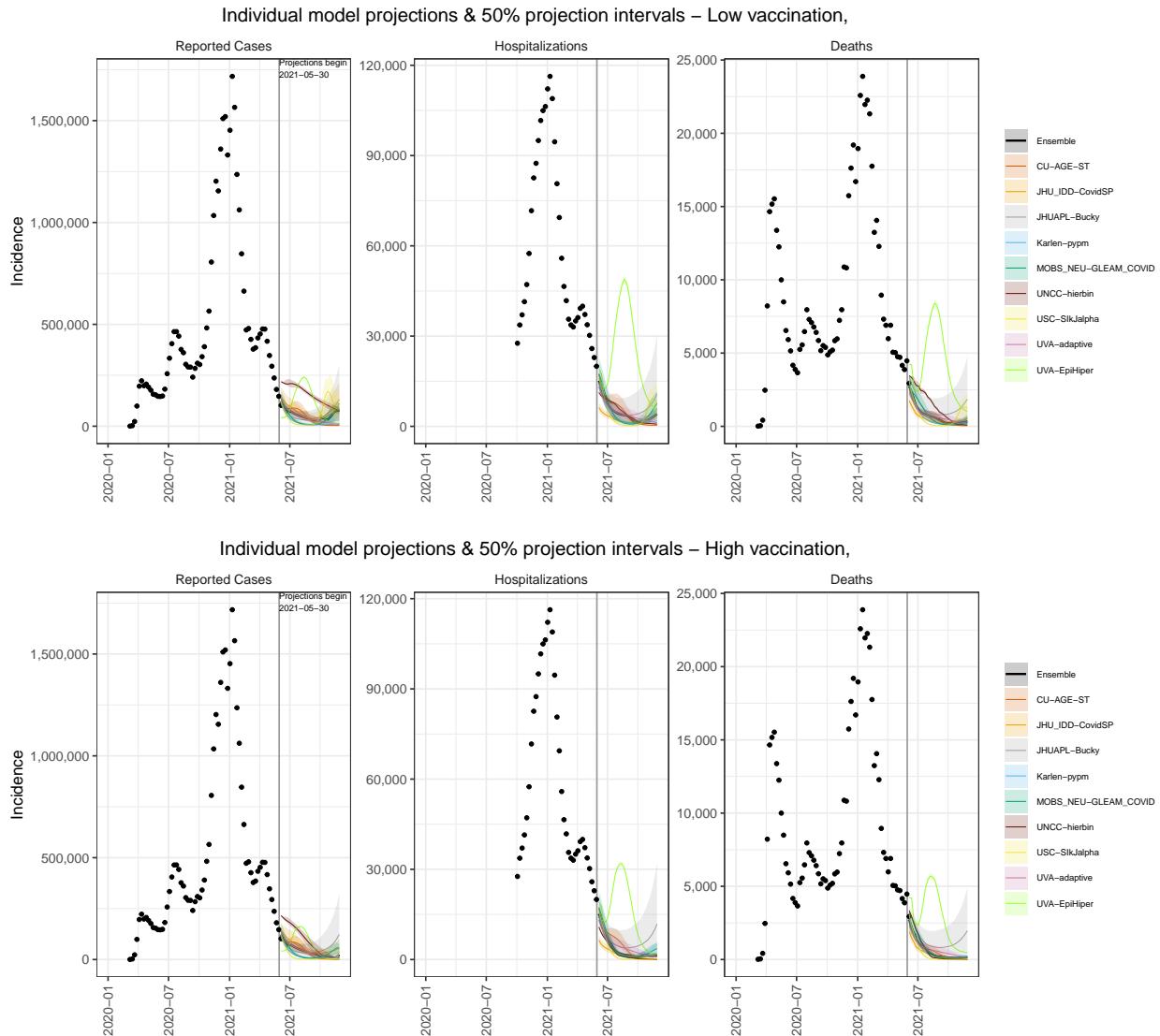


Individual model and ensembles projections for state-level incidence per 100,000 population at week 26.

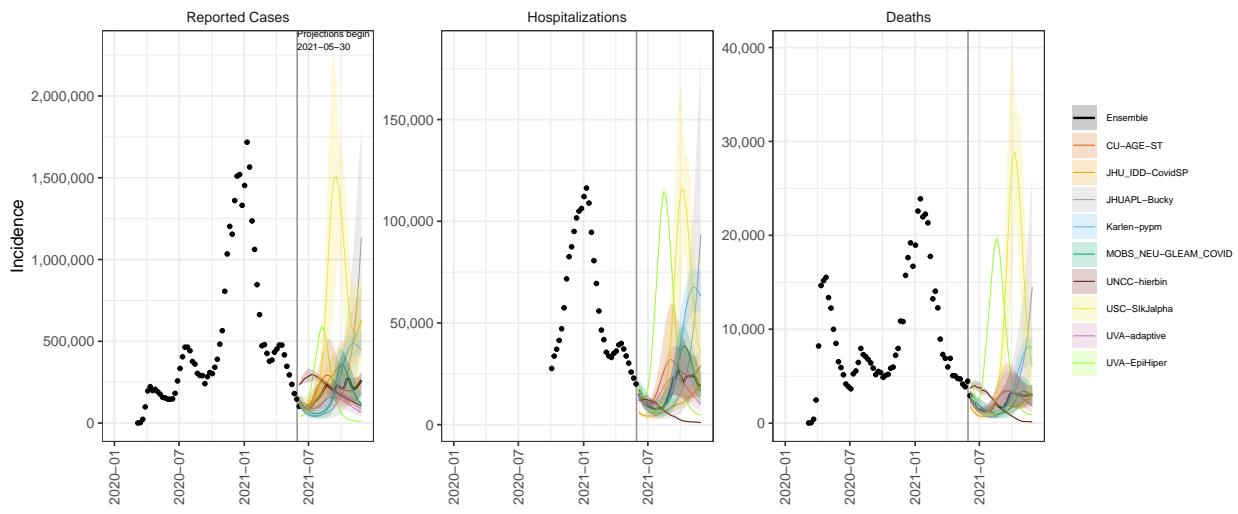


National model variation

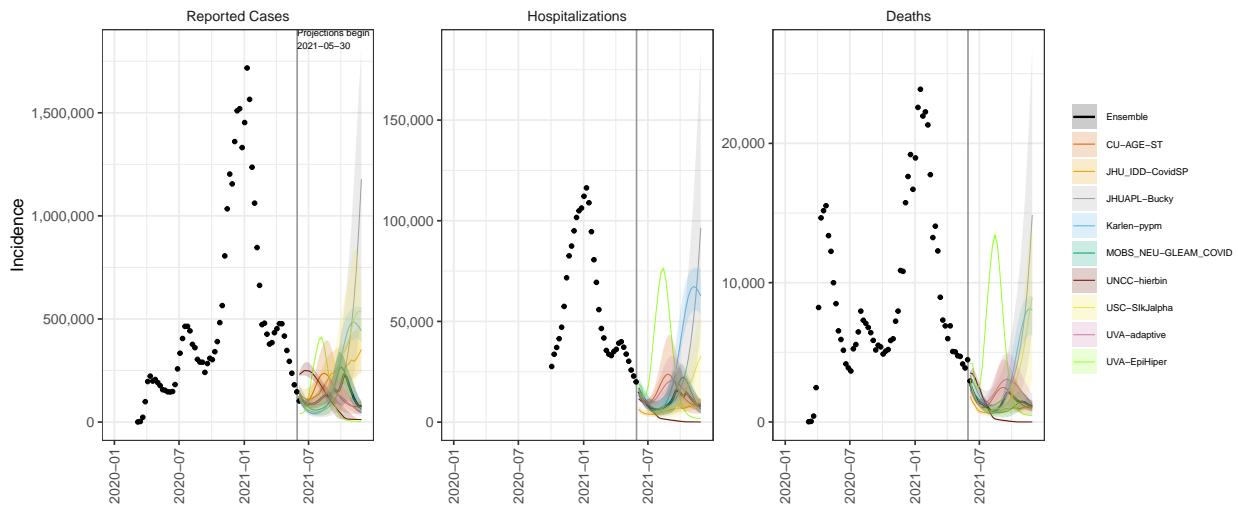
Individual model projections for national incident cases, hospitalizations and deaths.



Individual model projections & 50% projection intervals – Low vaccination,

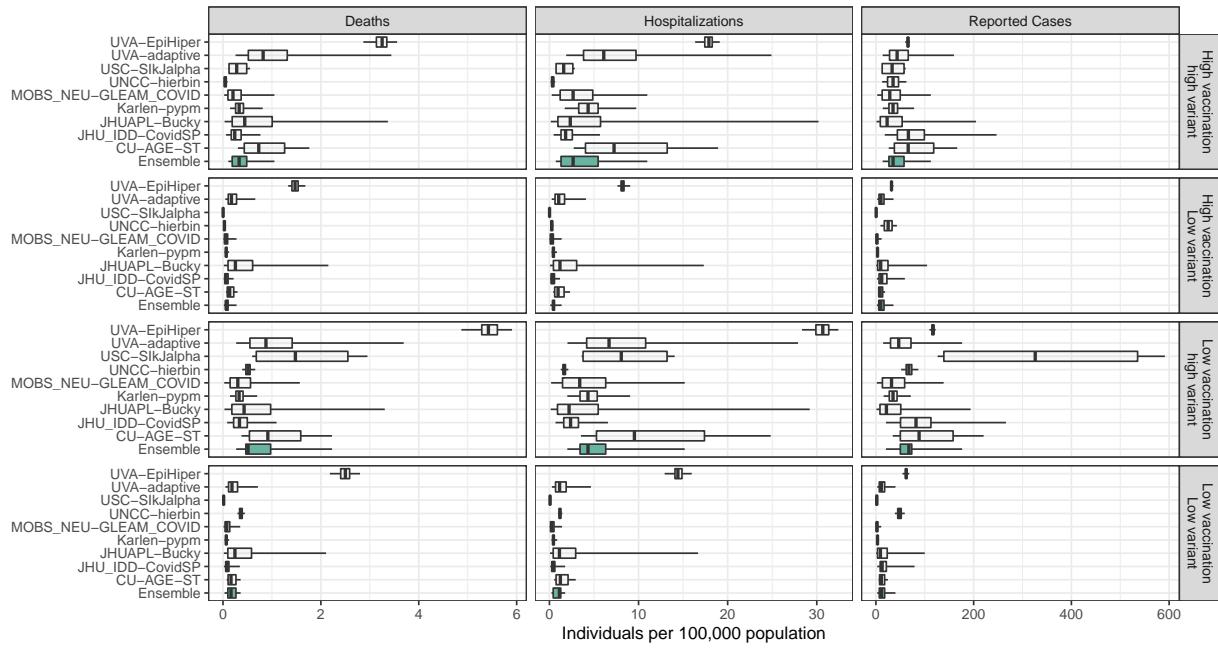


Individual model projections & 50% projection intervals – High vaccination,

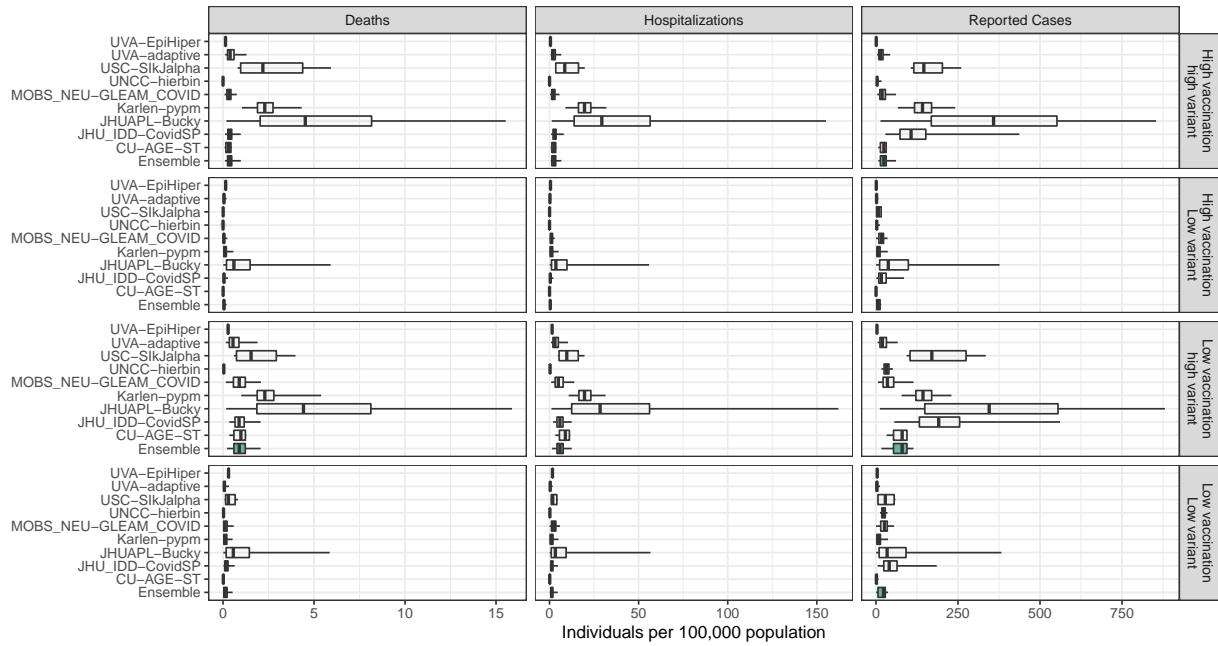


Projection distributions

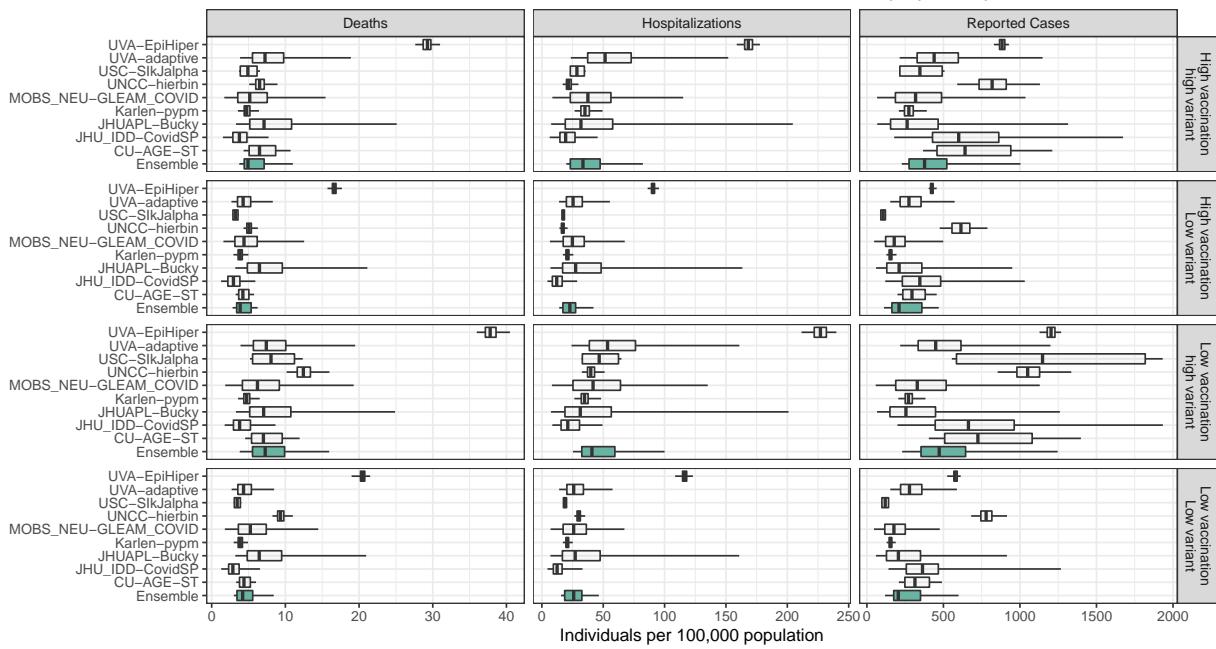
Model variation – 13 week ahead incidence



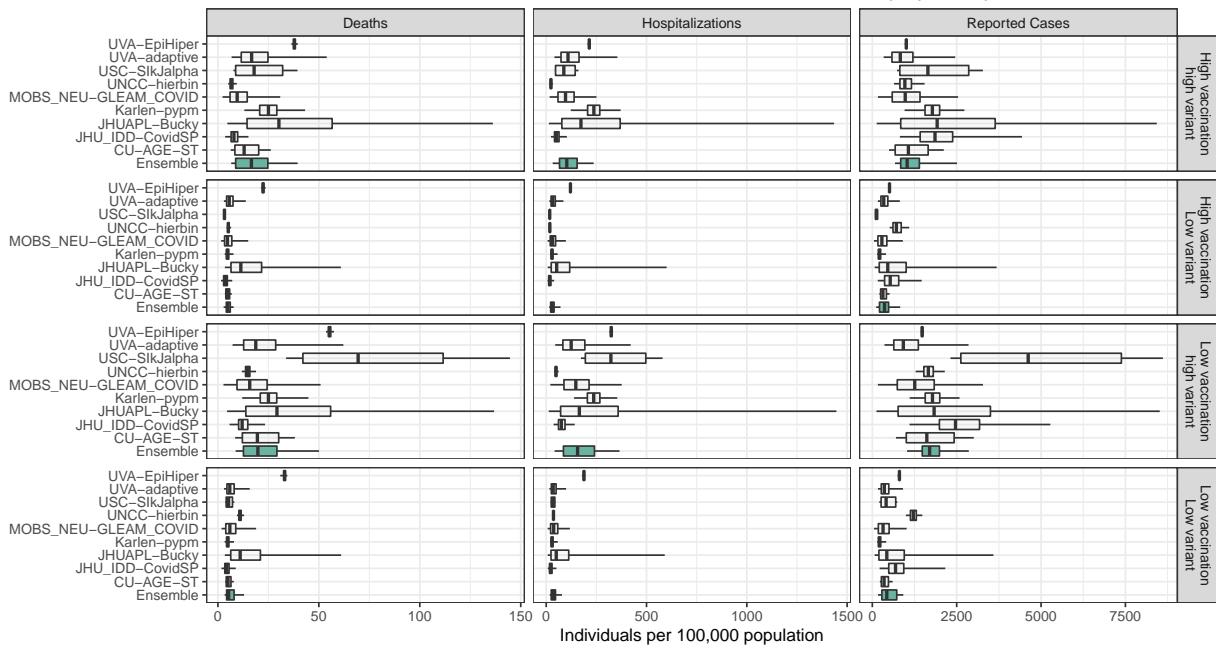
Model variation – 26 week ahead incidence



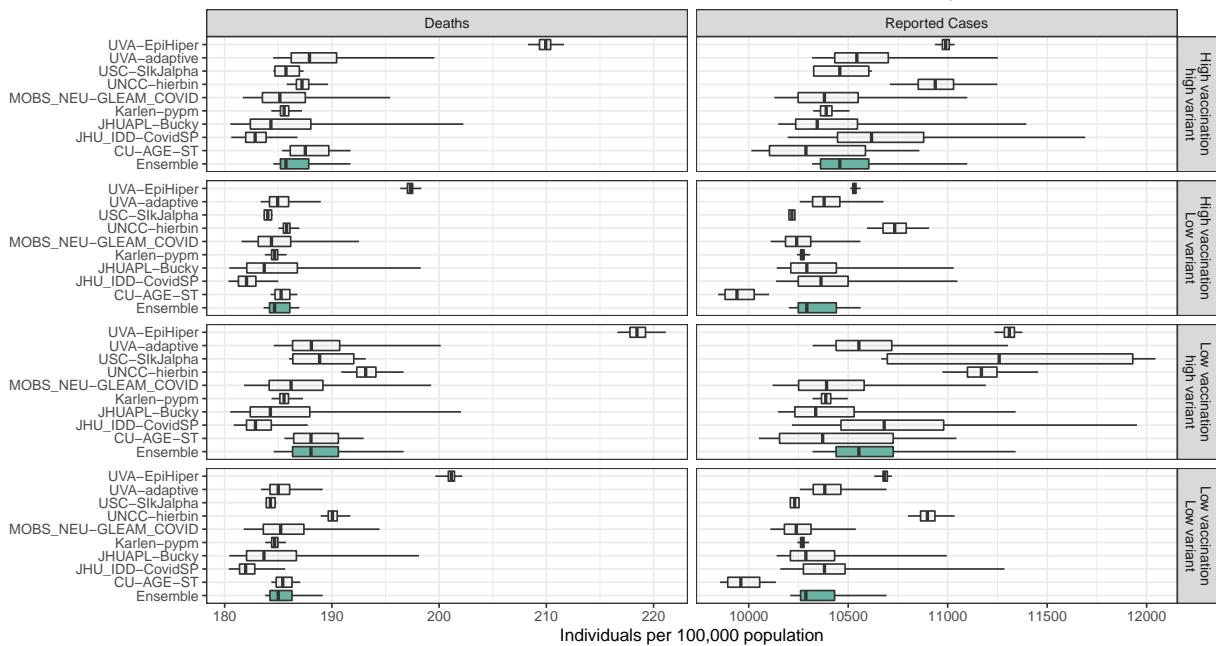
Model variation – 13 week ahead cumulative incidence over projection period



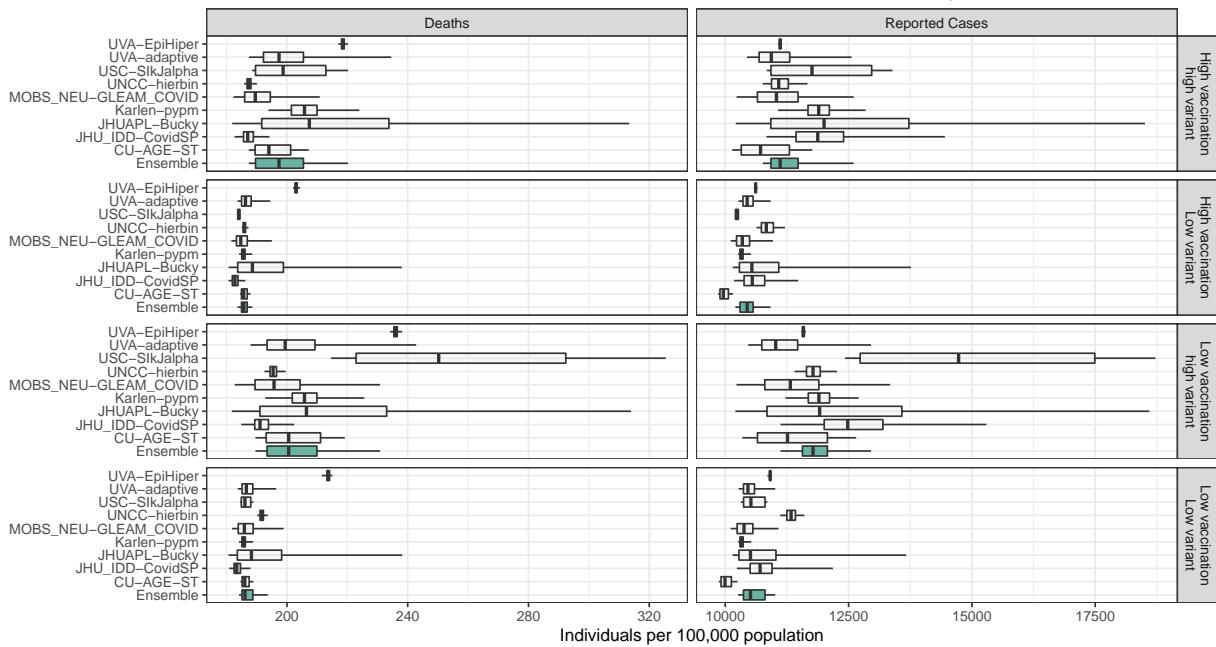
Model variation – 26 week ahead cumulative incidence over projection period



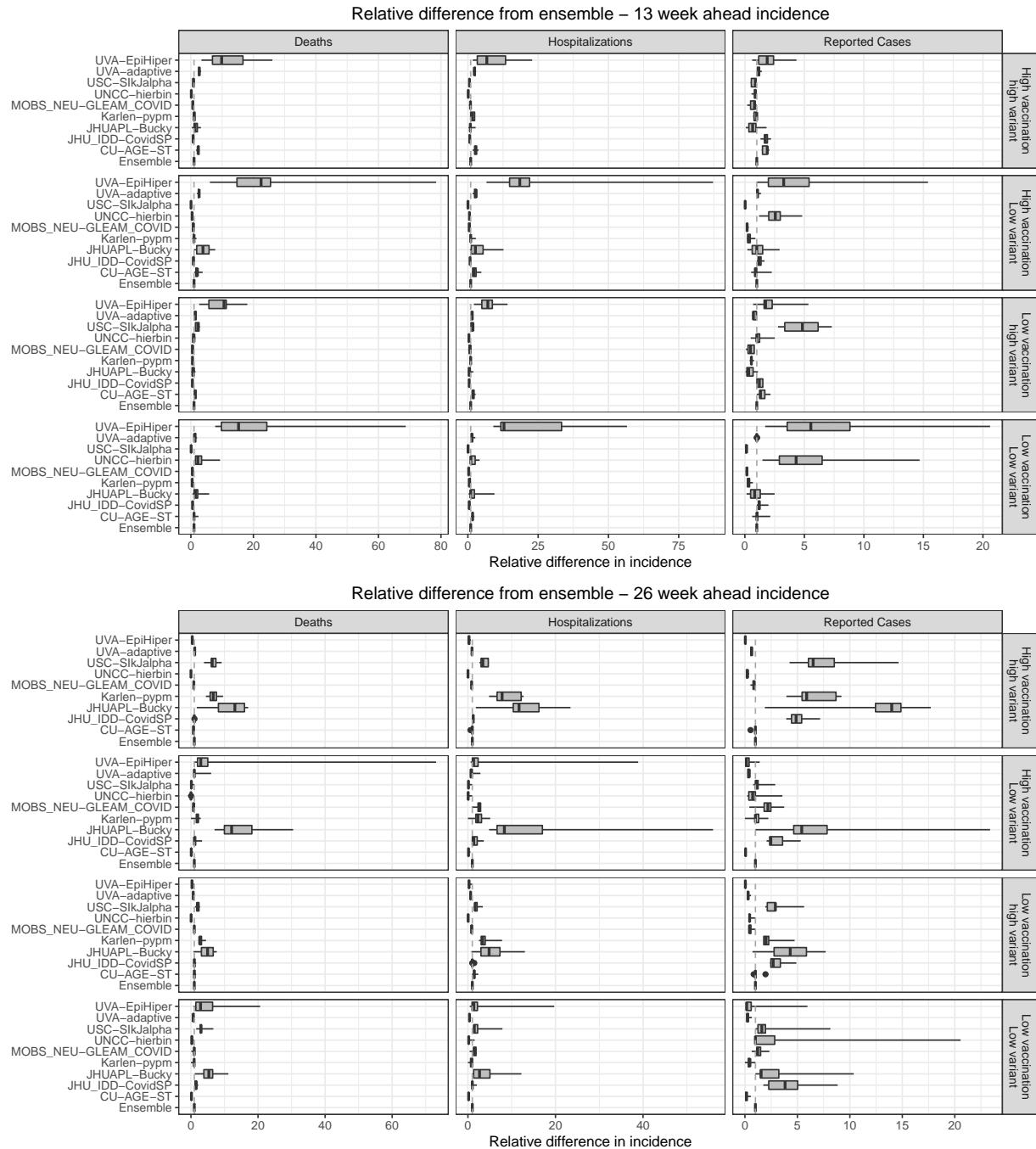
Model variation – 13 week ahead cumulative incidence over entire pandemic



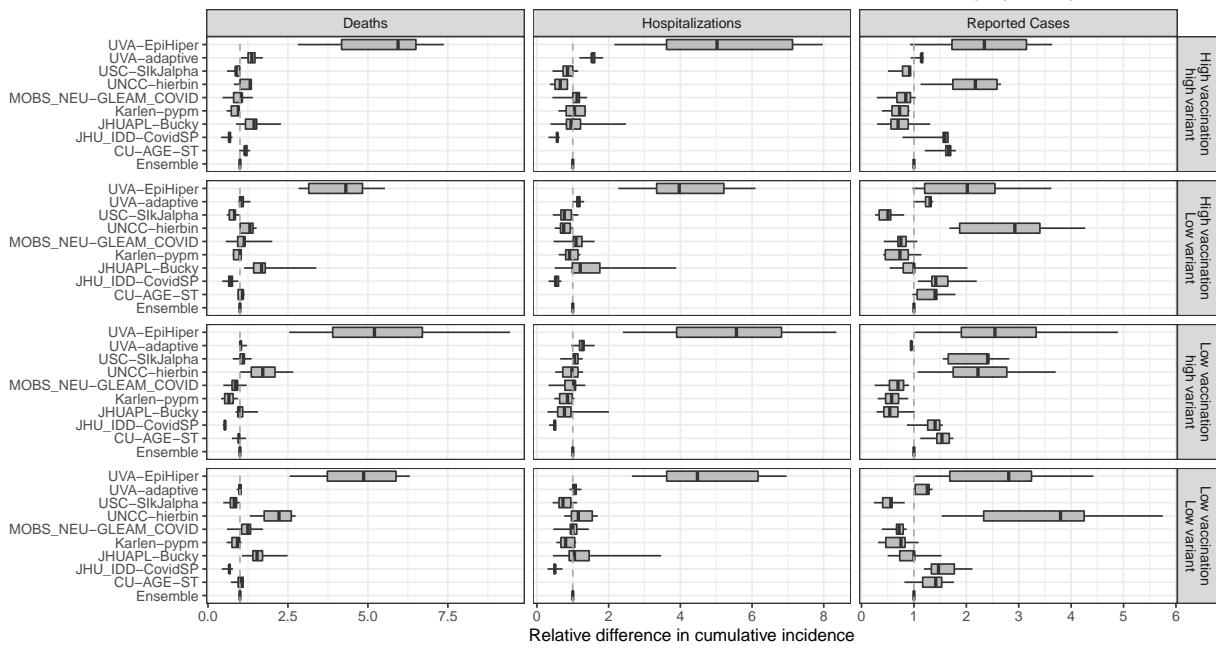
Model variation – 26 week ahead cumulative incidence over entire pandemic



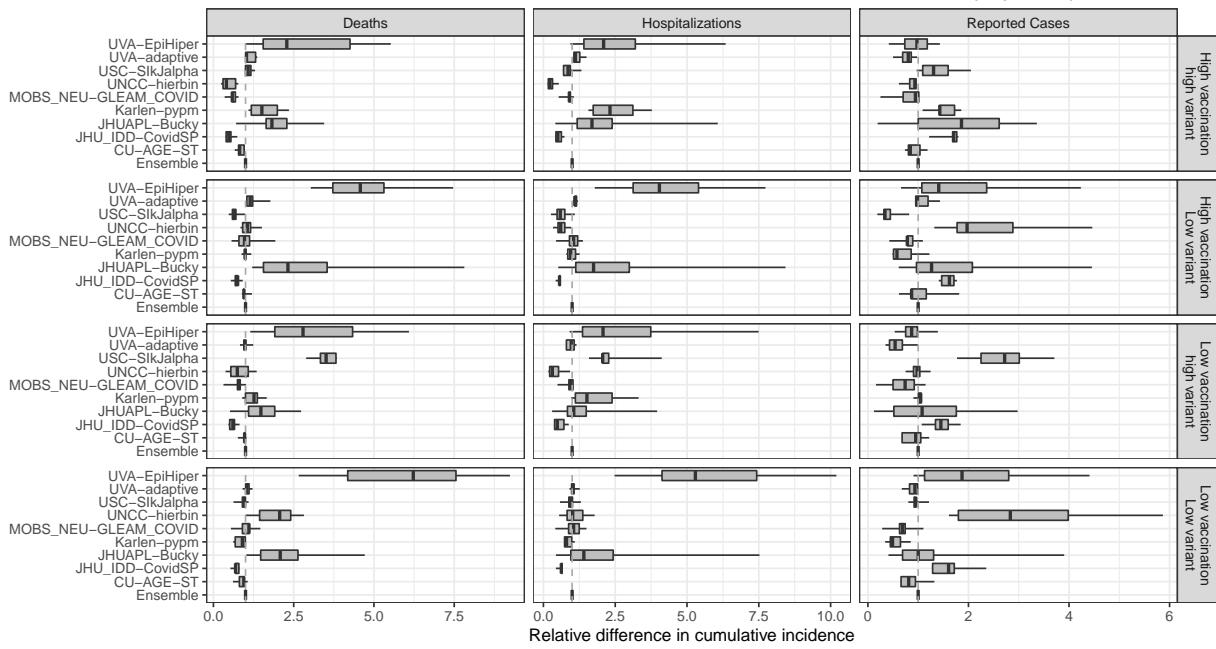
Difference between model and ensemble distributions



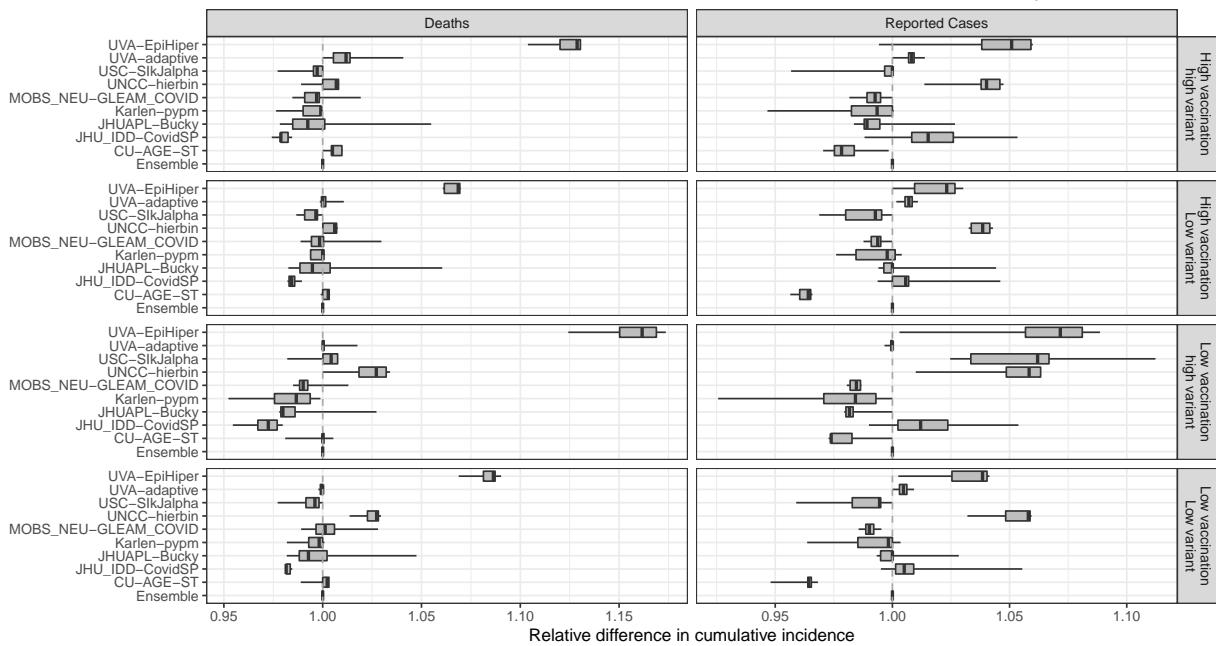
Relative difference from ensemble – 13 week ahead cumulative incidence over projection period



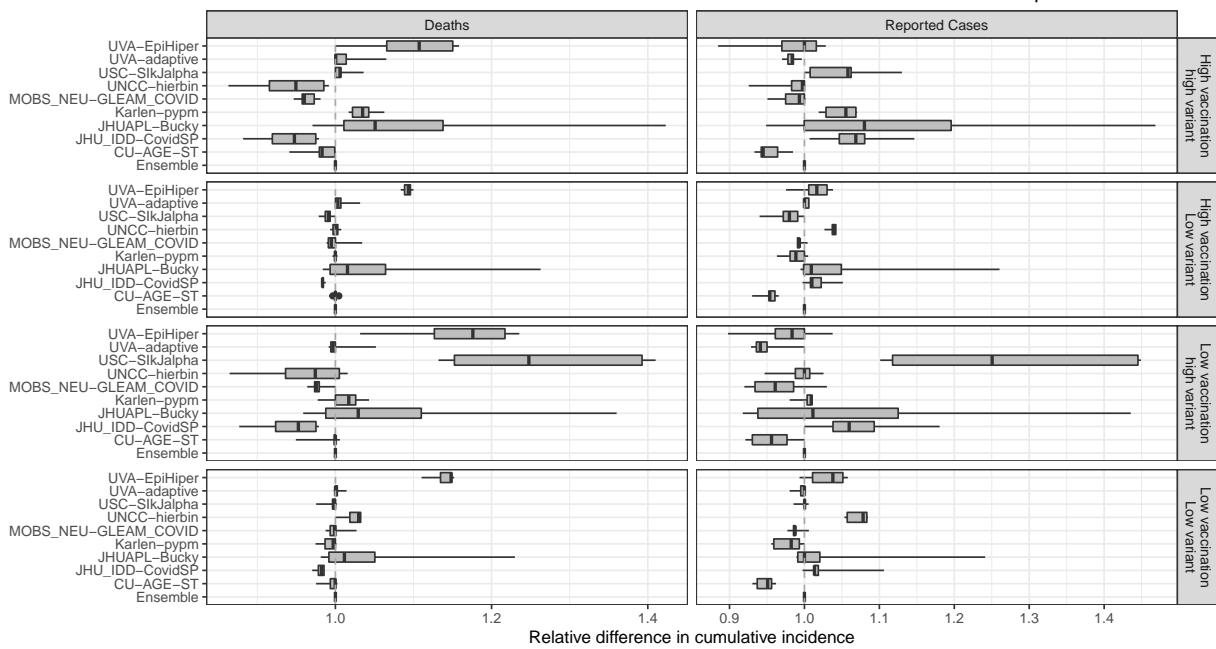
Relative difference from ensemble – 26 week ahead cumulative incidence over projection period



Relative difference from ensemble – 13 week ahead cumulative incidence over entire pandemic

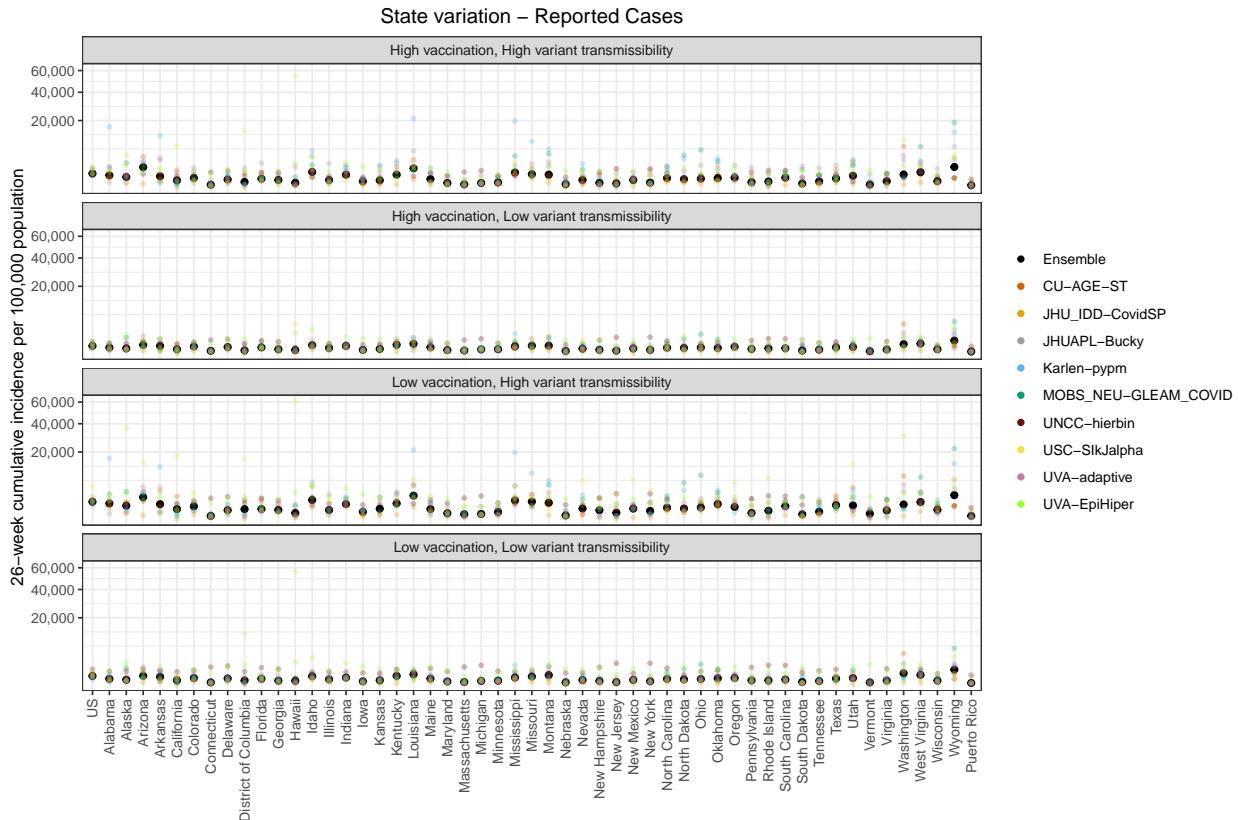


Relative difference from ensemble – 26 week ahead cumulative incidence over entire pandemic

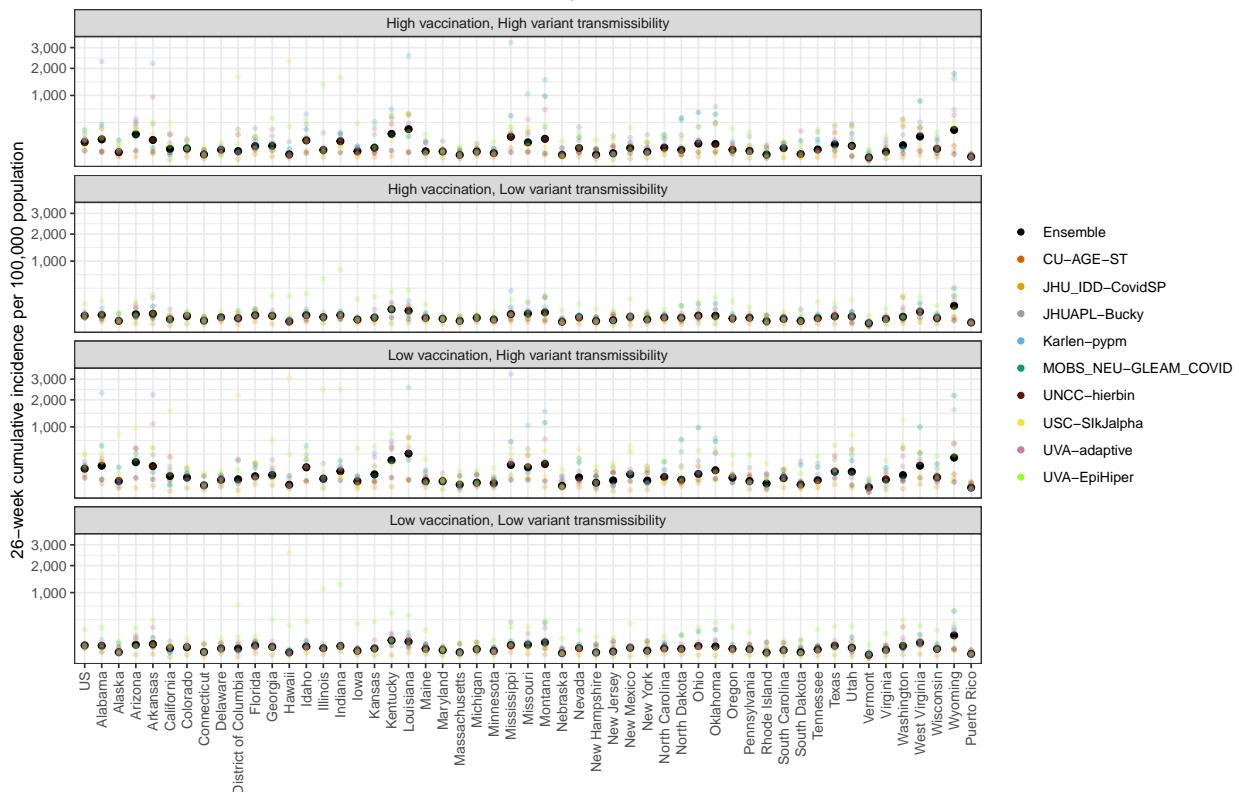


Supplemental Plots

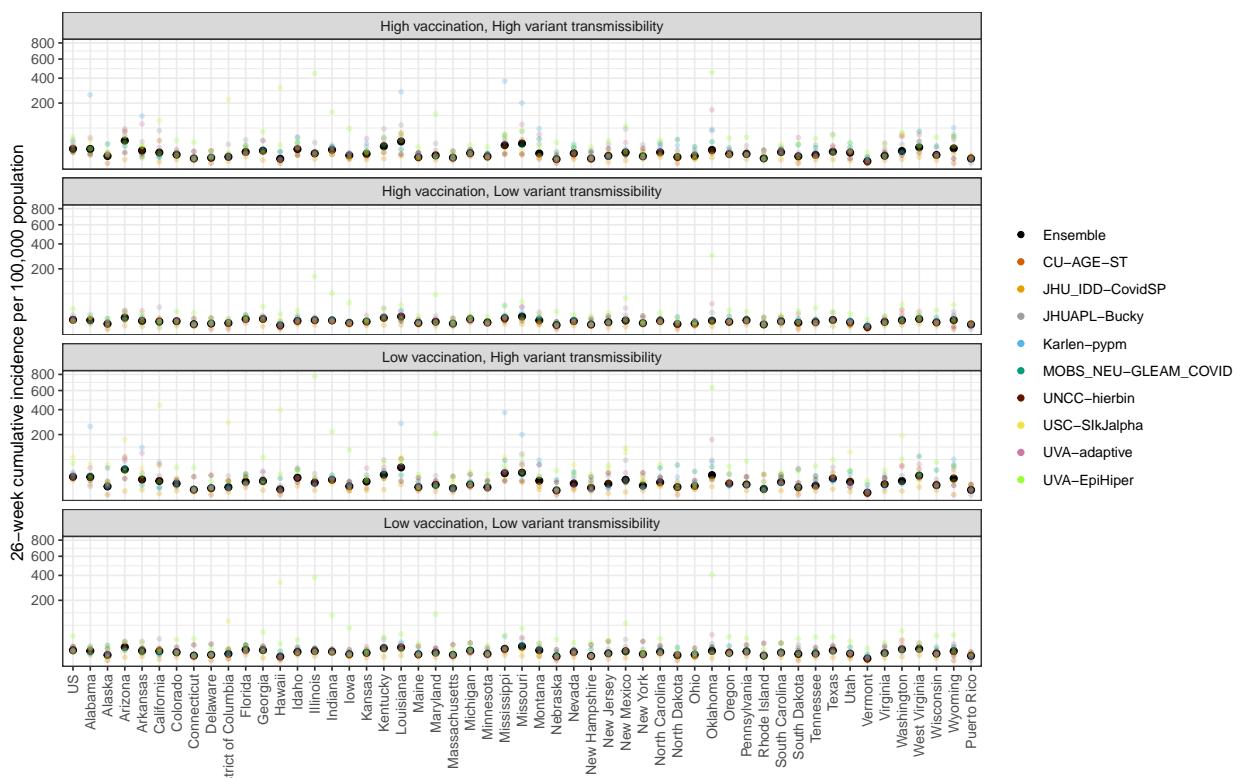
Individual model and ensembles projections for state-level cumulative incidence per 100,000 population over 26-week projection period. Please note the relatively small number of models incorporated in the ensemble at this stage, particularly states and territories for which only one or two models have submitted projections.



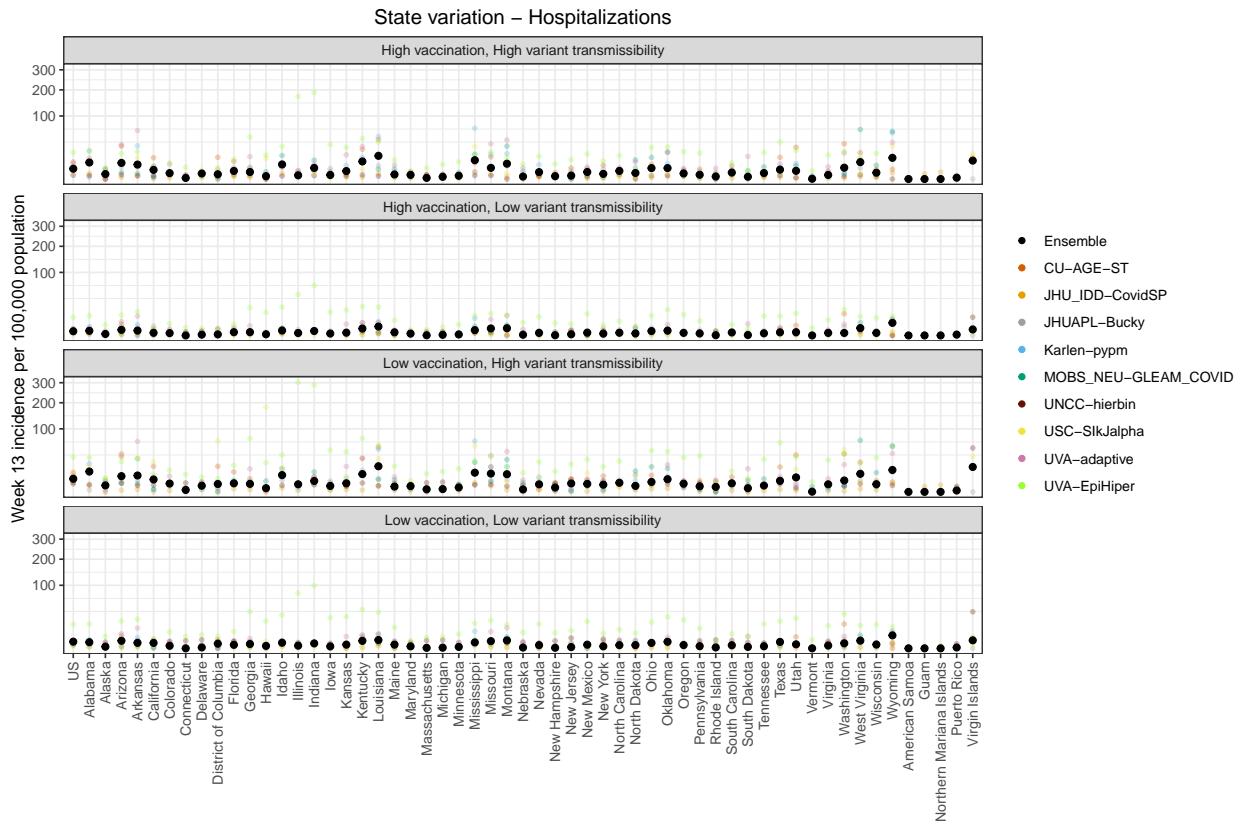
State variation – Hospitalizations

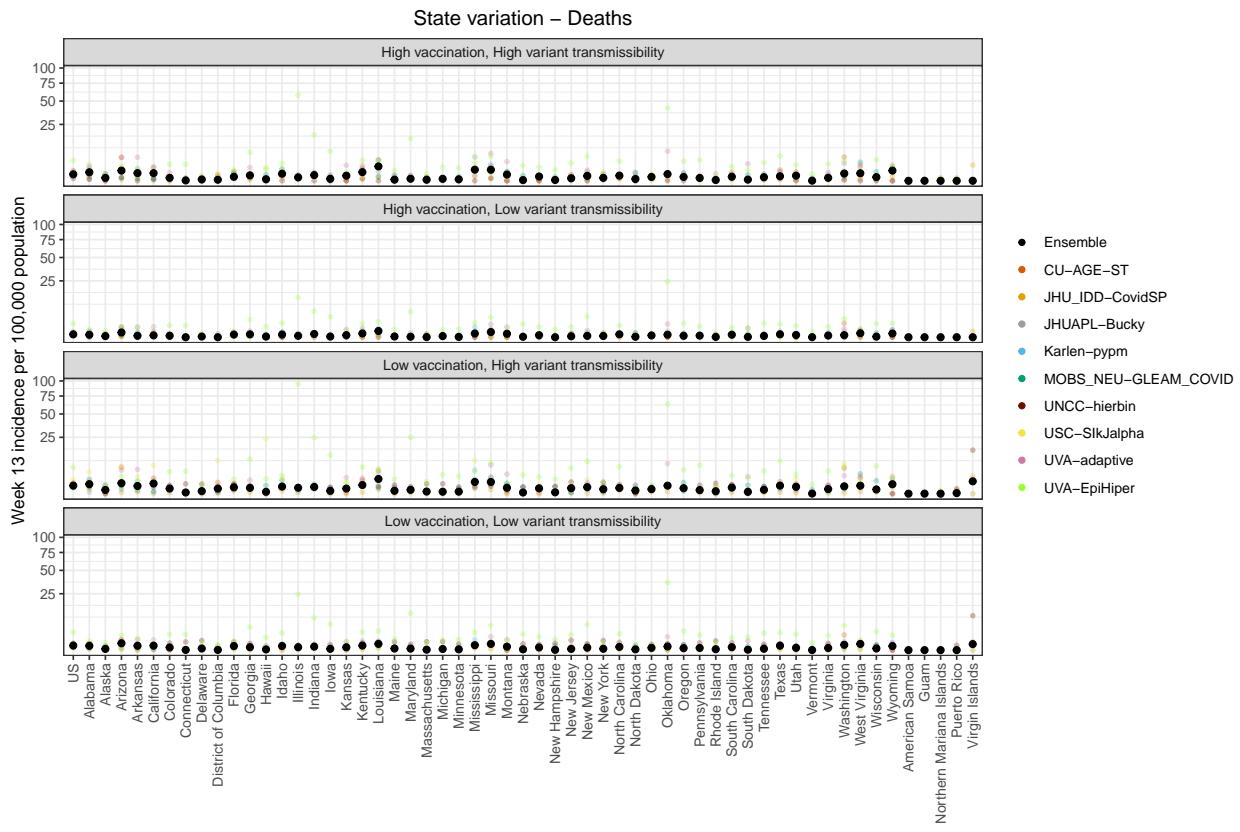


State variation – Deaths

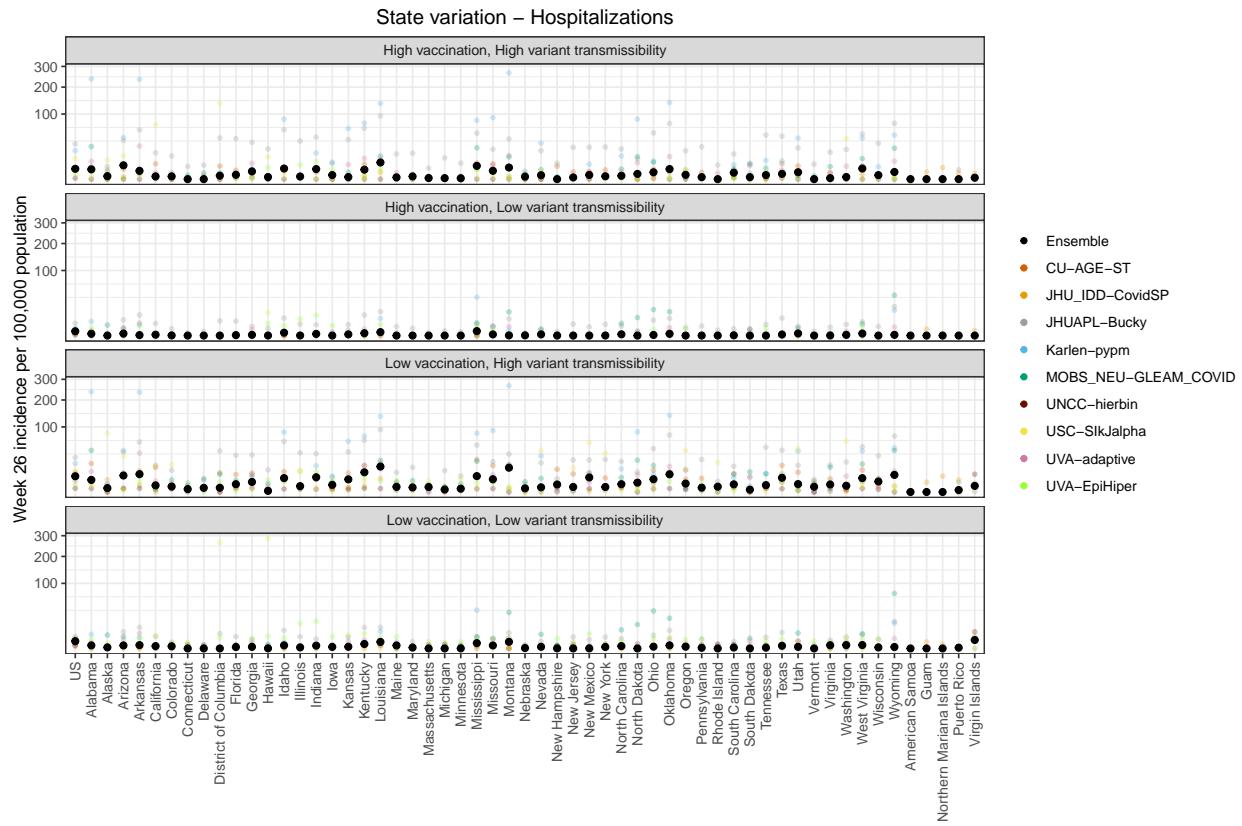


Individual model and ensembles projections for state-level death and hospitalization incidence per 100,000 population at week 13.

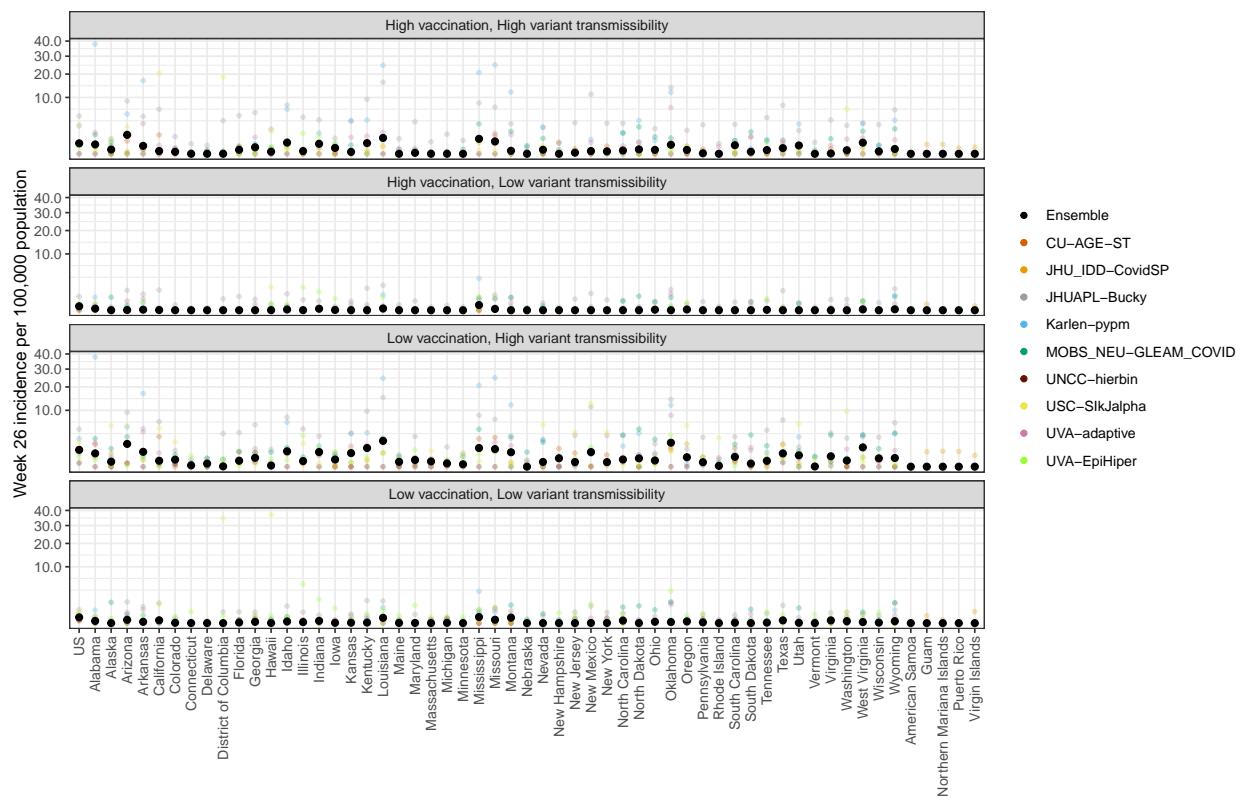




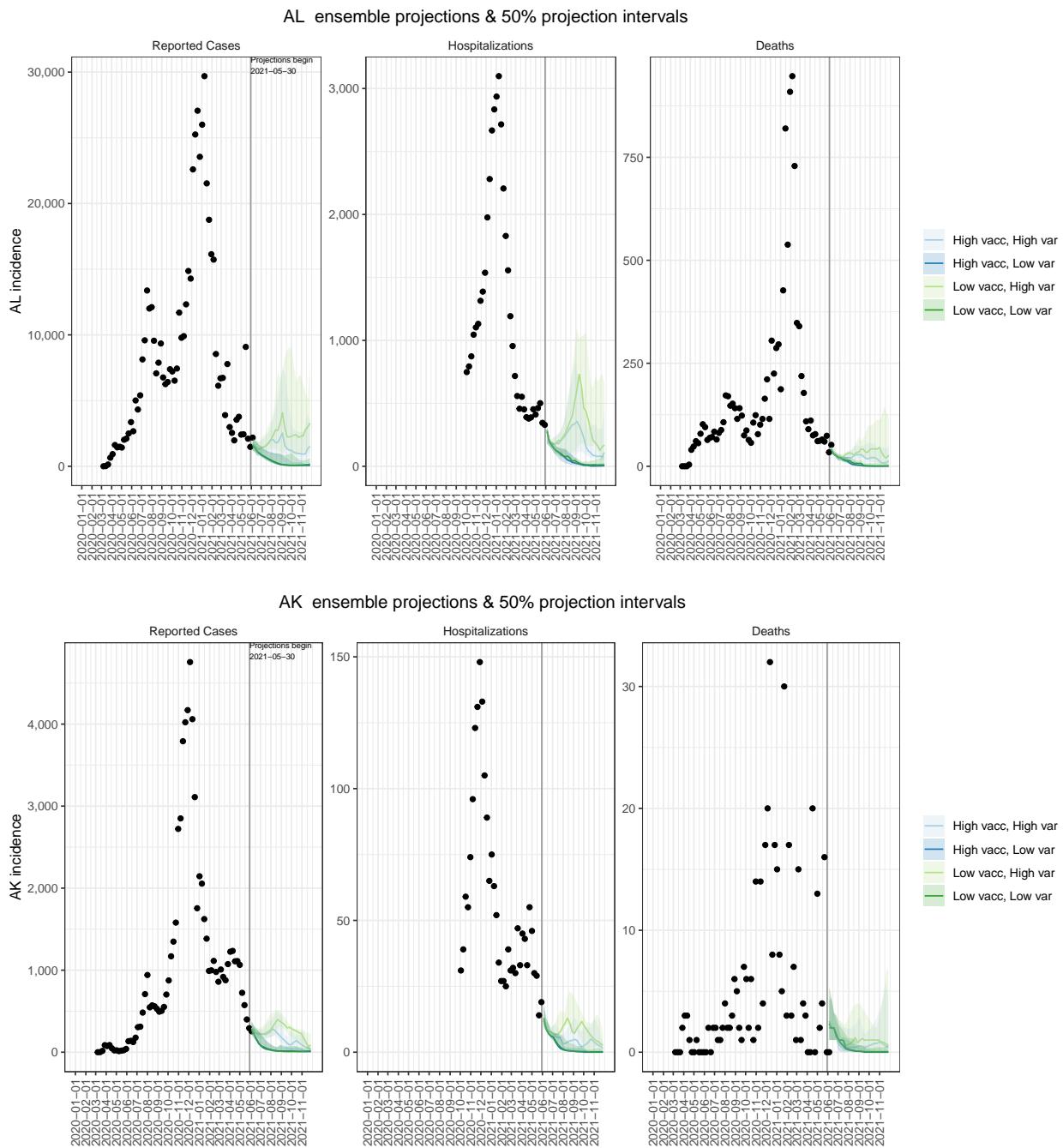
Individual model and ensembles projections for state-level incidence per 100,000 population at week 26.



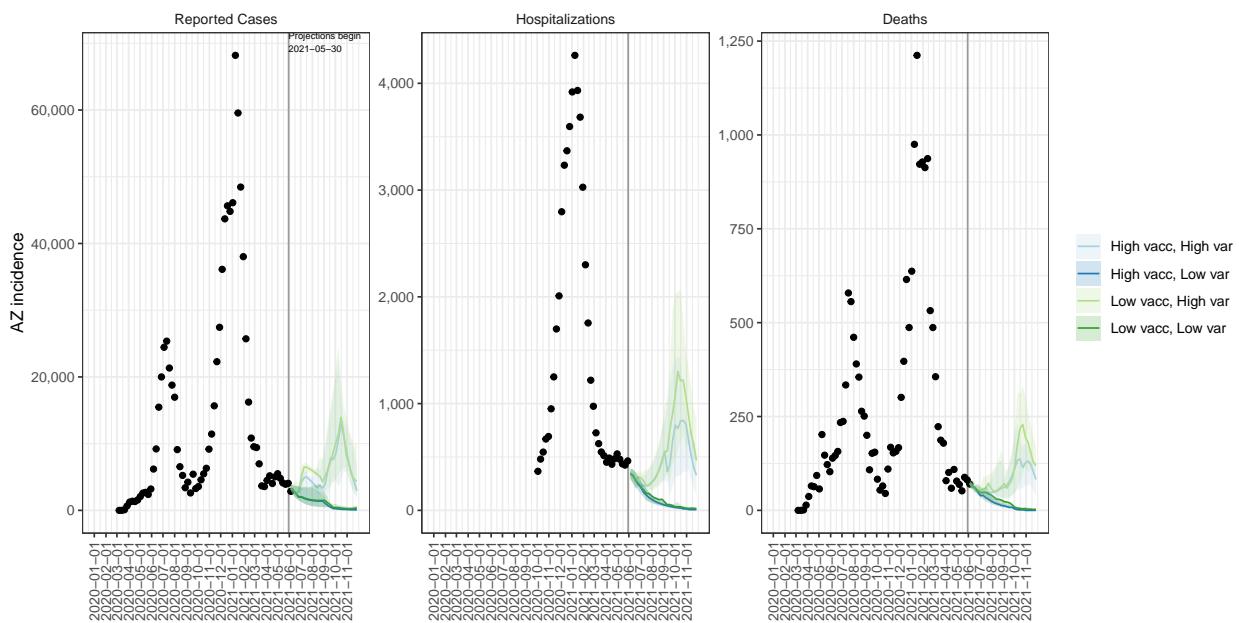
State variation – Deaths



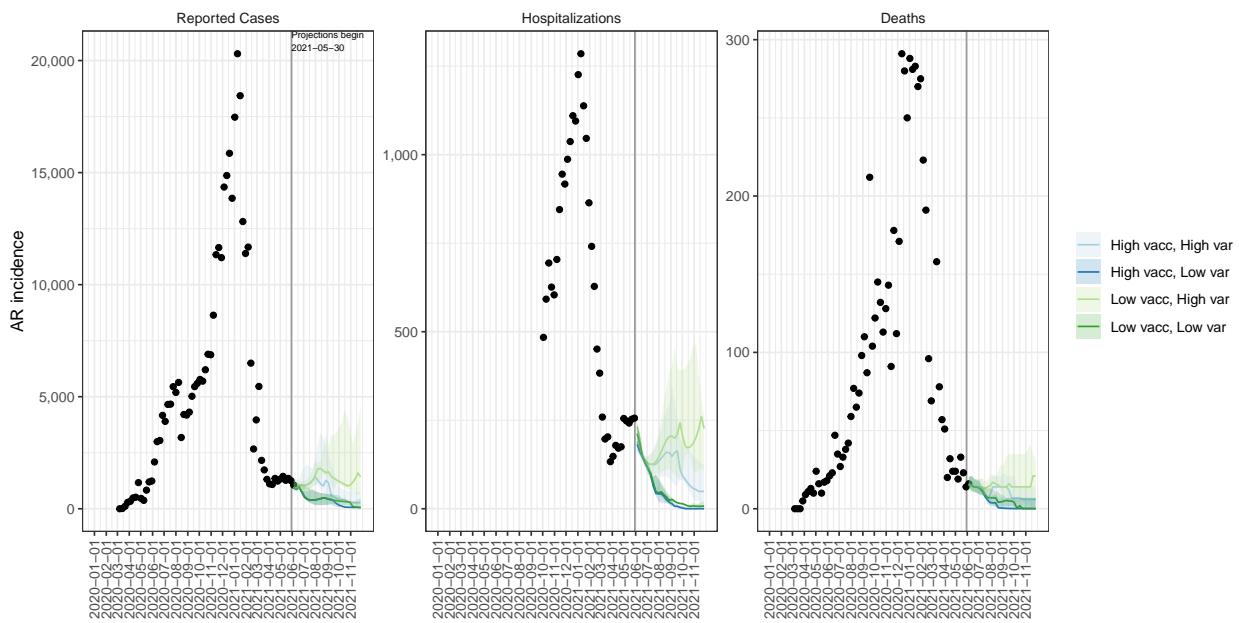
State-level ensemble plots



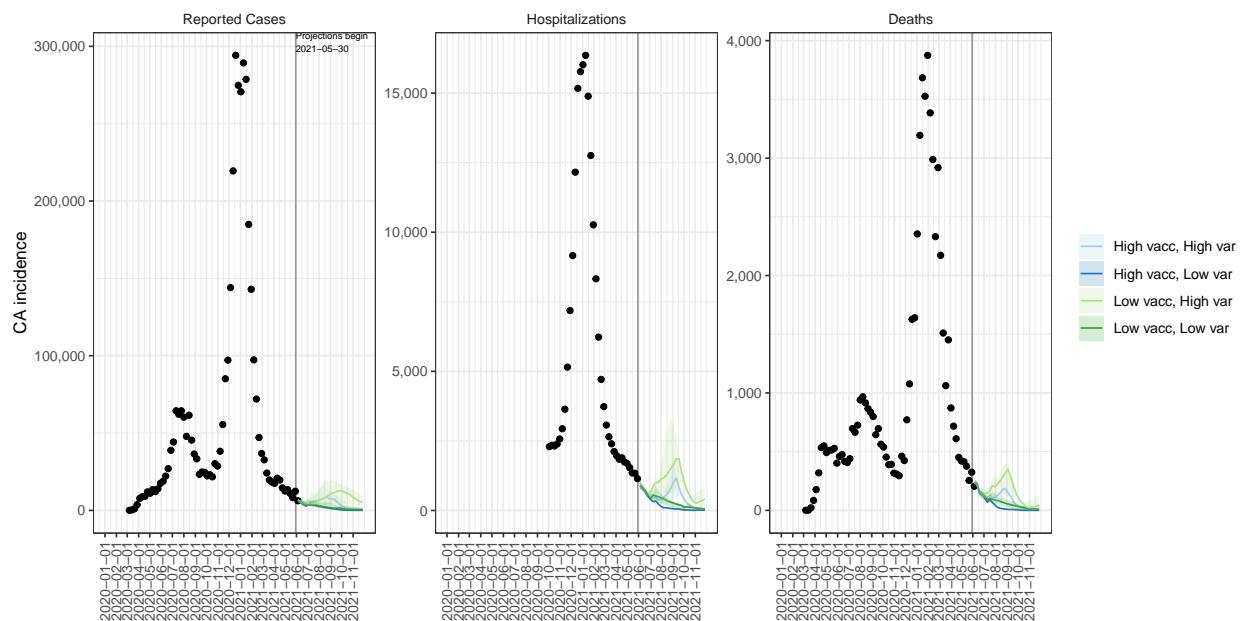
AZ ensemble projections & 50% projection intervals



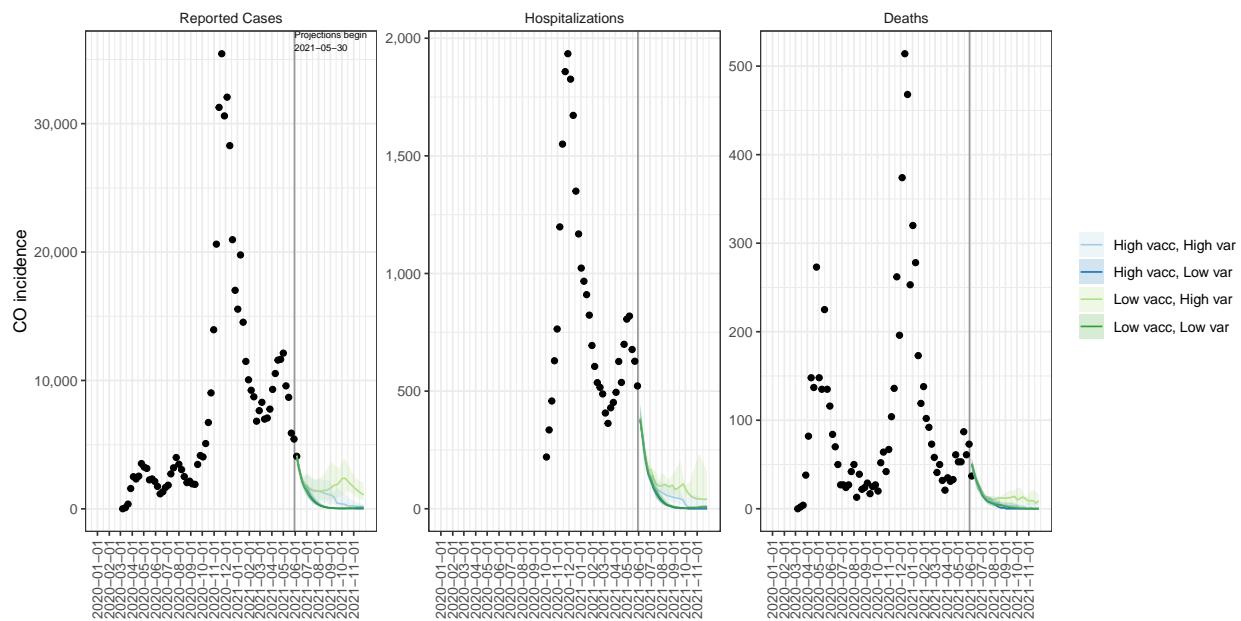
AR ensemble projections & 50% projection intervals



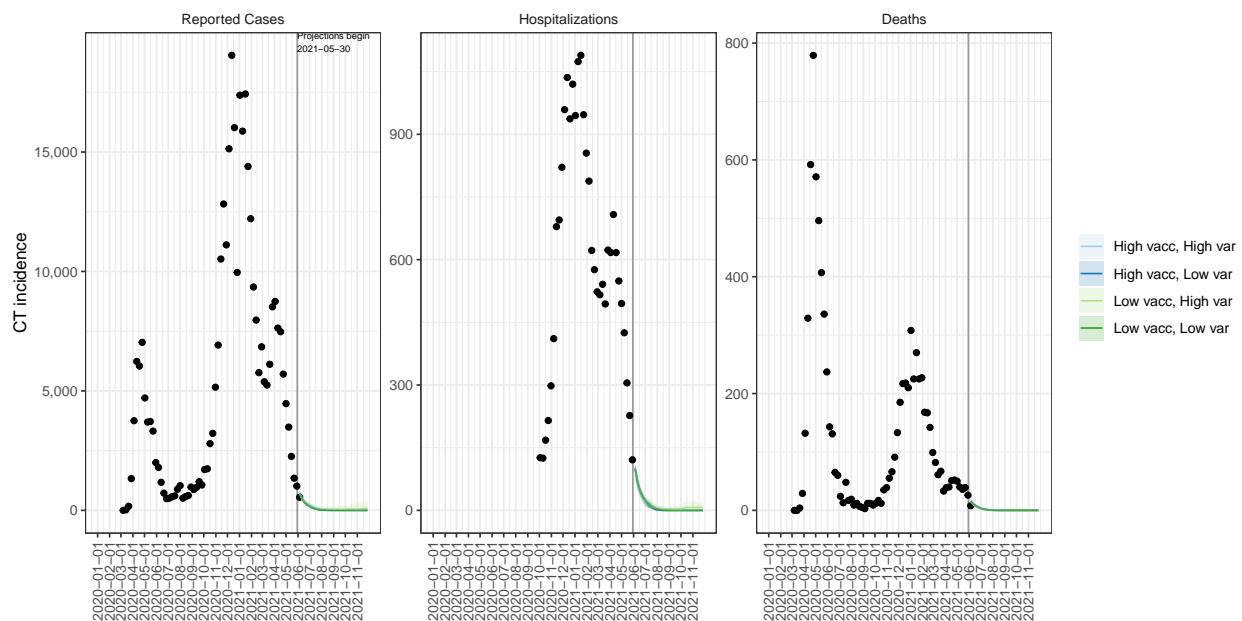
CA ensemble projections & 50% projection intervals



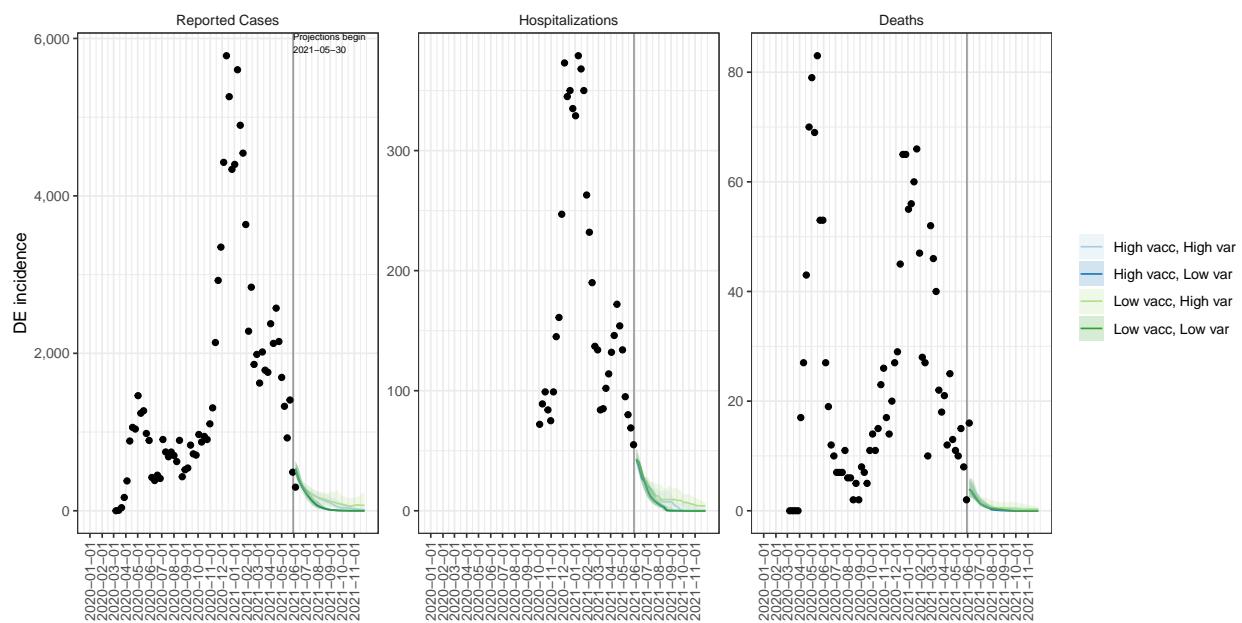
CO ensemble projections & 50% projection intervals



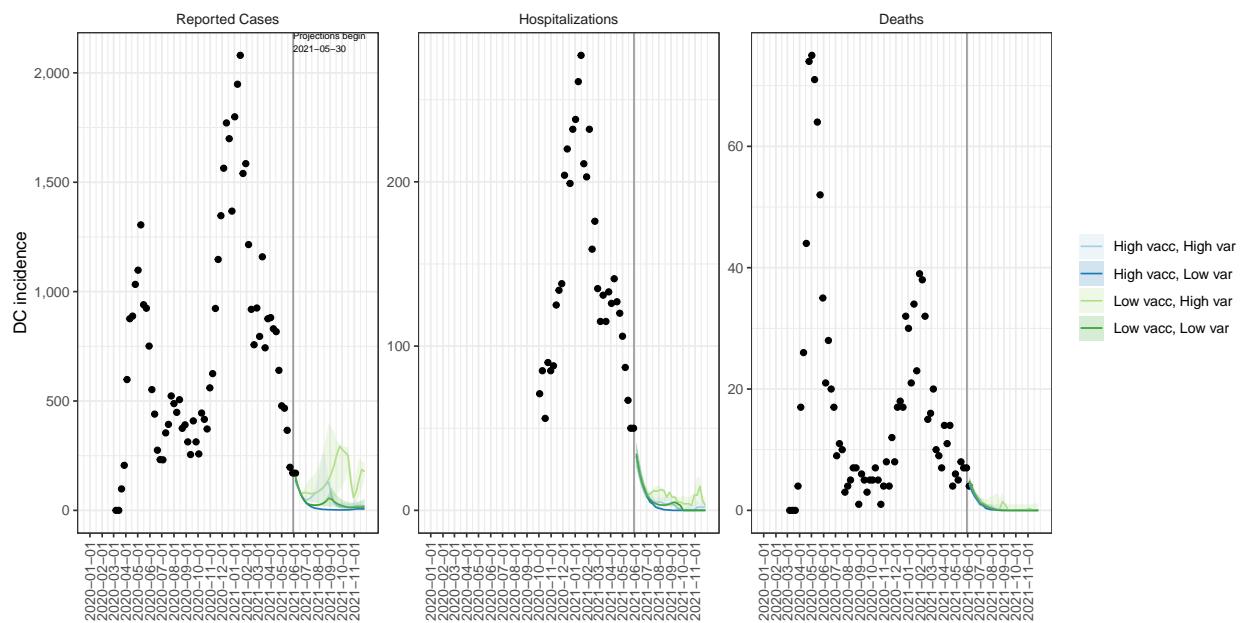
CT ensemble projections & 50% projection intervals



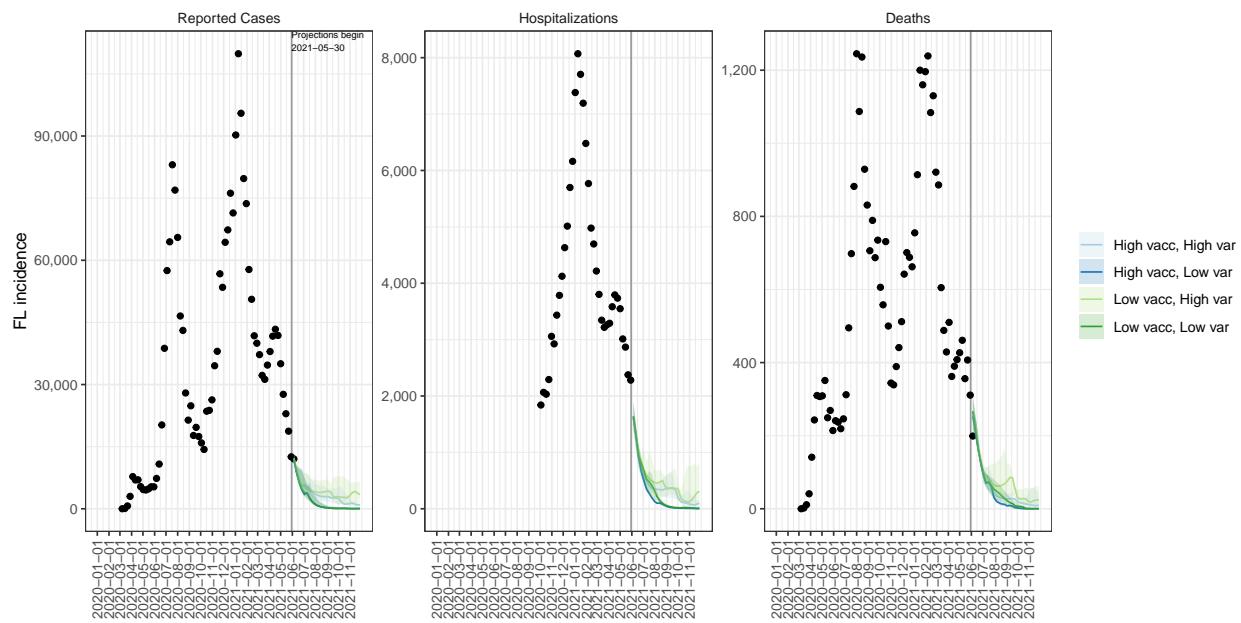
DE ensemble projections & 50% projection intervals



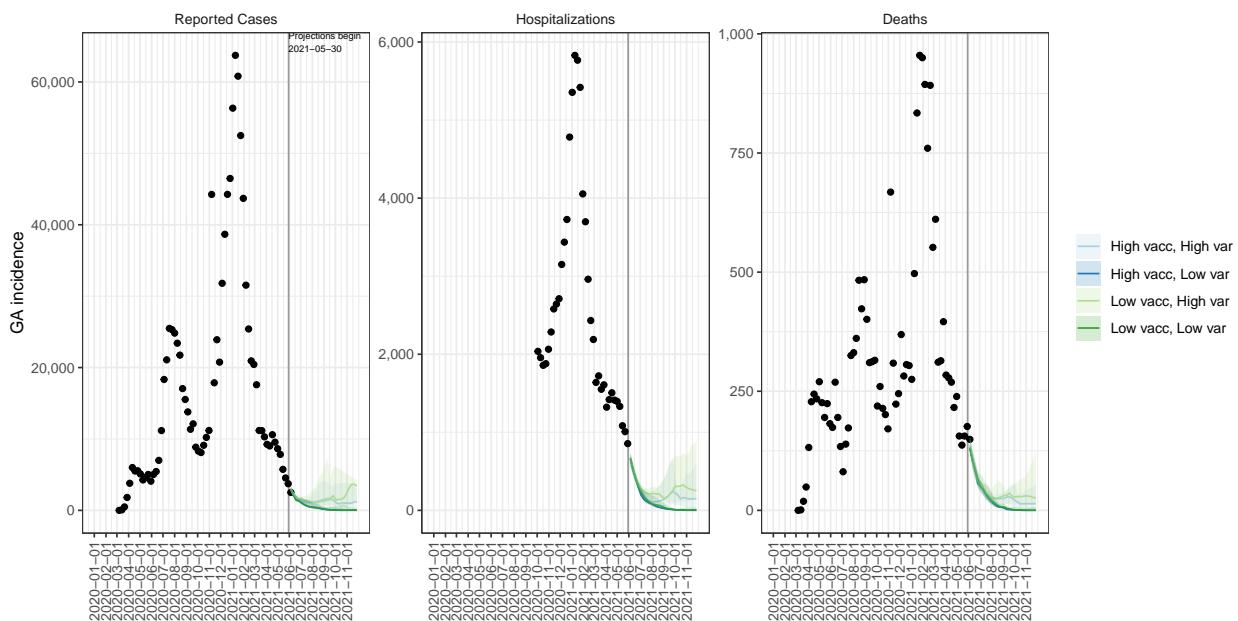
DC ensemble projections & 50% projection intervals



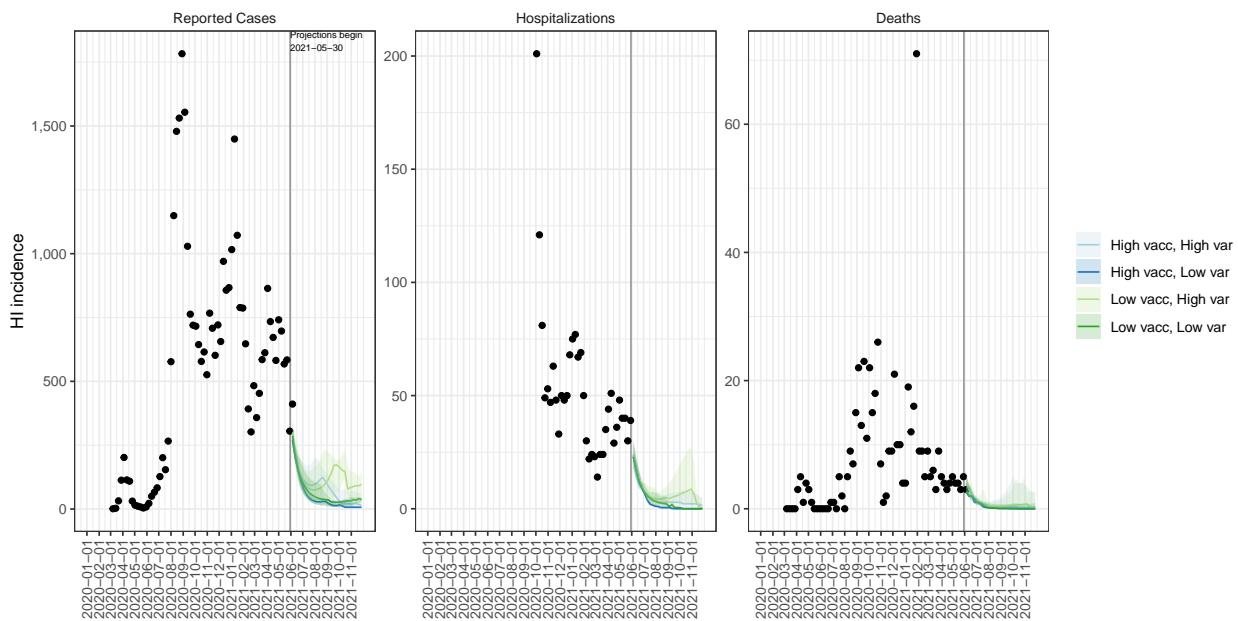
FL ensemble projections & 50% projection intervals

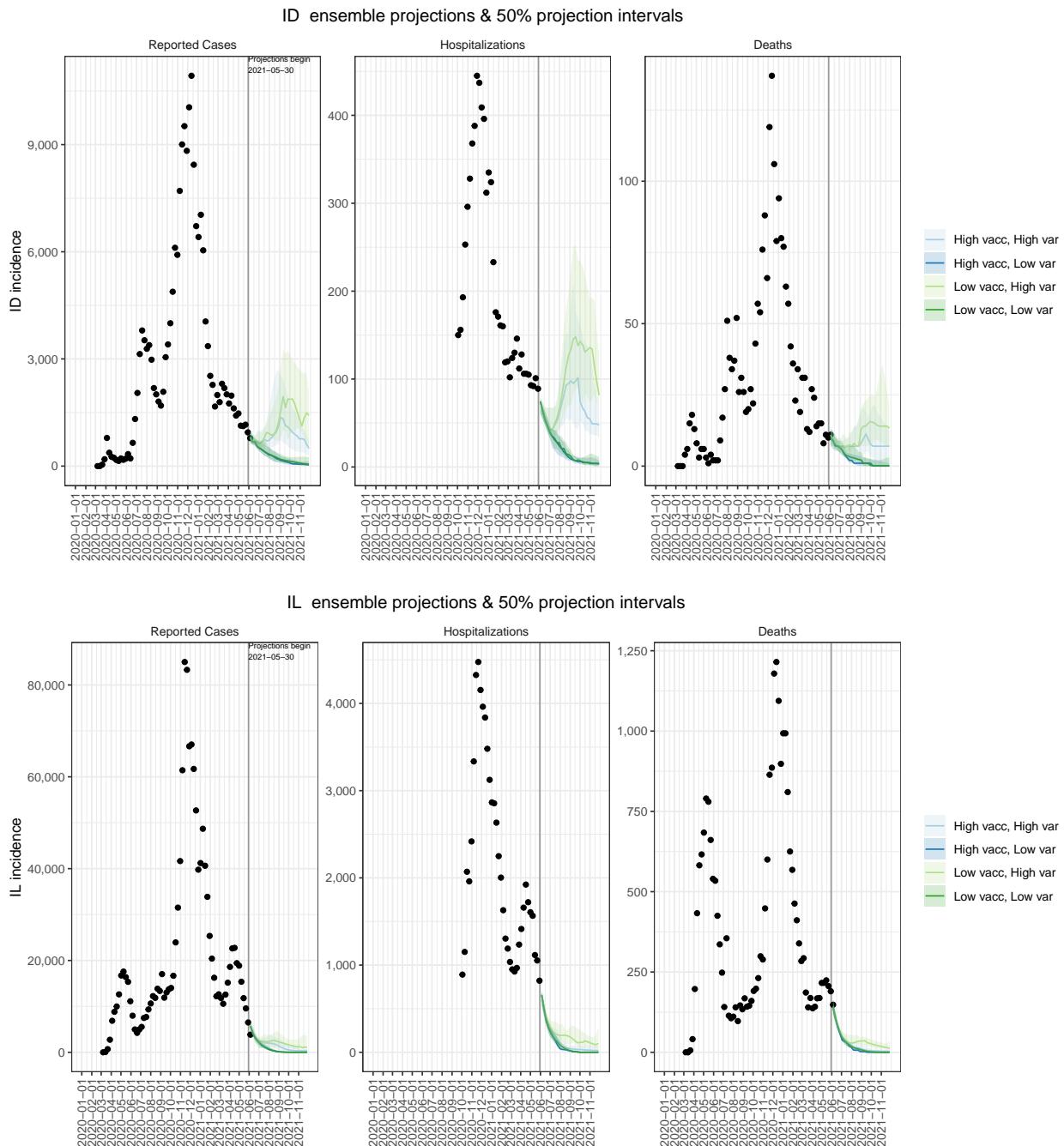


GA ensemble projections & 50% projection intervals

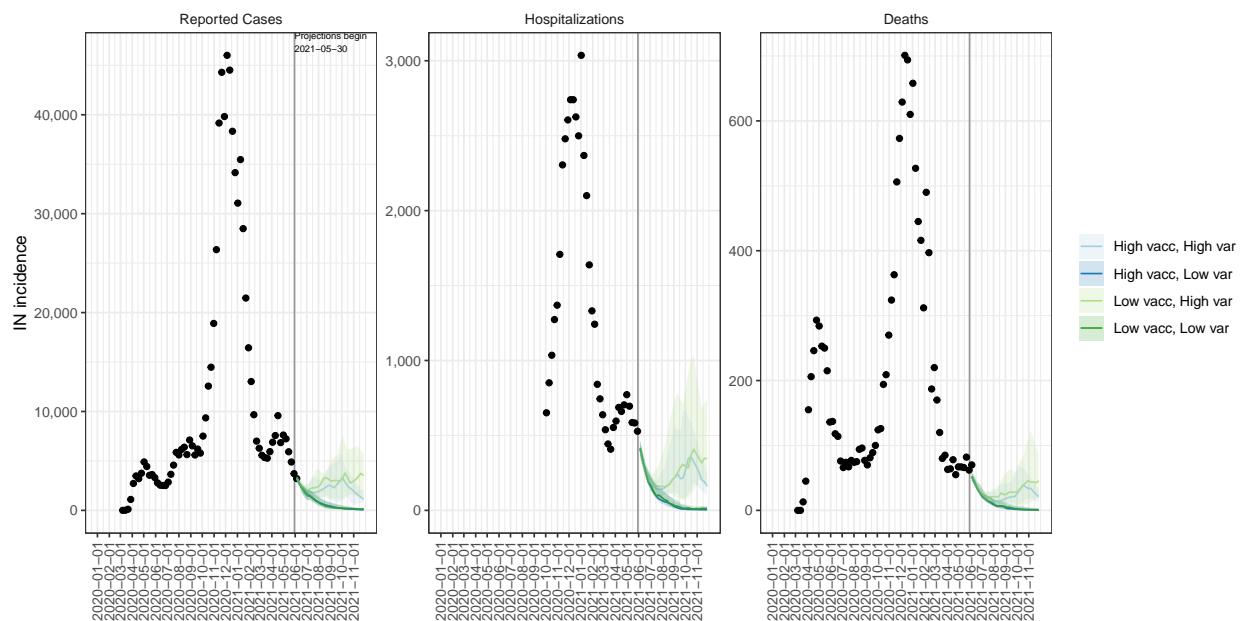


HI ensemble projections & 50% projection intervals

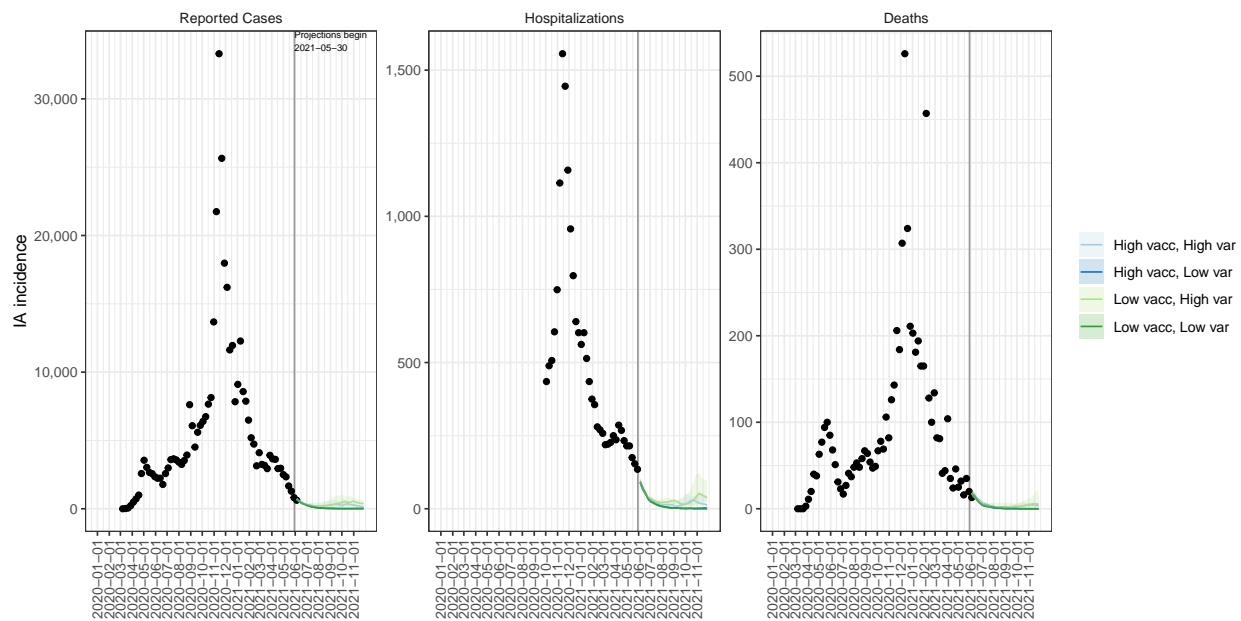




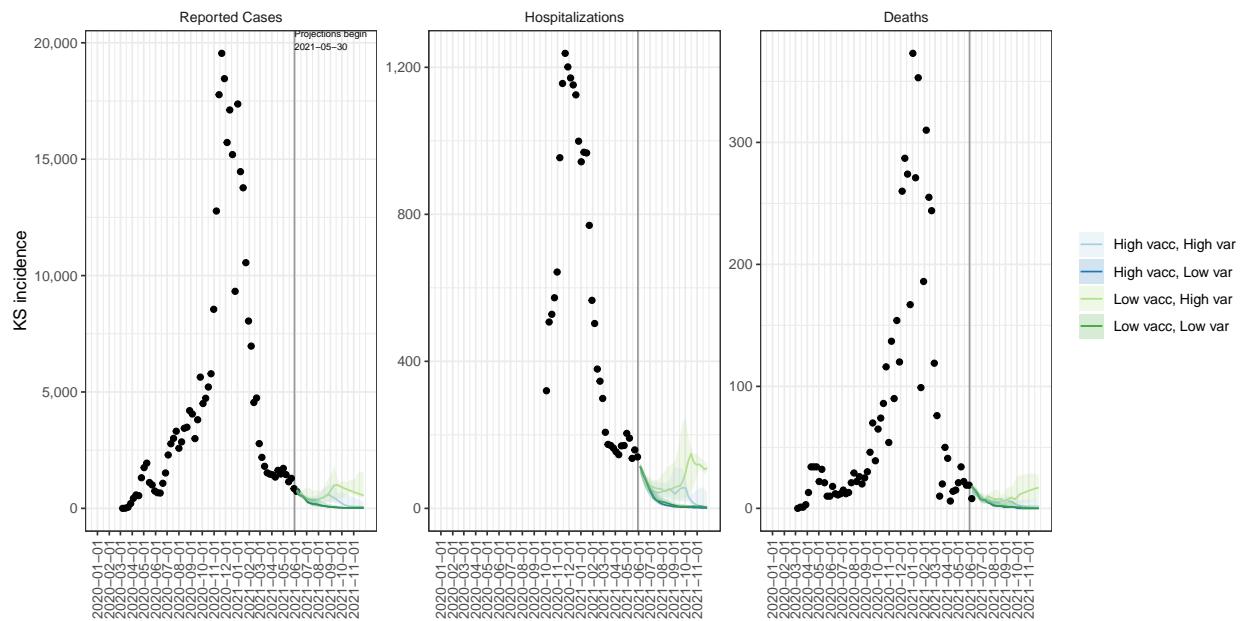
IN ensemble projections & 50% projection intervals



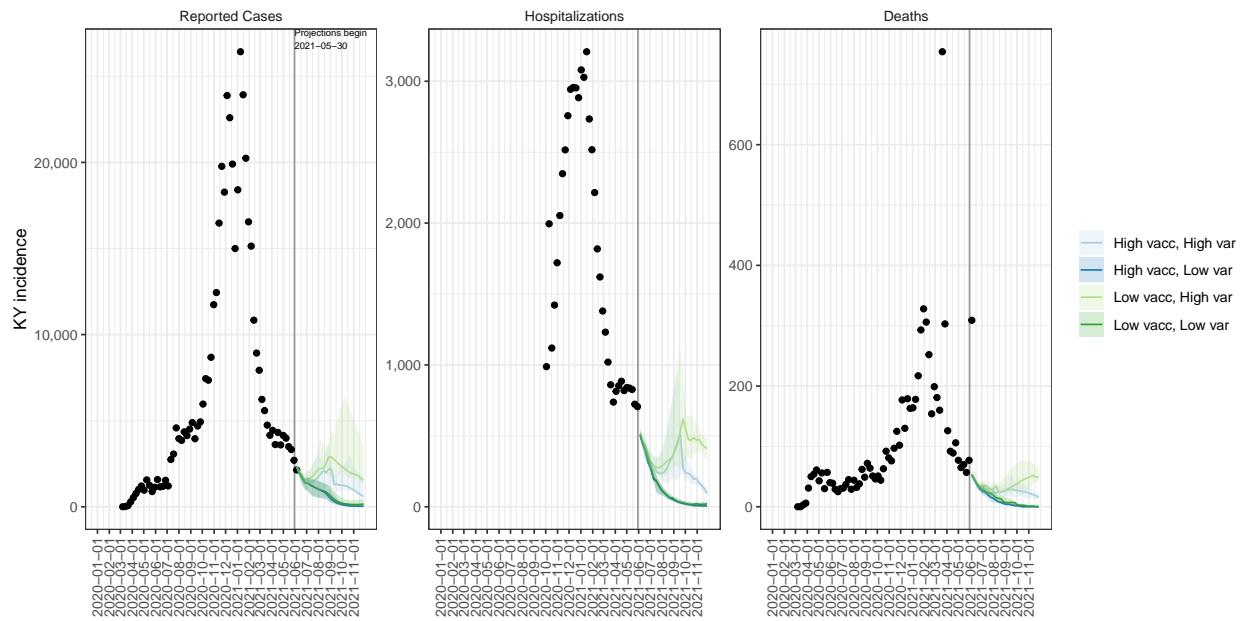
IA ensemble projections & 50% projection intervals



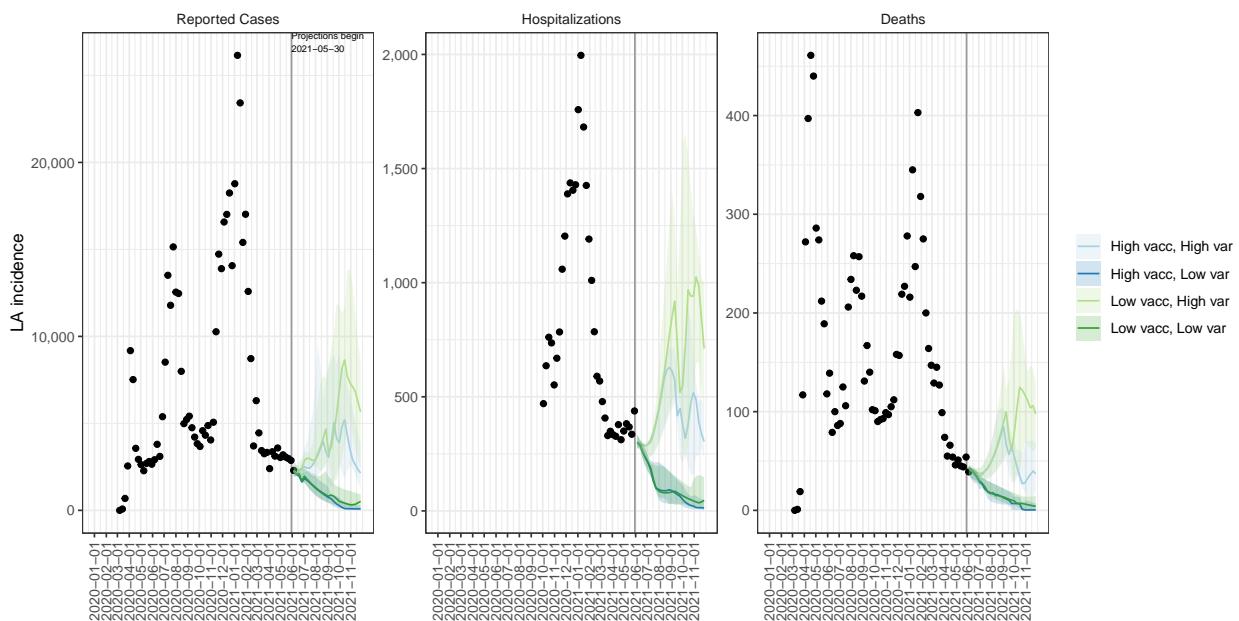
KS ensemble projections & 50% projection intervals



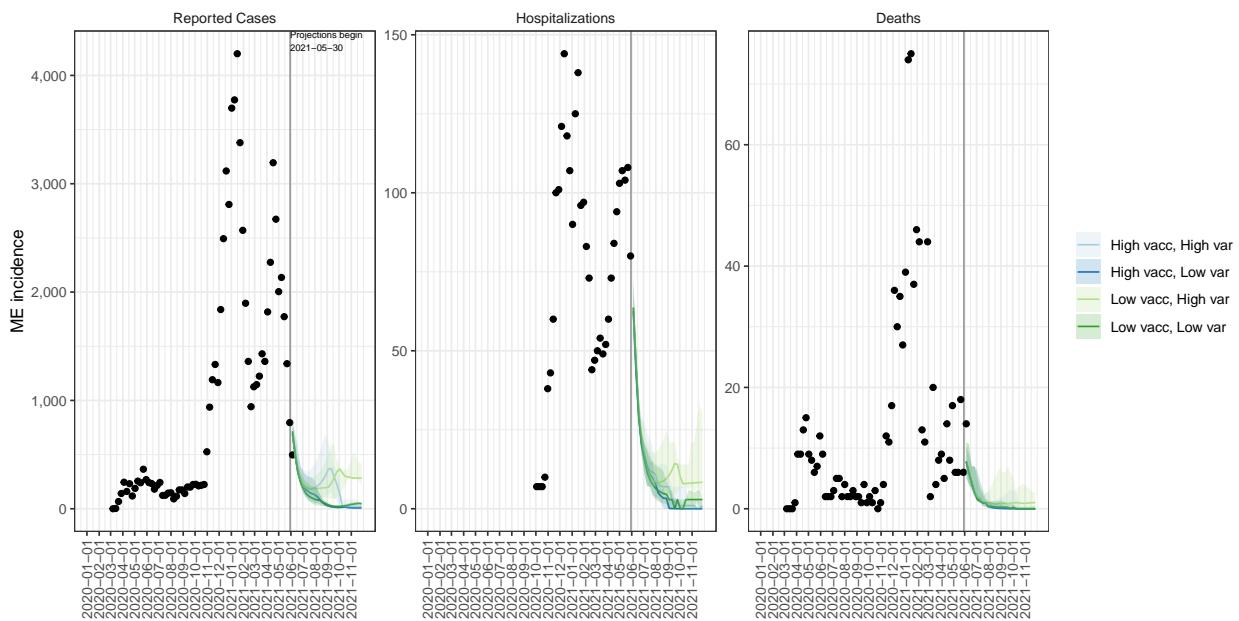
KY ensemble projections & 50% projection intervals



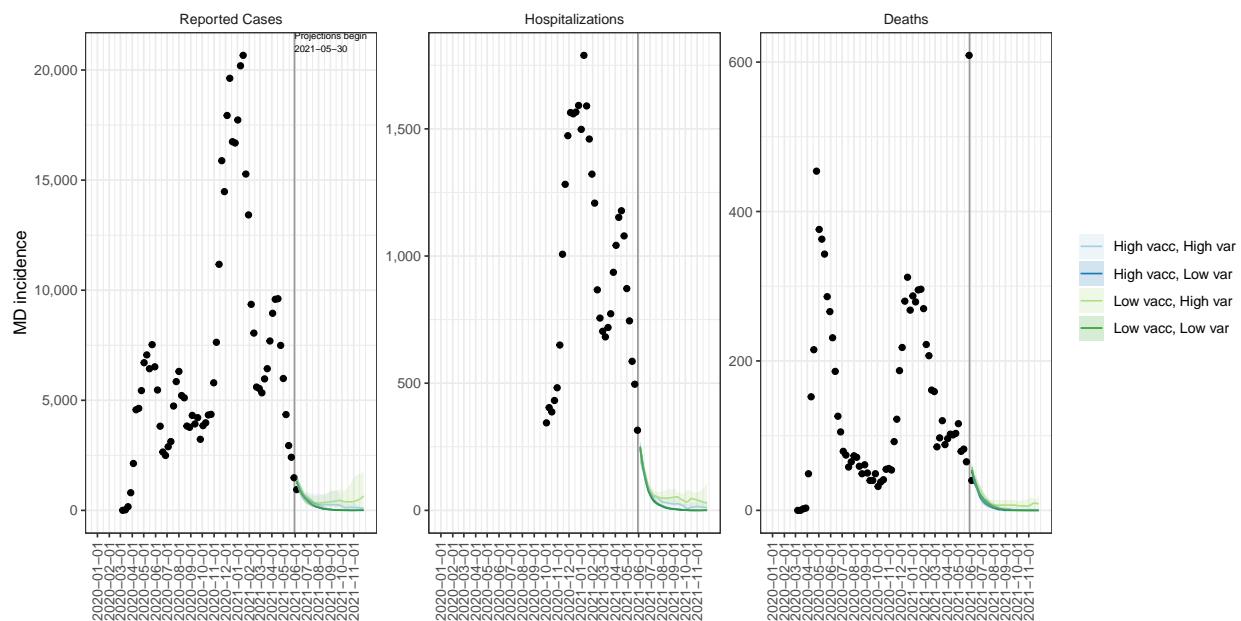
LA ensemble projections & 50% projection intervals



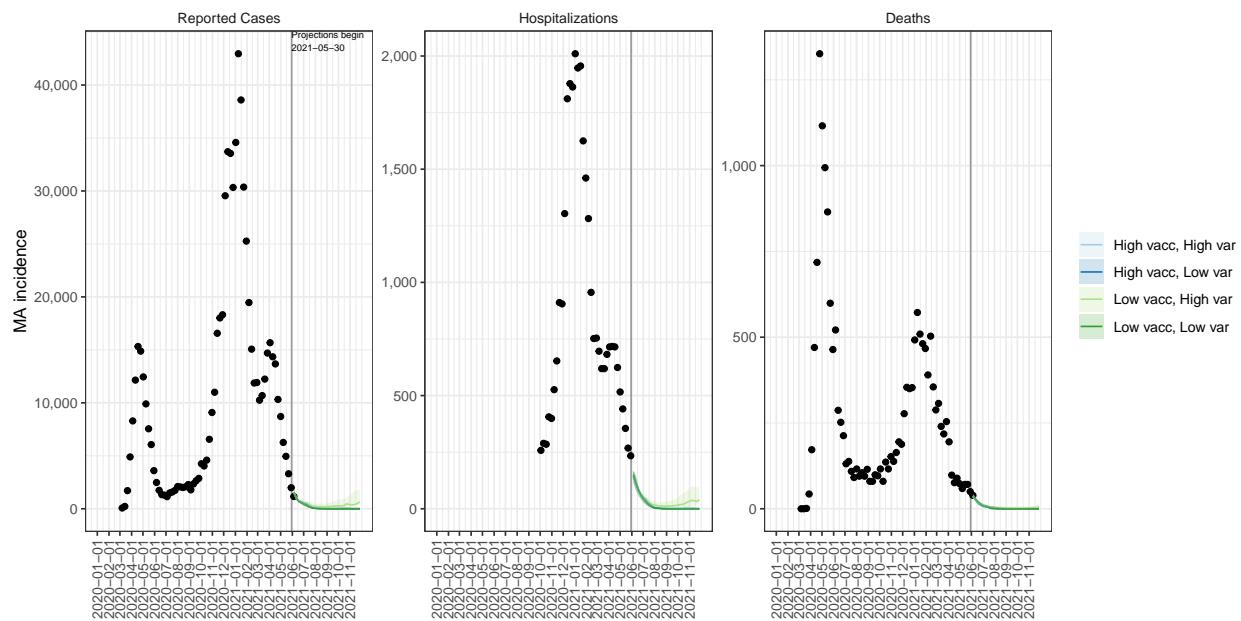
ME ensemble projections & 50% projection intervals



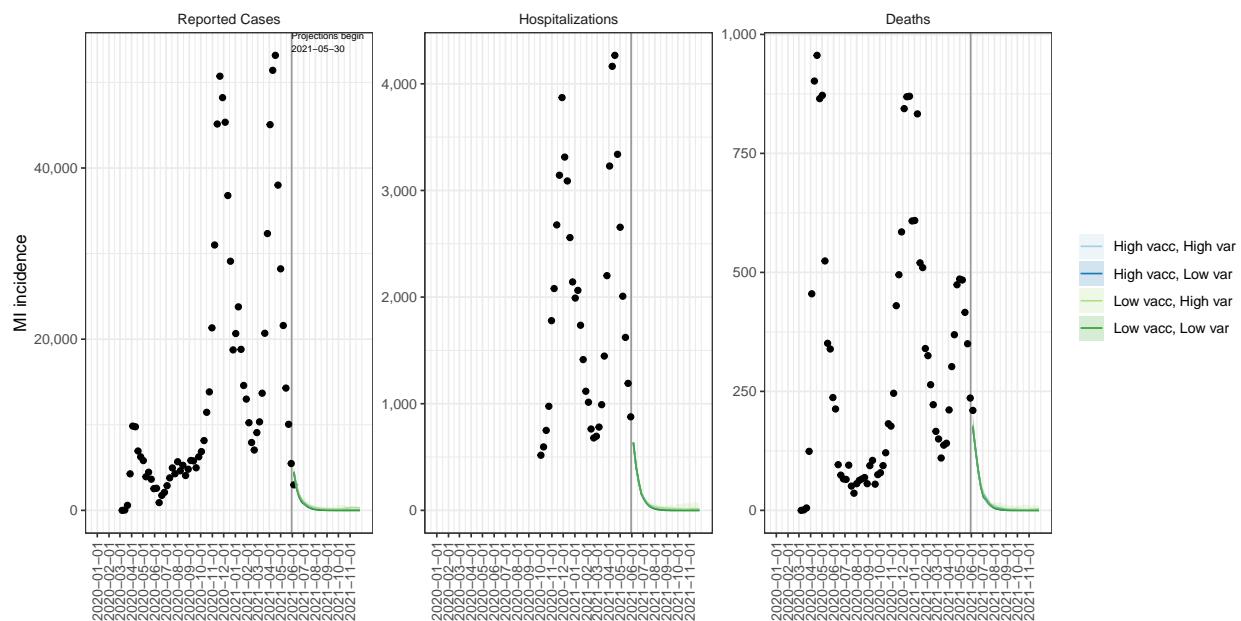
MD ensemble projections & 50% projection intervals



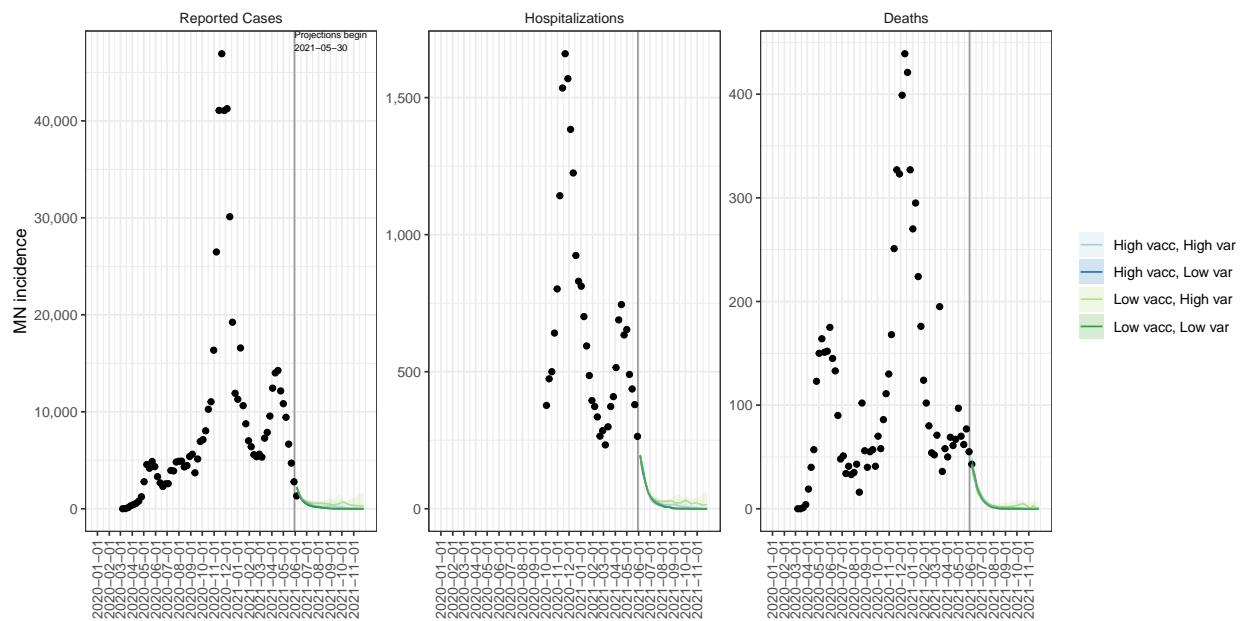
MA ensemble projections & 50% projection intervals



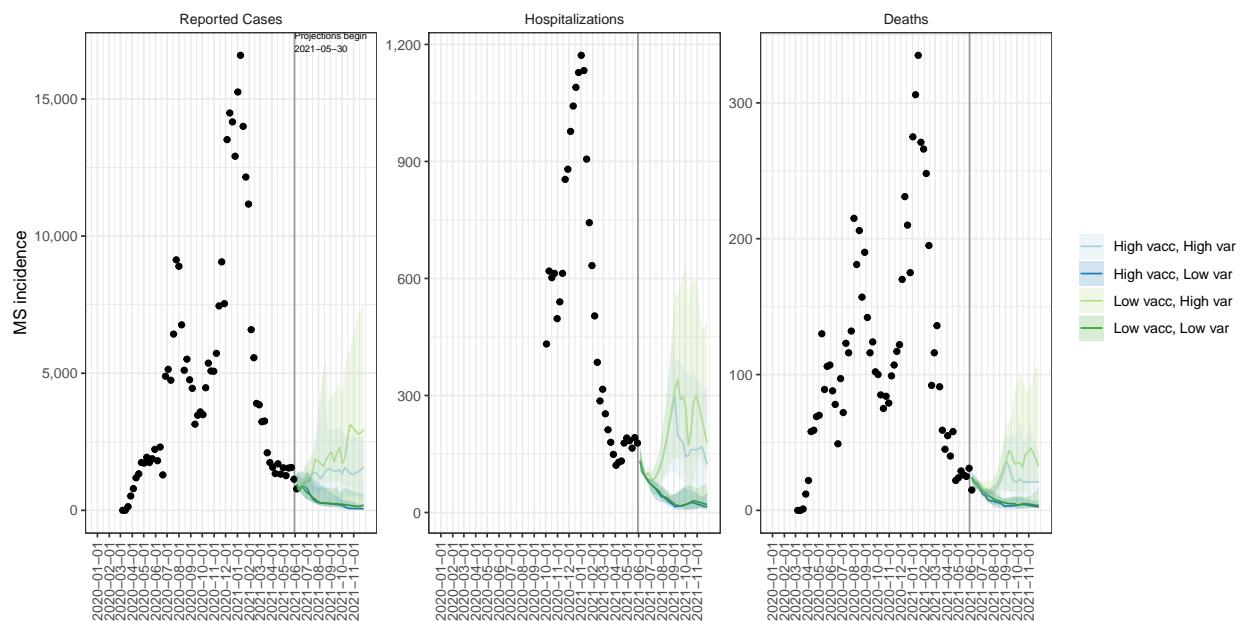
MI ensemble projections & 50% projection intervals



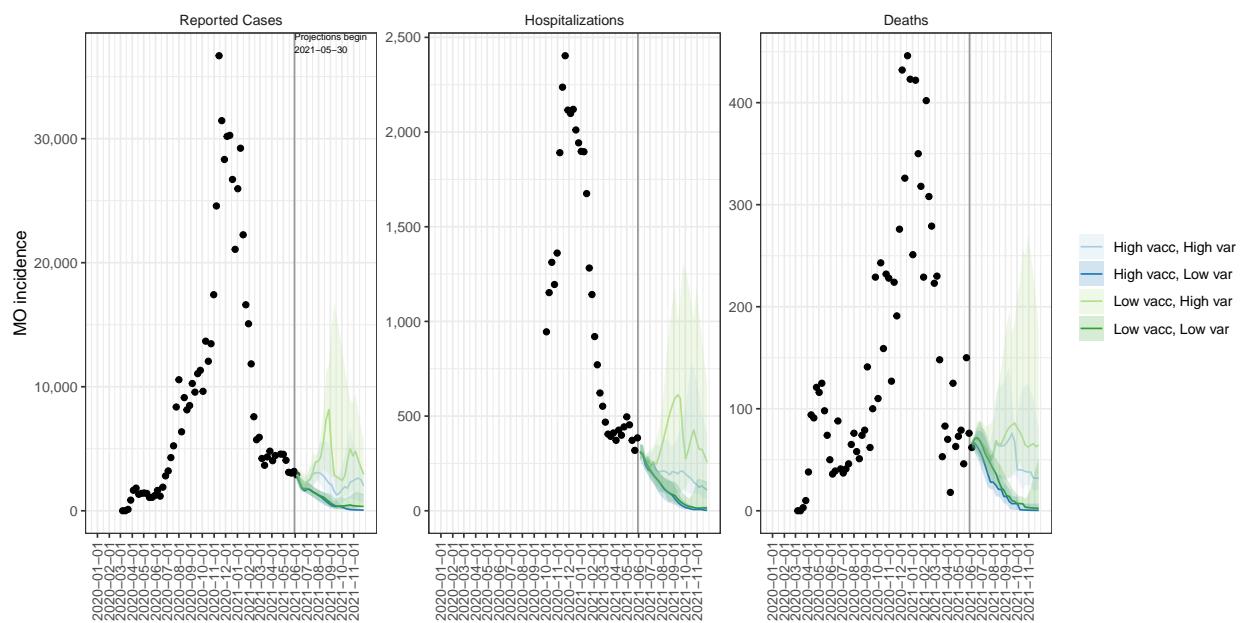
MN ensemble projections & 50% projection intervals



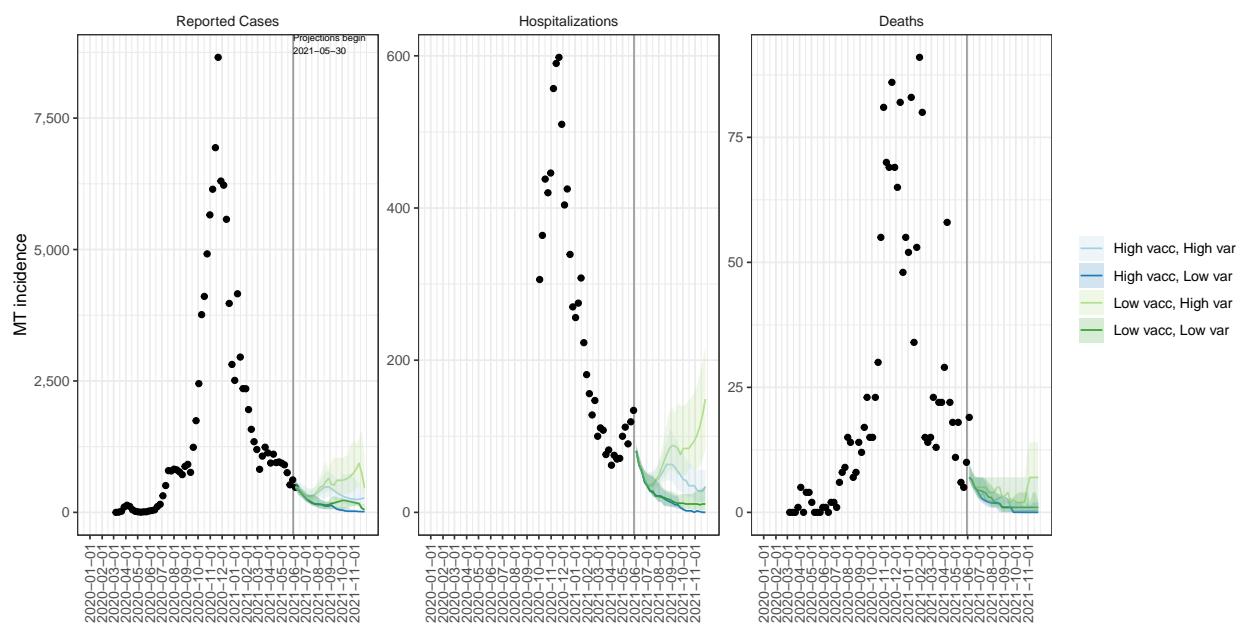
MS ensemble projections & 50% projection intervals



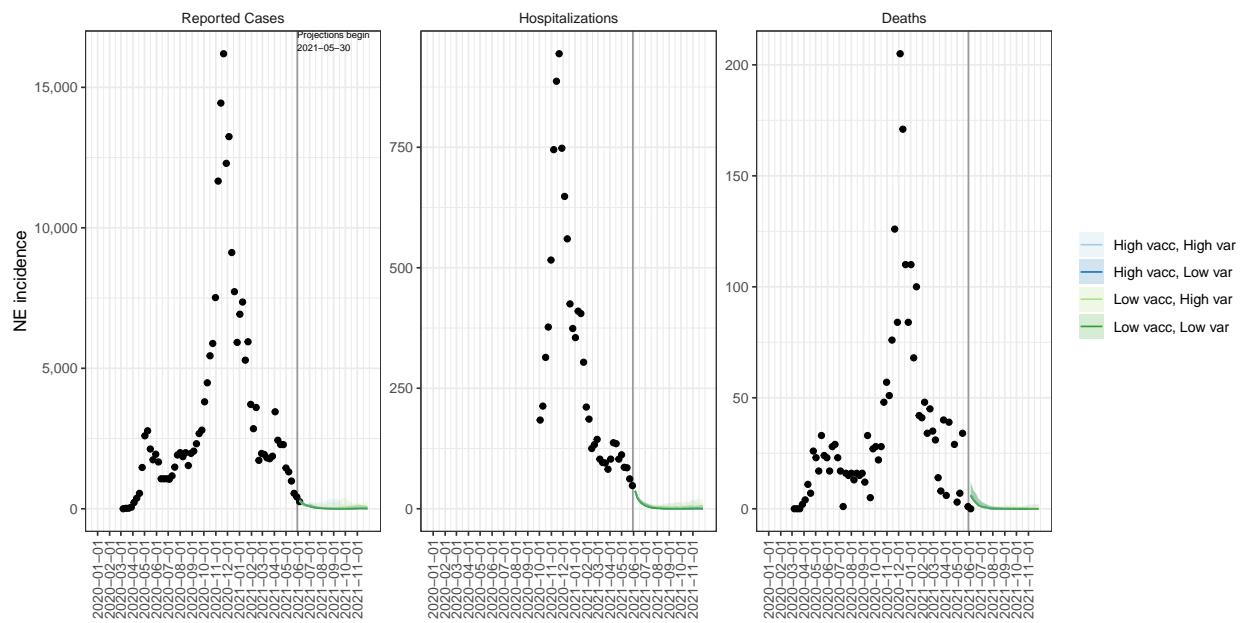
MO ensemble projections & 50% projection intervals



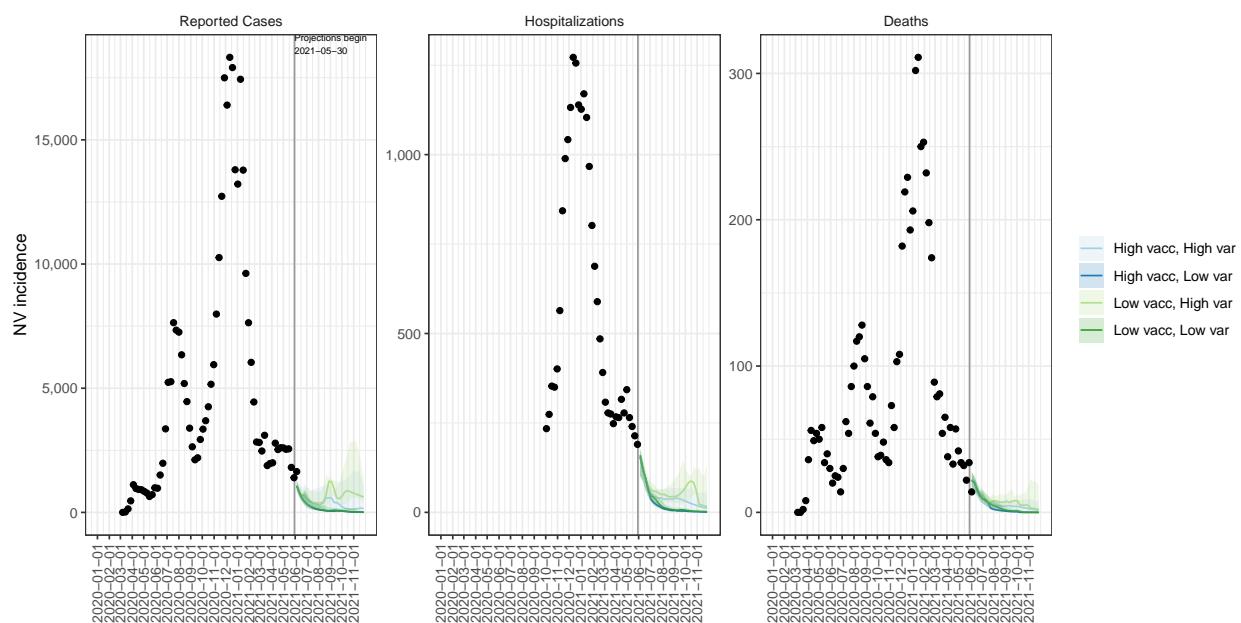
MT ensemble projections & 50% projection intervals



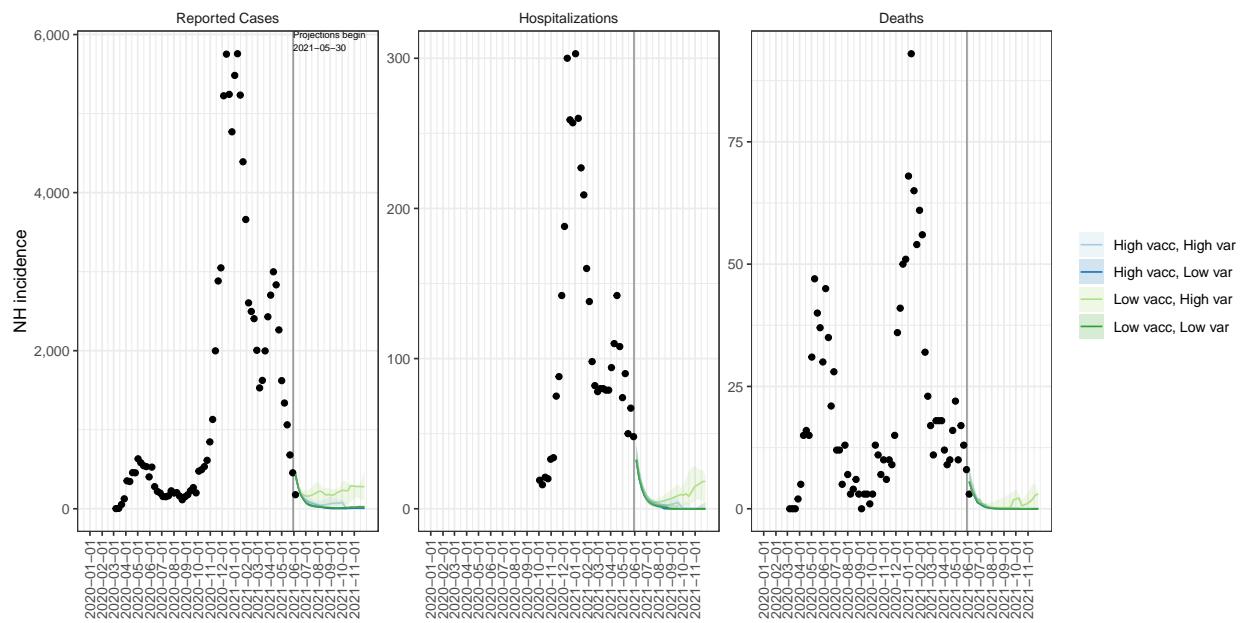
NE ensemble projections & 50% projection intervals



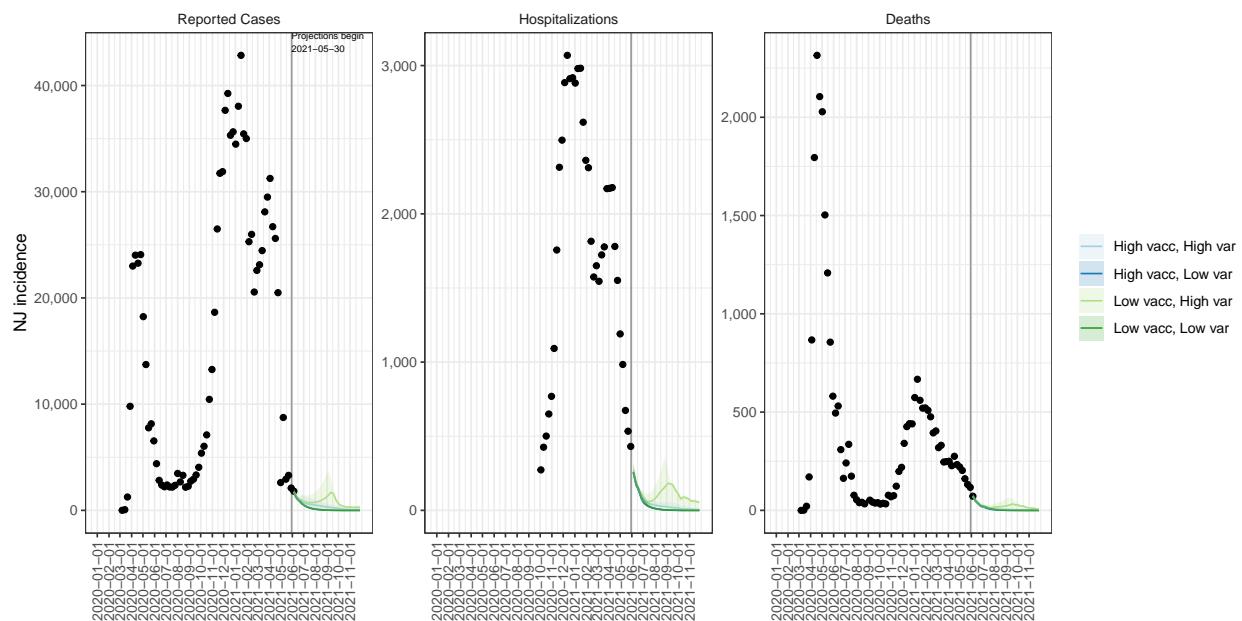
NV ensemble projections & 50% projection intervals



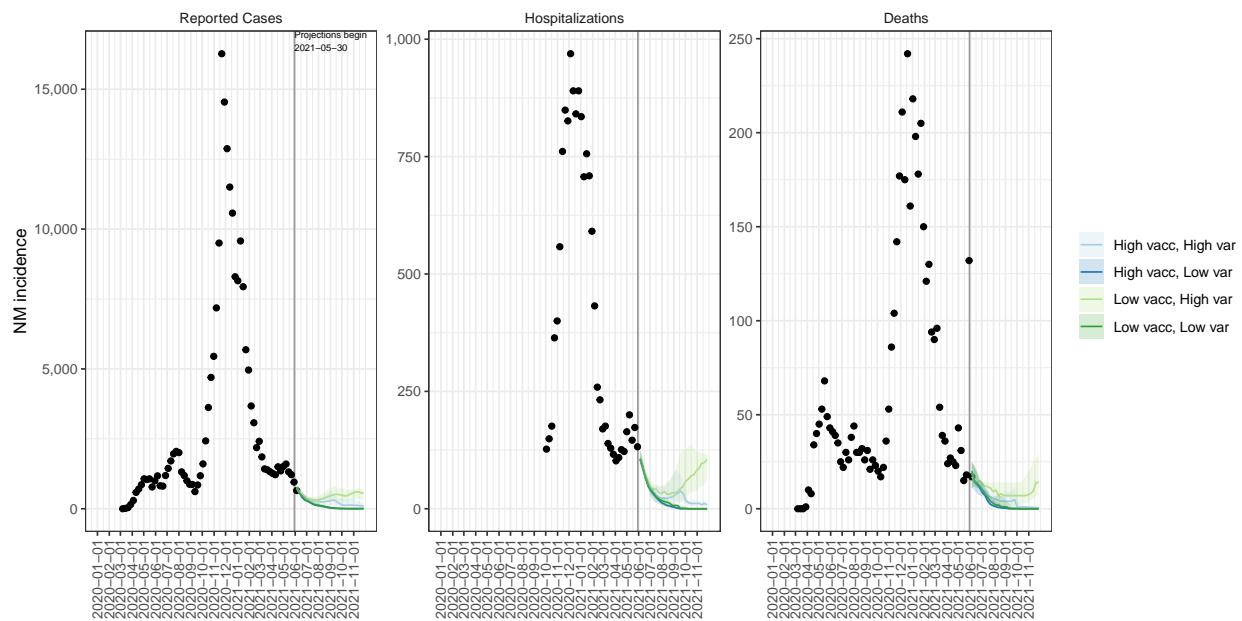
NH ensemble projections & 50% projection intervals



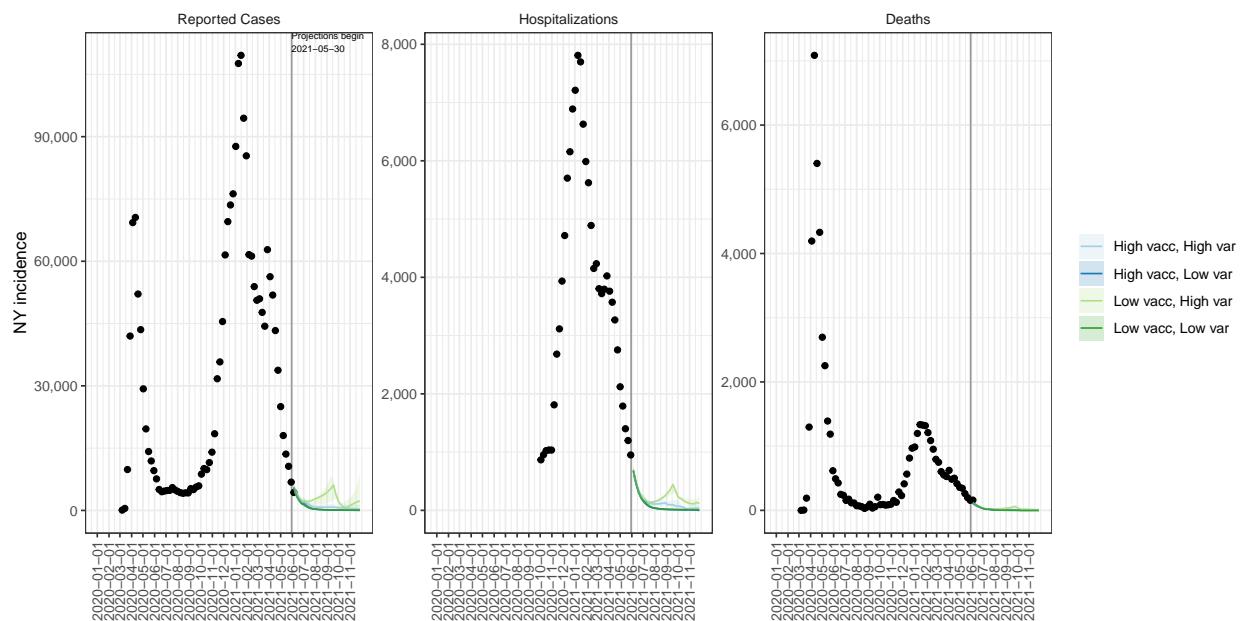
NJ ensemble projections & 50% projection intervals



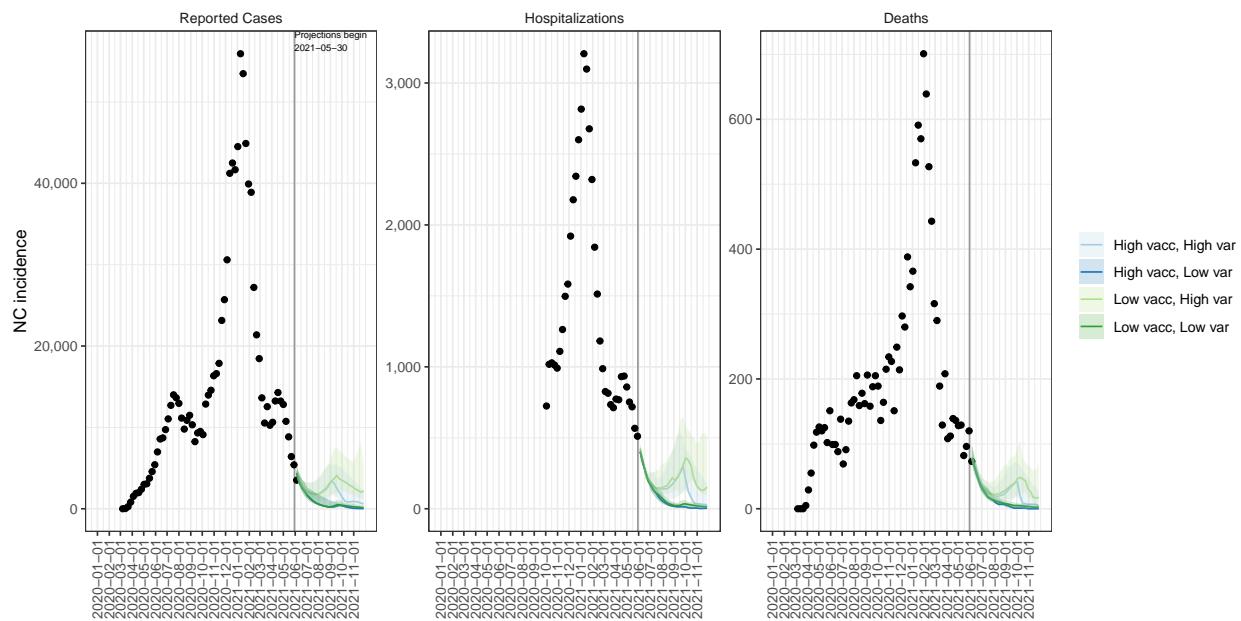
NM ensemble projections & 50% projection intervals



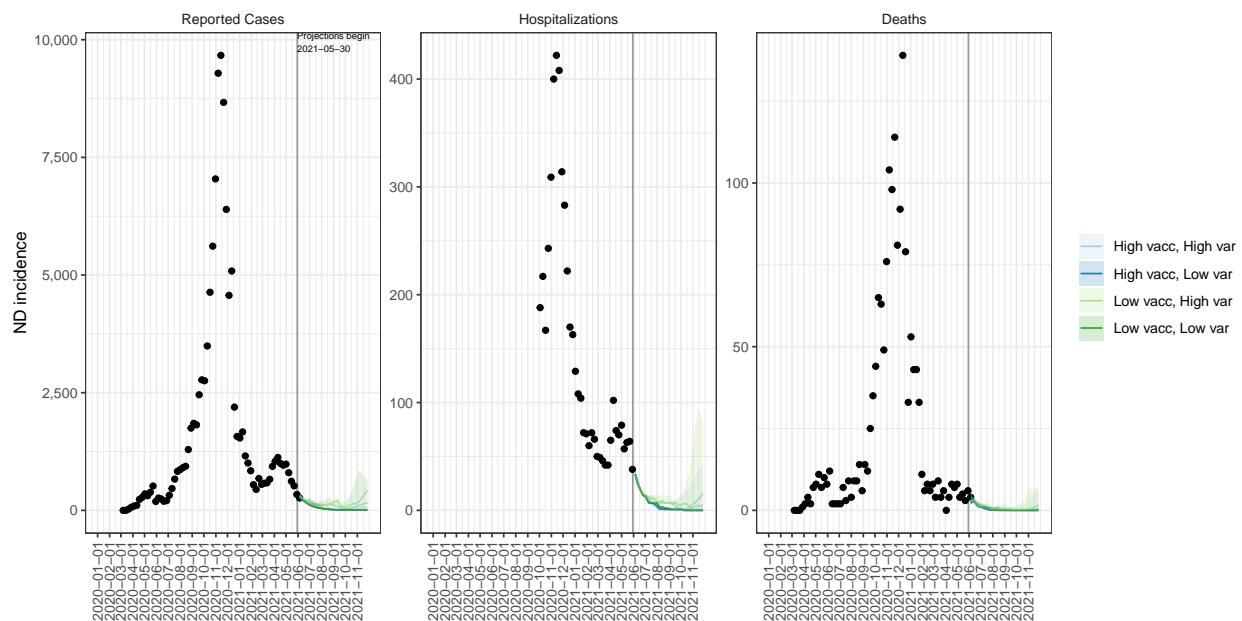
NY ensemble projections & 50% projection intervals



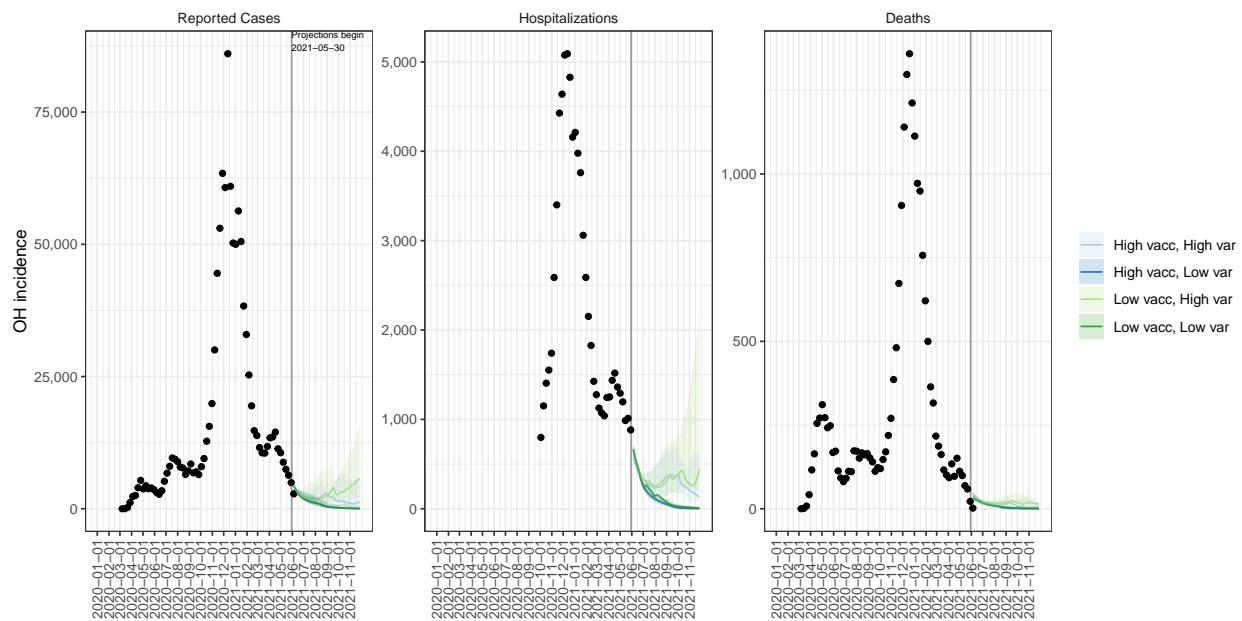
NC ensemble projections & 50% projection intervals



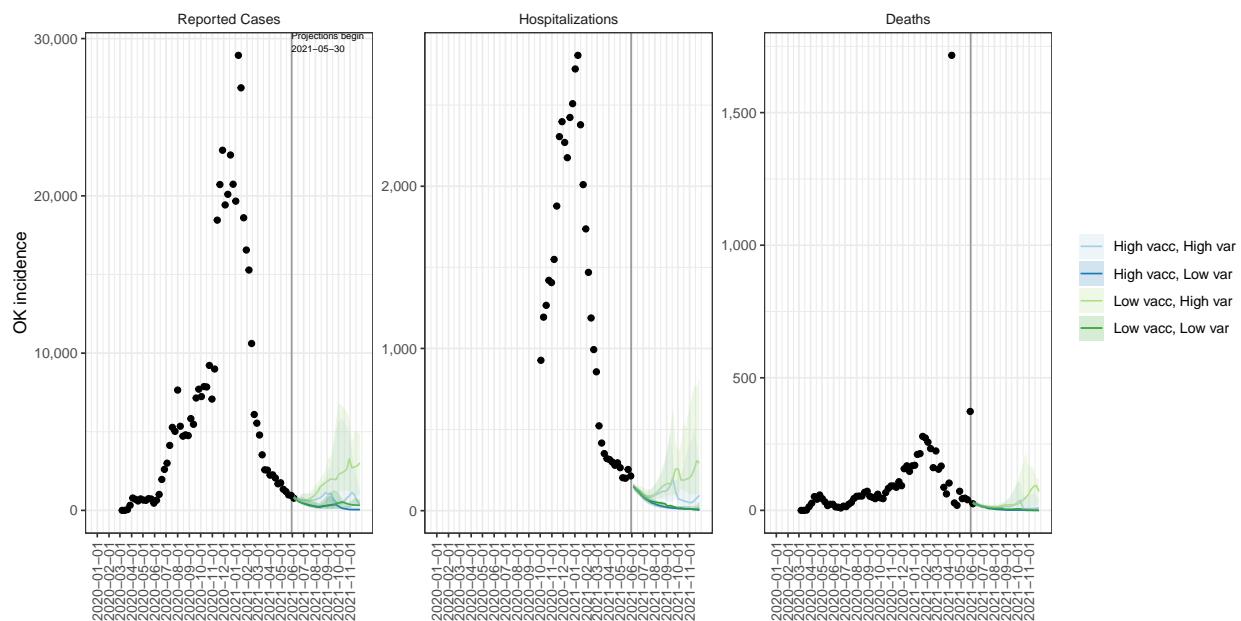
ND ensemble projections & 50% projection intervals



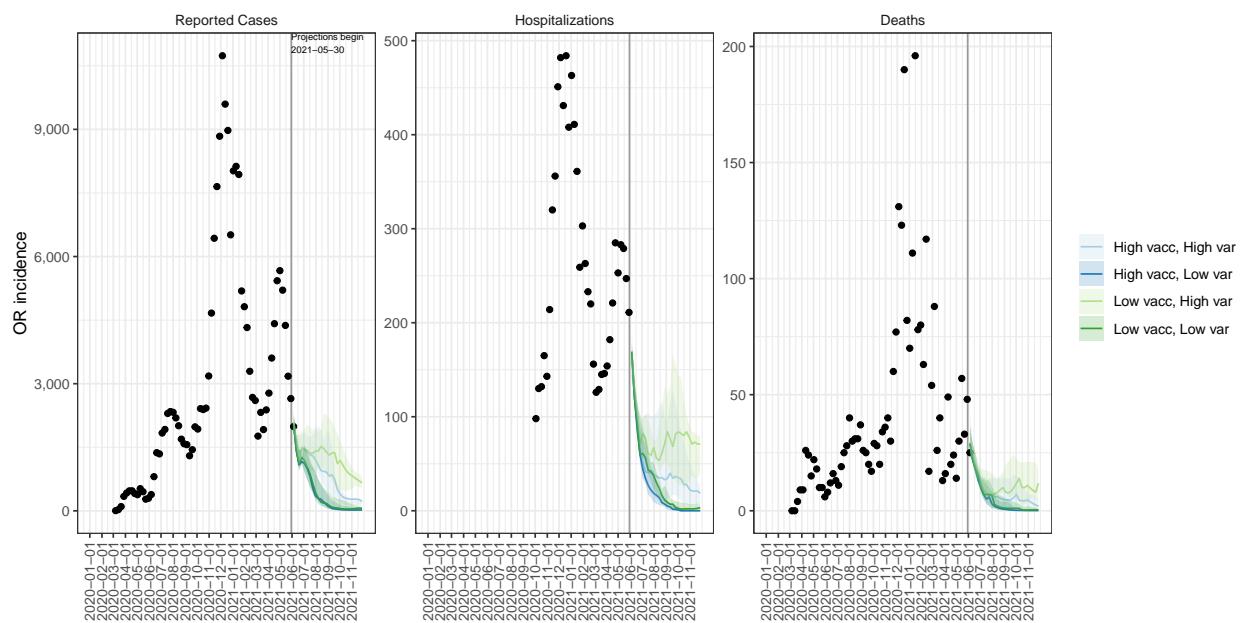
OH ensemble projections & 50% projection intervals



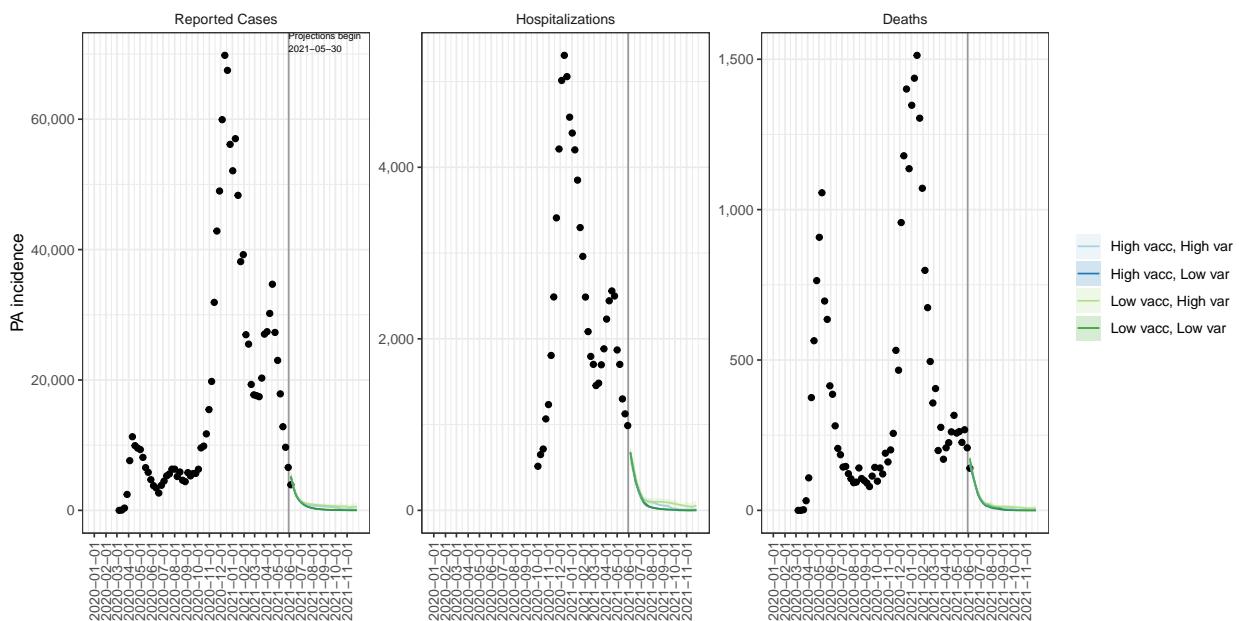
OK ensemble projections & 50% projection intervals



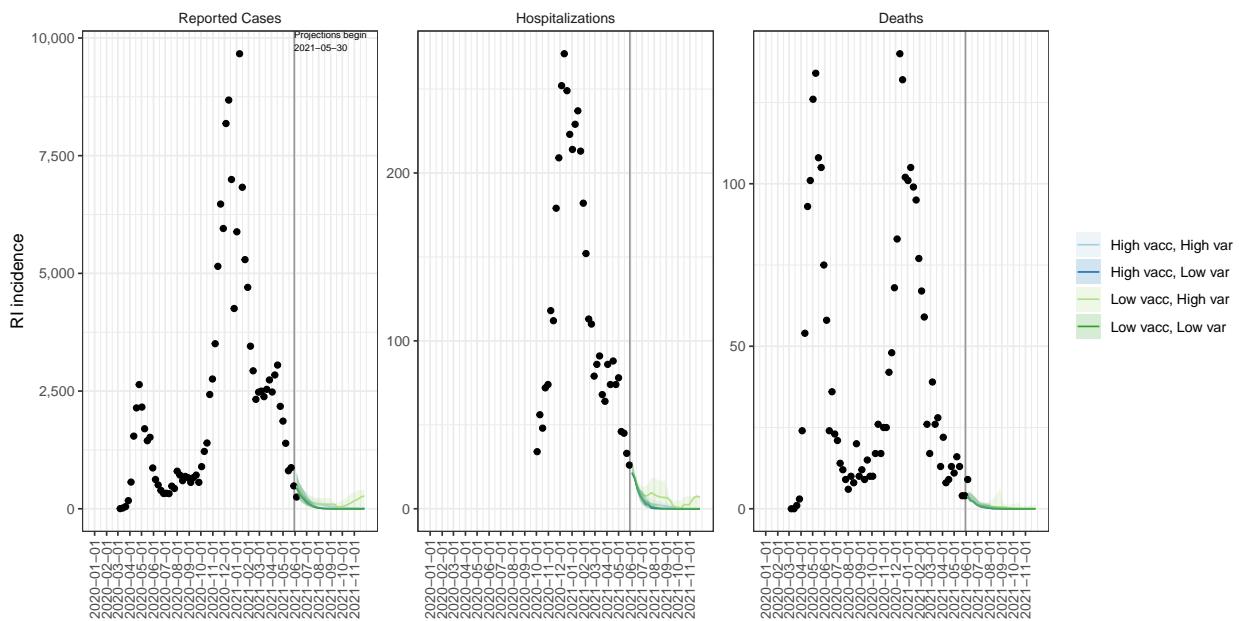
OR ensemble projections & 50% projection intervals



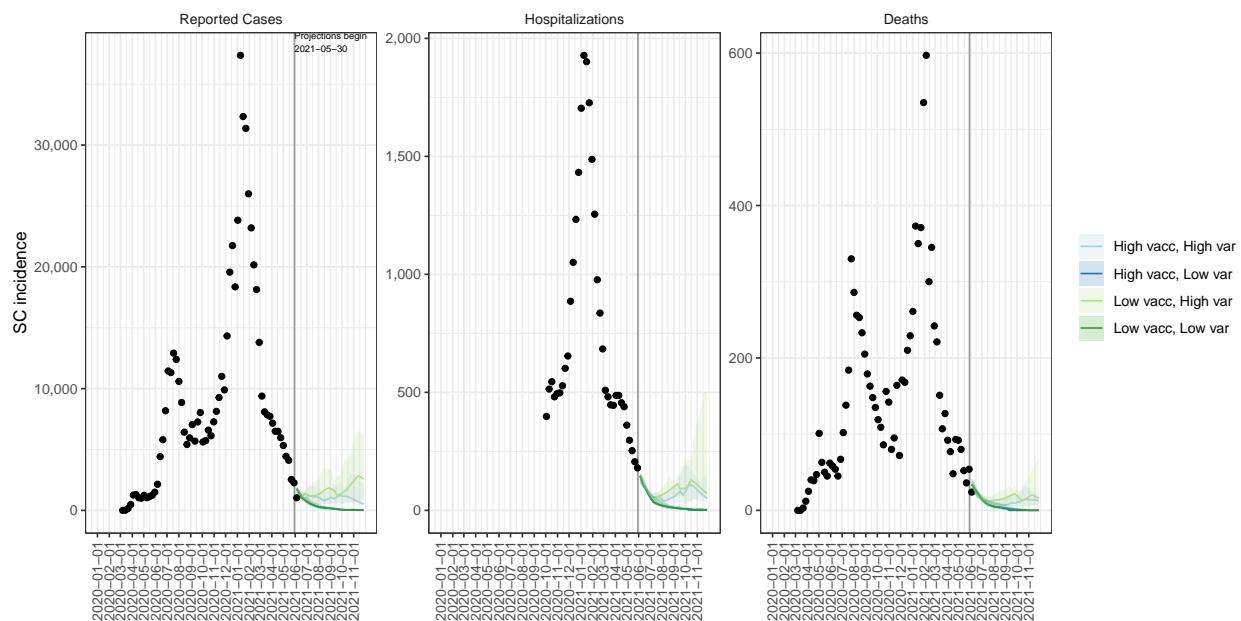
PA ensemble projections & 50% projection intervals



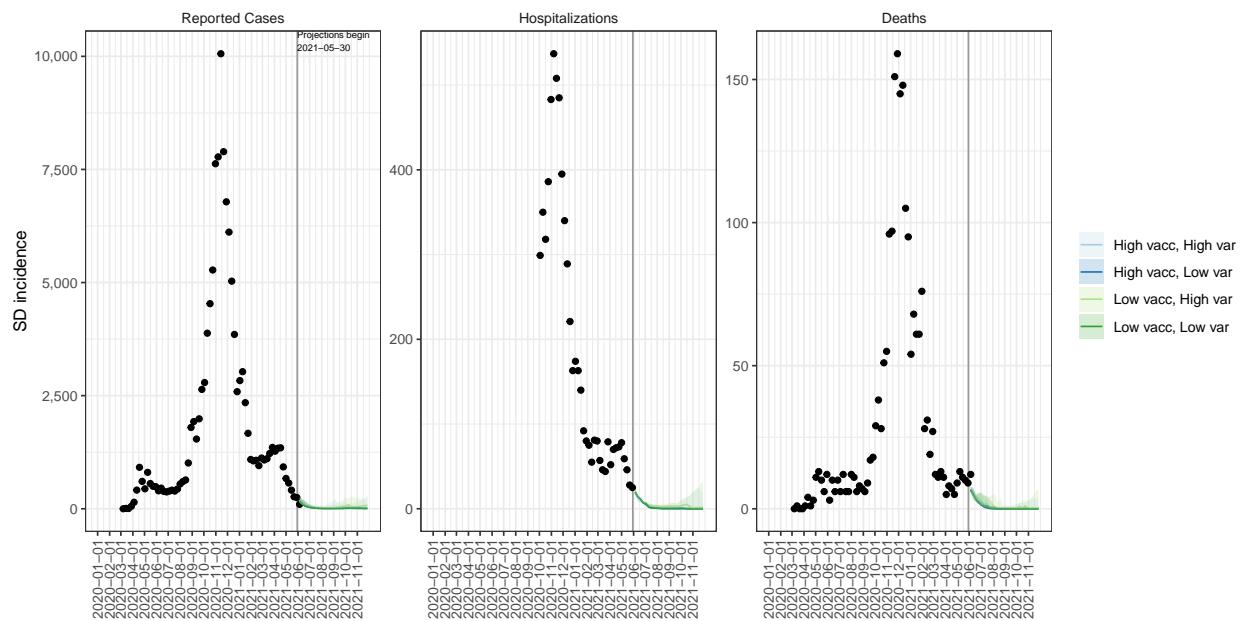
RI ensemble projections & 50% projection intervals



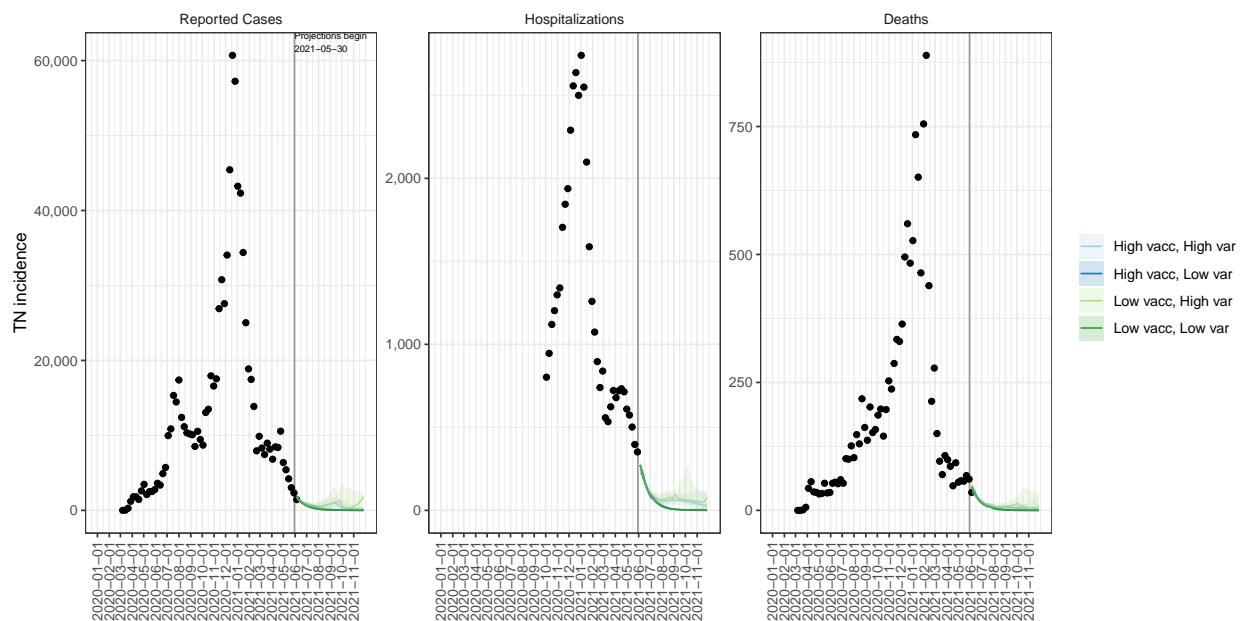
SC ensemble projections & 50% projection intervals



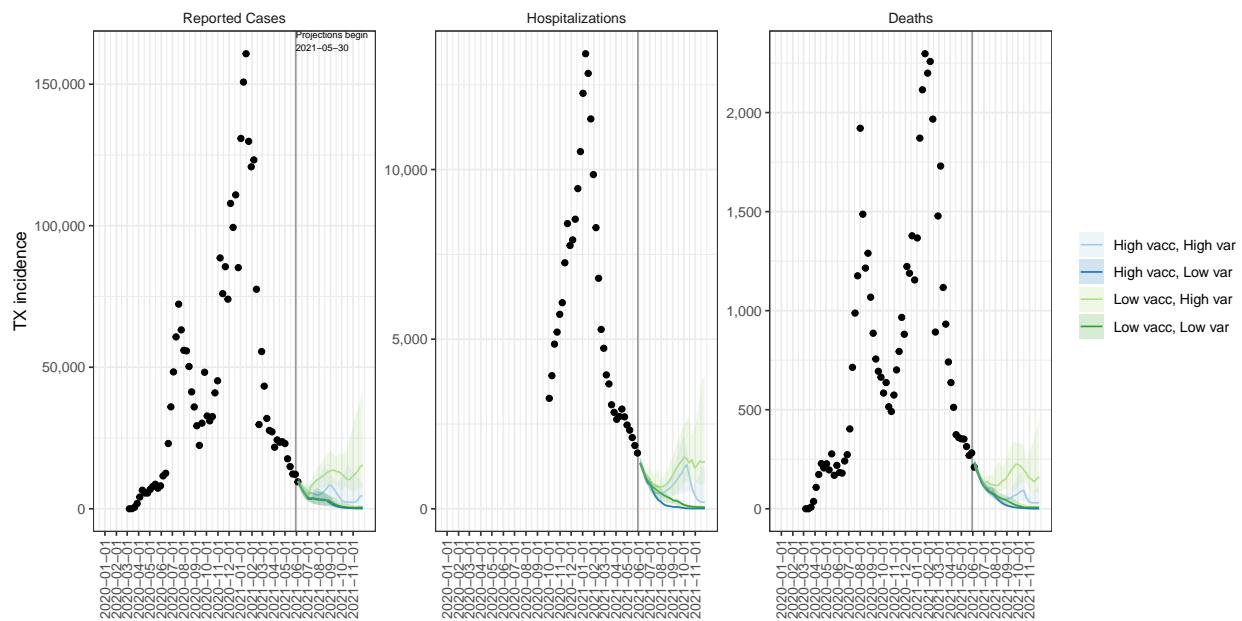
SD ensemble projections & 50% projection intervals



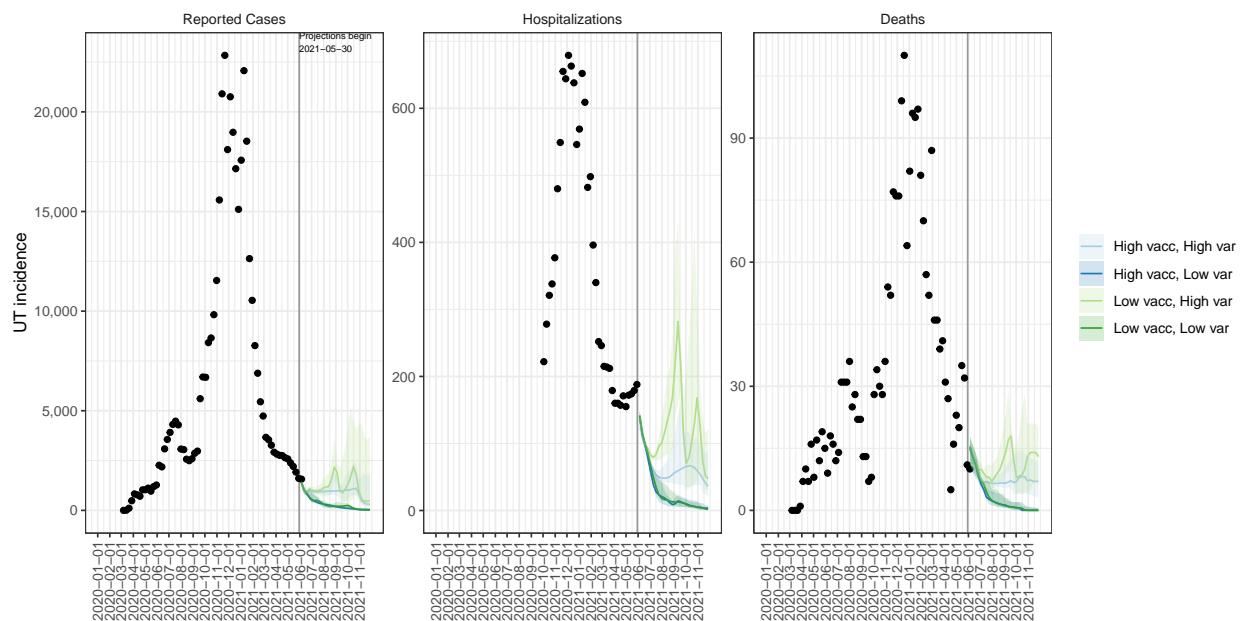
TN ensemble projections & 50% projection intervals



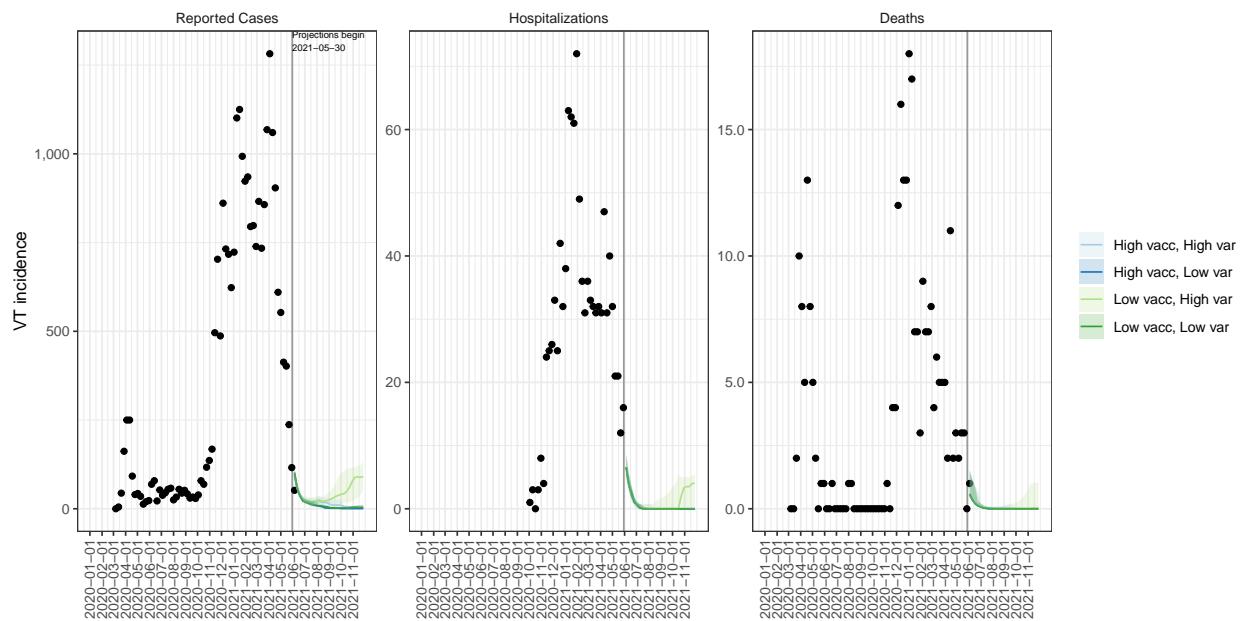
TX ensemble projections & 50% projection intervals



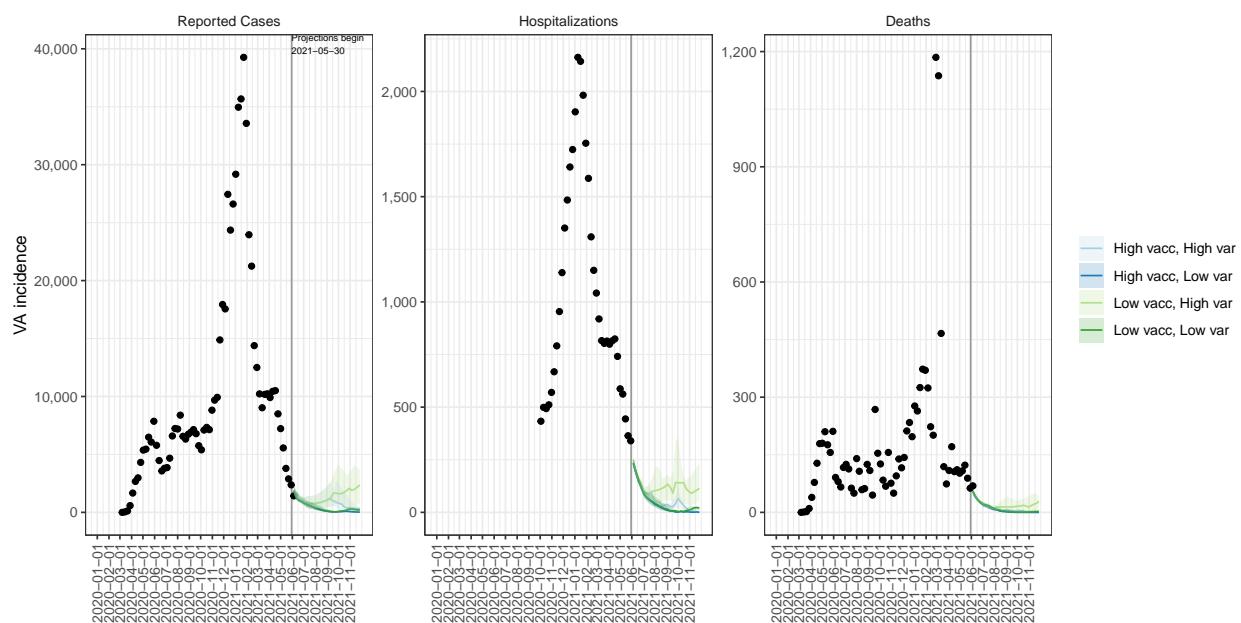
UT ensemble projections & 50% projection intervals



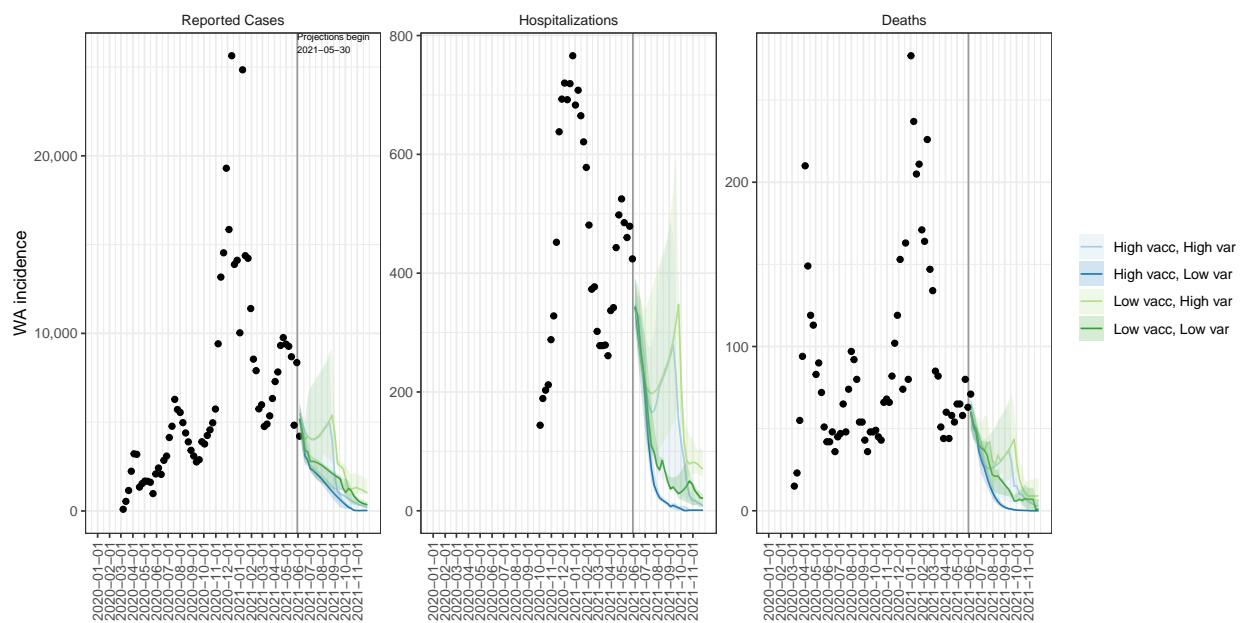
VT ensemble projections & 50% projection intervals



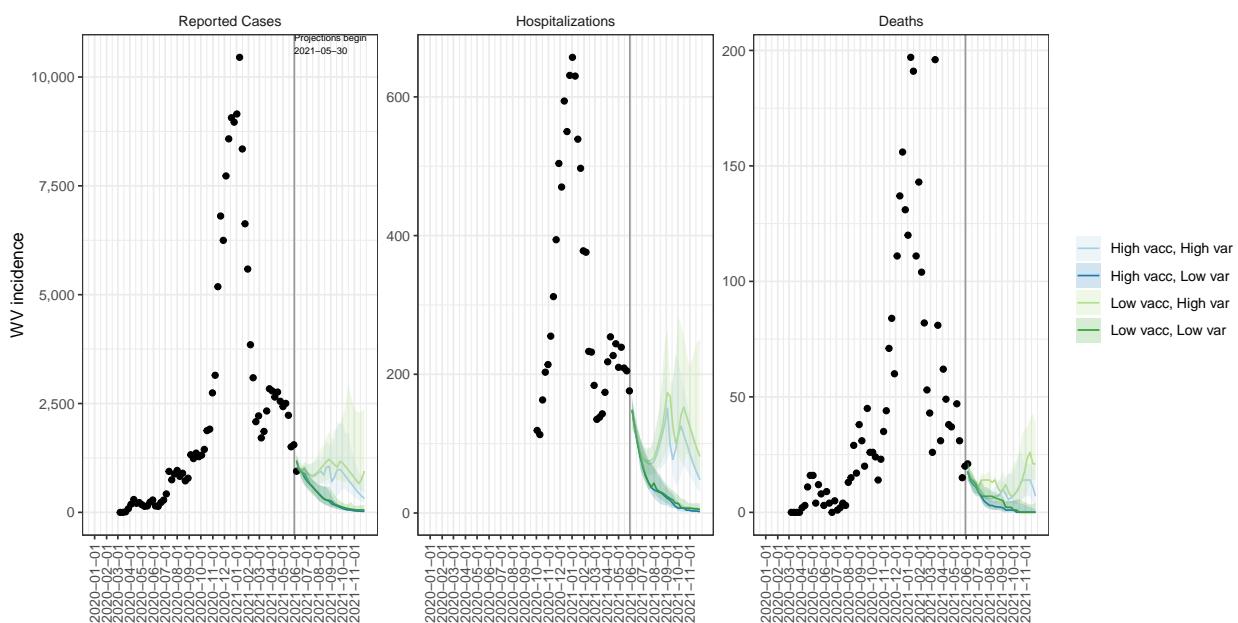
VA ensemble projections & 50% projection intervals



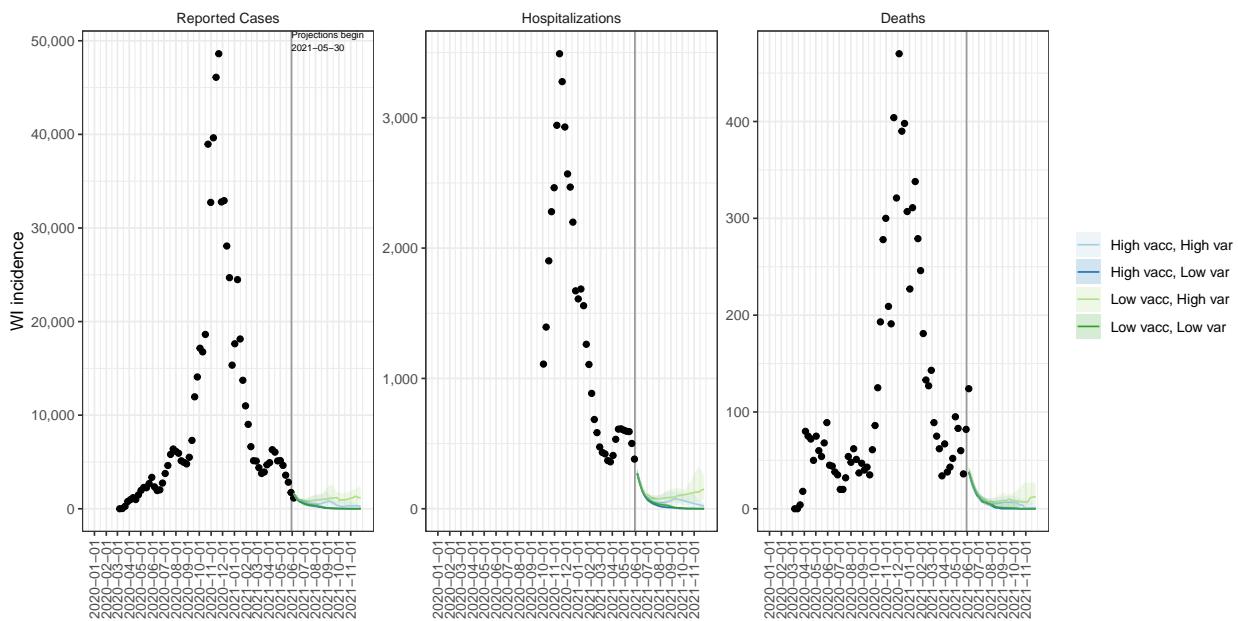
WA ensemble projections & 50% projection intervals



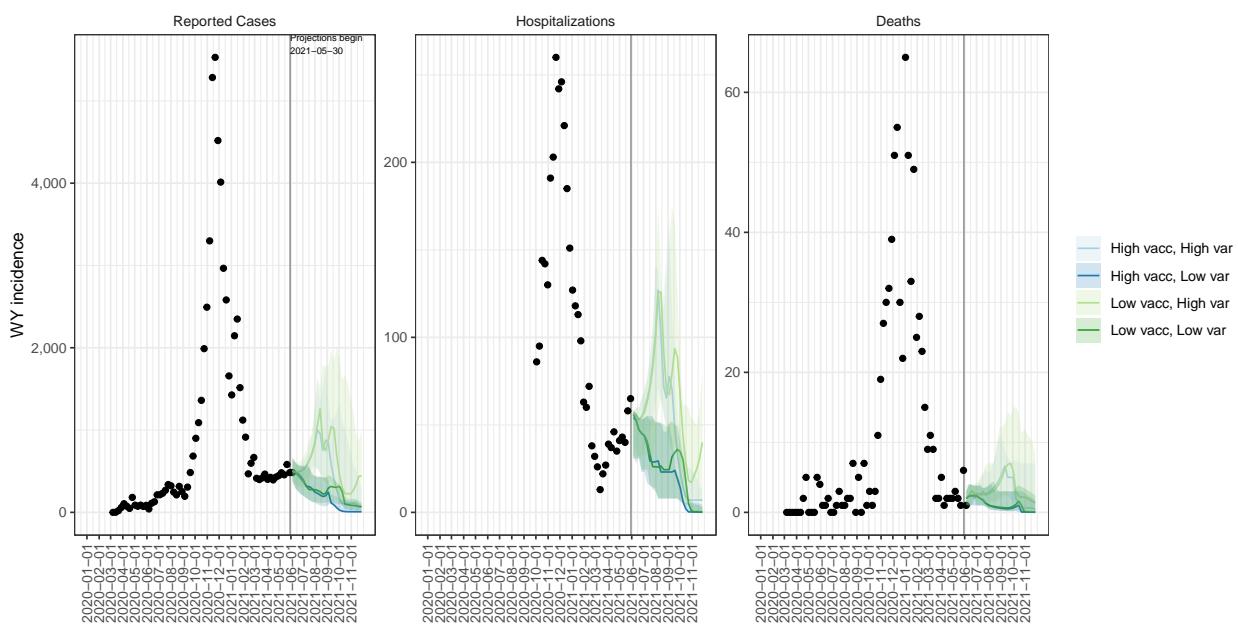
WV ensemble projections & 50% projection intervals



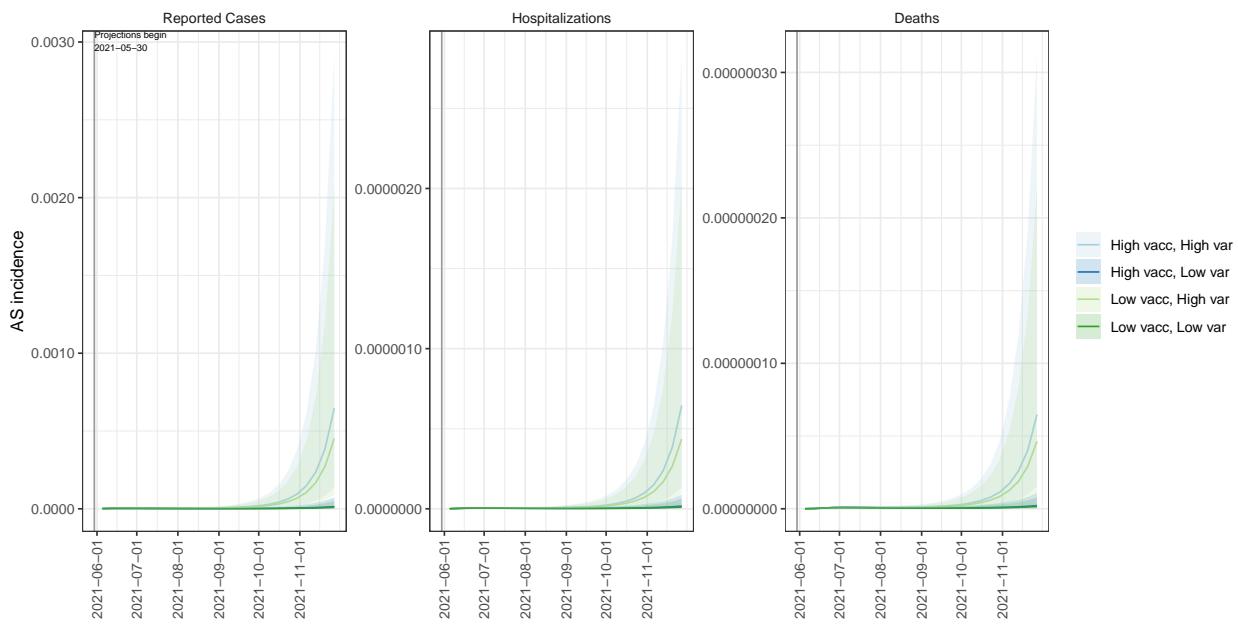
WI ensemble projections & 50% projection intervals



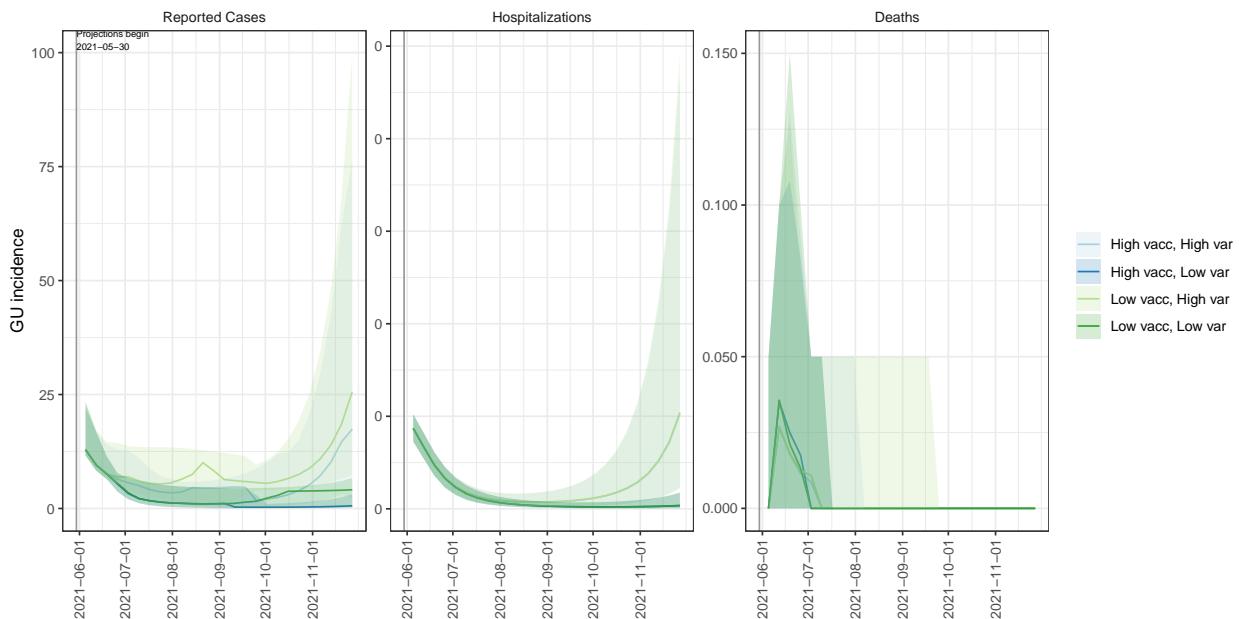
WY ensemble projections & 50% projection intervals



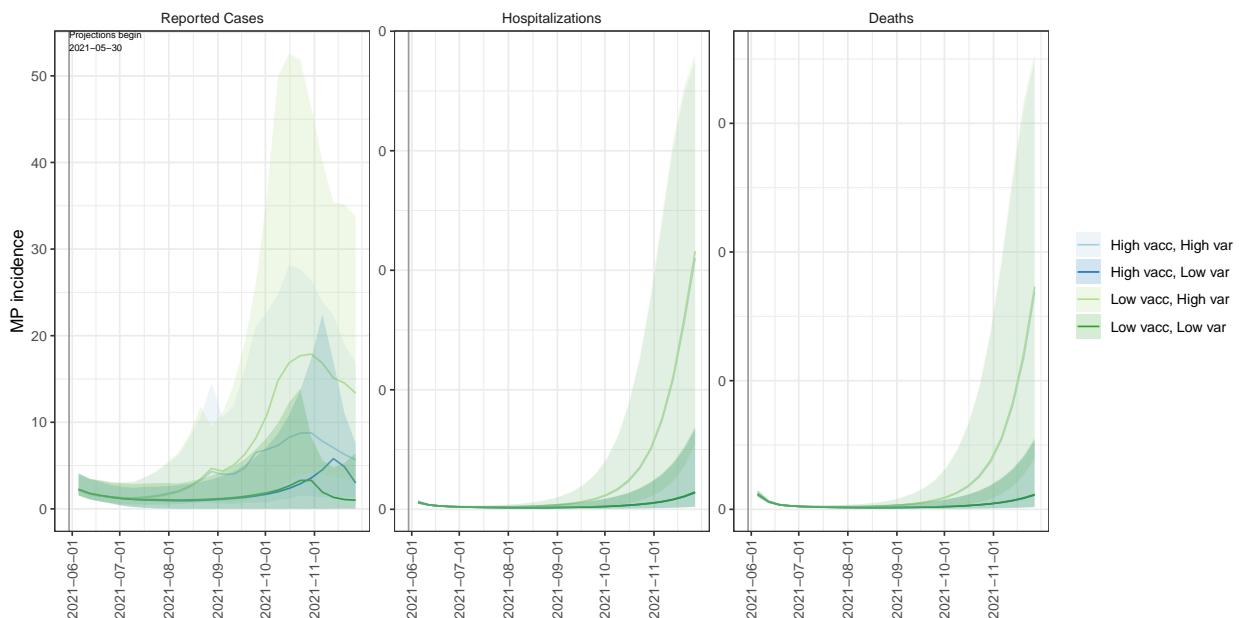
AS ensemble projections & 50% projection intervals



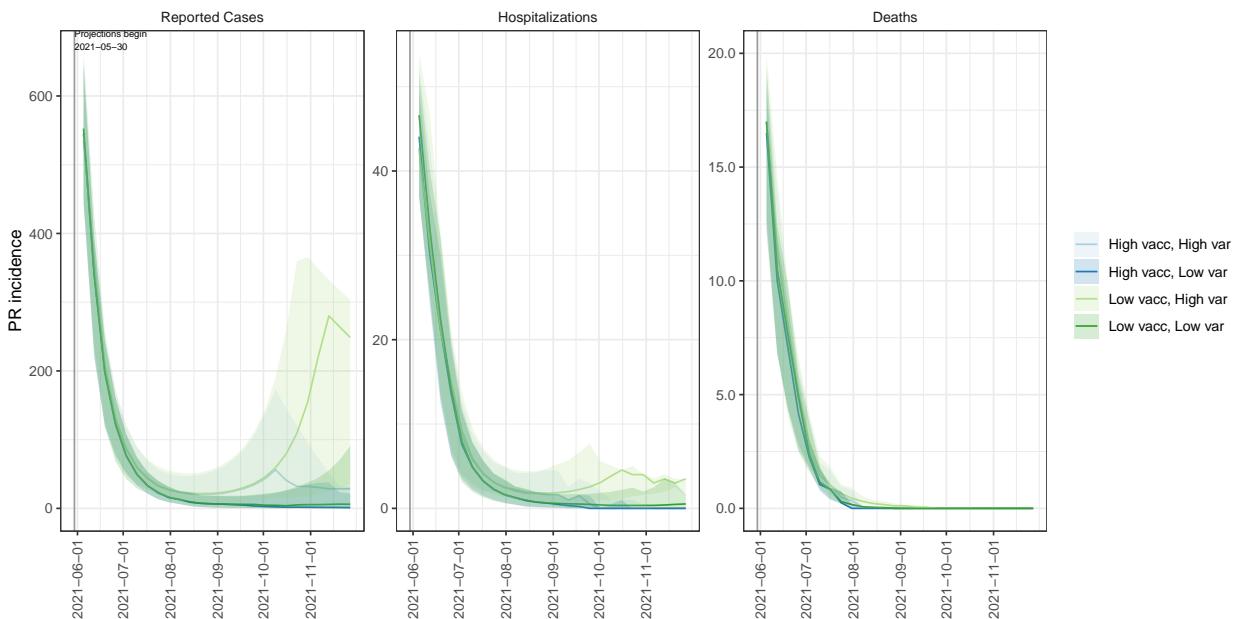
GU ensemble projections & 50% projection intervals



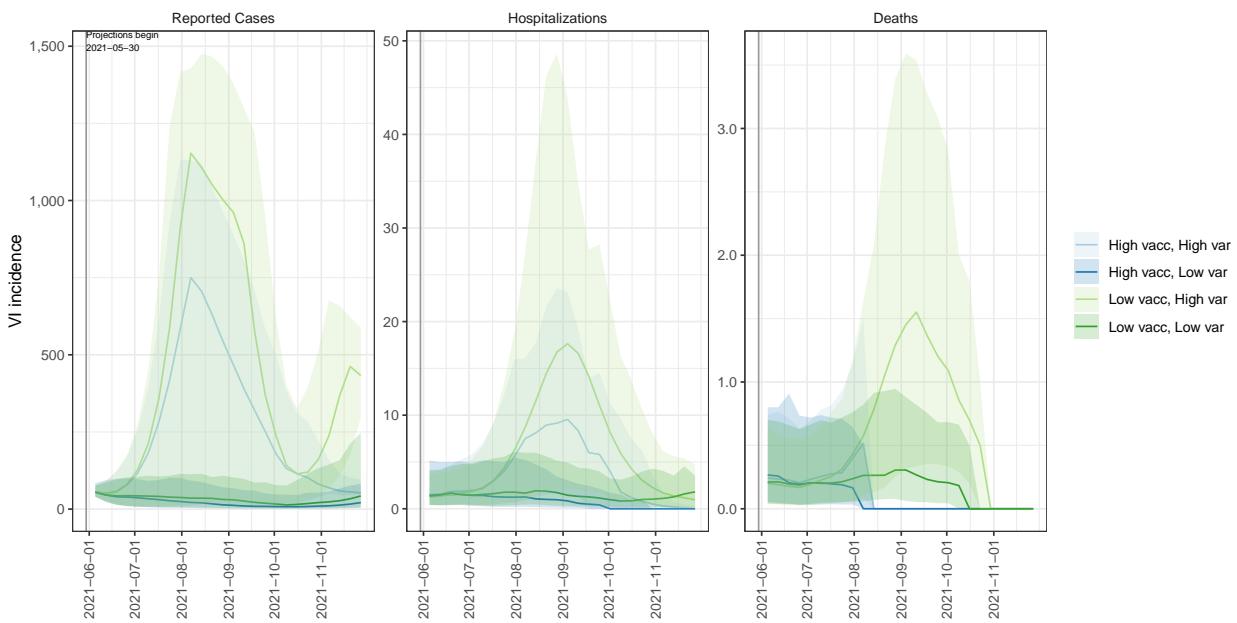
MP ensemble projections & 50% projection intervals



PR ensemble projections & 50% projection intervals



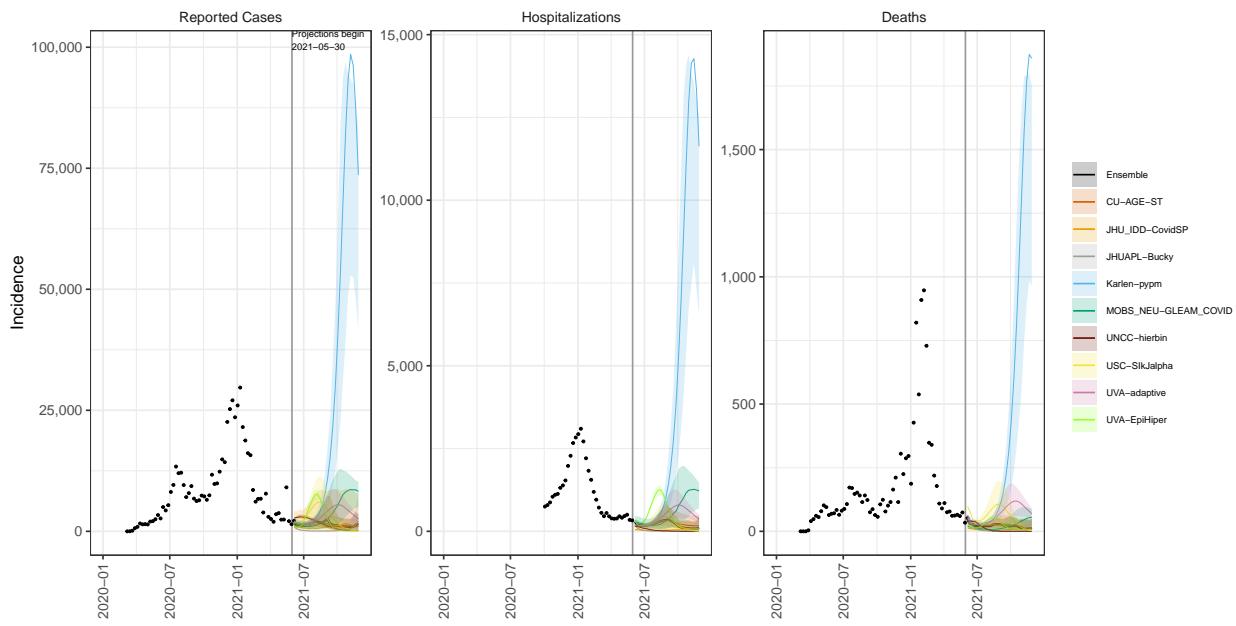
VI ensemble projections & 50% projection intervals



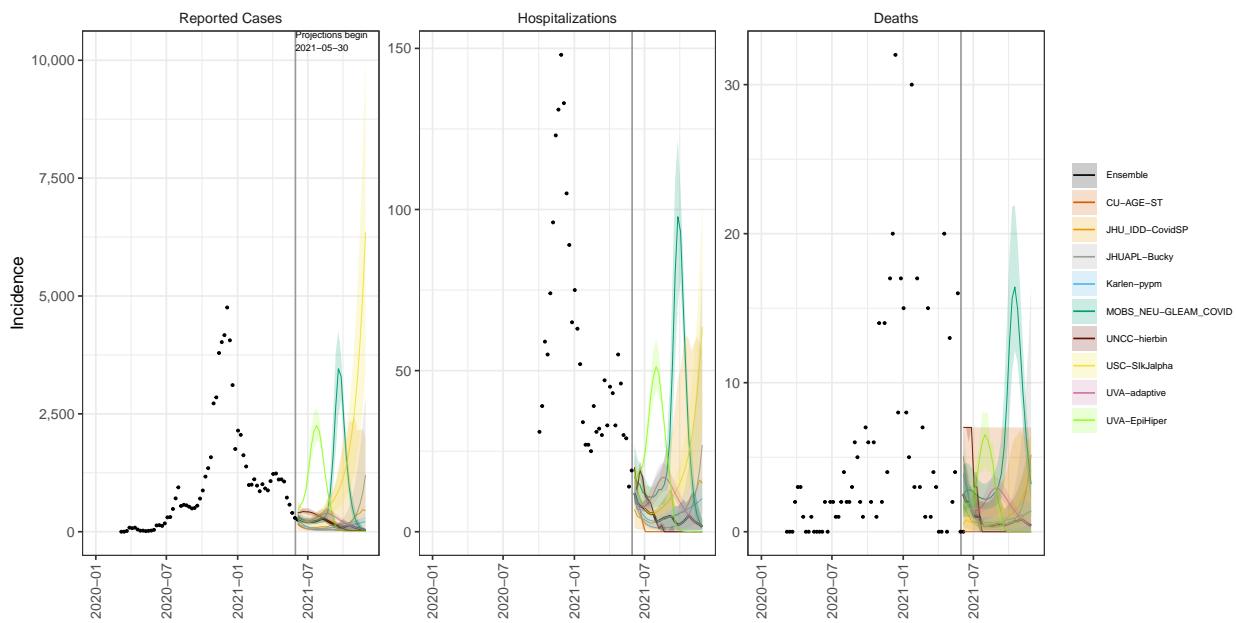
State-level model variation

National model variation for the high vaccination, high variant transmissibility scenario

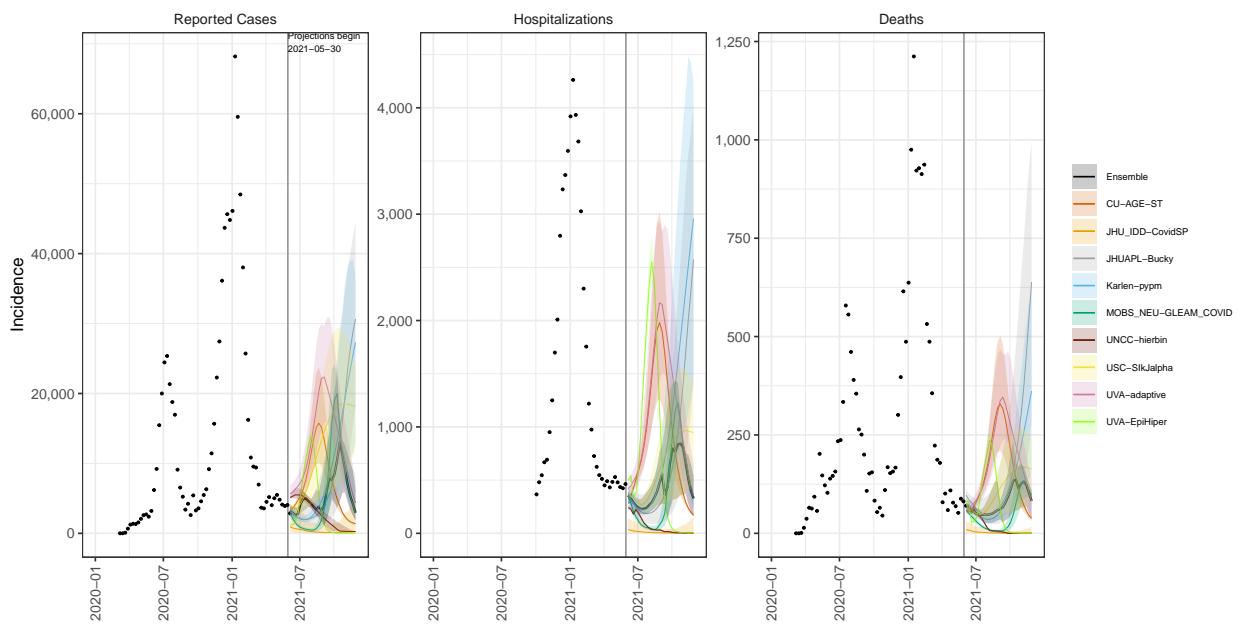
AL model variance & 50% projection intervals – High vaccination, High variant transmissibility



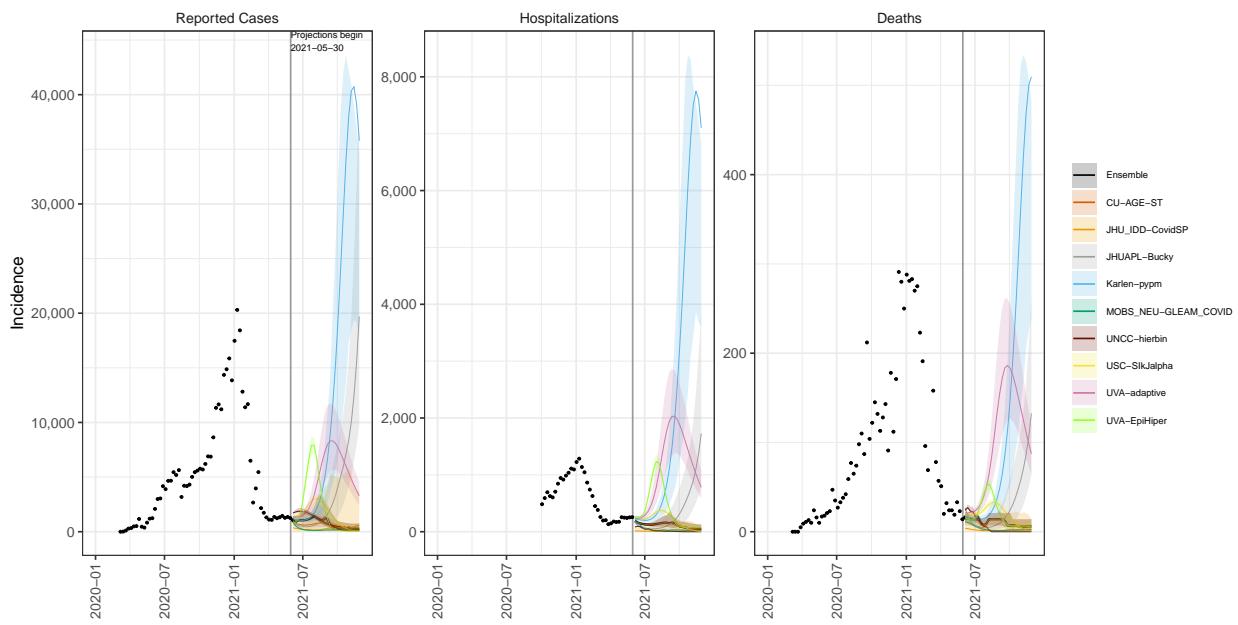
AK model variance & 50% projection intervals – High vaccination, High variant transmissibility



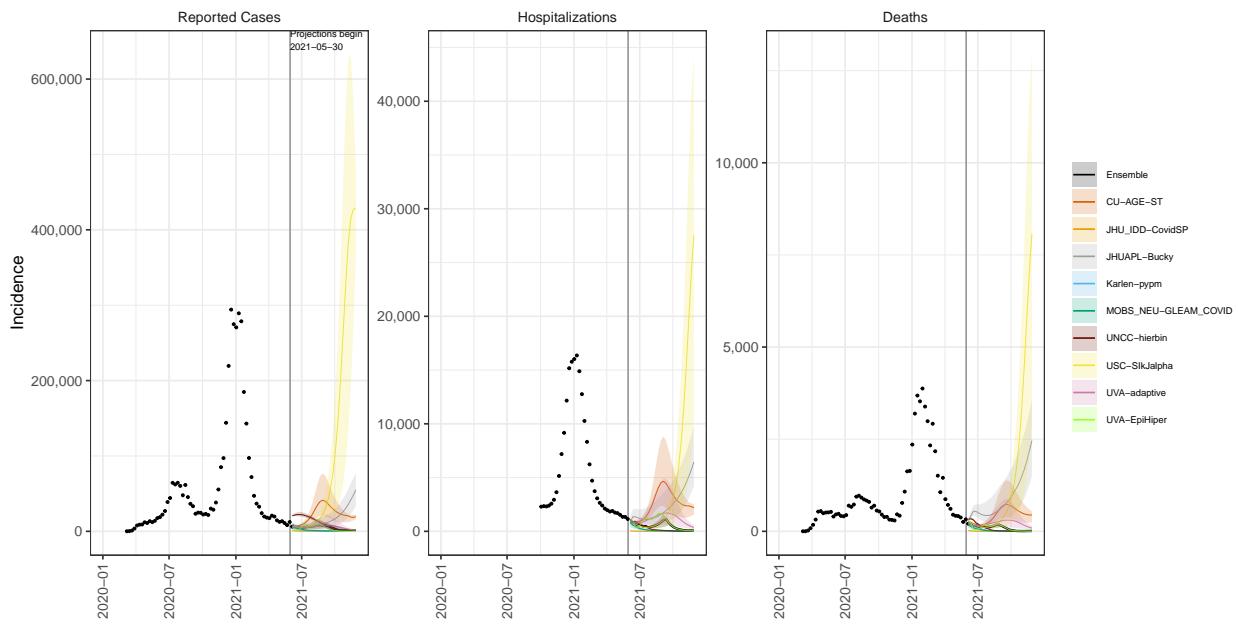
AZ model variance & 50% projection intervals – High vaccination, High variant transmissibility



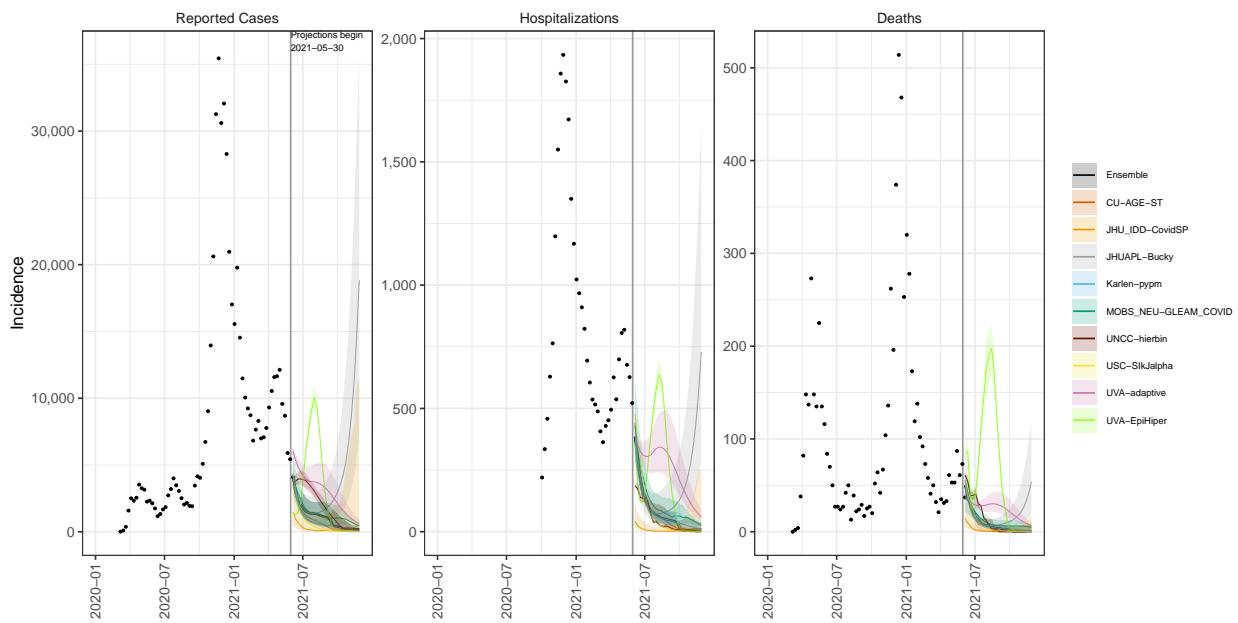
AR model variance & 50% projection intervals – High vaccination, High variant transmissibility



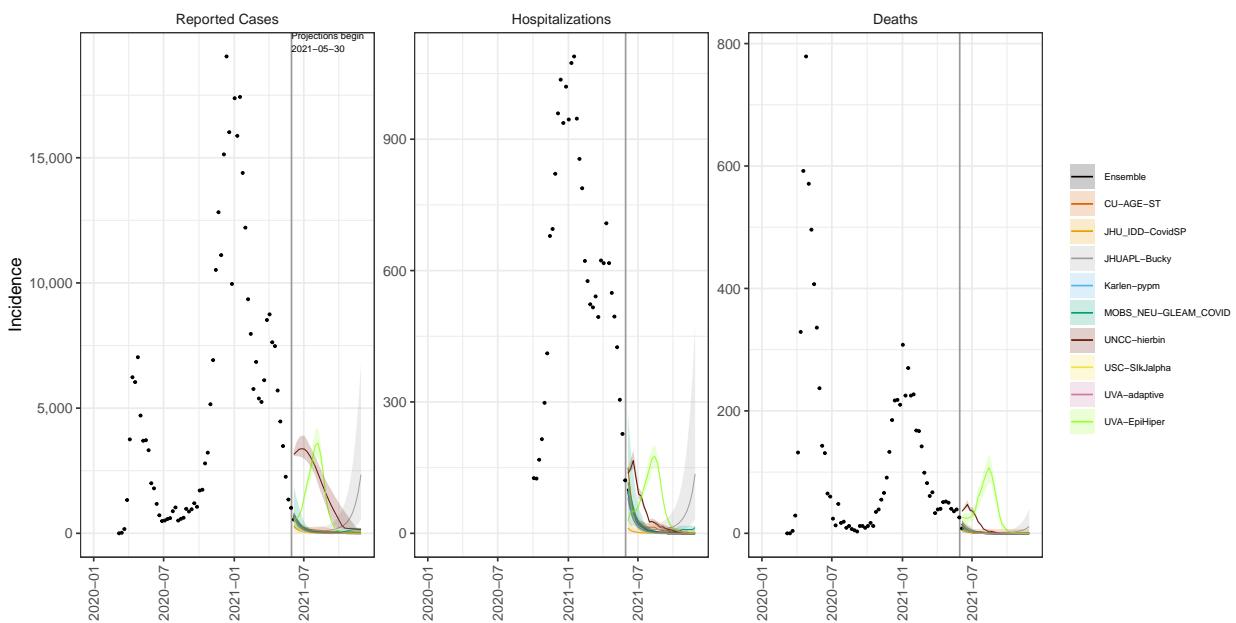
CA model variance & 50% projection intervals – High vaccination, High variant transmissibility



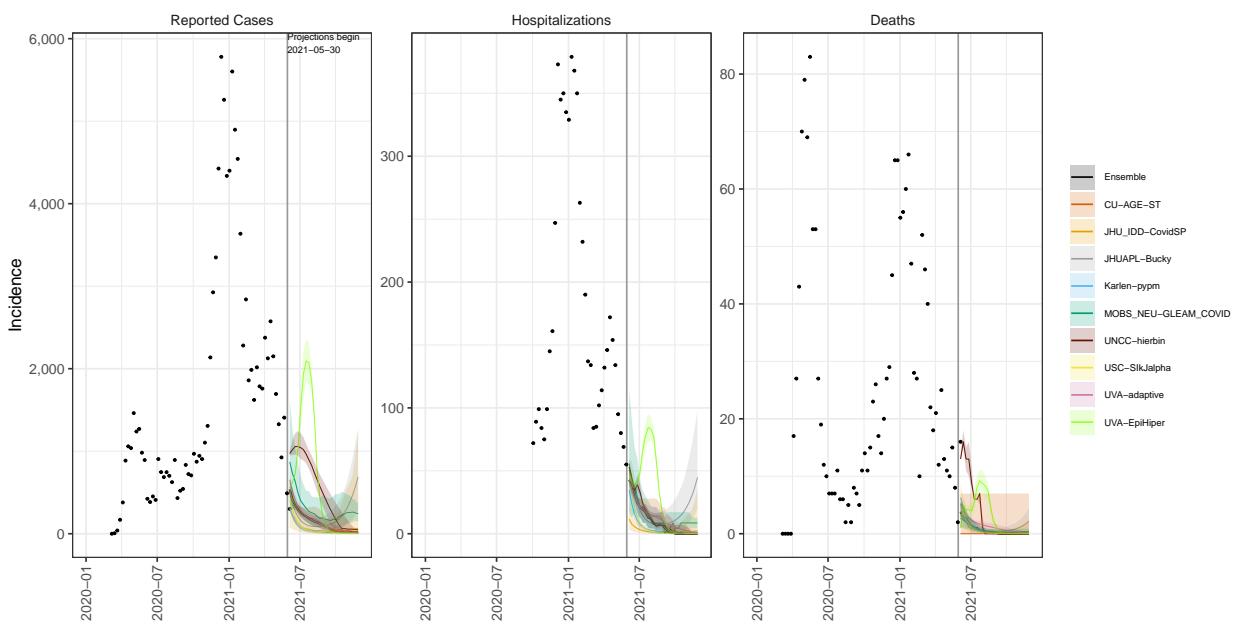
CO model variance & 50% projection intervals – High vaccination, High variant transmissibility



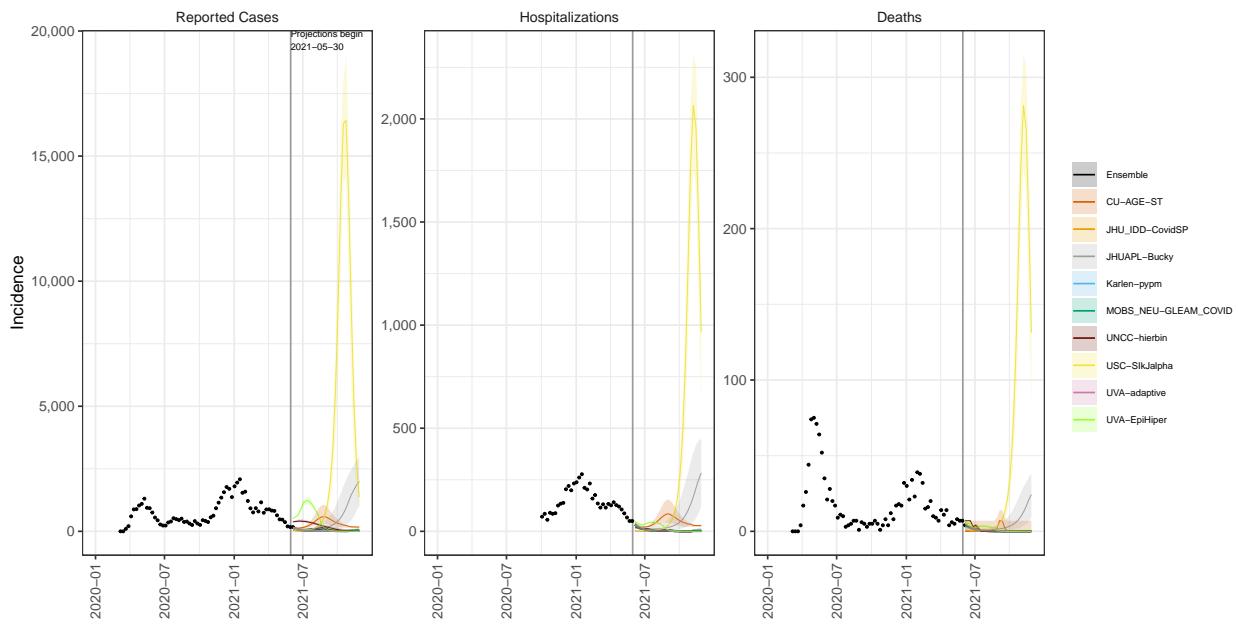
CT model variance & 50% projection intervals – High vaccination, High variant transmissibility



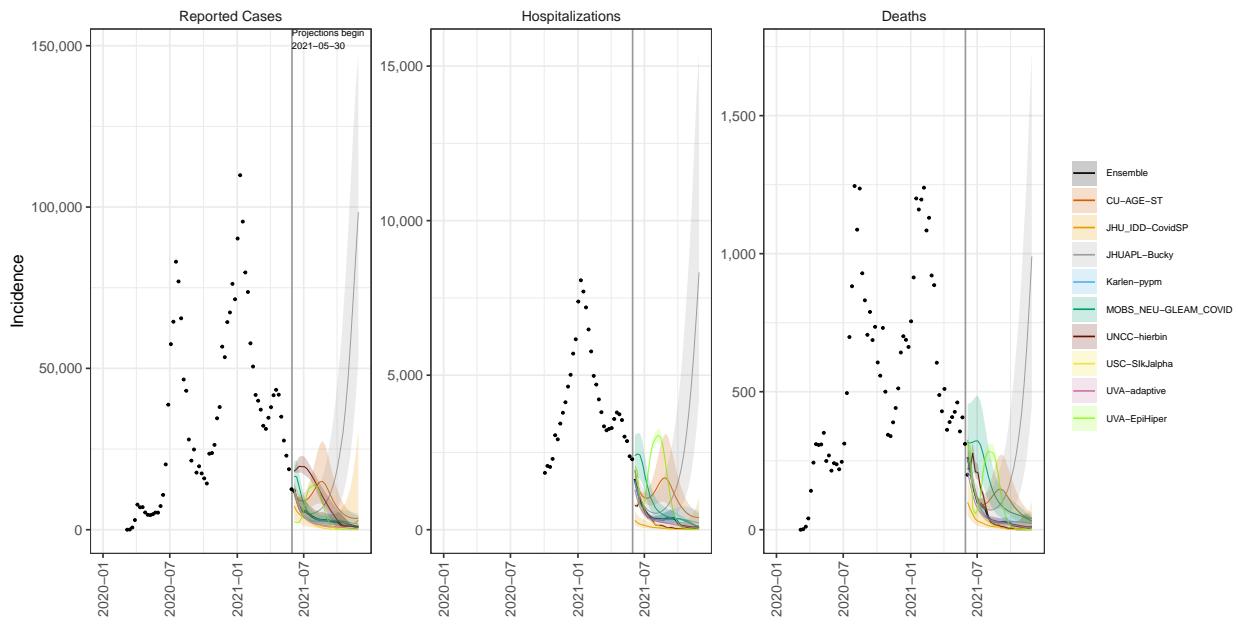
DE model variance & 50% projection intervals – High vaccination, High variant transmissibility



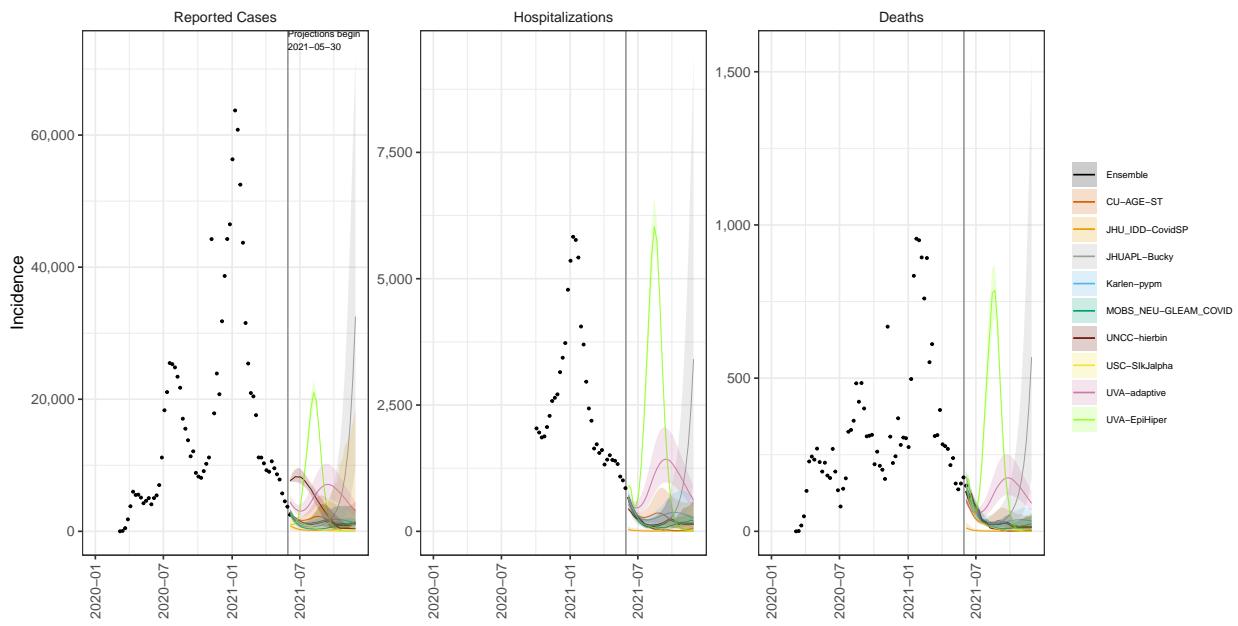
DC model variance & 50% projection intervals – High vaccination, High variant transmissibility



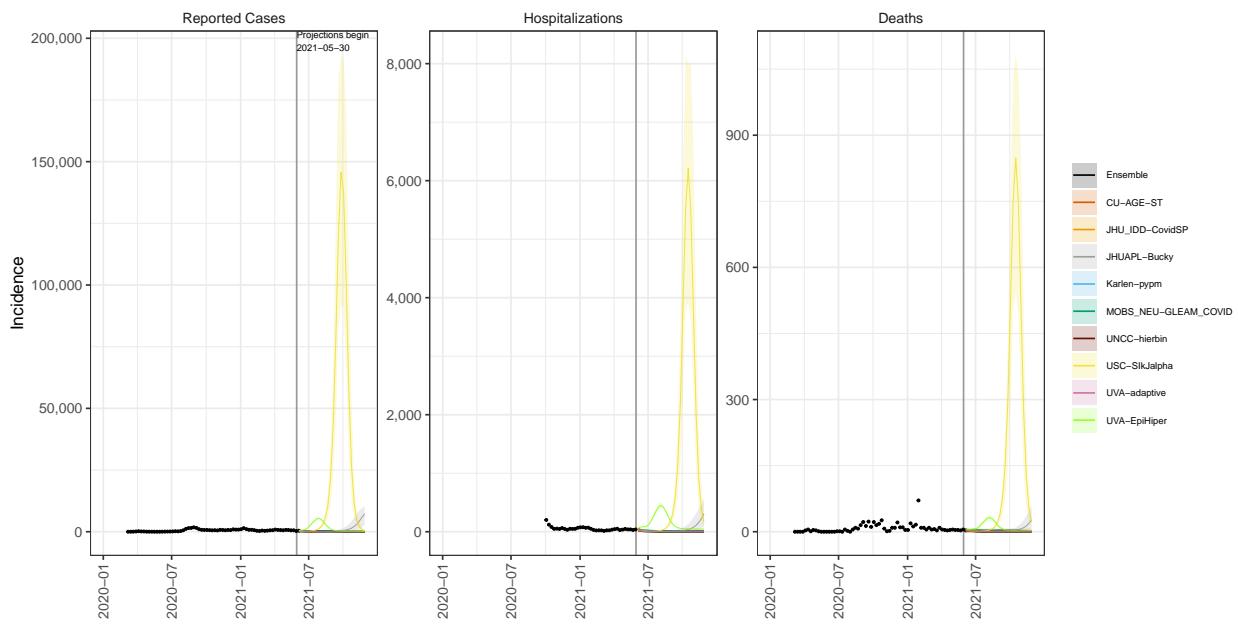
FL model variance & 50% projection intervals – High vaccination, High variant transmissibility



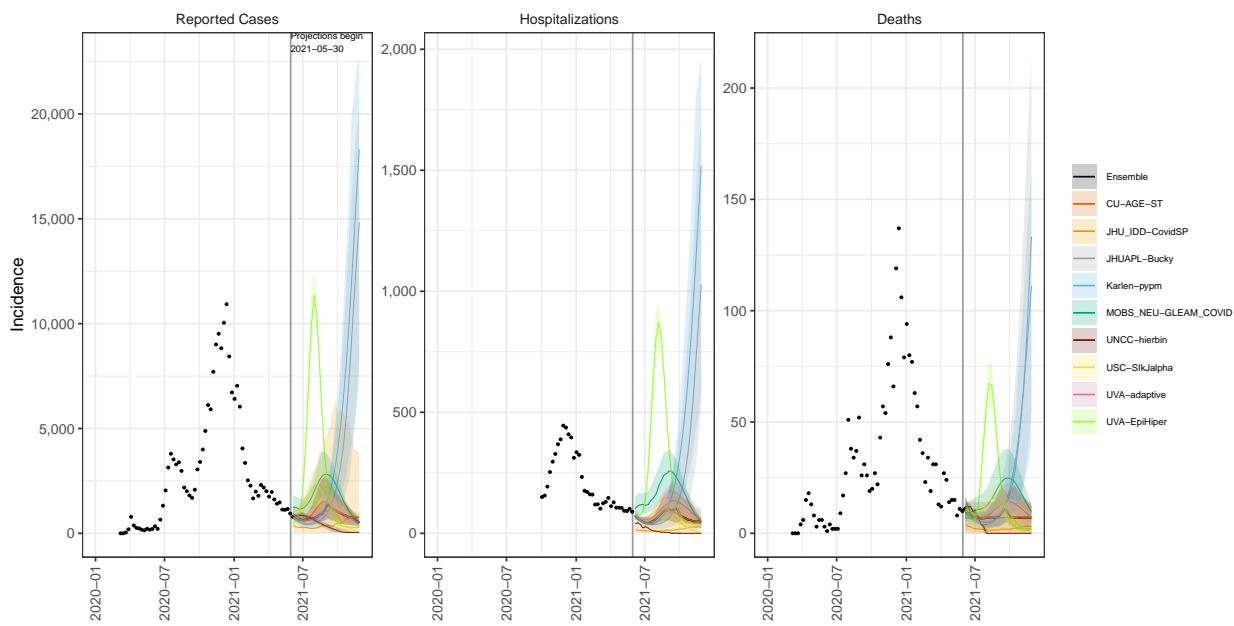
GA model variance & 50% projection intervals – High vaccination, High variant transmissibility



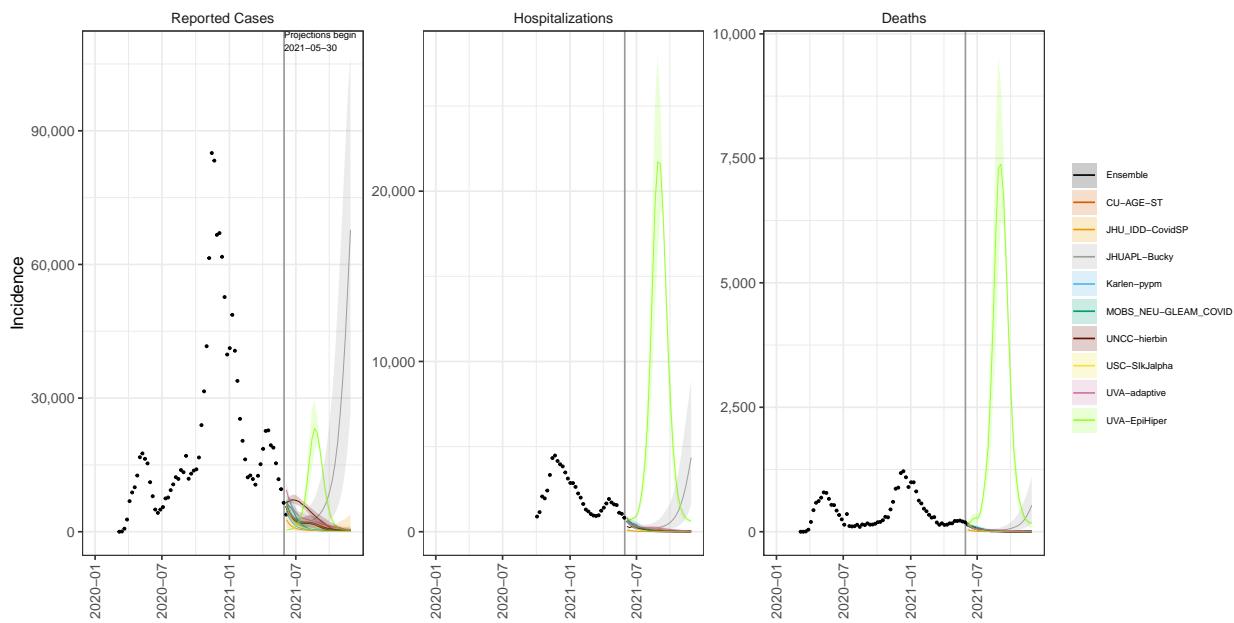
HI model variance & 50% projection intervals – High vaccination, High variant transmissibility



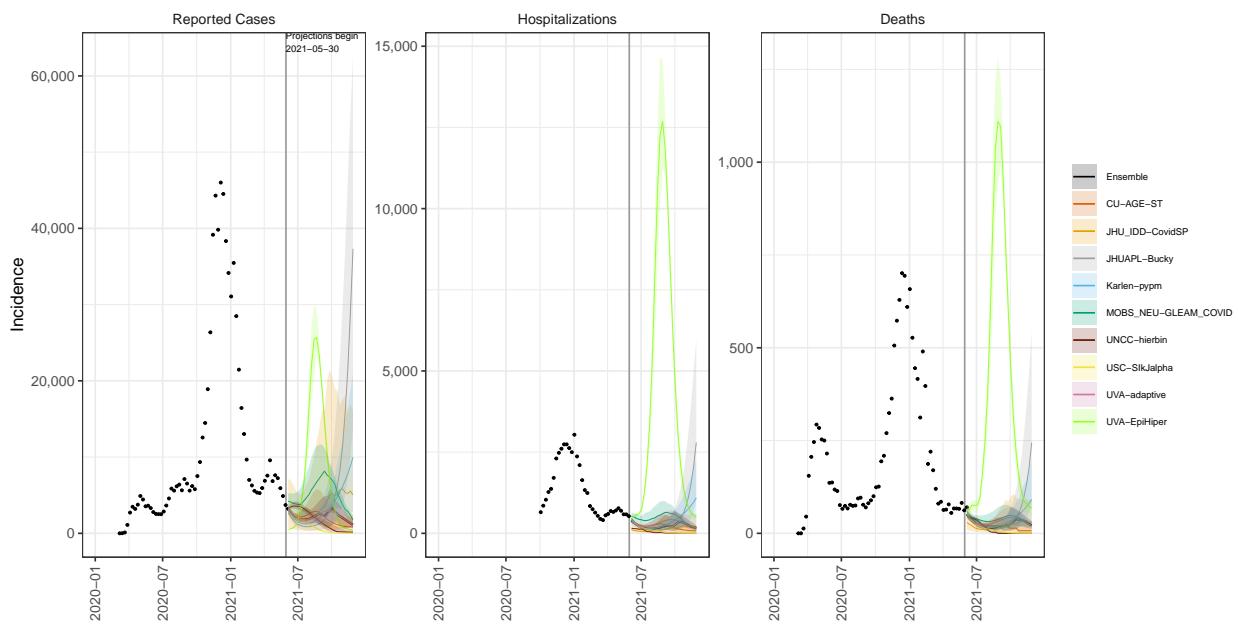
ID model variance & 50% projection intervals – High vaccination, High variant transmissibility



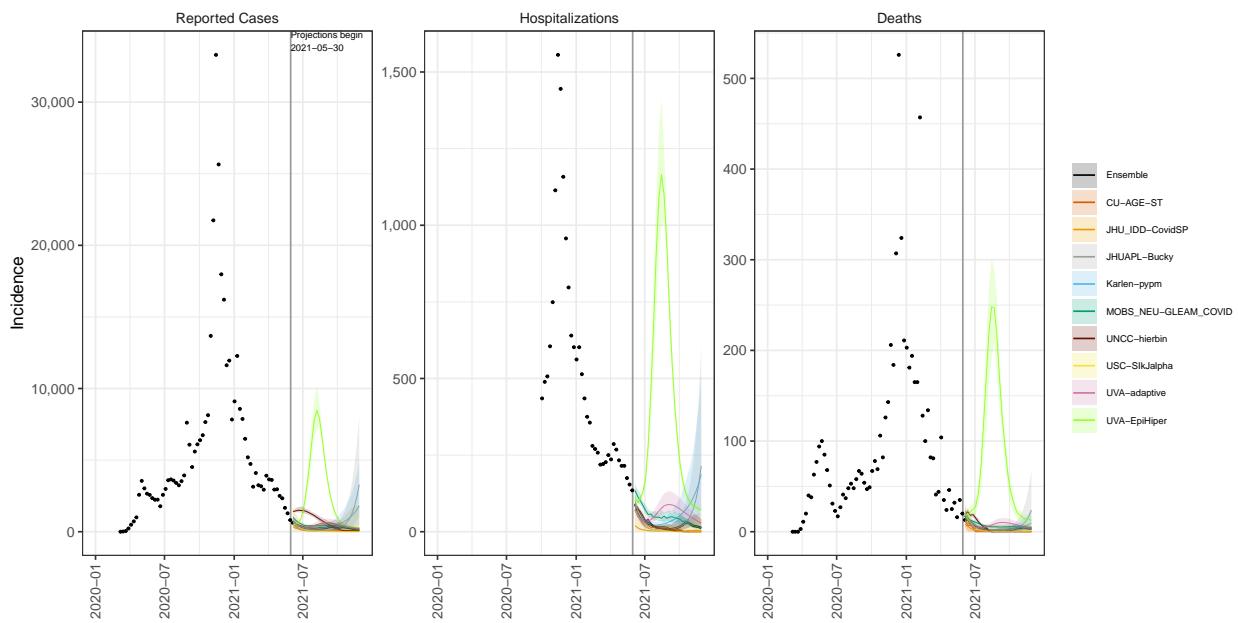
IL model variance & 50% projection intervals – High vaccination, High variant transmissibility



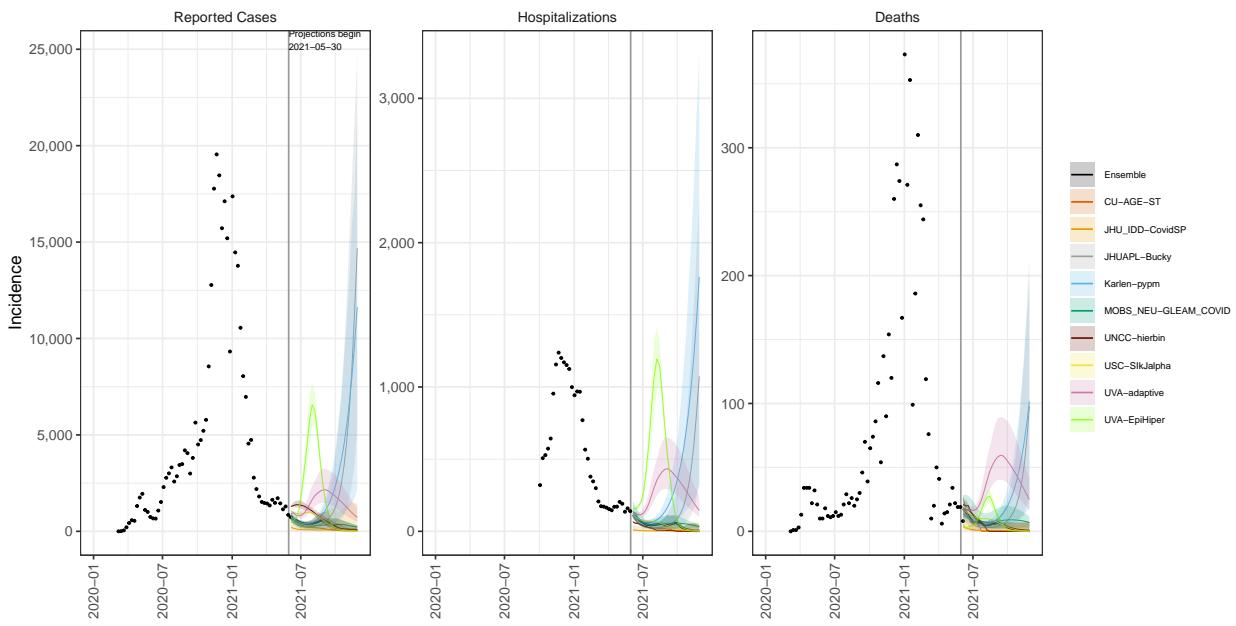
IN model variance & 50% projection intervals – High vaccination, High variant transmissibility



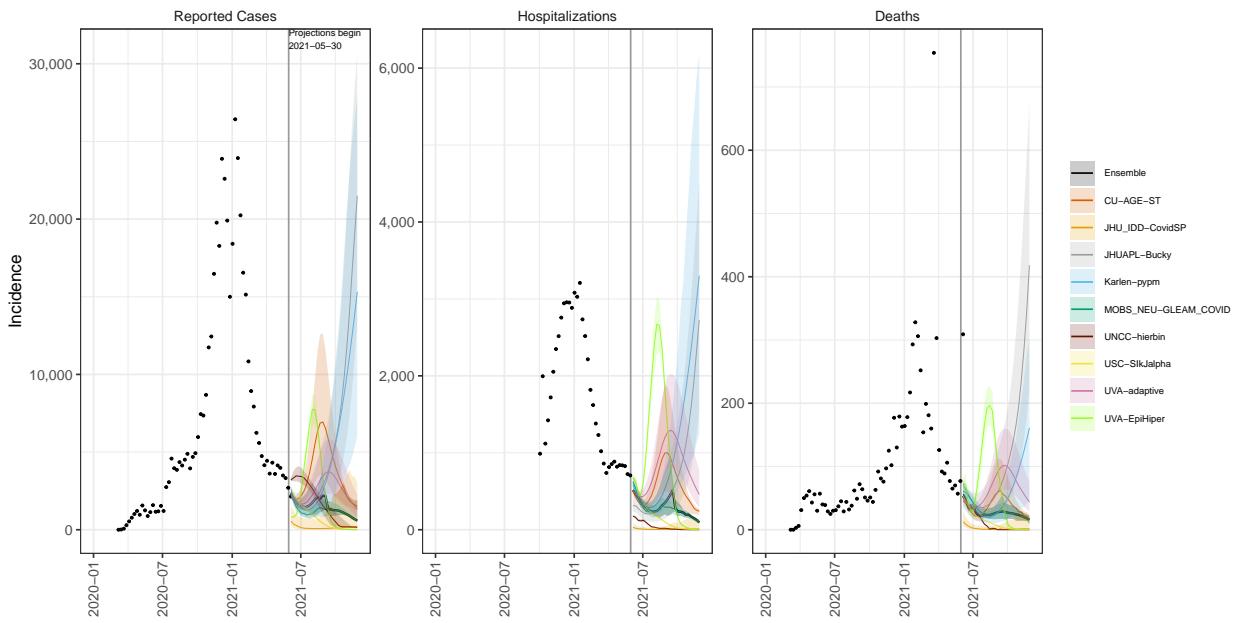
IA model variance & 50% projection intervals – High vaccination, High variant transmissibility



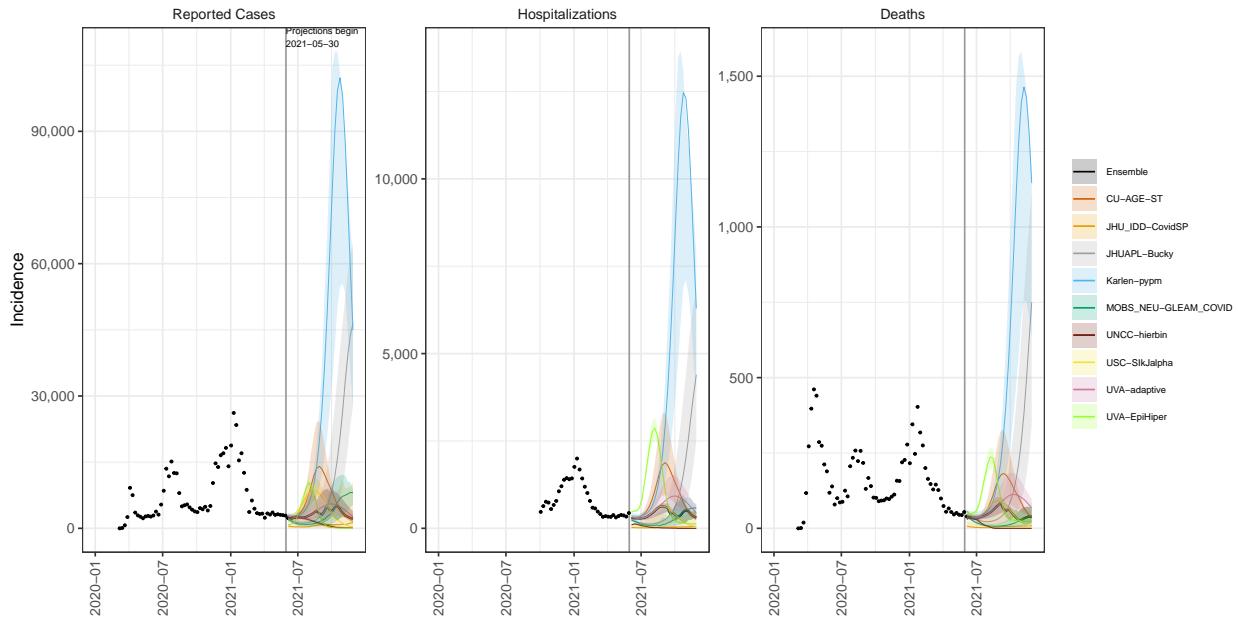
KS model variance & 50% projection intervals – High vaccination, High variant transmissibility



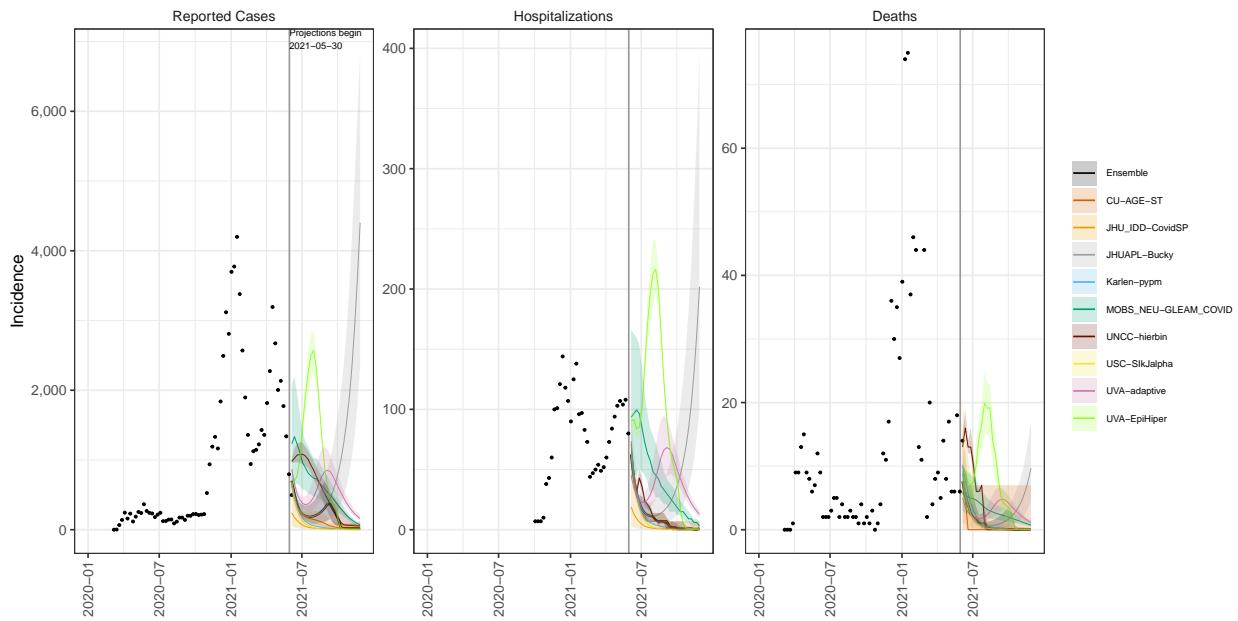
KY model variance & 50% projection intervals – High vaccination, High variant transmissibility



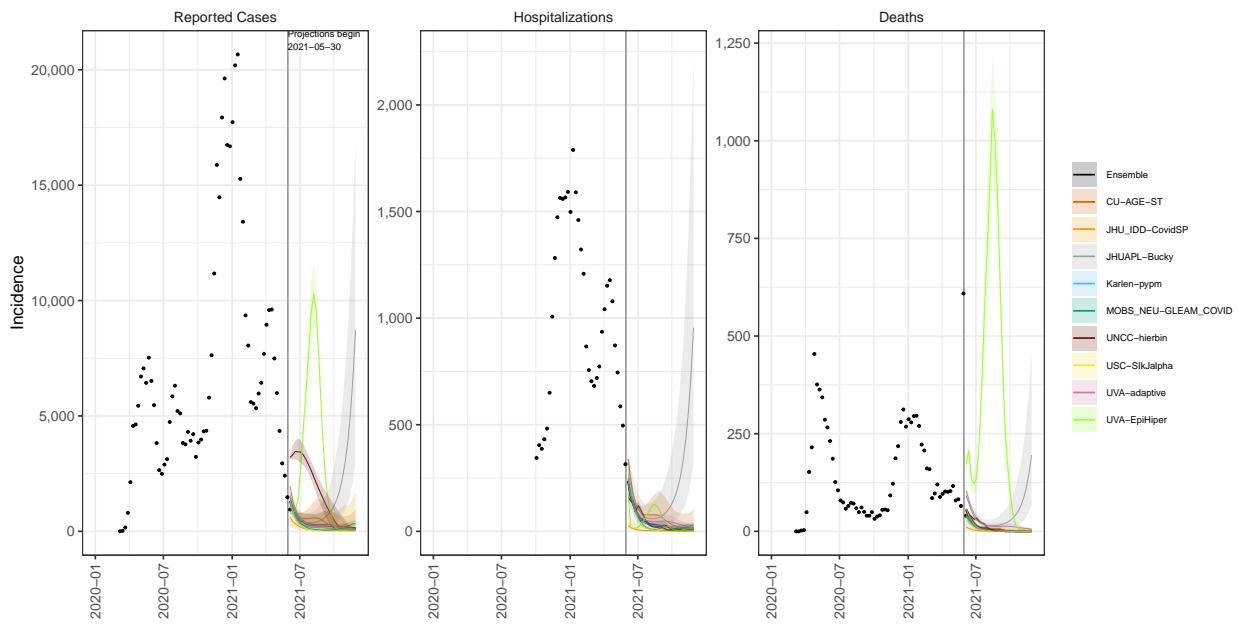
LA model variance & 50% projection intervals – High vaccination, High variant transmissibility



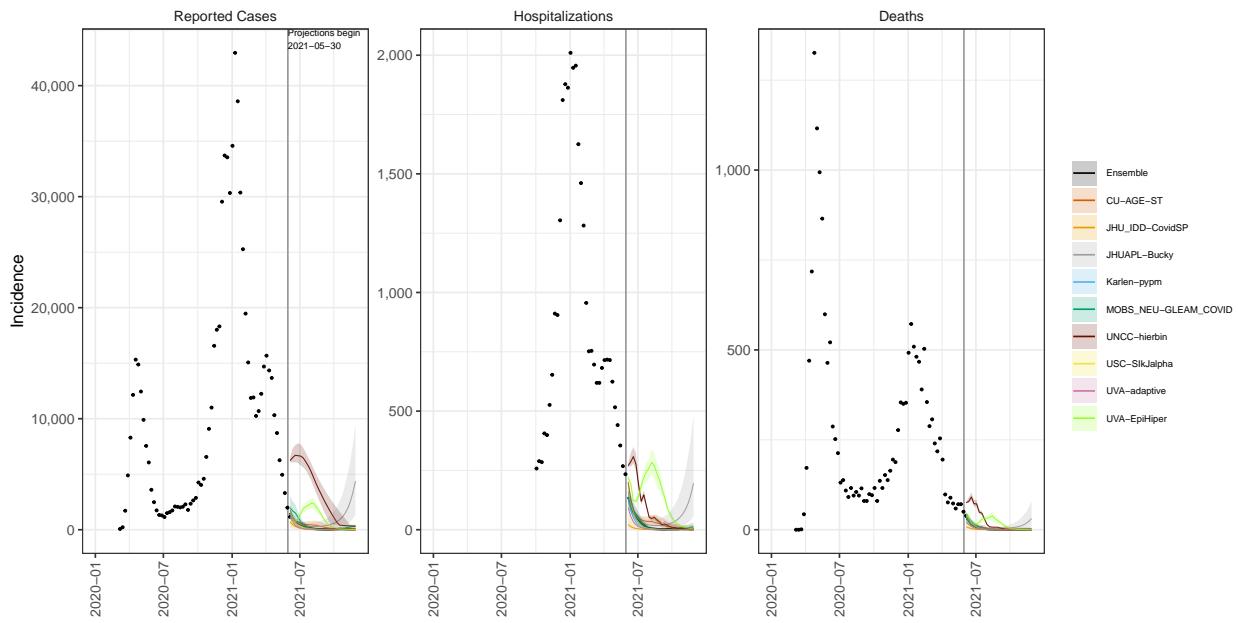
ME model variance & 50% projection intervals – High vaccination, High variant transmissibility



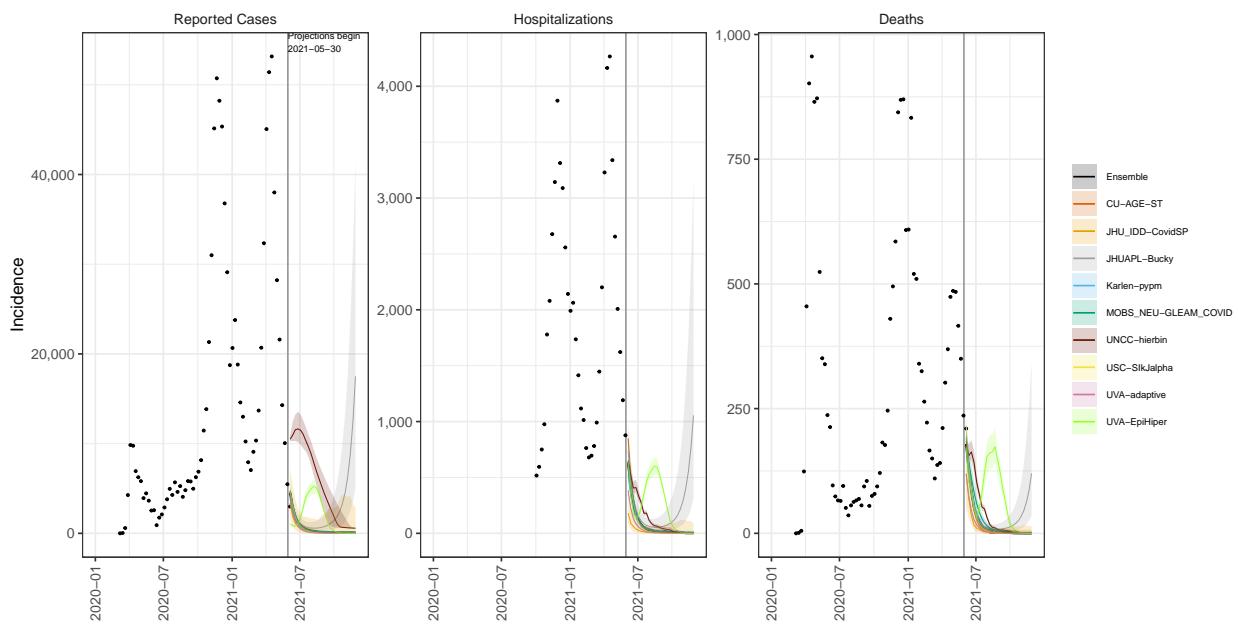
MD model variance & 50% projection intervals – High vaccination, High variant transmissibility



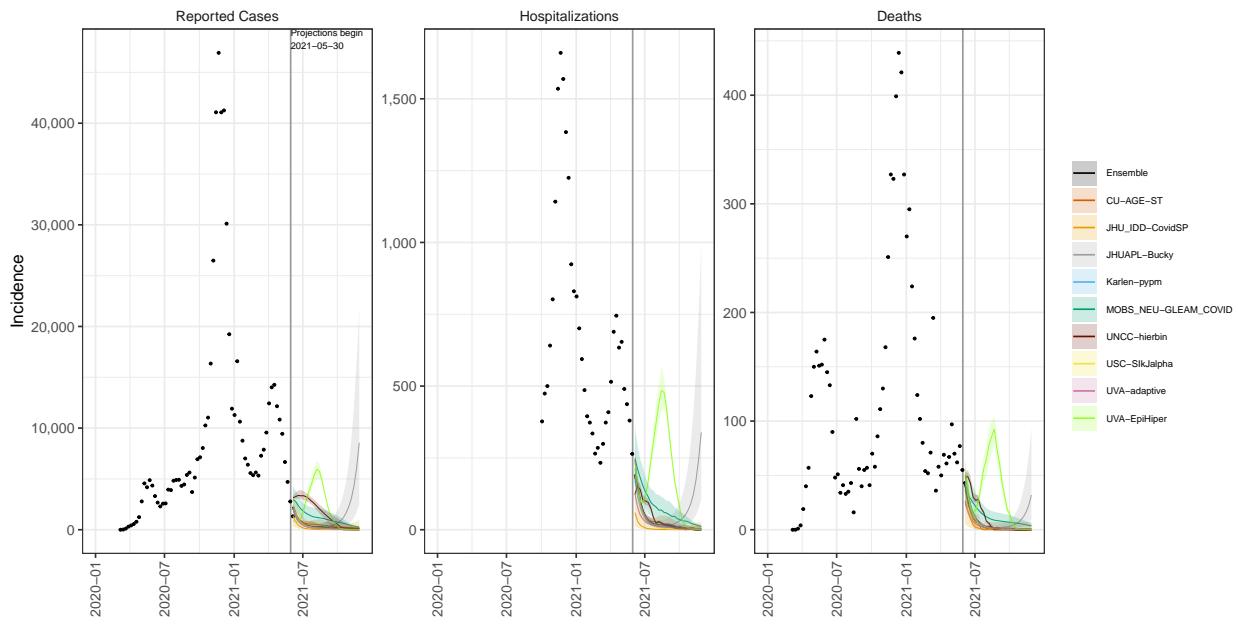
MA model variance & 50% projection intervals – High vaccination, High variant transmissibility



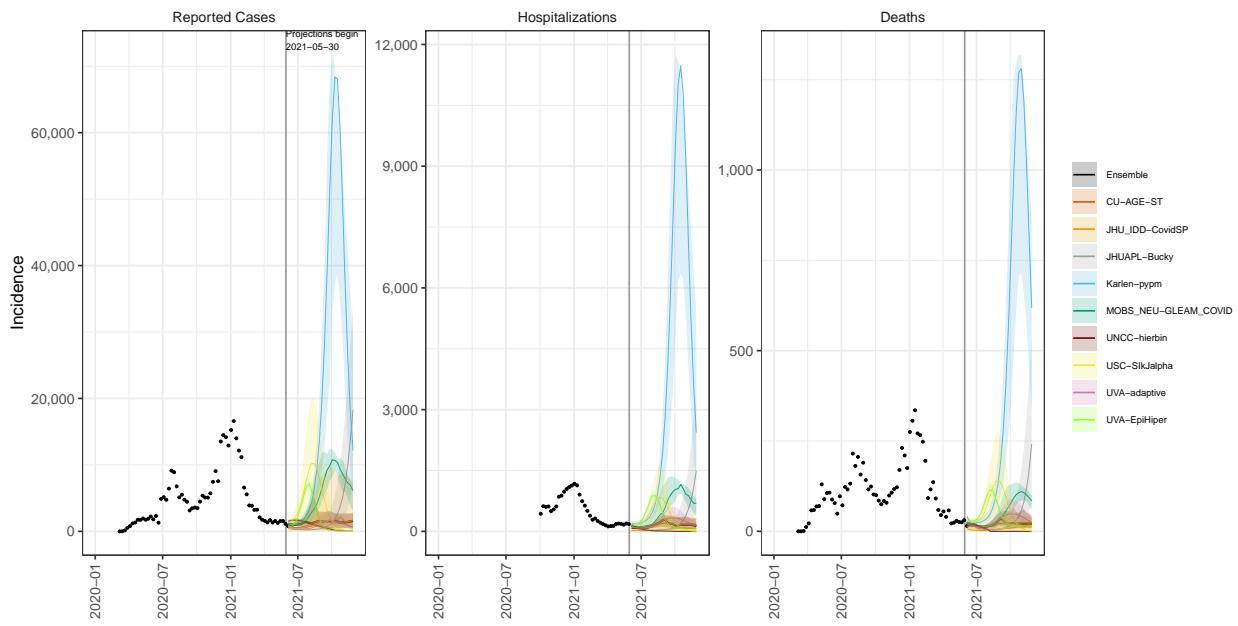
MI model variance & 50% projection intervals – High vaccination, High variant transmissibility



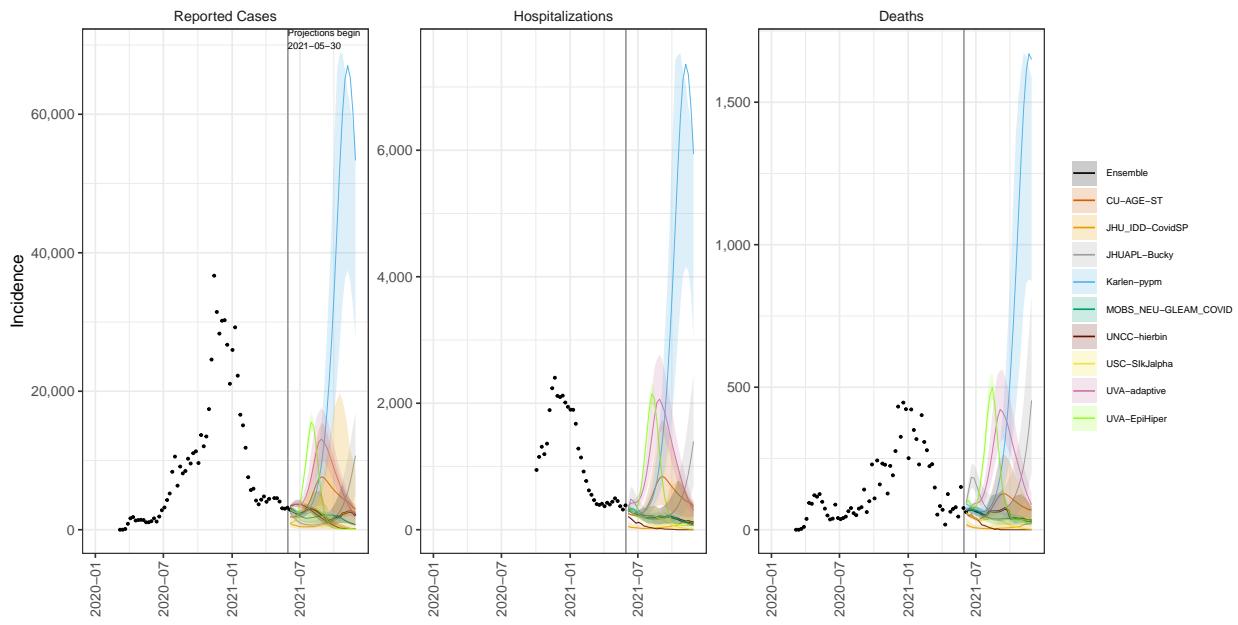
MN model variance & 50% projection intervals – High vaccination, High variant transmissibility



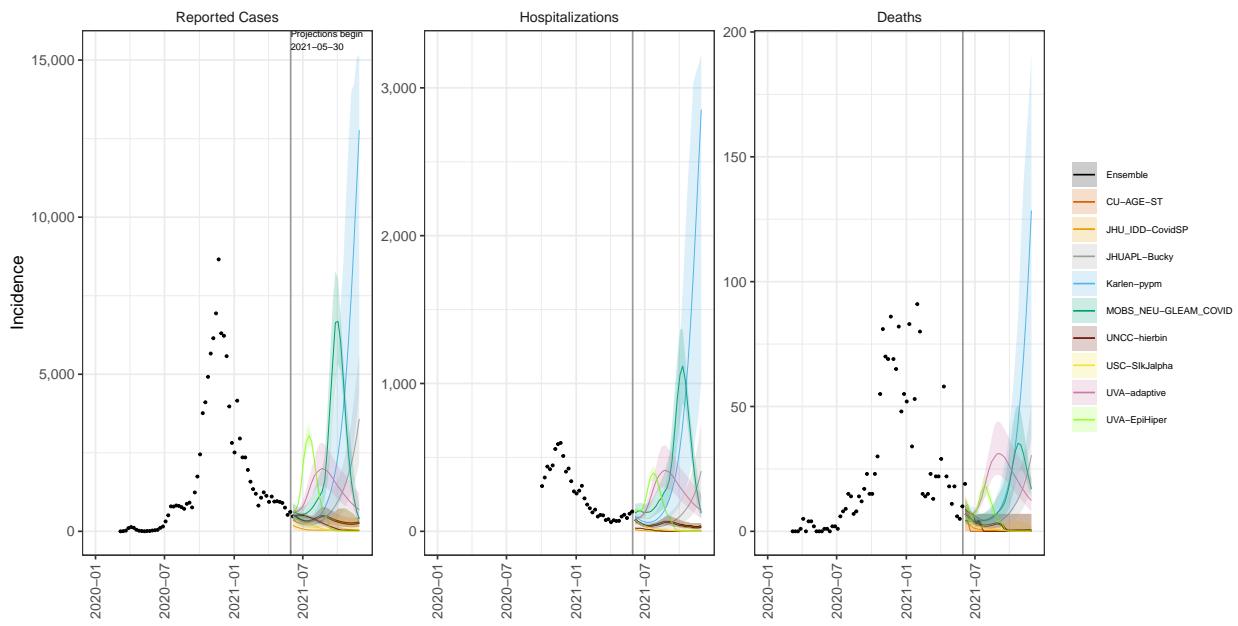
MS model variance & 50% projection intervals – High vaccination, High variant transmissibility



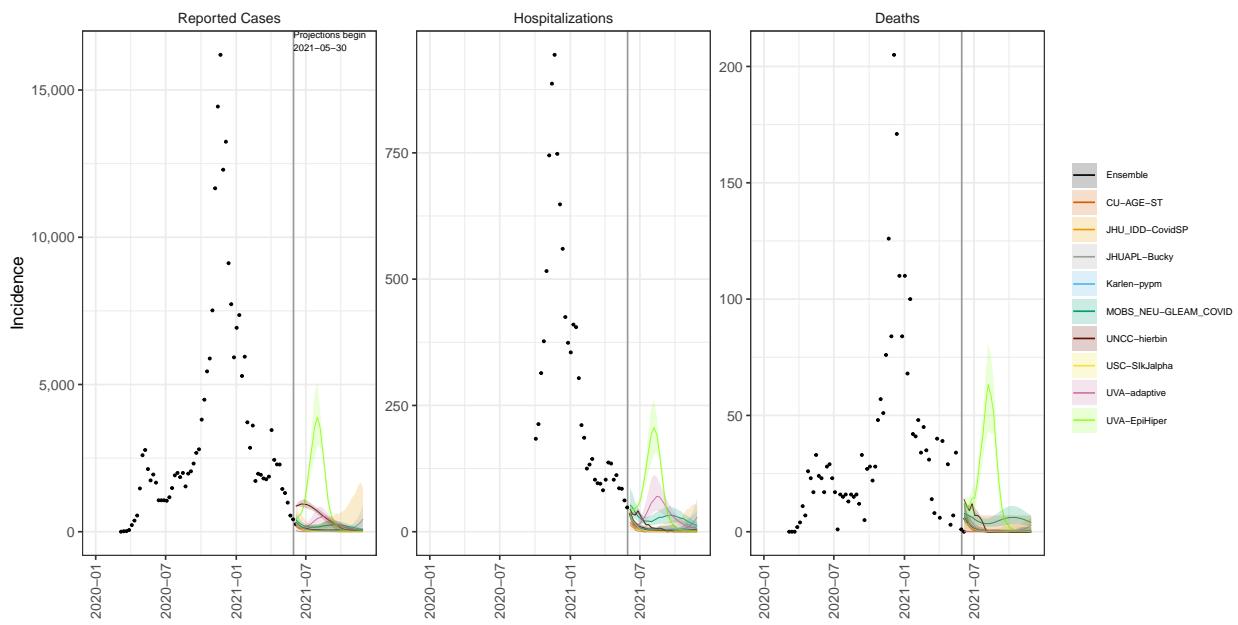
MO model variance & 50% projection intervals – High vaccination, High variant transmissibility



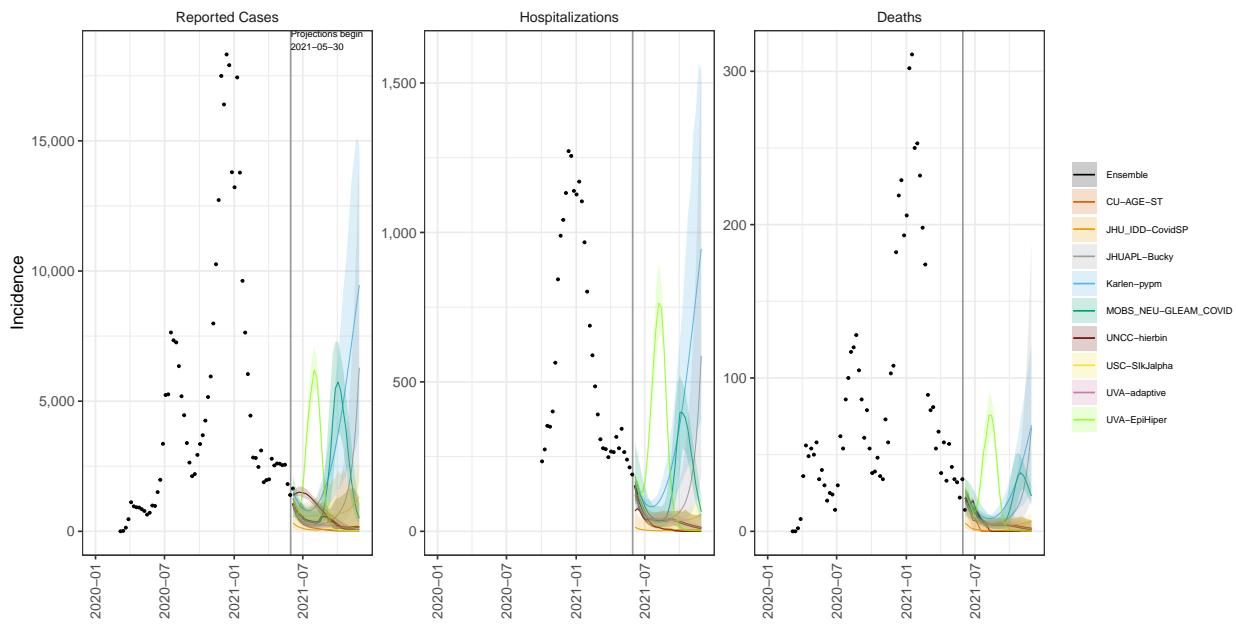
MT model variance & 50% projection intervals – High vaccination, High variant transmissibility



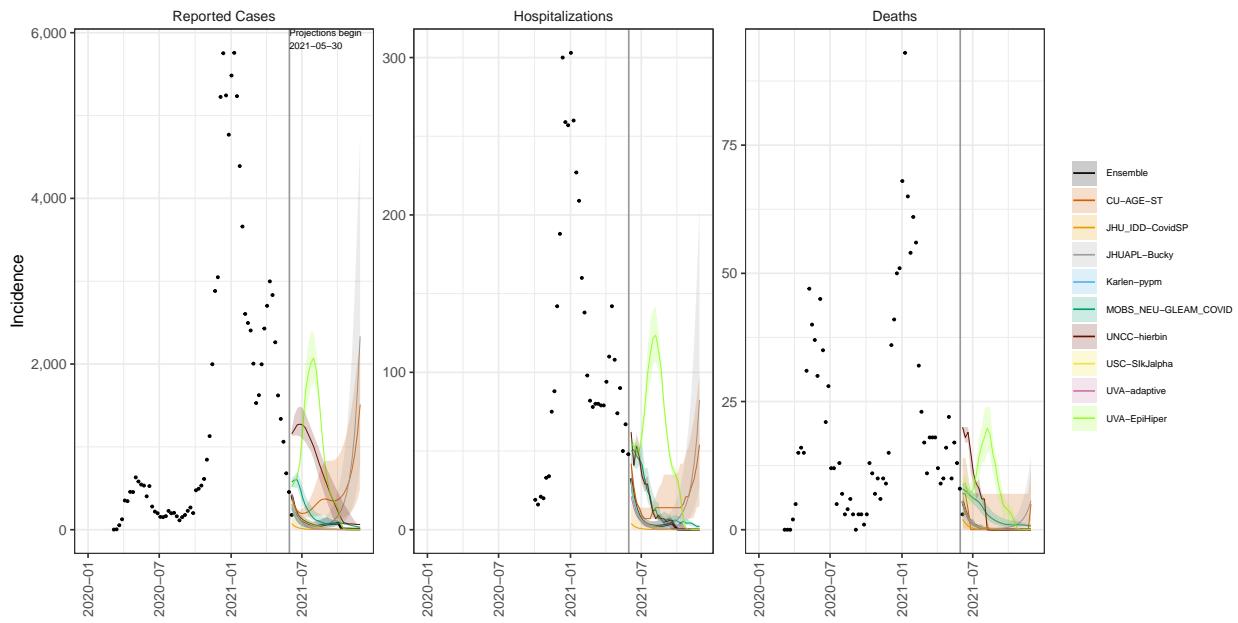
NE model variance & 50% projection intervals – High vaccination, High variant transmissibility



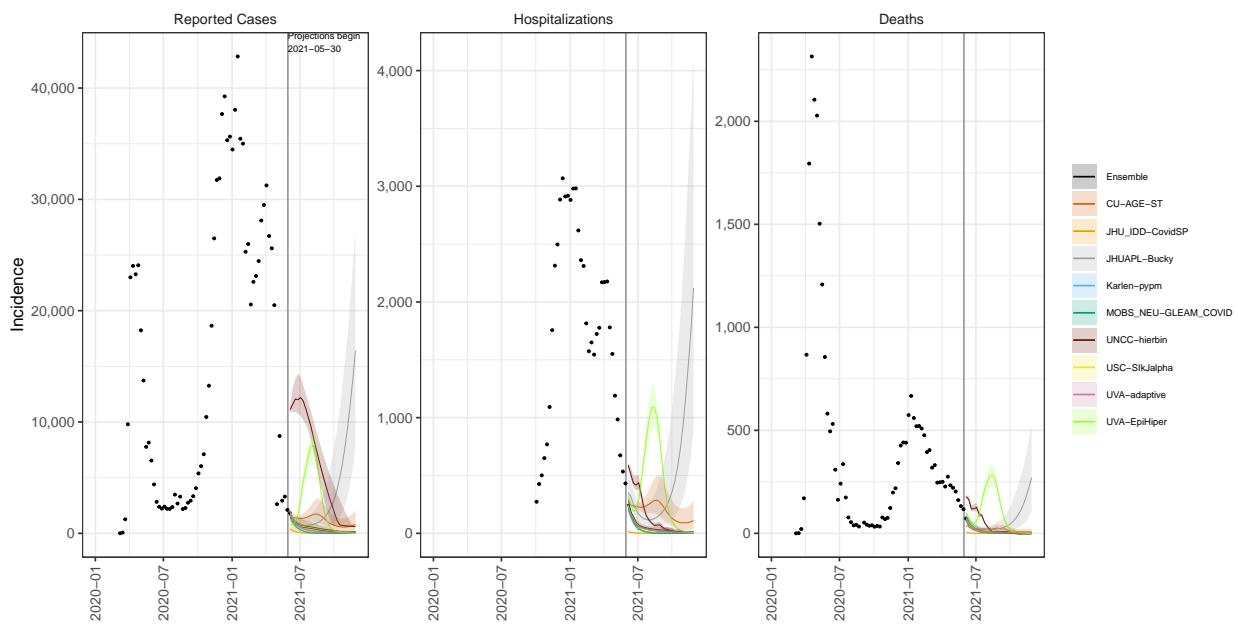
NV model variance & 50% projection intervals – High vaccination, High variant transmissibility



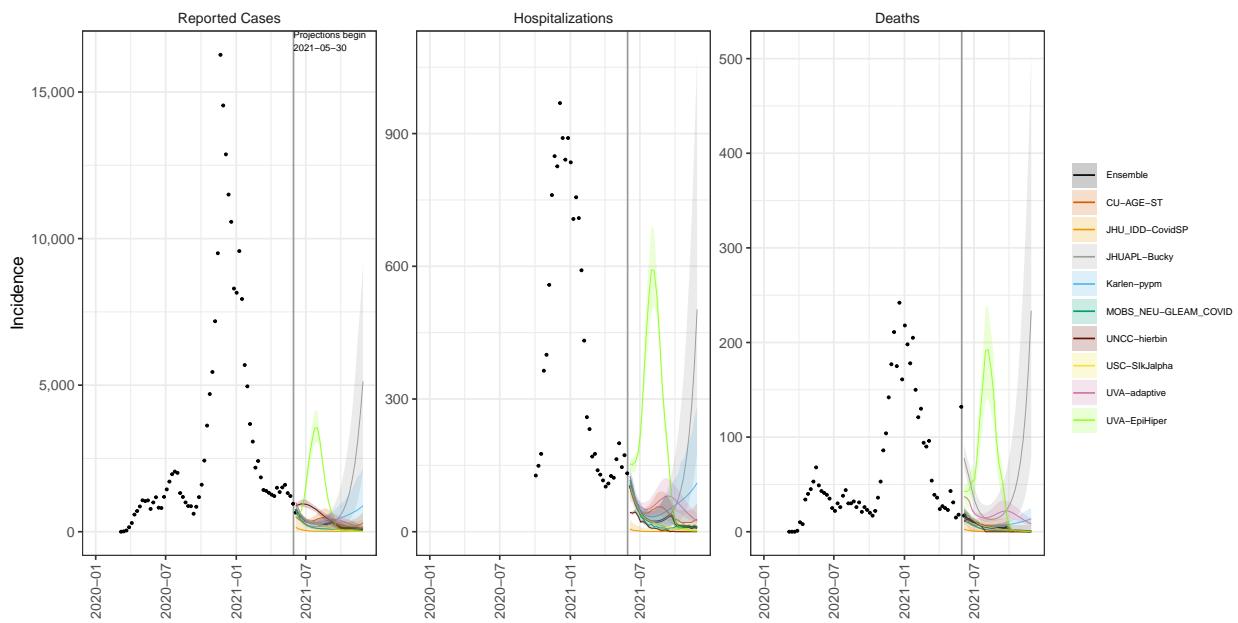
NH model variance & 50% projection intervals – High vaccination, High variant transmissibility



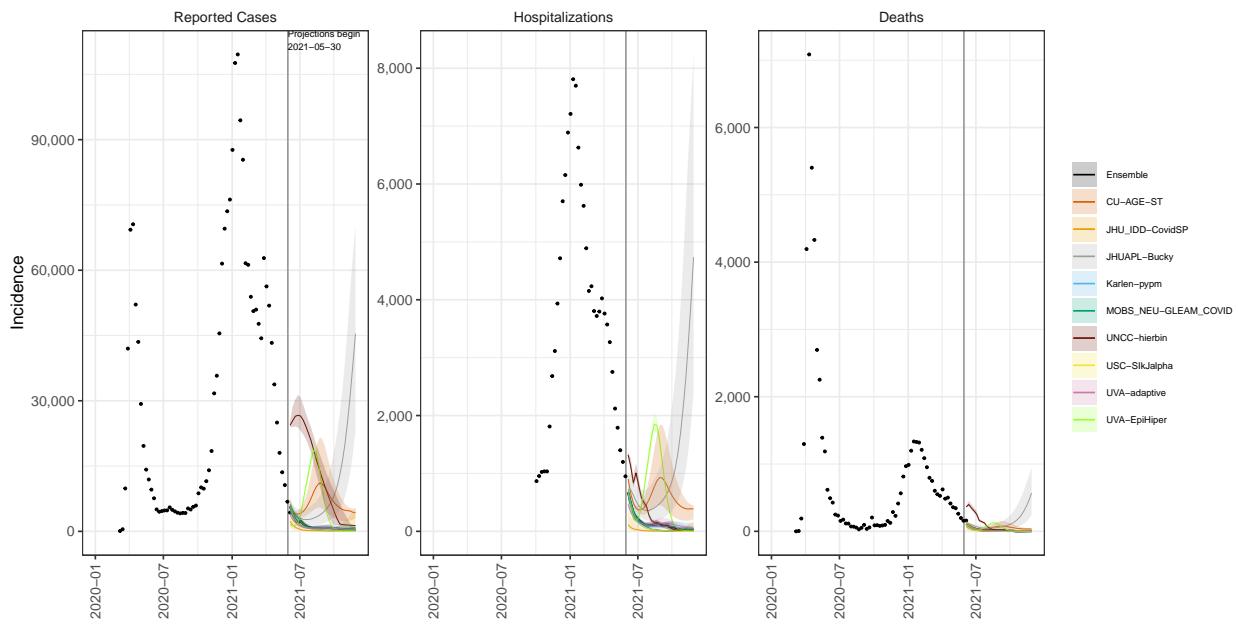
NJ model variance & 50% projection intervals – High vaccination, High variant transmissibility



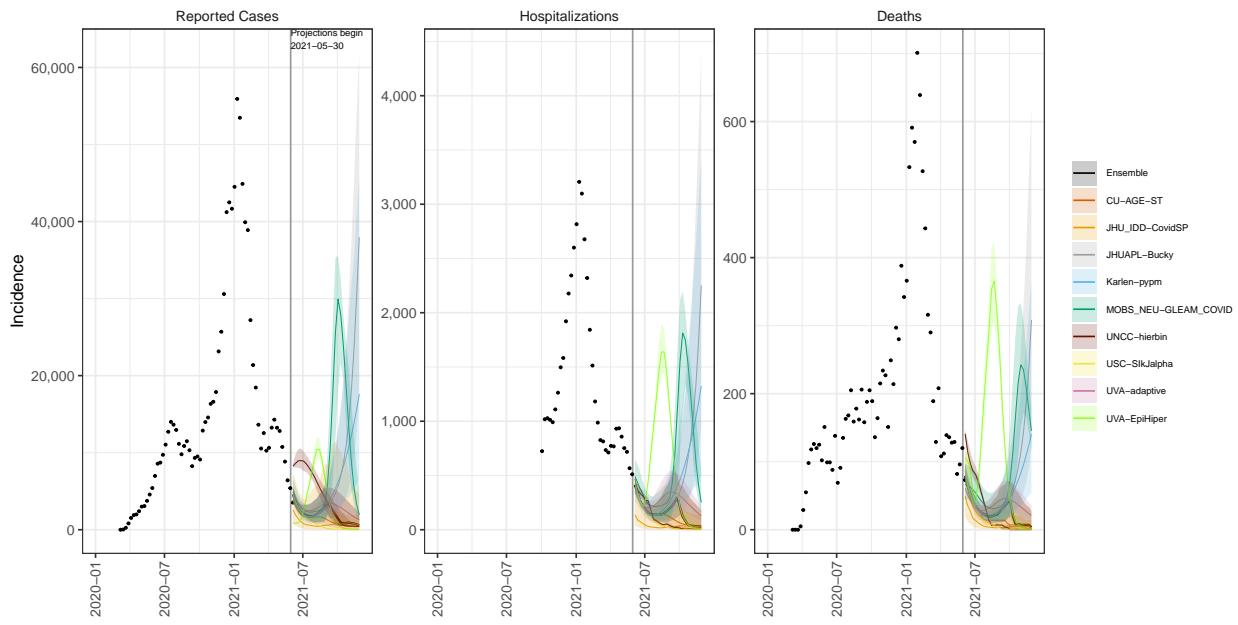
NM model variance & 50% projection intervals – High vaccination, High variant transmissibility



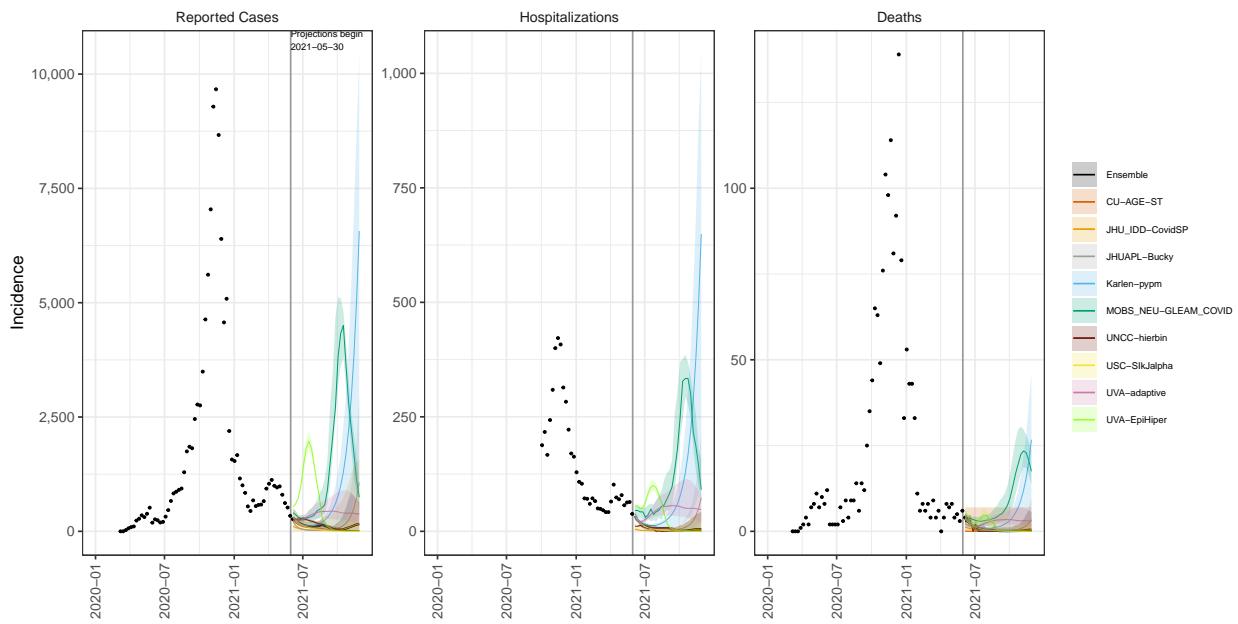
NY model variance & 50% projection intervals – High vaccination, High variant transmissibility



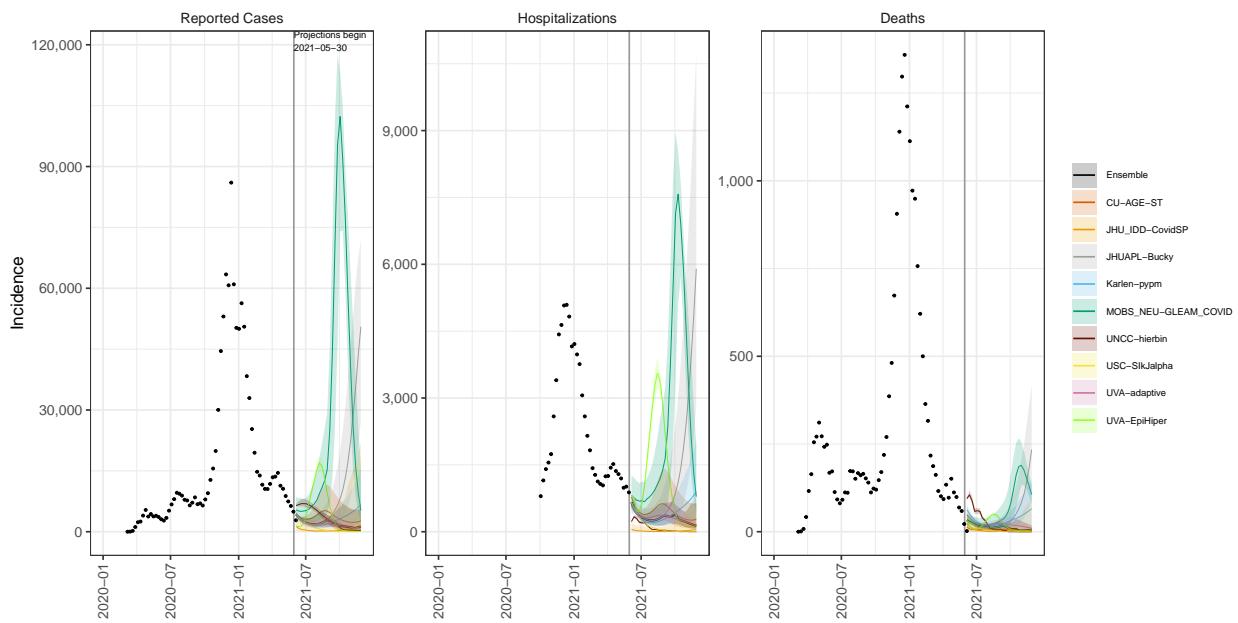
NC model variance & 50% projection intervals – High vaccination, High variant transmissibility



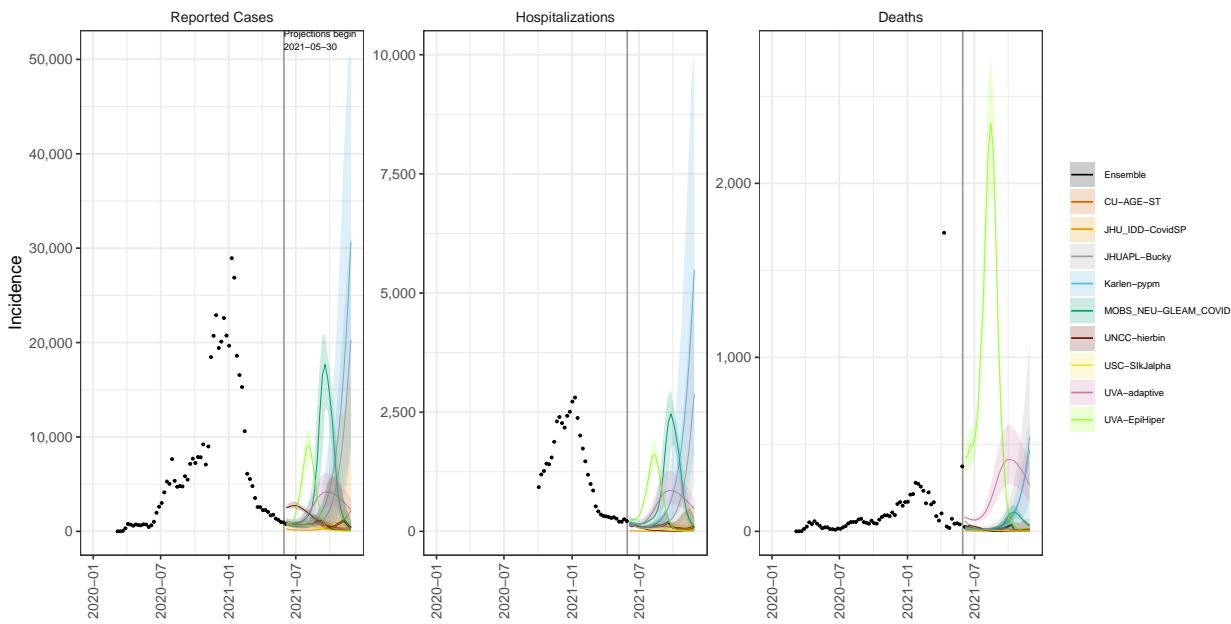
ND model variance & 50% projection intervals – High vaccination, High variant transmissibility



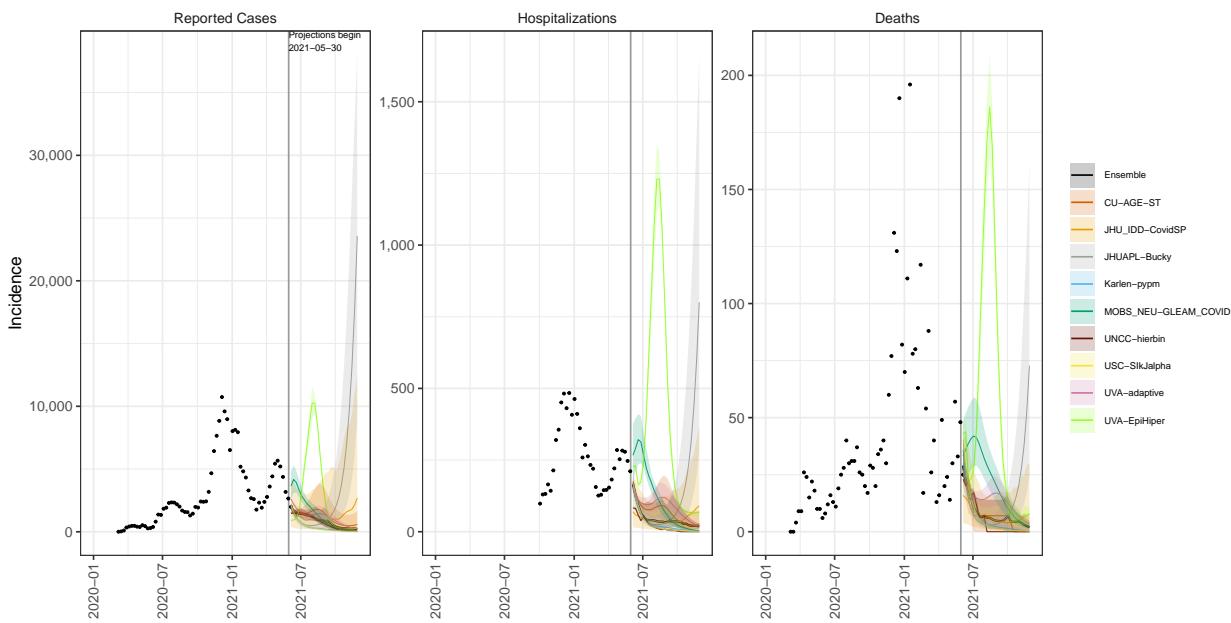
OH model variance & 50% projection intervals – High vaccination, High variant transmissibility



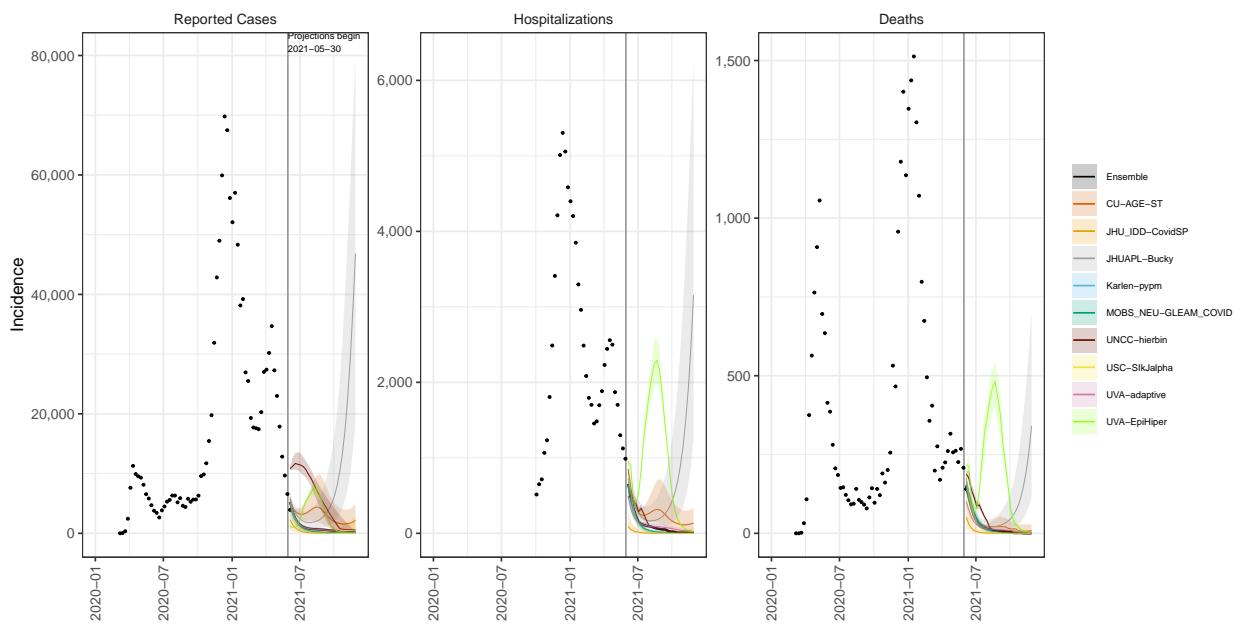
OK model variance & 50% projection intervals – High vaccination, High variant transmissibility



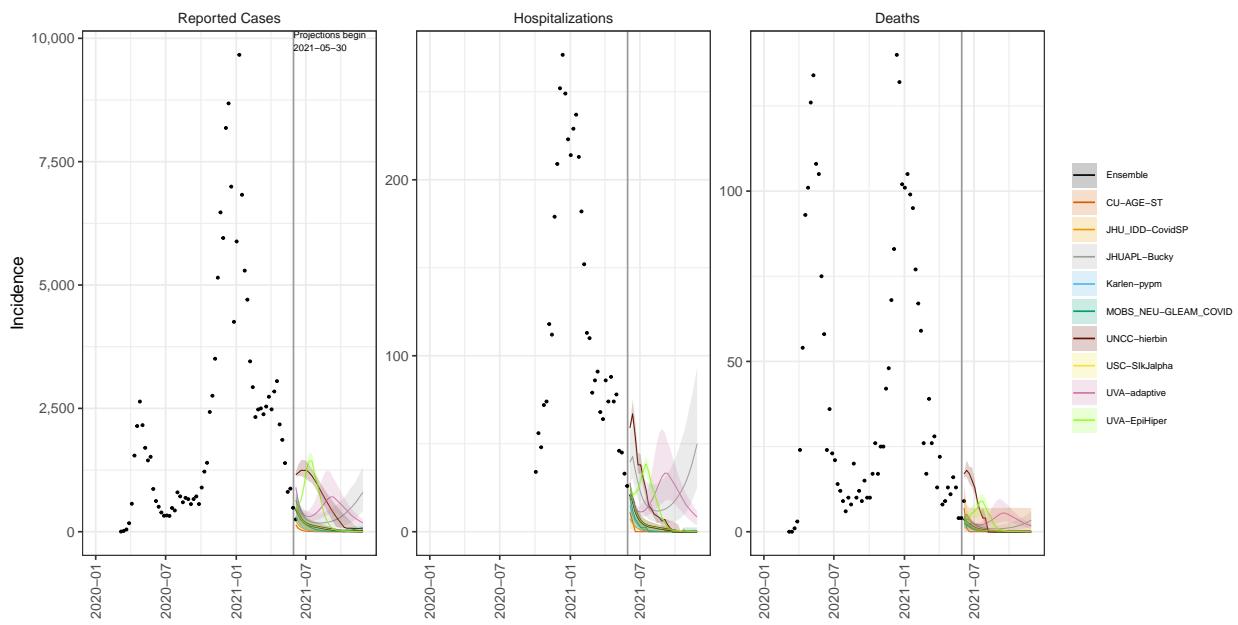
OR model variance & 50% projection intervals – High vaccination, High variant transmissibility



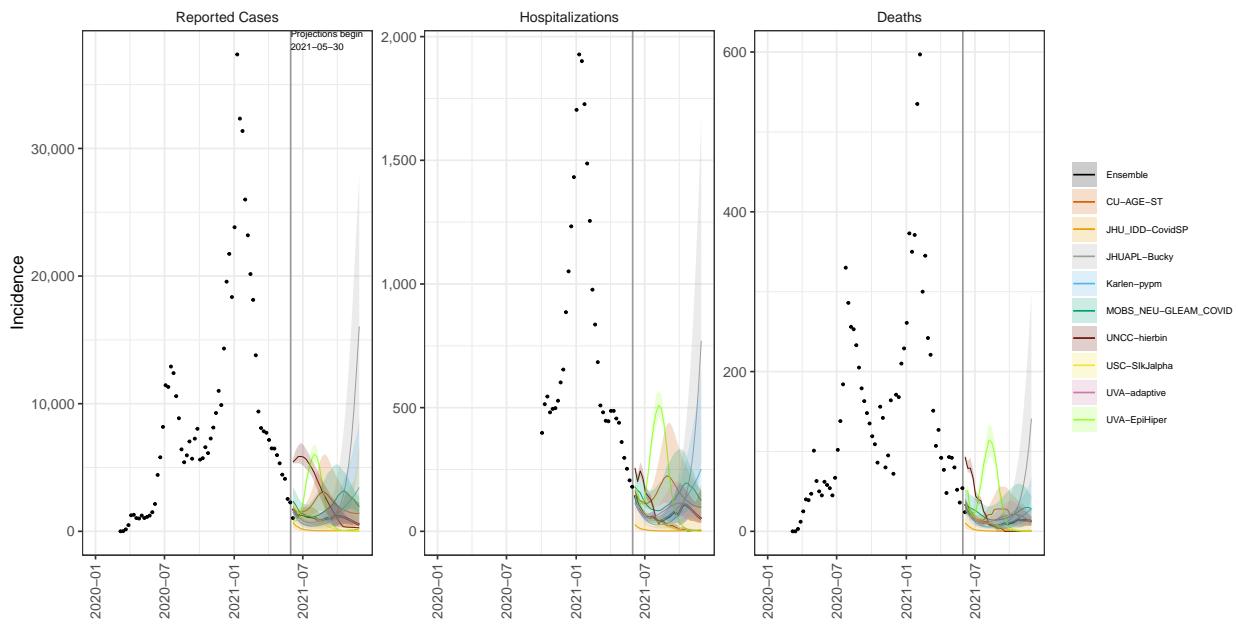
PA model variance & 50% projection intervals – High vaccination, High variant transmissibility



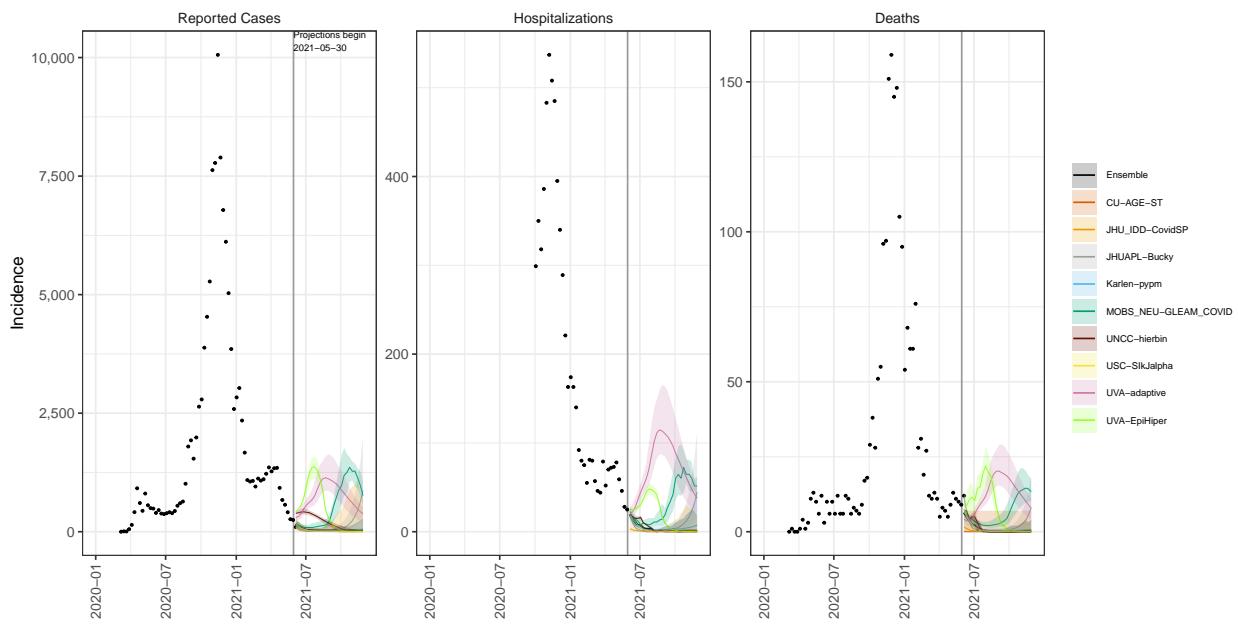
RI model variance & 50% projection intervals – High vaccination, High variant transmissibility



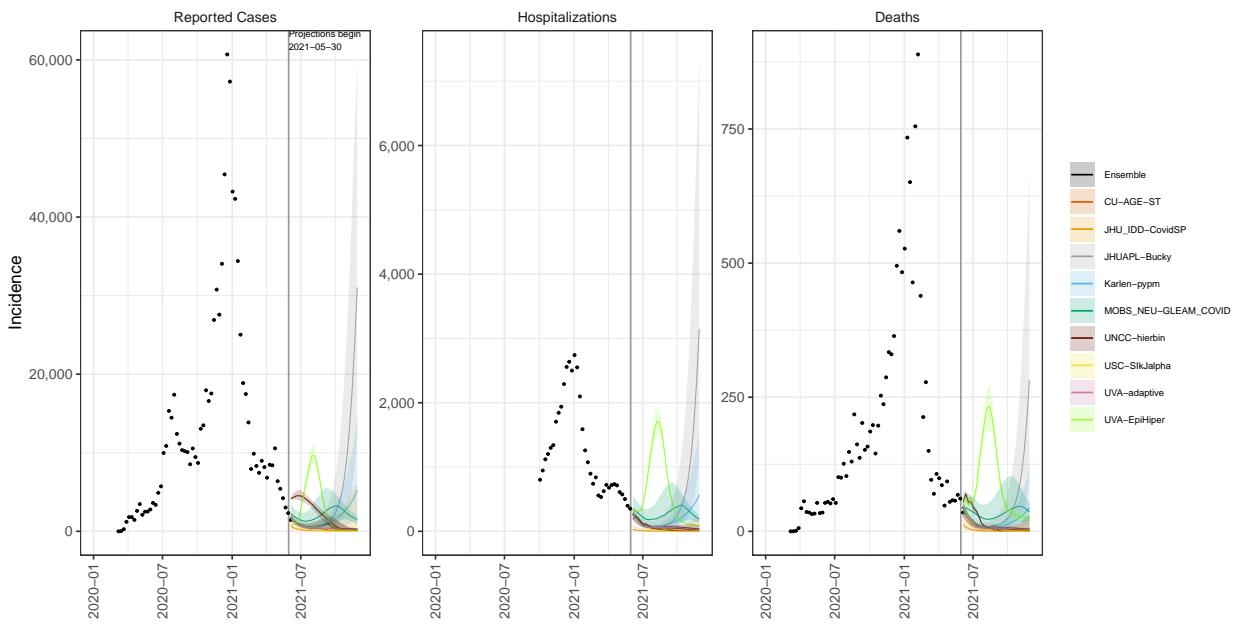
SC model variance & 50% projection intervals – High vaccination, High variant transmissibility



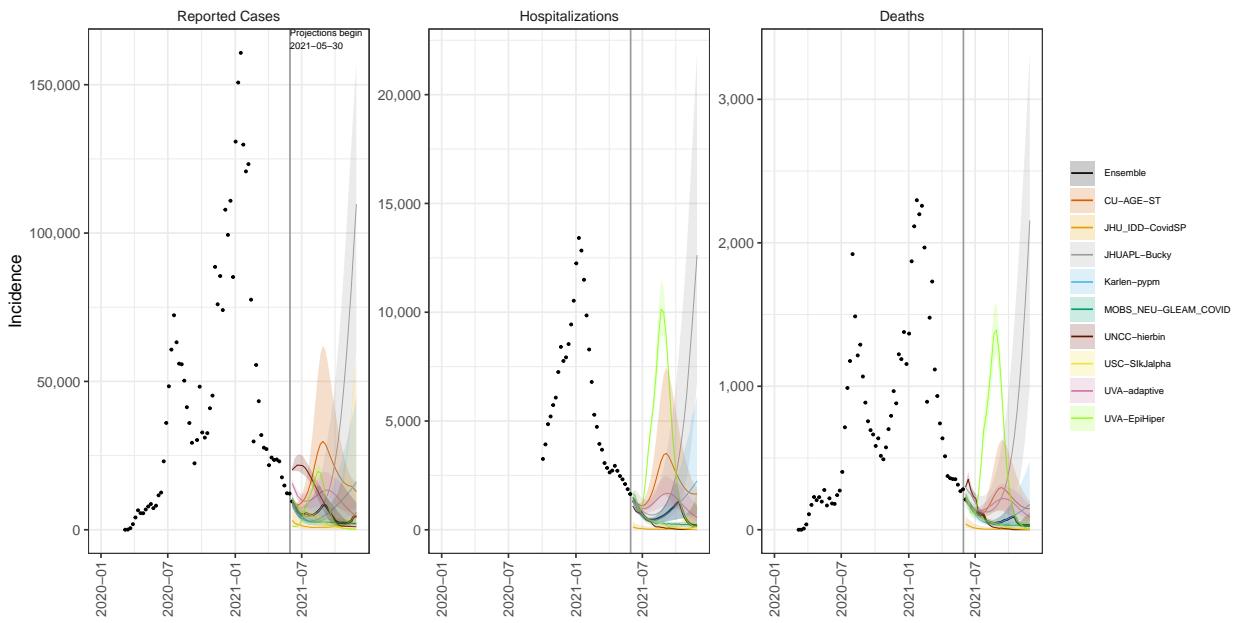
SD model variance & 50% projection intervals – High vaccination, High variant transmissibility



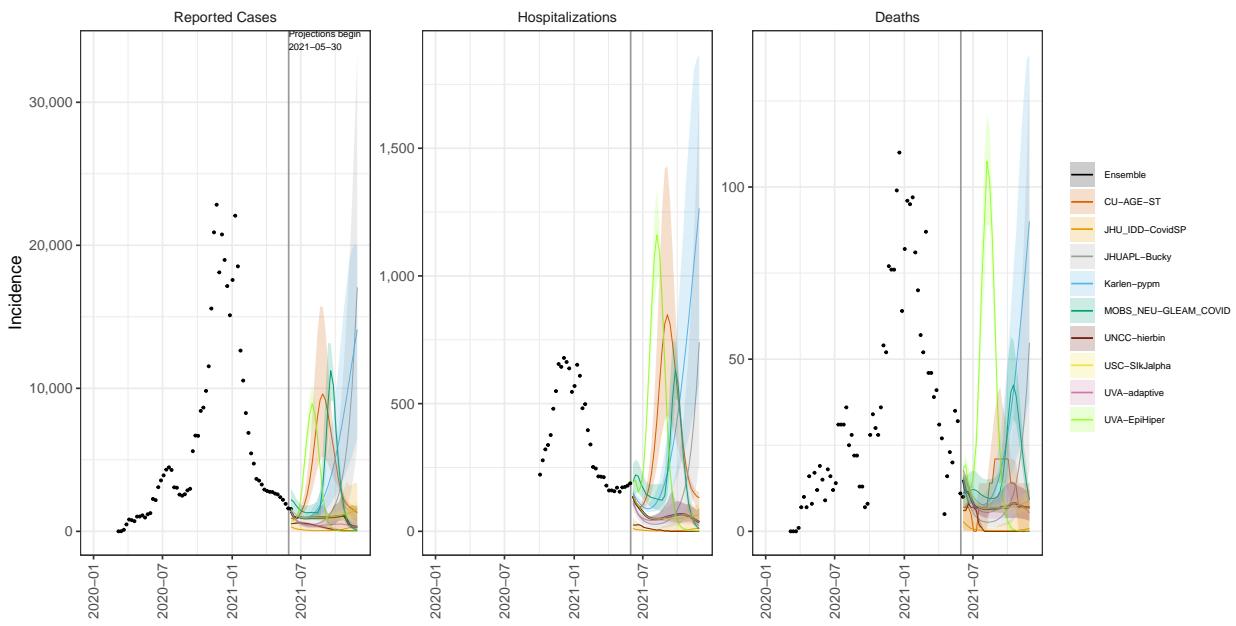
TN model variance & 50% projection intervals – High vaccination, High variant transmissibility



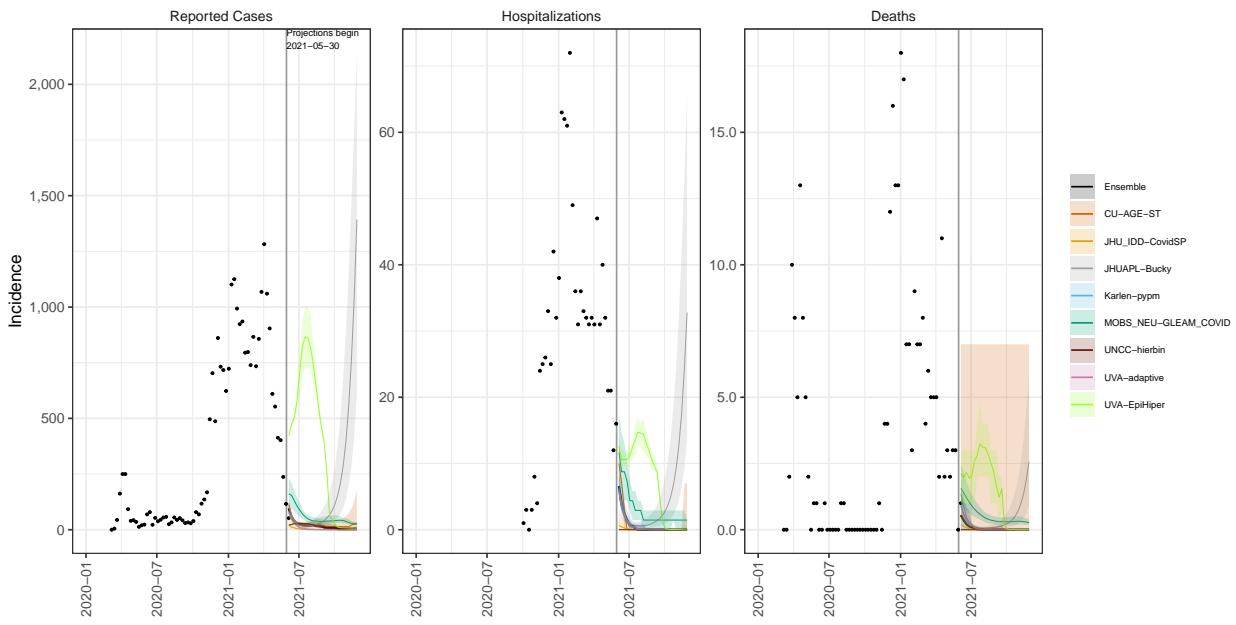
TX model variance & 50% projection intervals – High vaccination, High variant transmissibility



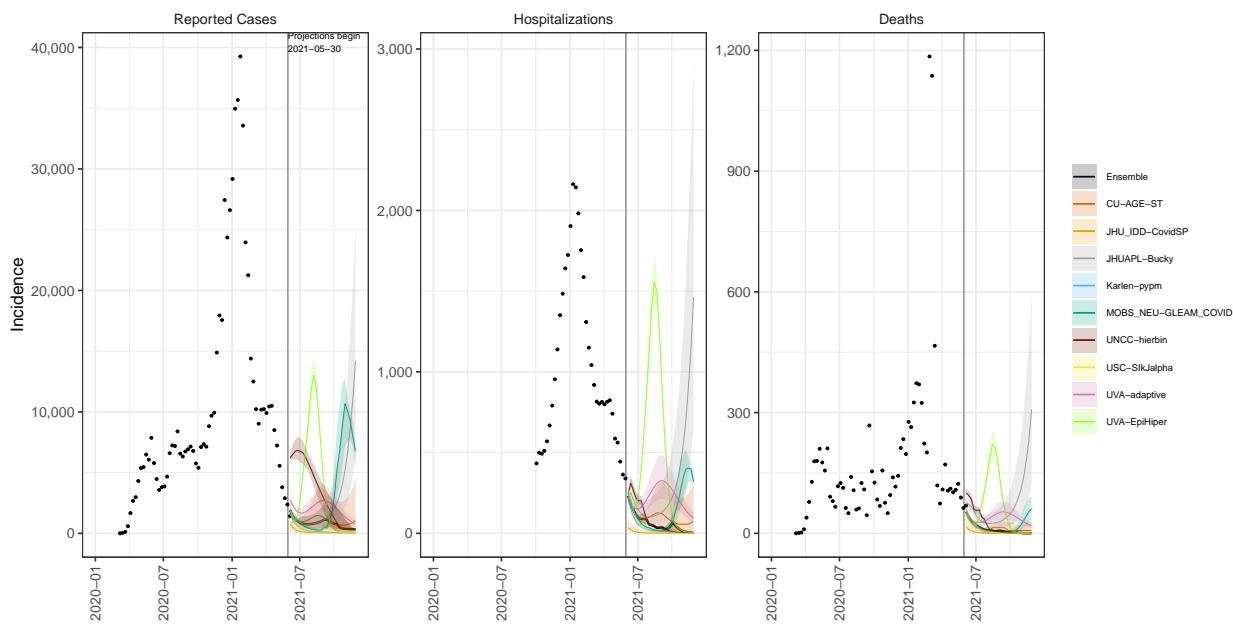
UT model variance & 50% projection intervals – High vaccination, High variant transmissibility



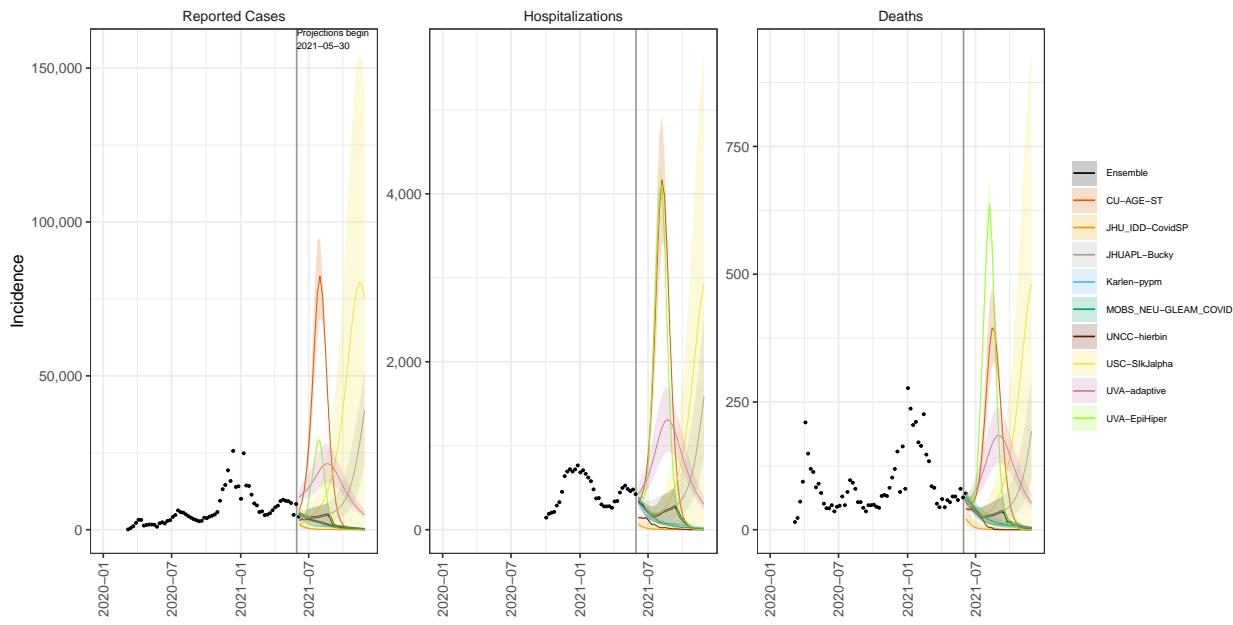
VT model variance & 50% projection intervals – High vaccination, High variant transmissibility



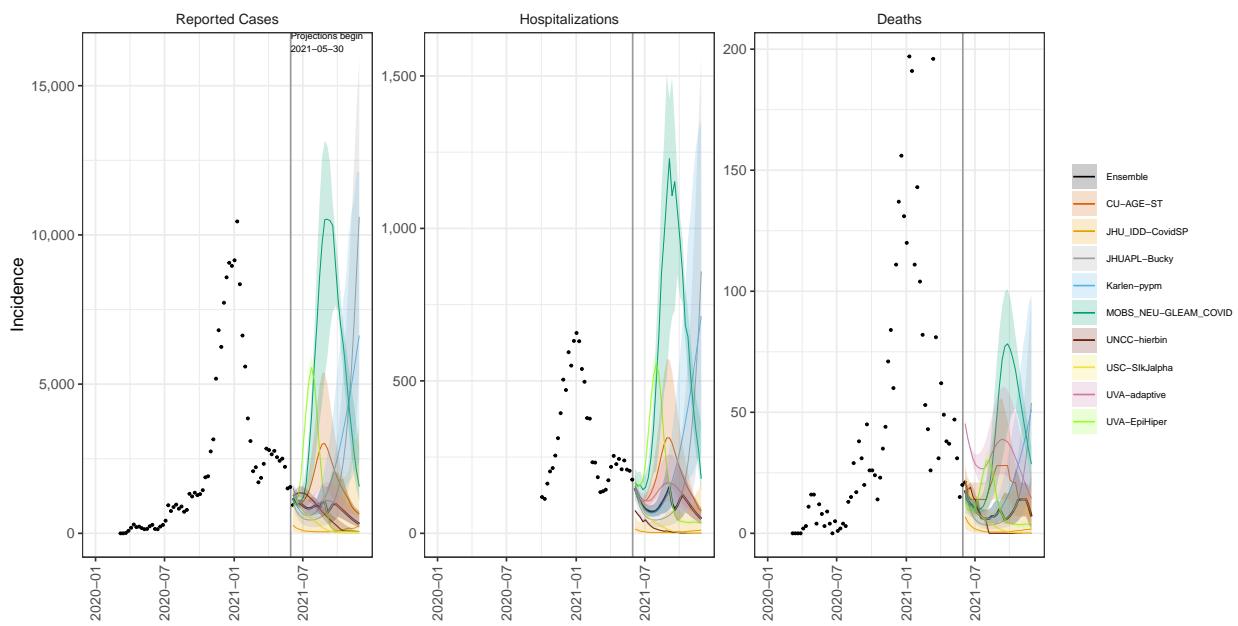
VA model variance & 50% projection intervals – High vaccination, High variant transmissibility



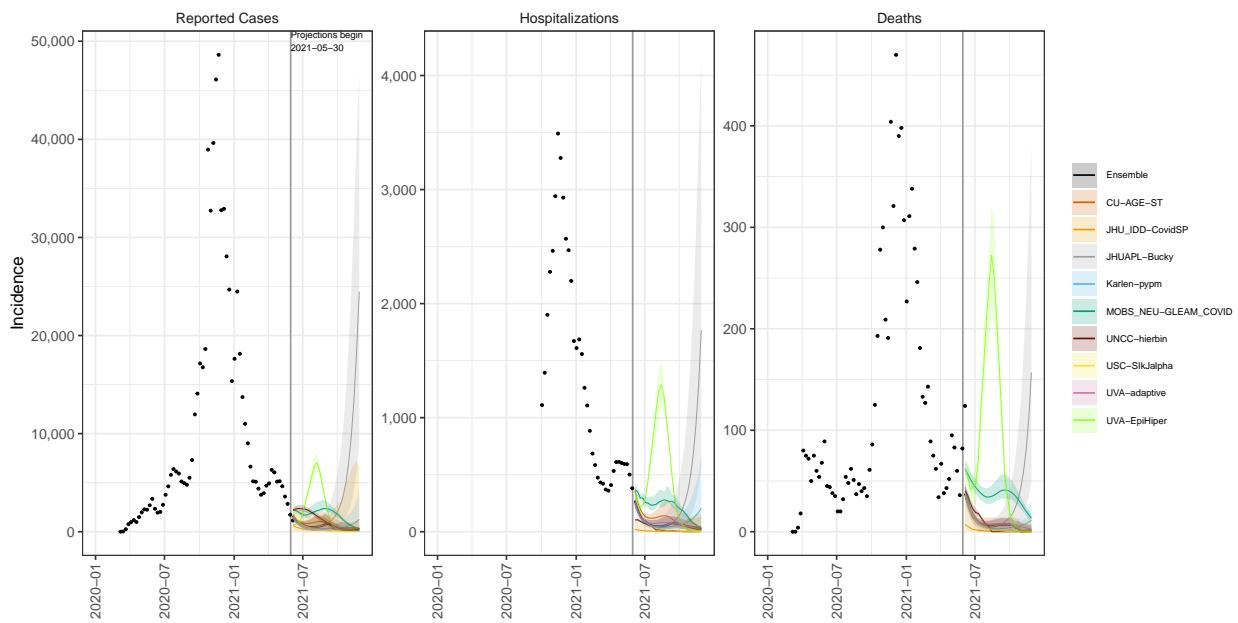
WA model variance & 50% projection intervals – High vaccination, High variant transmissibility



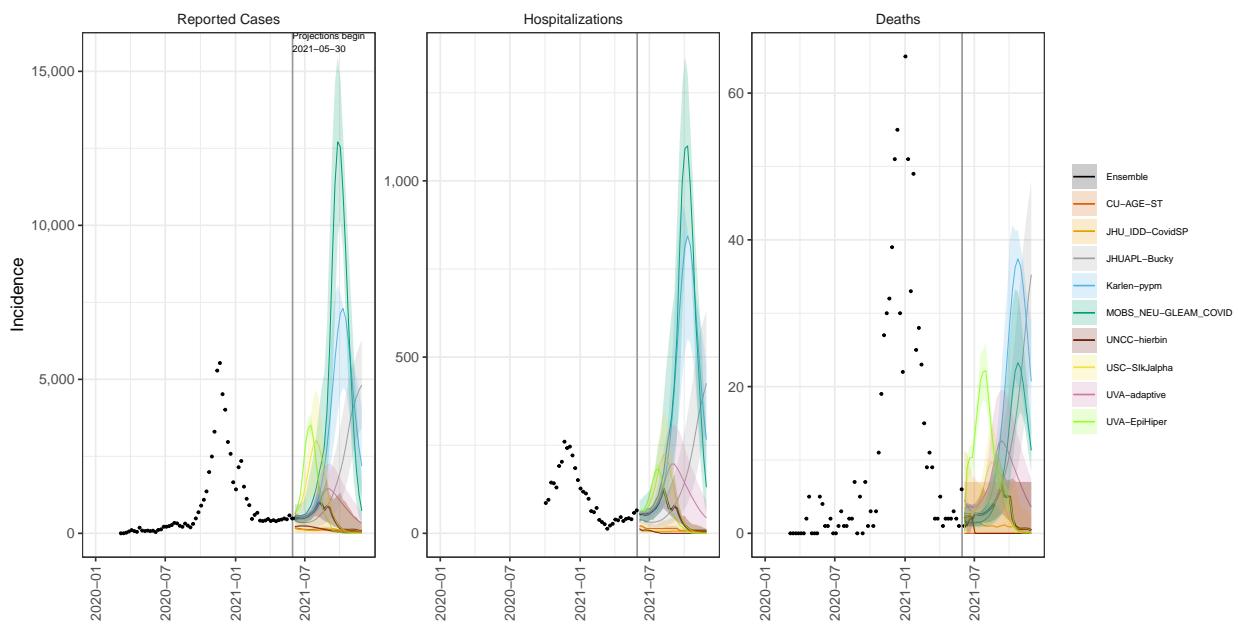
WV model variance & 50% projection intervals – High vaccination, High variant transmissibility



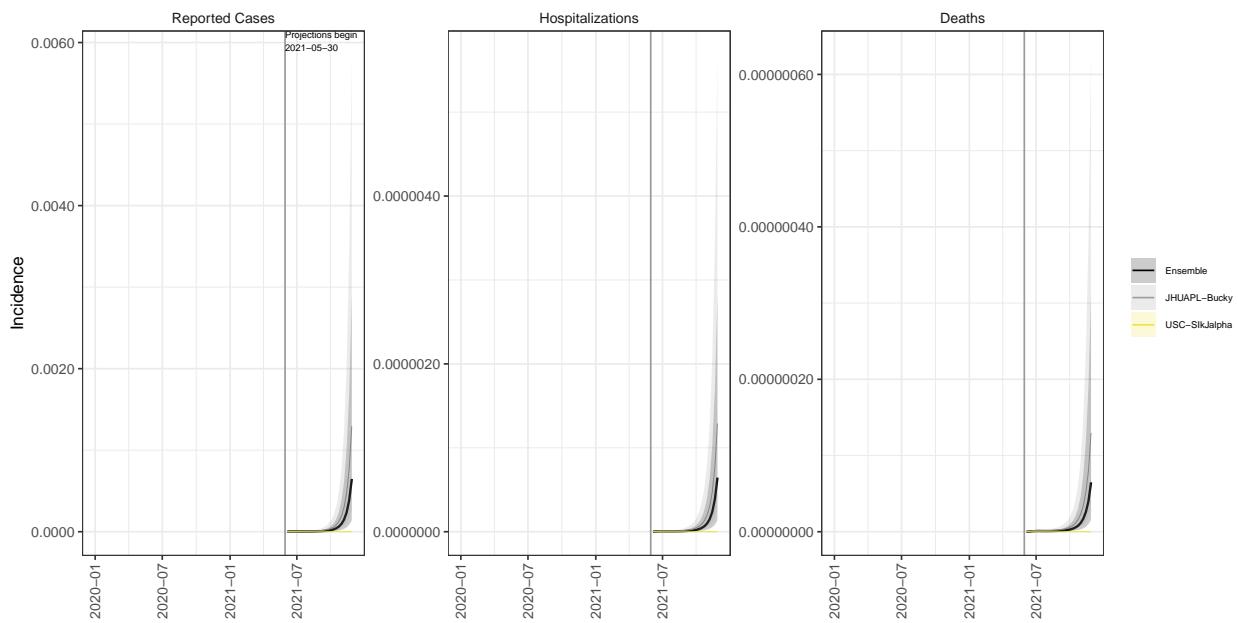
WI model variance & 50% projection intervals – High vaccination, High variant transmissibility



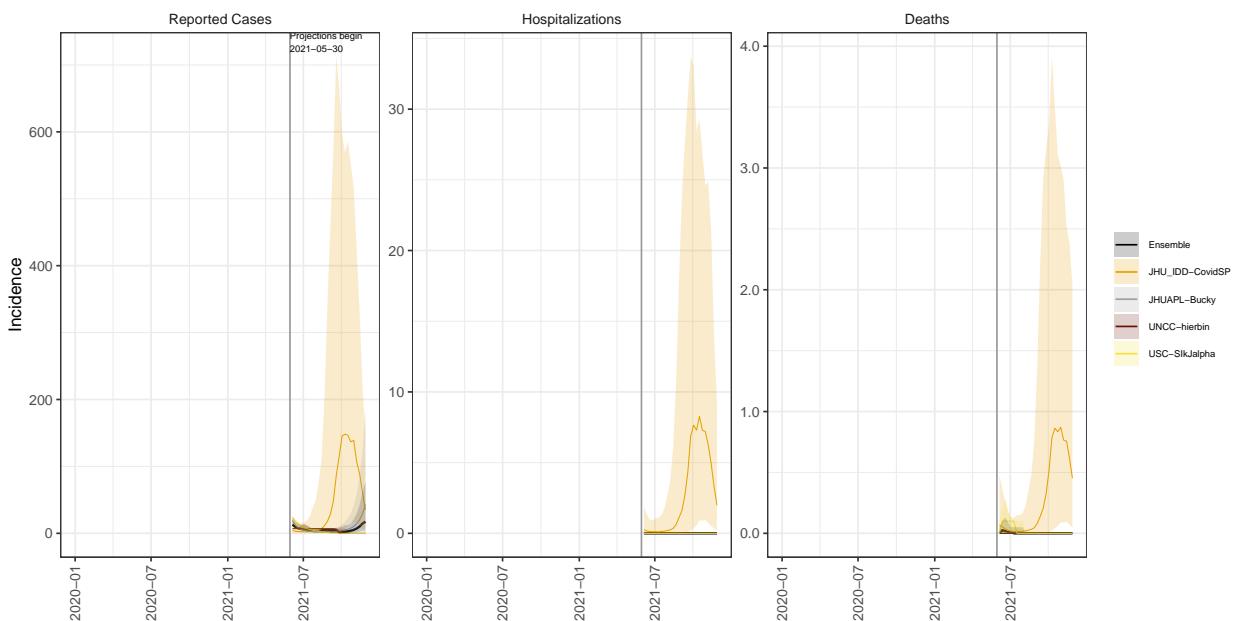
WY model variance & 50% projection intervals – High vaccination, High variant transmissibility



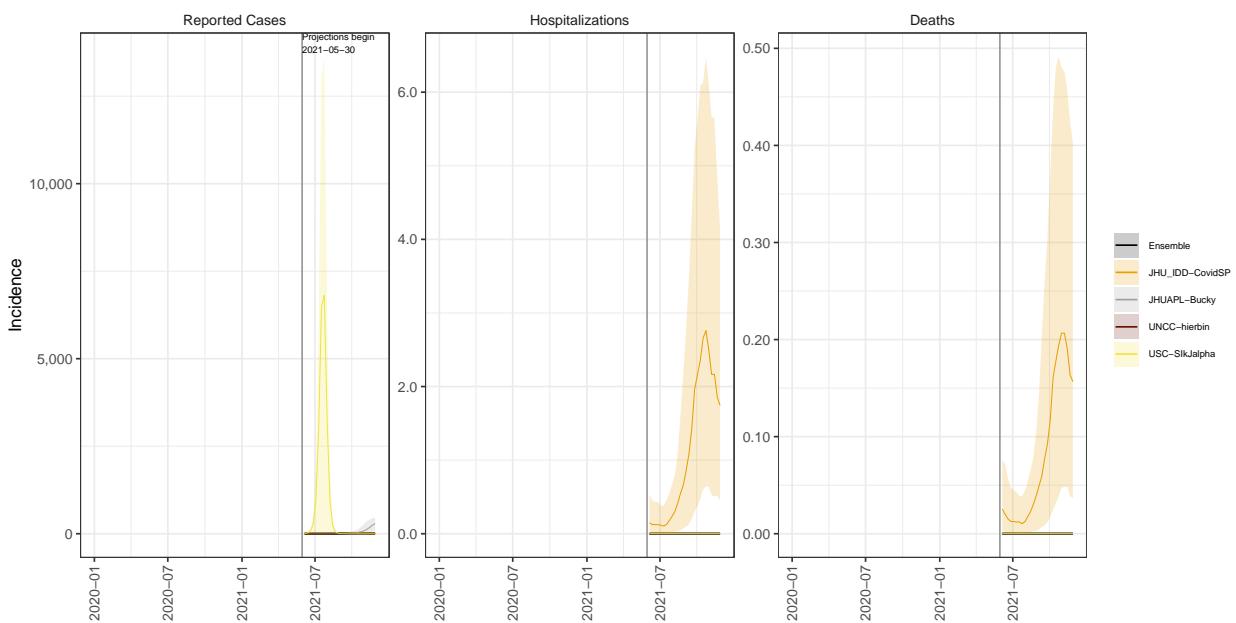
AS model variance & 50% projection intervals – High vaccination, High variant transmissibility



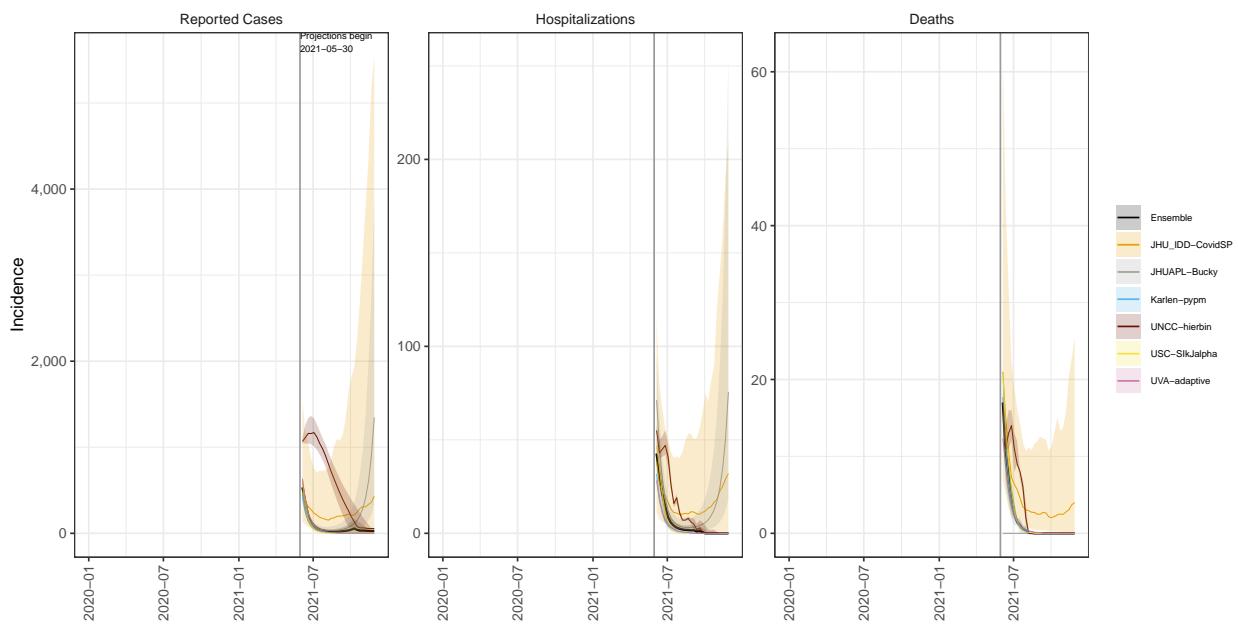
GU model variance & 50% projection intervals – High vaccination, High variant transmissibility



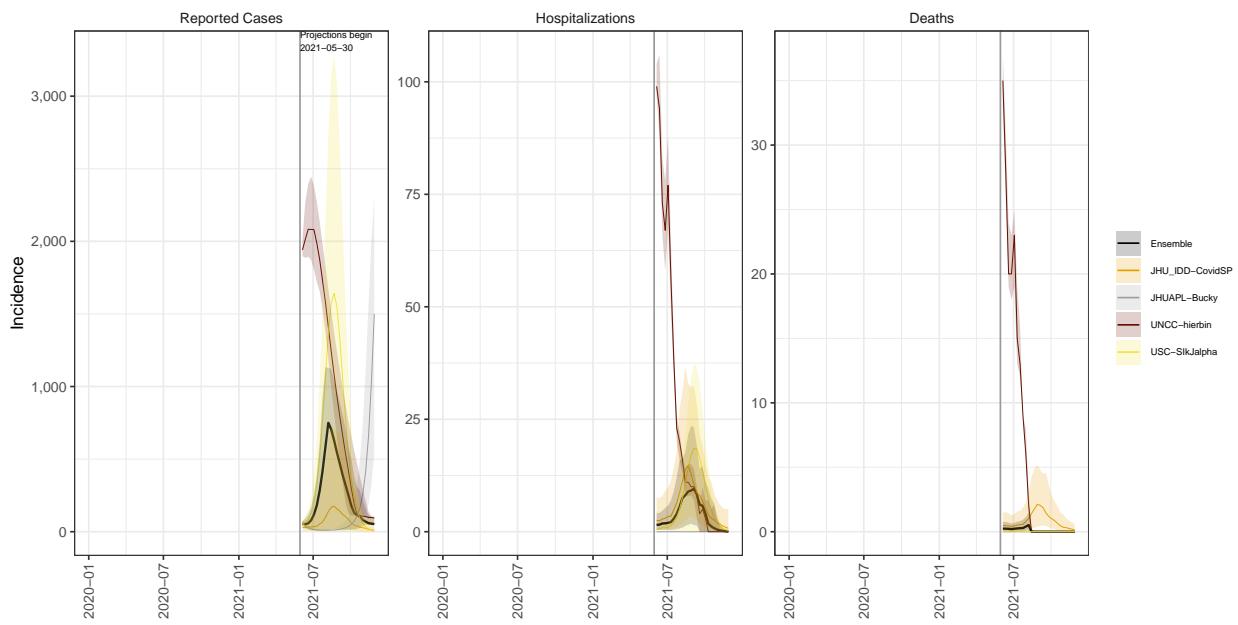
MP model variance & 50% projection intervals – High vaccination, High variant transmissibility



PR model variance & 50% projection intervals – High vaccination, High variant transmissibility

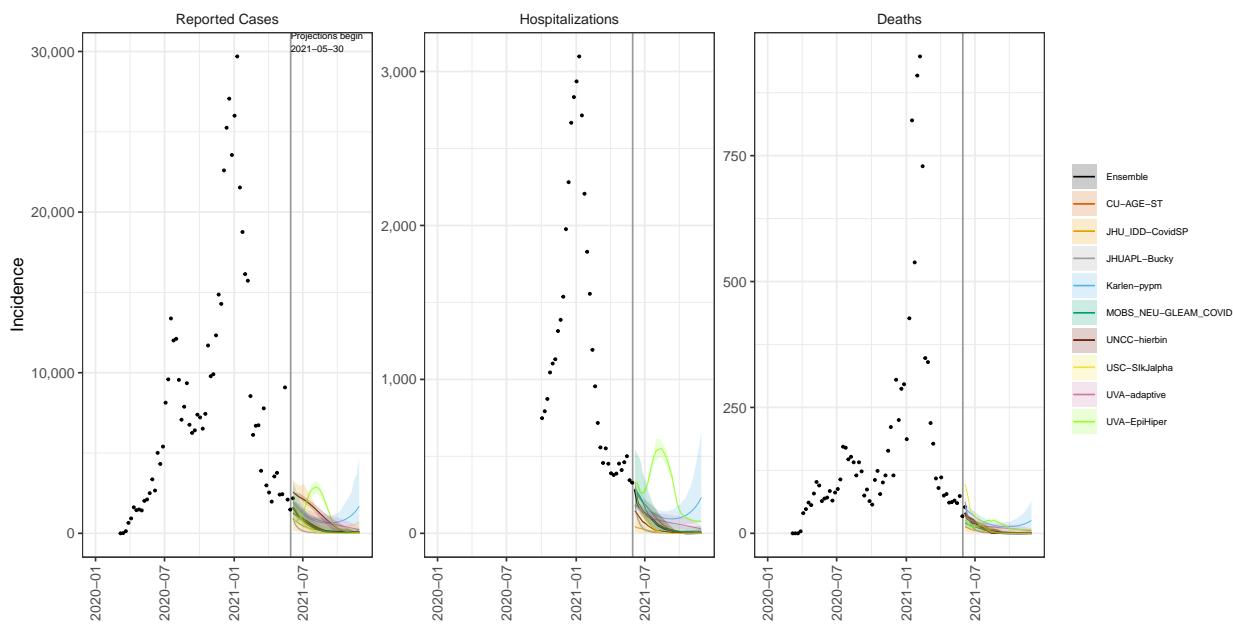


VI model variance & 50% projection intervals – High vaccination, High variant transmissibility

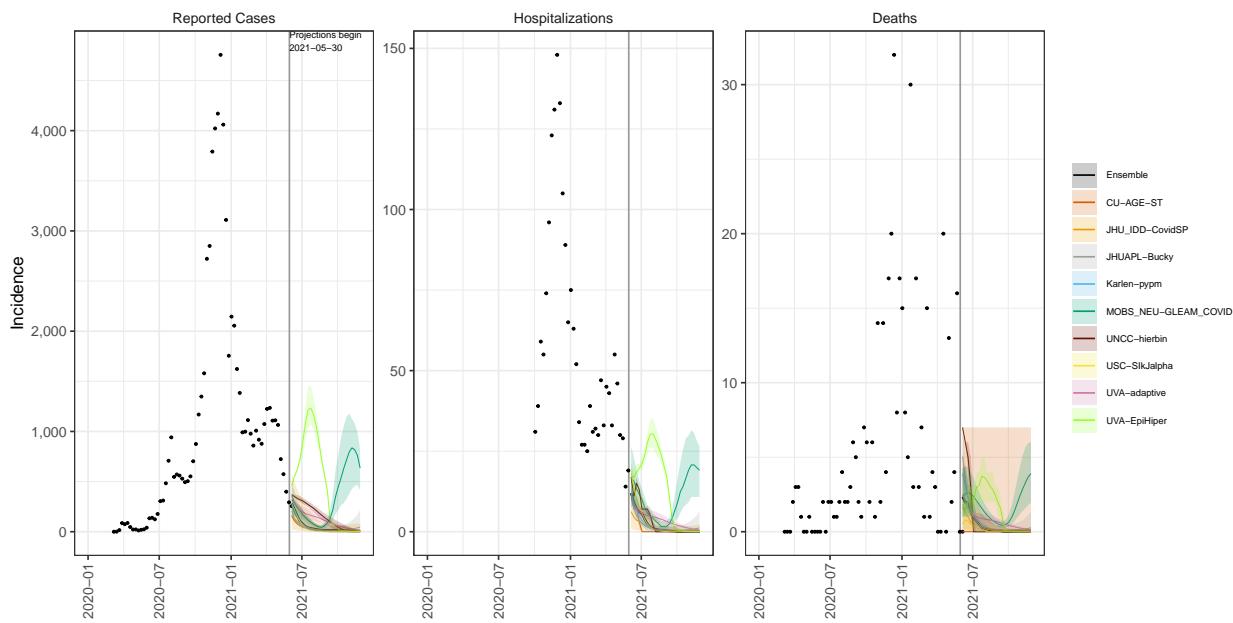


National model variation for the high vaccination, low variant transmissibility scenario

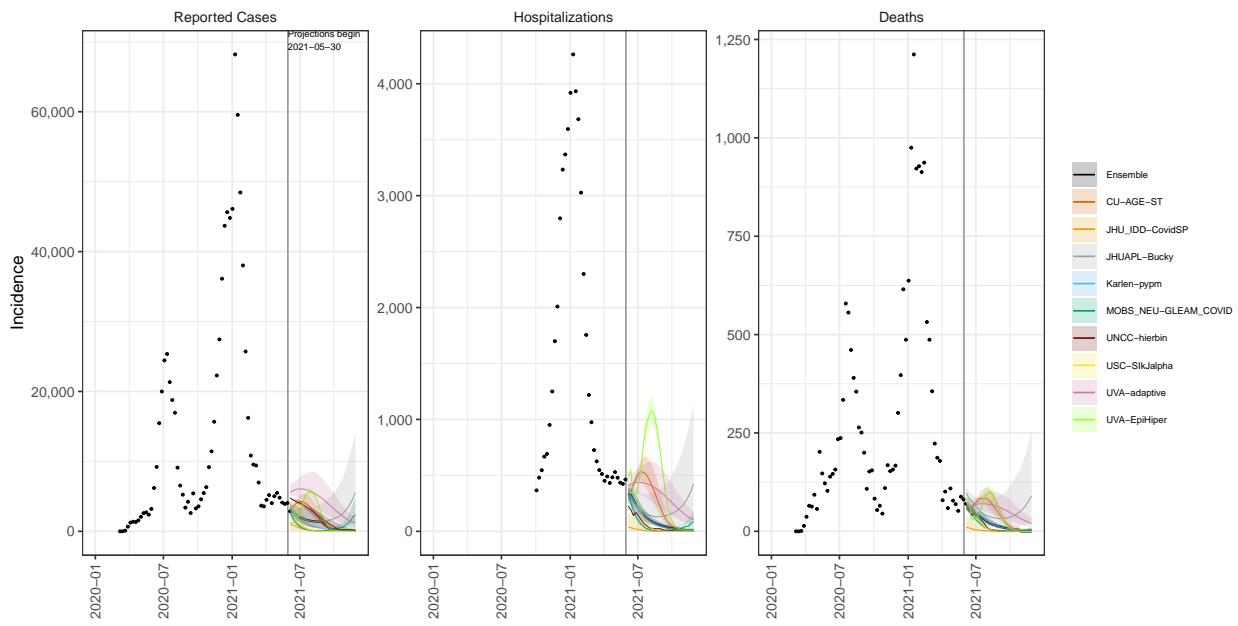
AL model variance & 50% projection intervals – High vaccination, Low variant transmissibility



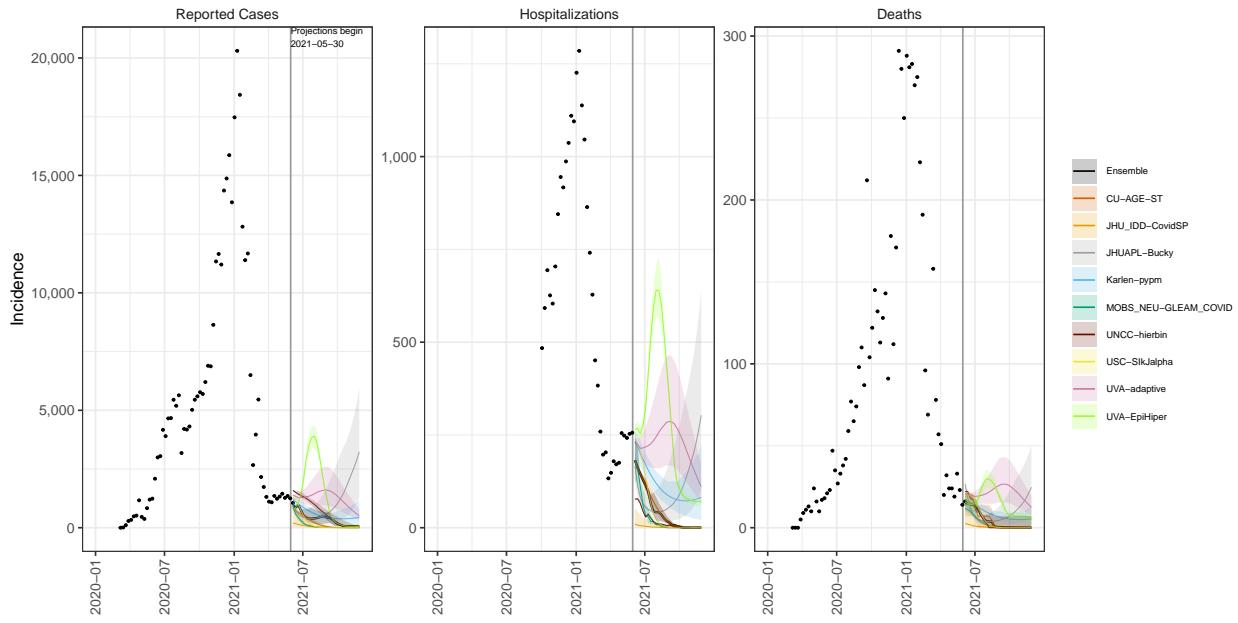
AK model variance & 50% projection intervals – High vaccination, Low variant transmissibility



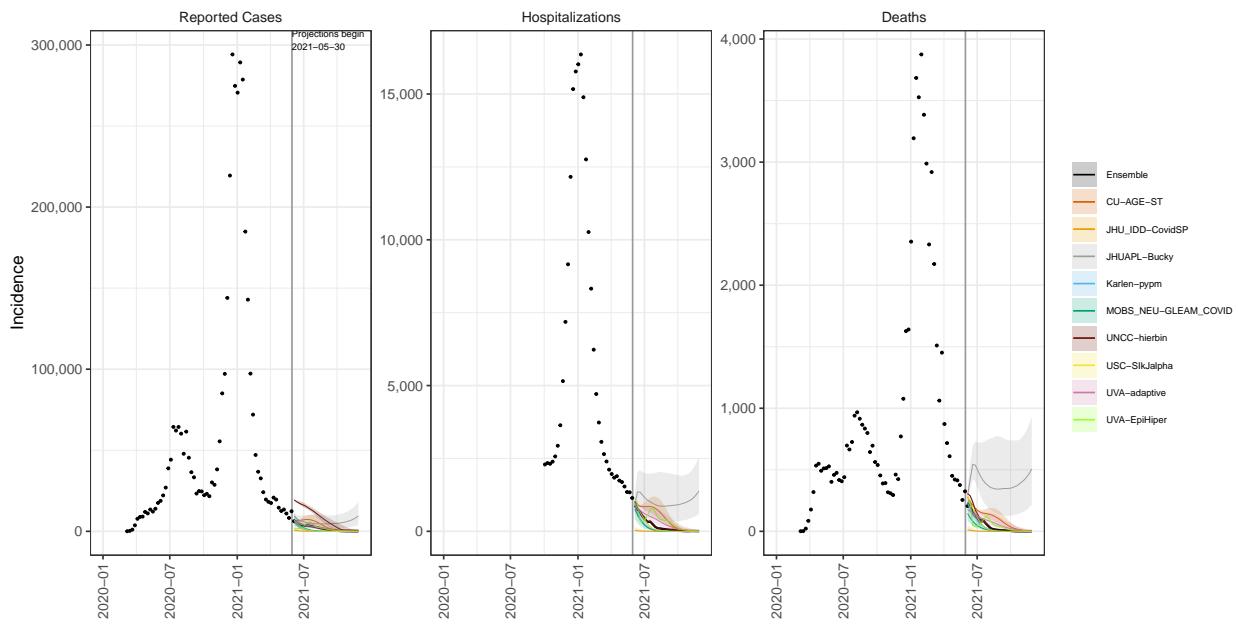
AZ model variance & 50% projection intervals – High vaccination, Low variant transmissibility



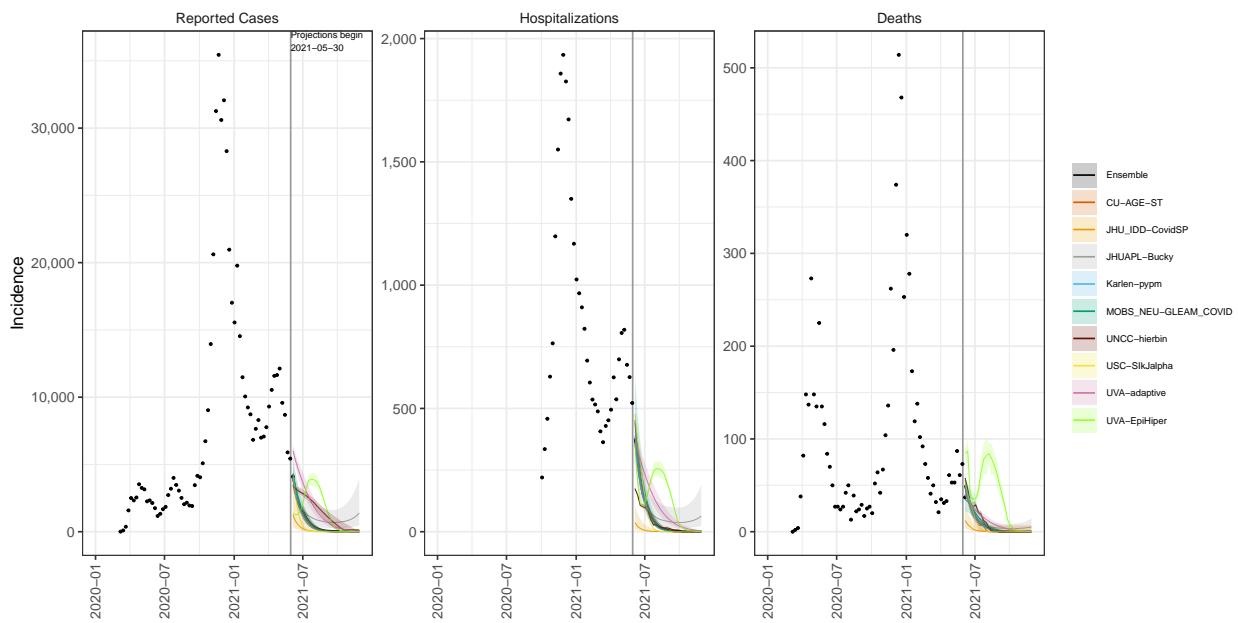
AR model variance & 50% projection intervals – High vaccination, Low variant transmissibility



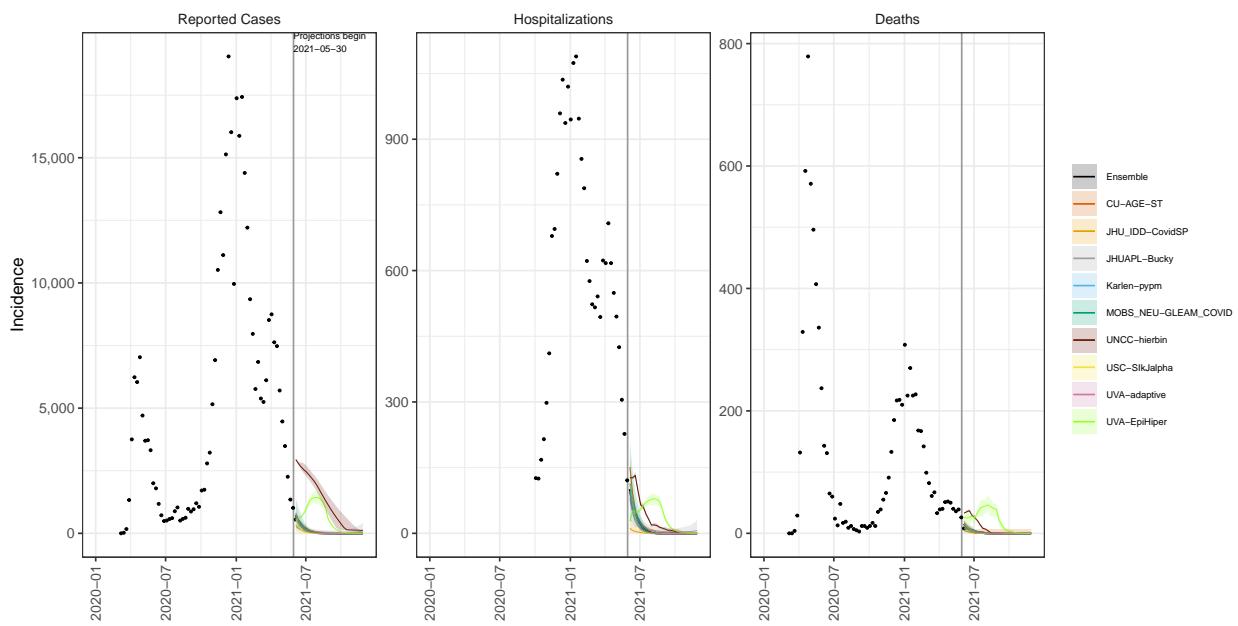
CA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



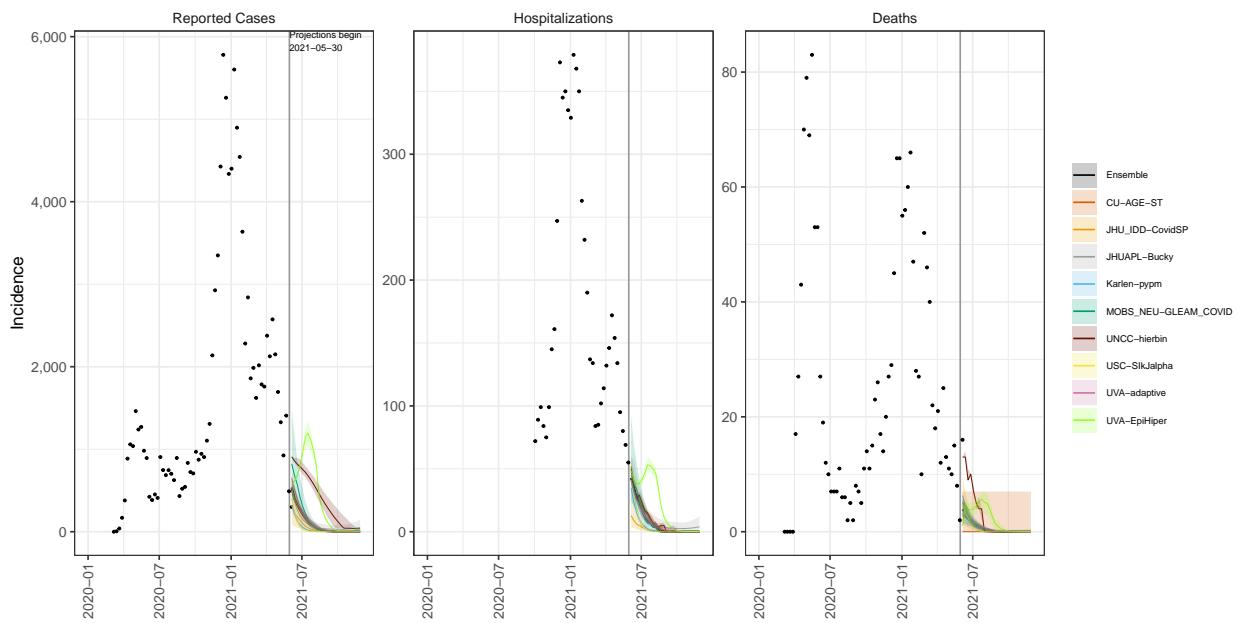
CO model variance & 50% projection intervals – High vaccination, Low variant transmissibility



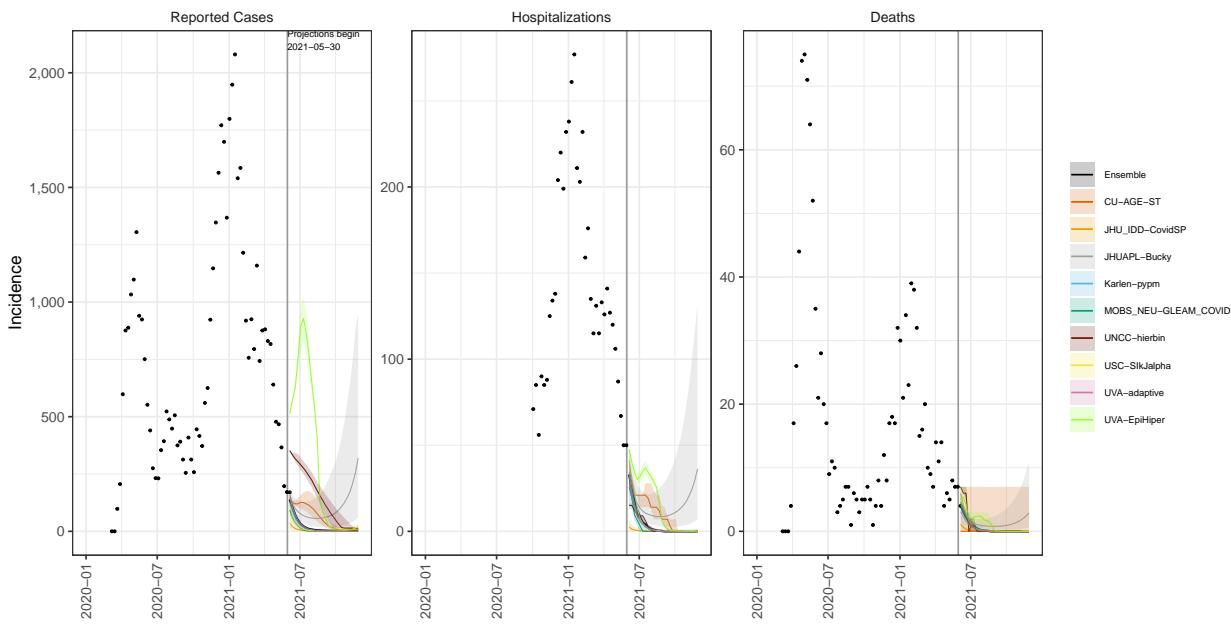
CT model variance & 50% projection intervals – High vaccination, Low variant transmissibility



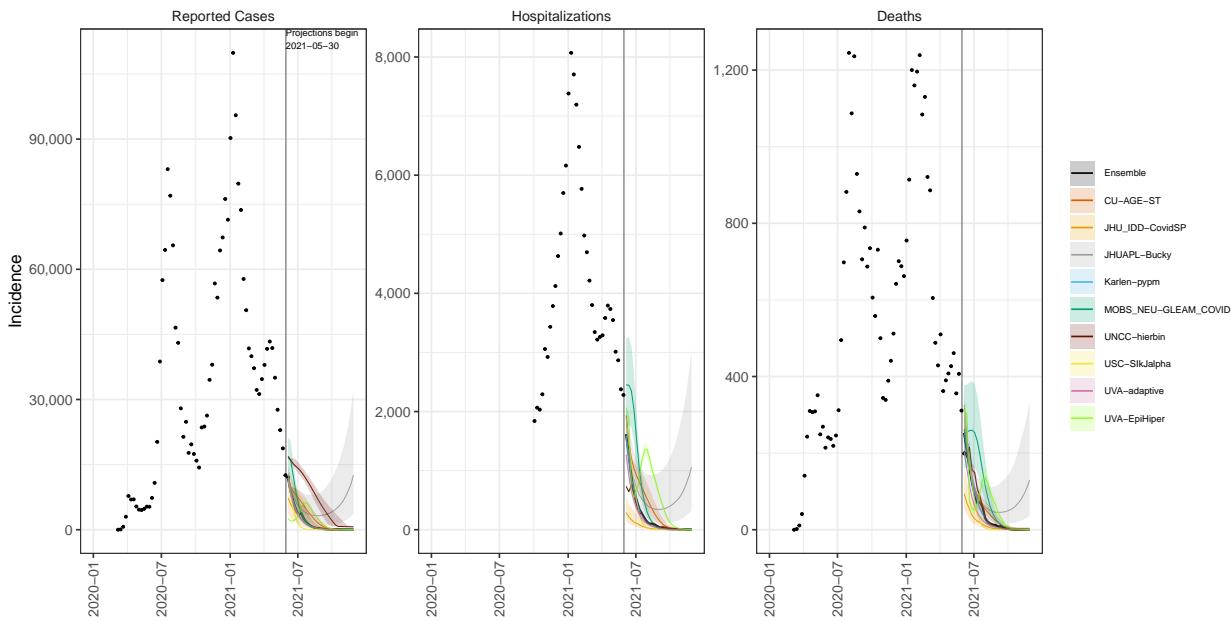
DE model variance & 50% projection intervals – High vaccination, Low variant transmissibility



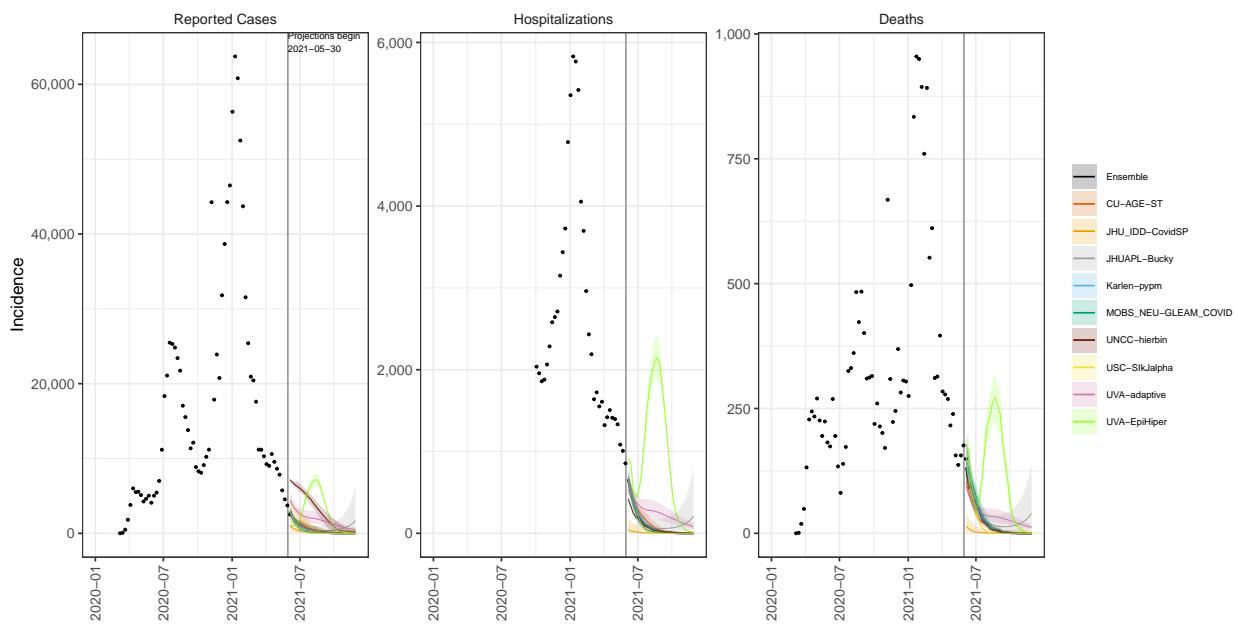
DC model variance & 50% projection intervals – High vaccination, Low variant transmissibility



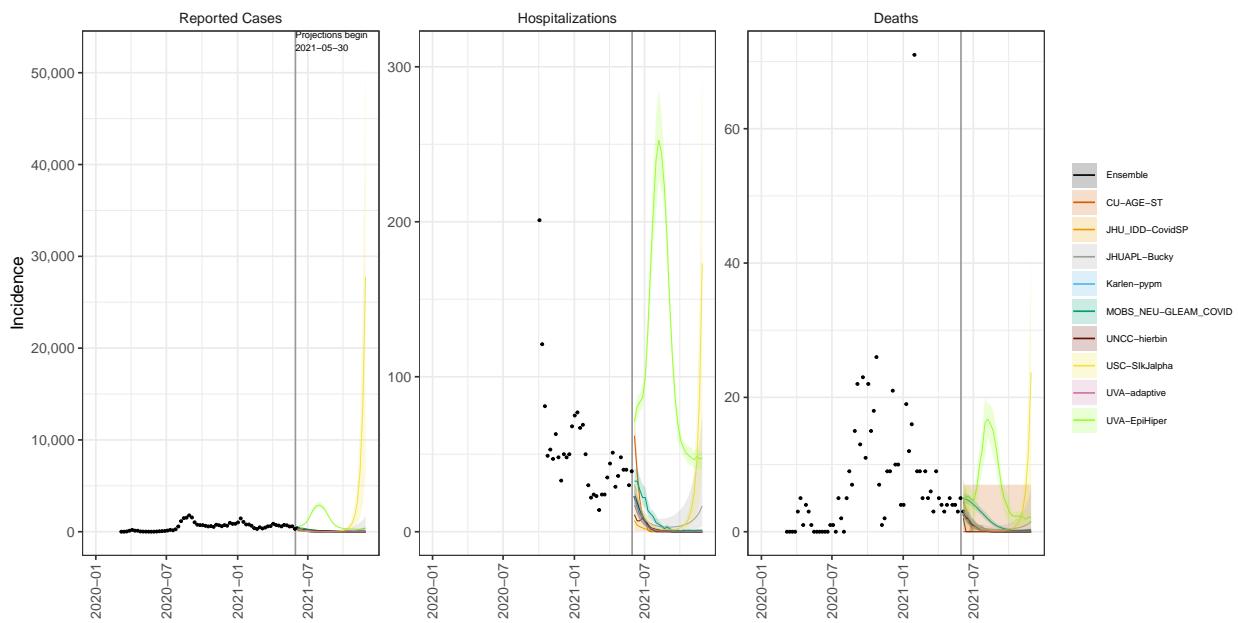
FL model variance & 50% projection intervals – High vaccination, Low variant transmissibility



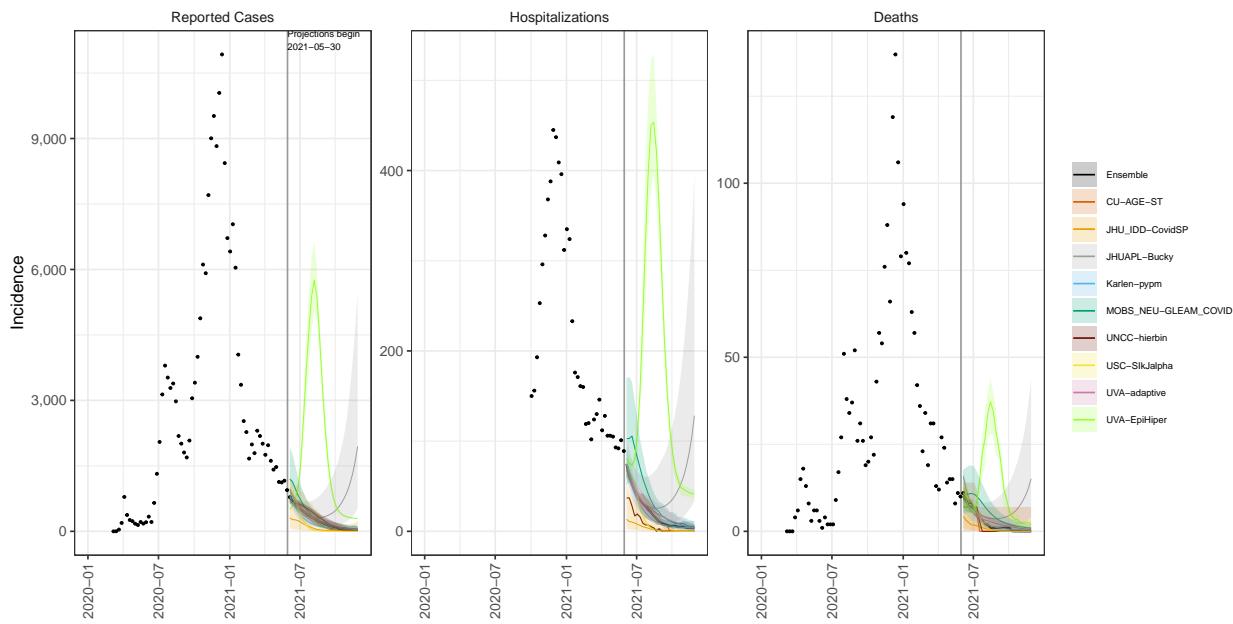
GA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



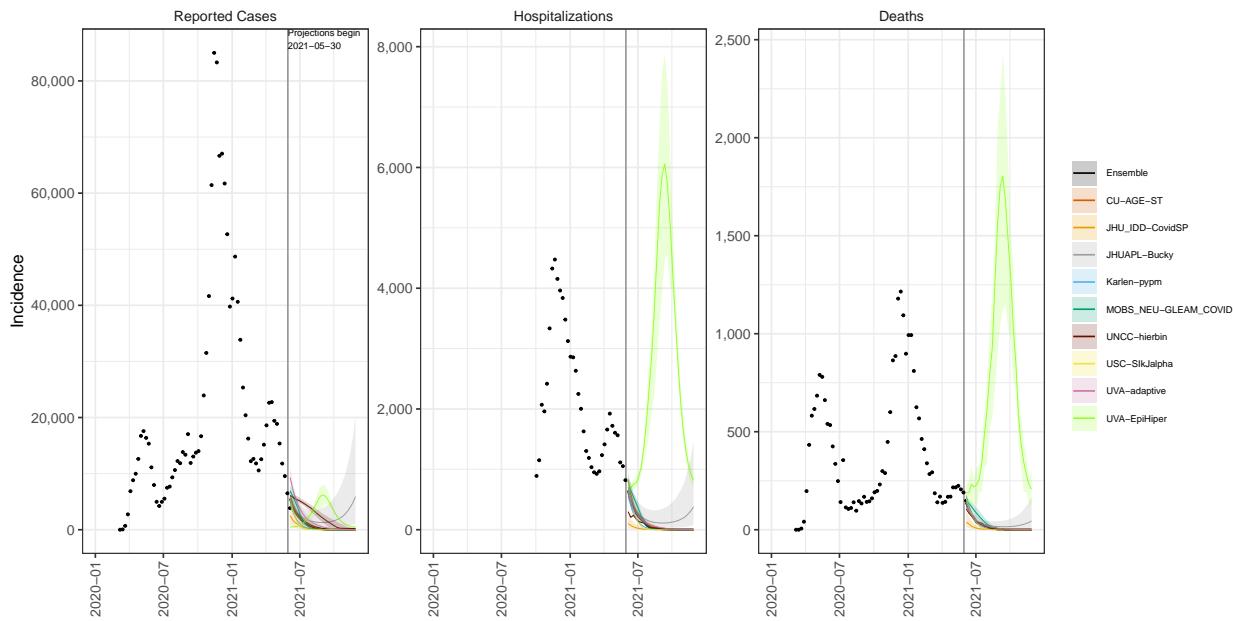
HI model variance & 50% projection intervals – High vaccination, Low variant transmissibility



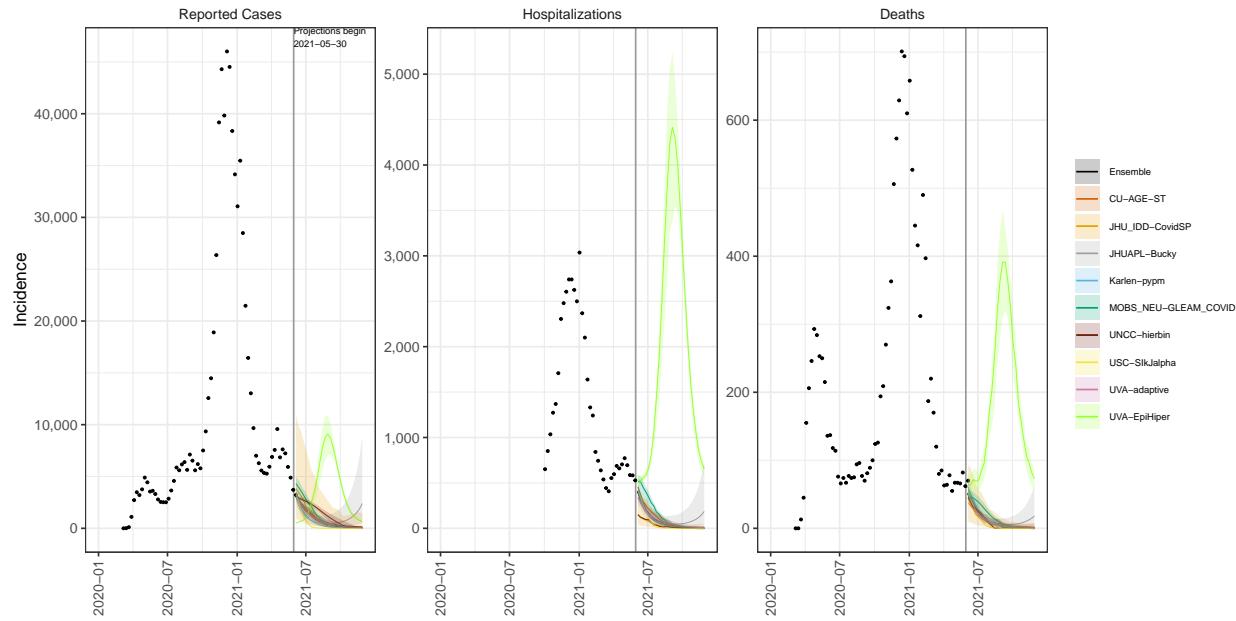
ID model variance & 50% projection intervals – High vaccination, Low variant transmissibility



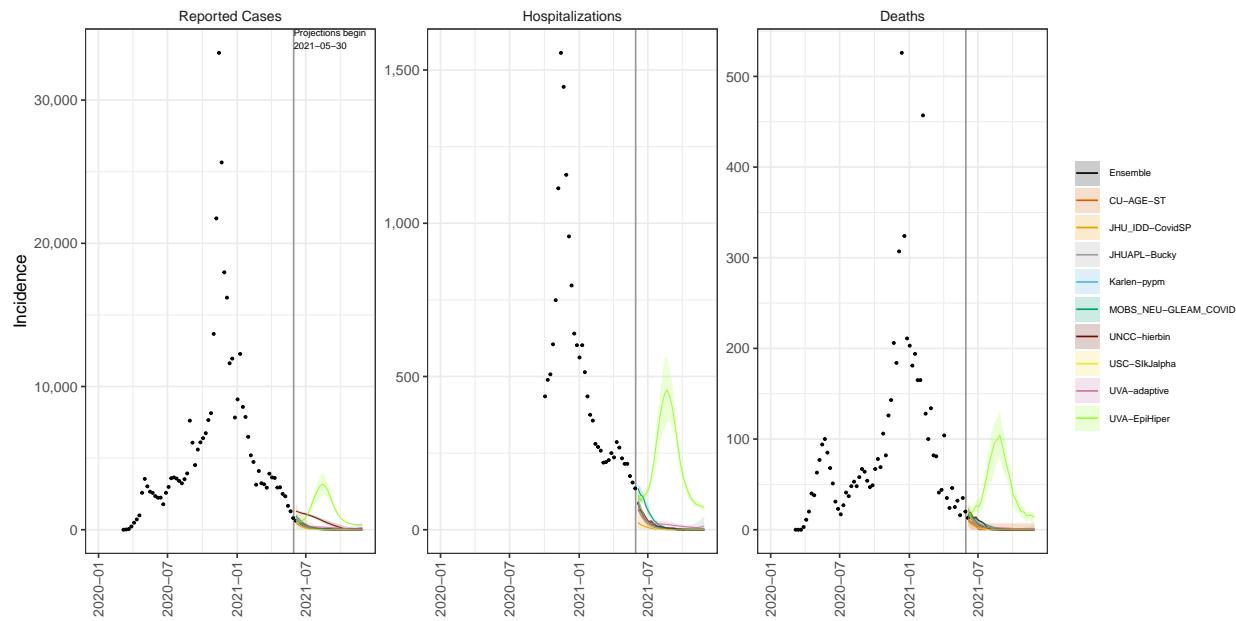
IL model variance & 50% projection intervals – High vaccination, Low variant transmissibility



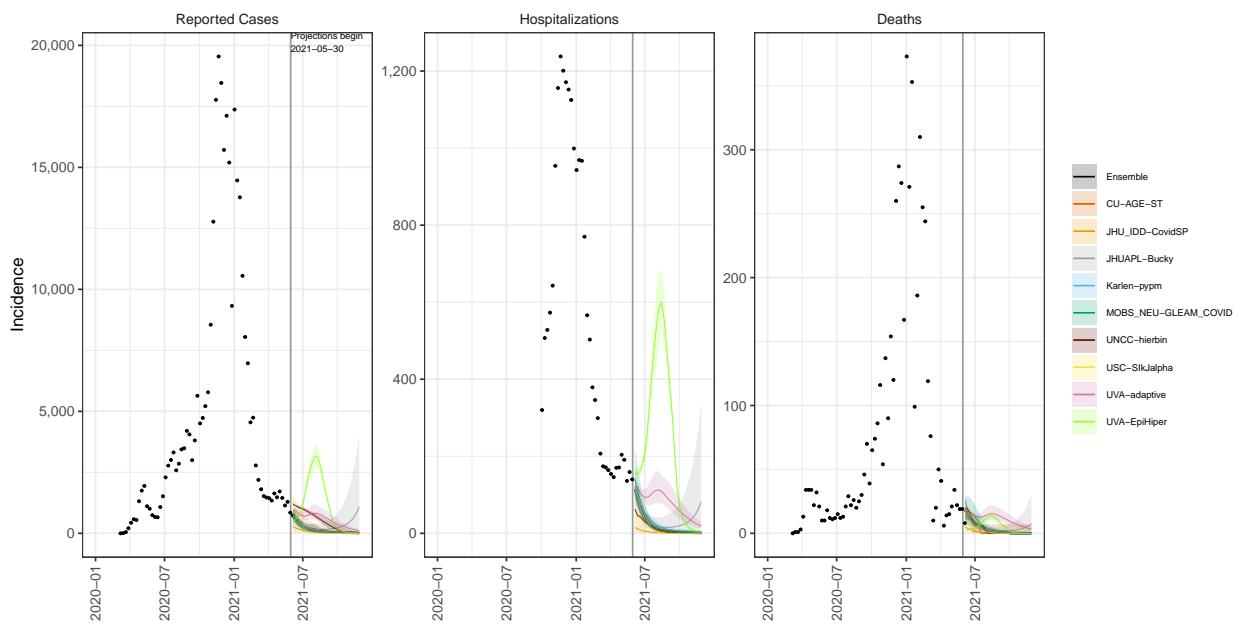
IN model variance & 50% projection intervals – High vaccination, Low variant transmissibility



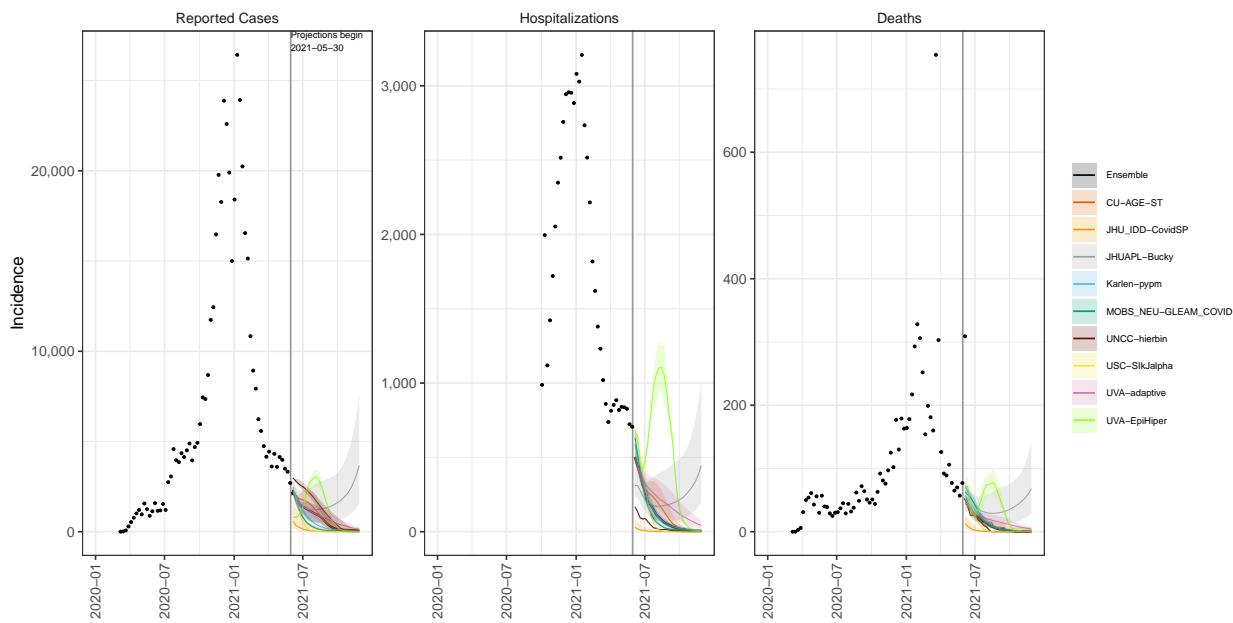
IA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



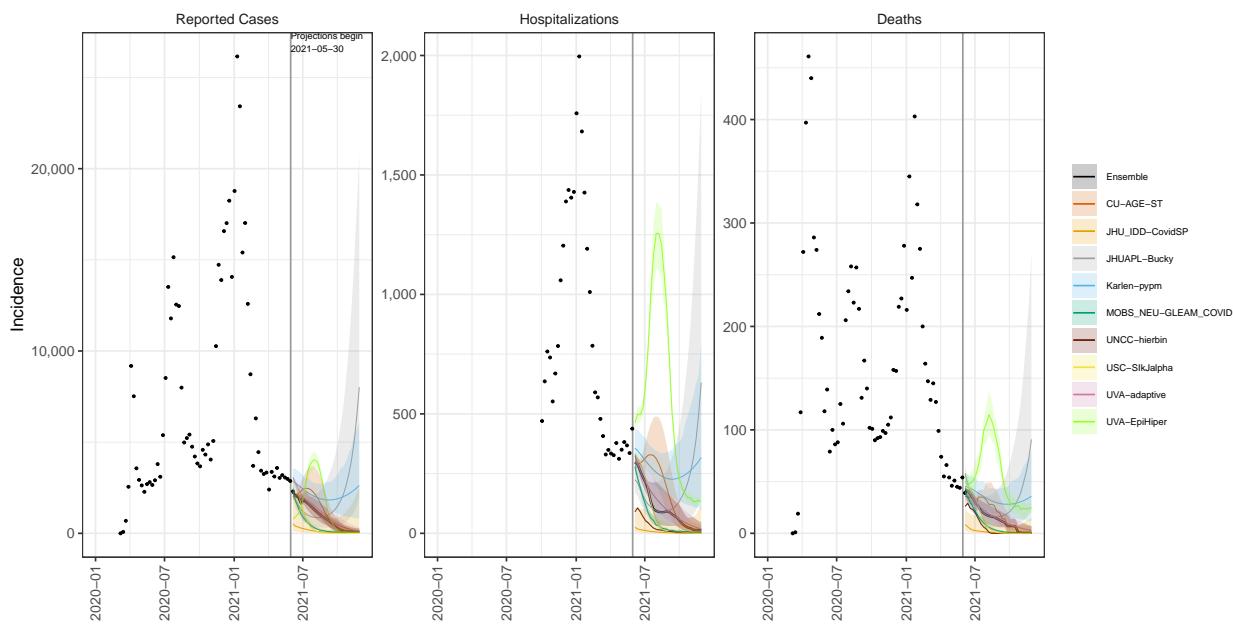
KS model variance & 50% projection intervals – High vaccination, Low variant transmissibility



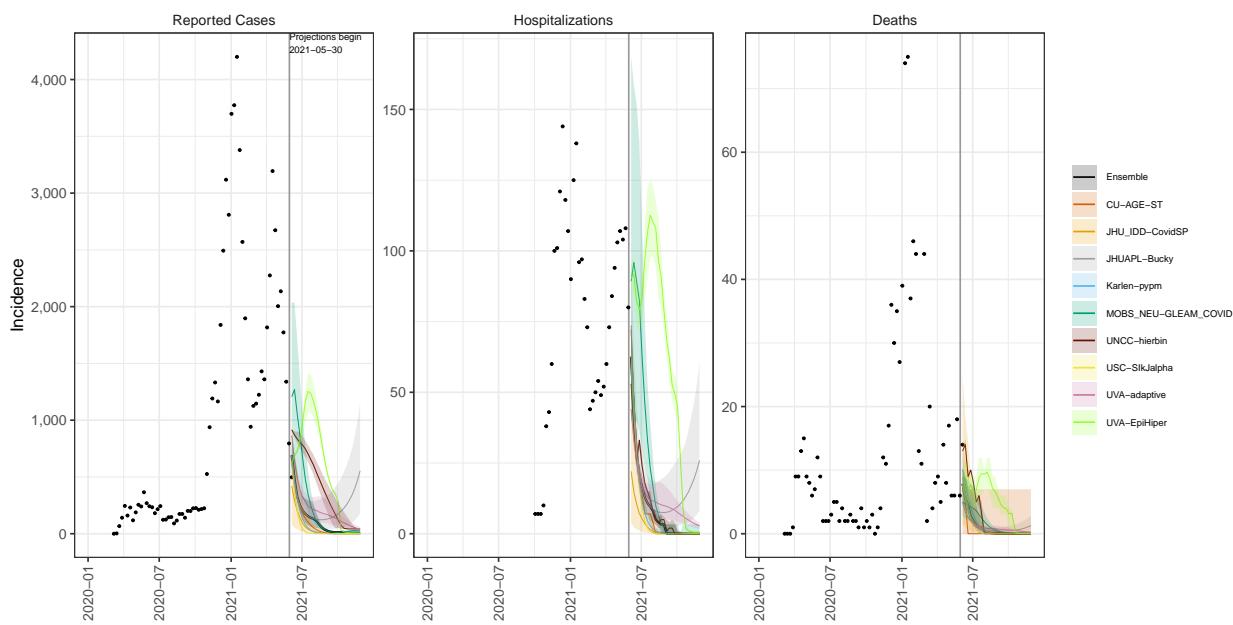
KY model variance & 50% projection intervals – High vaccination, Low variant transmissibility



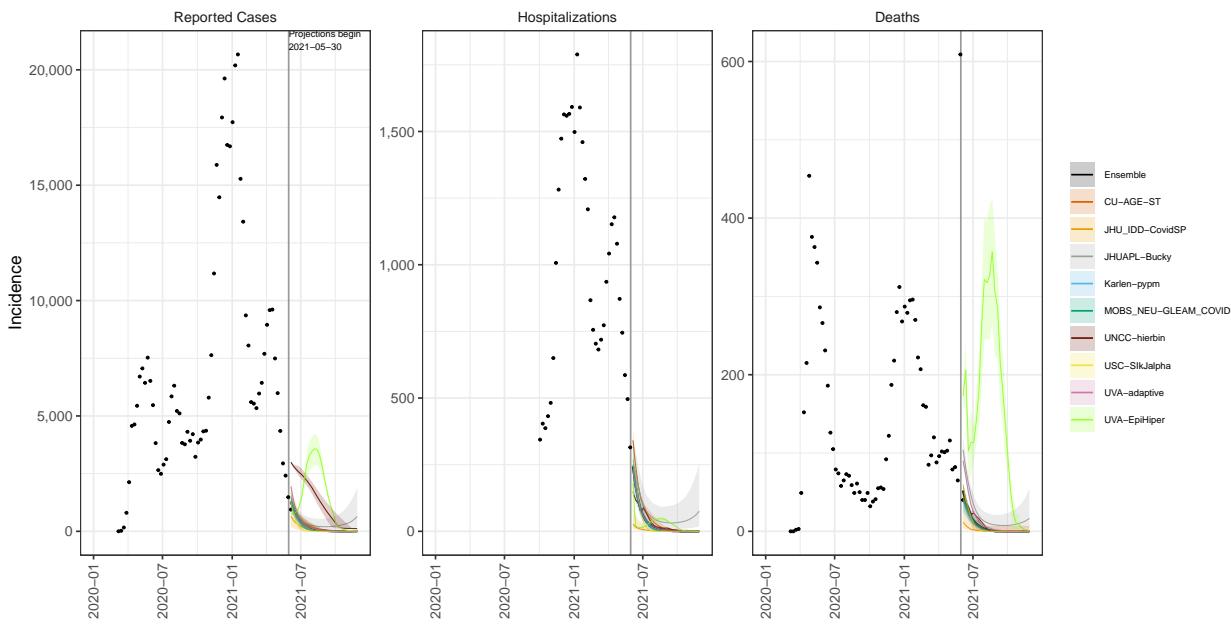
LA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



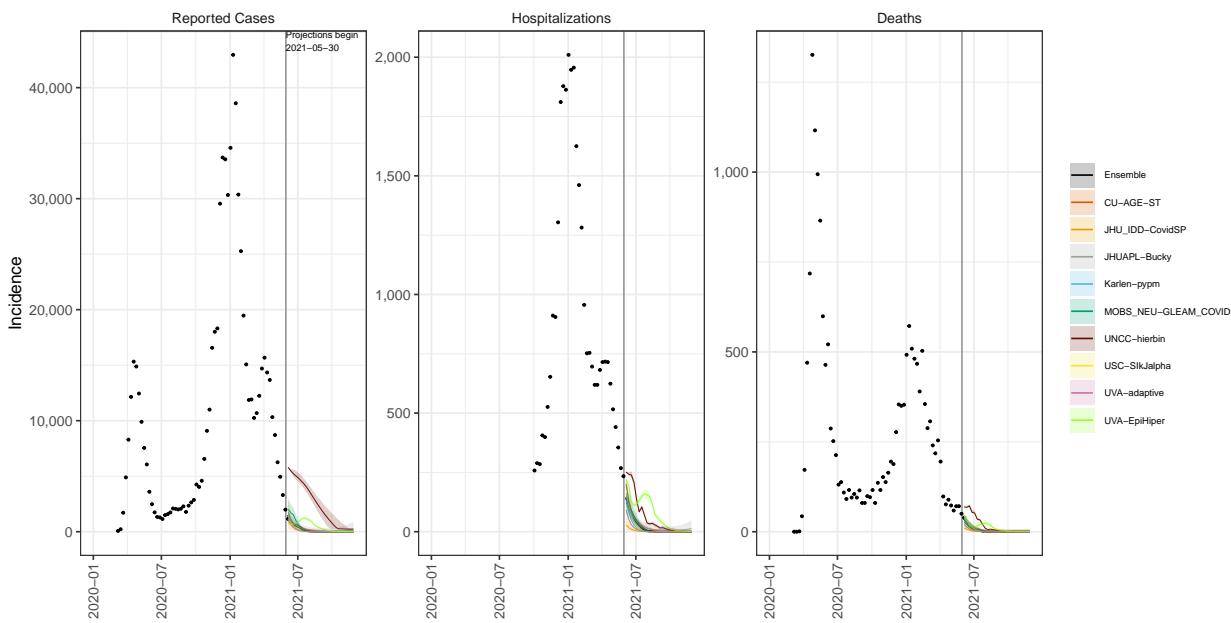
ME model variance & 50% projection intervals – High vaccination, Low variant transmissibility



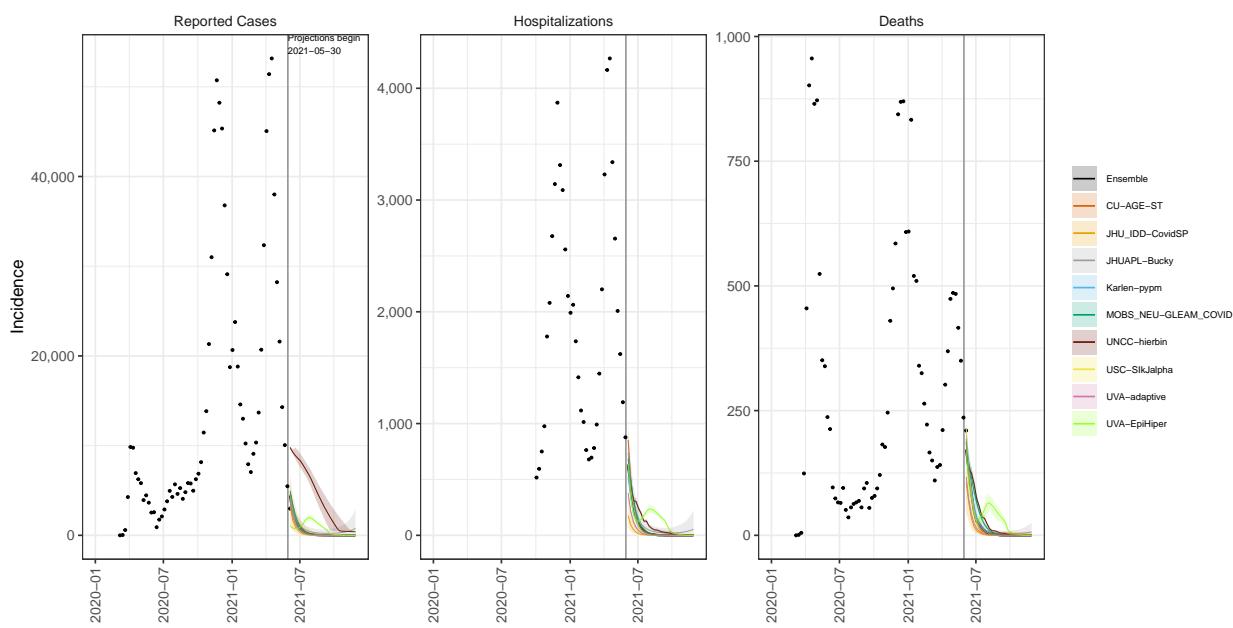
MD model variance & 50% projection intervals – High vaccination, Low variant transmissibility



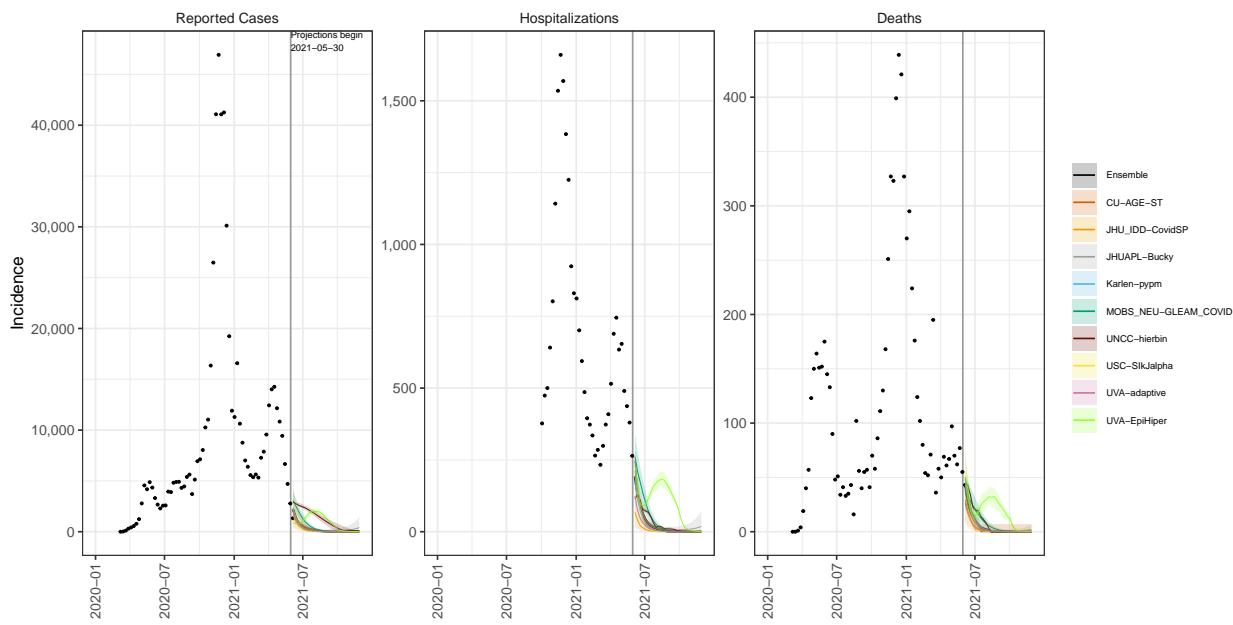
MA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



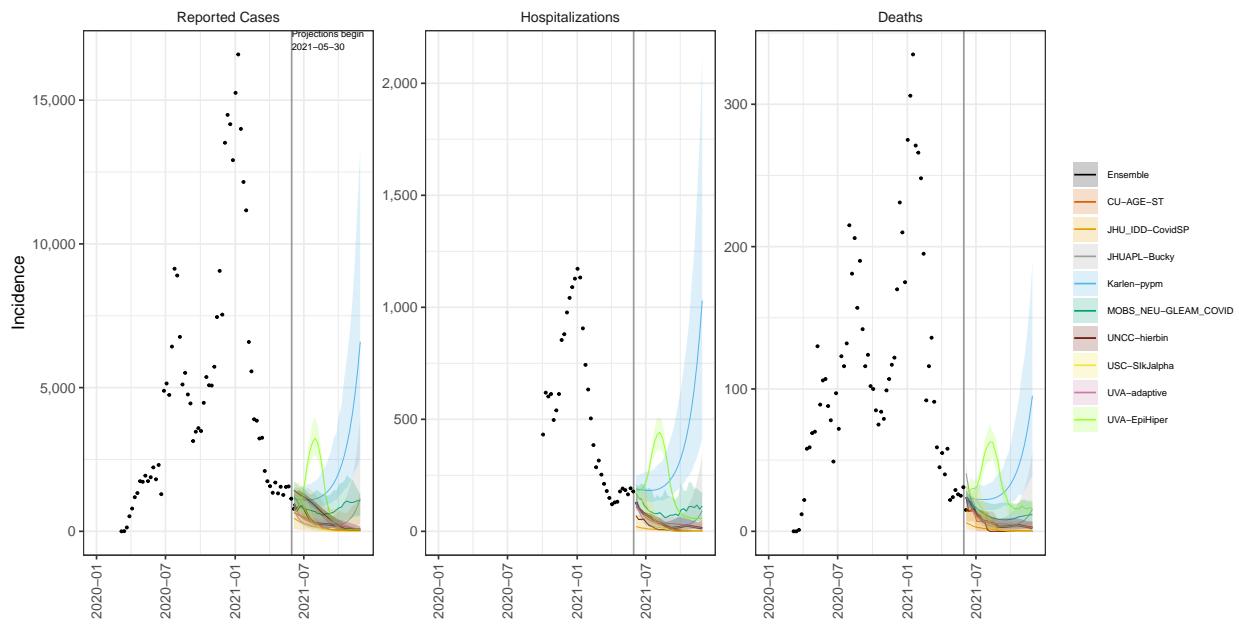
MI model variance & 50% projection intervals – High vaccination, Low variant transmissibility



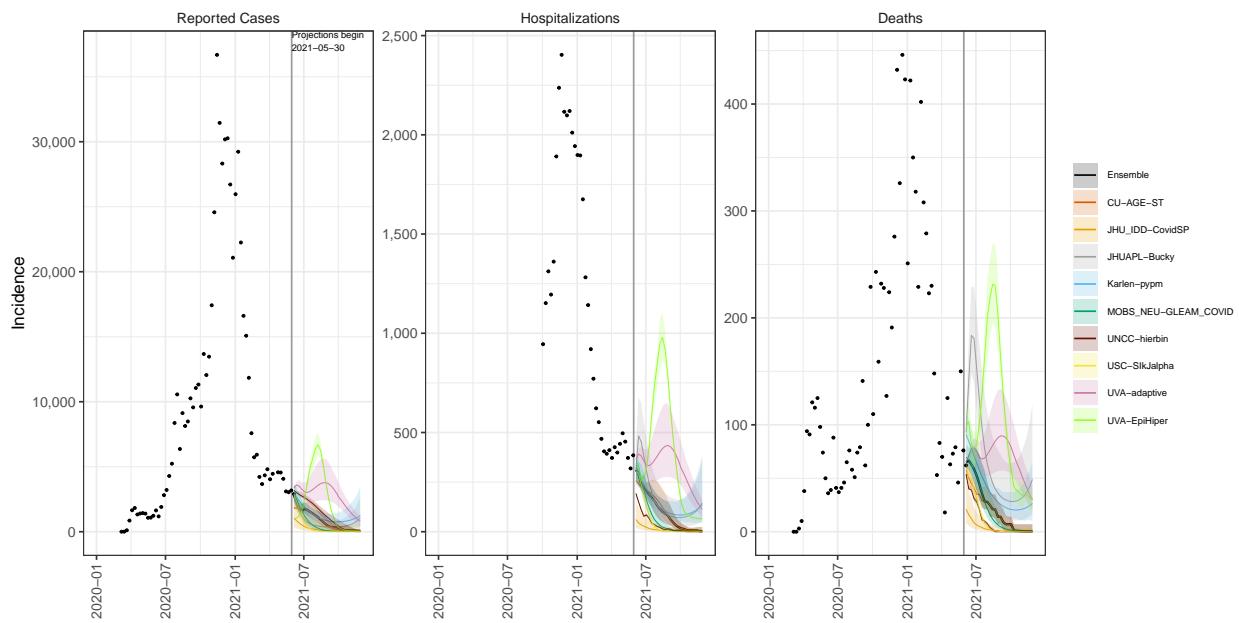
MN model variance & 50% projection intervals – High vaccination, Low variant transmissibility



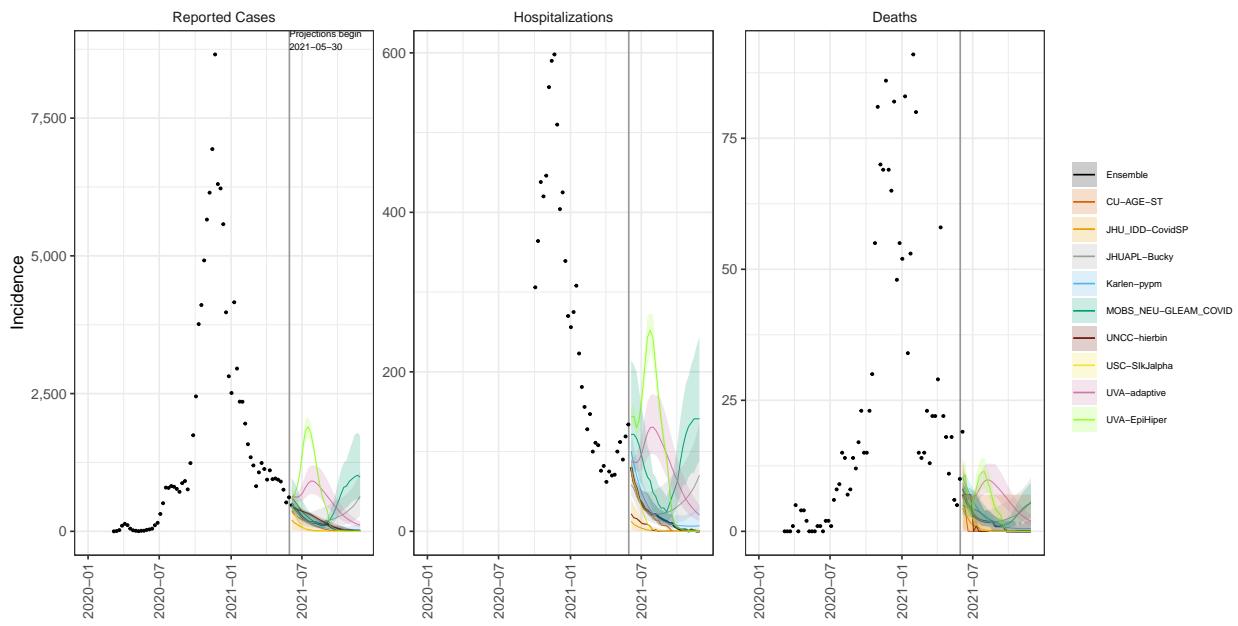
MS model variance & 50% projection intervals – High vaccination, Low variant transmissibility



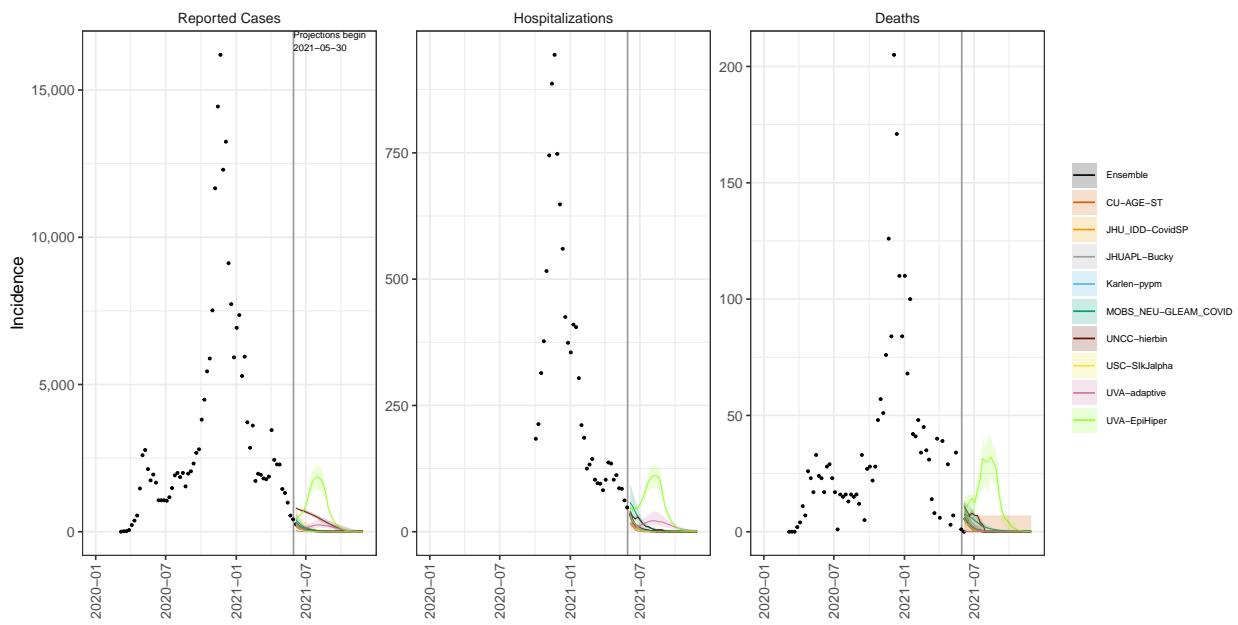
MO model variance & 50% projection intervals – High vaccination, Low variant transmissibility



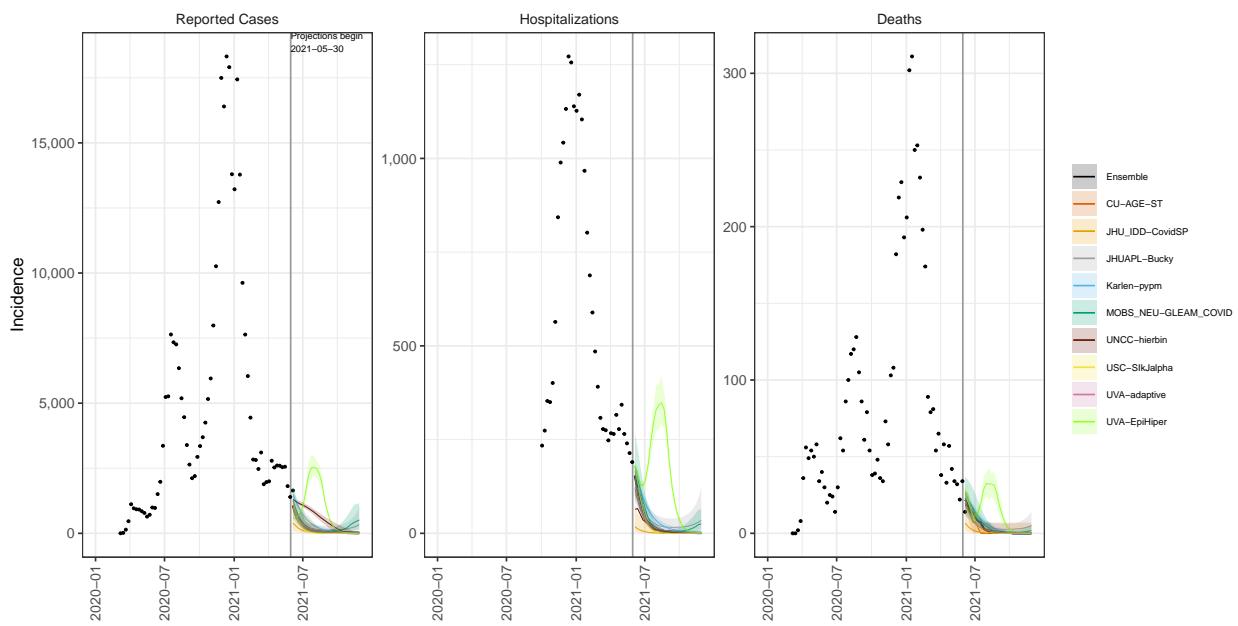
MT model variance & 50% projection intervals – High vaccination, Low variant transmissibility



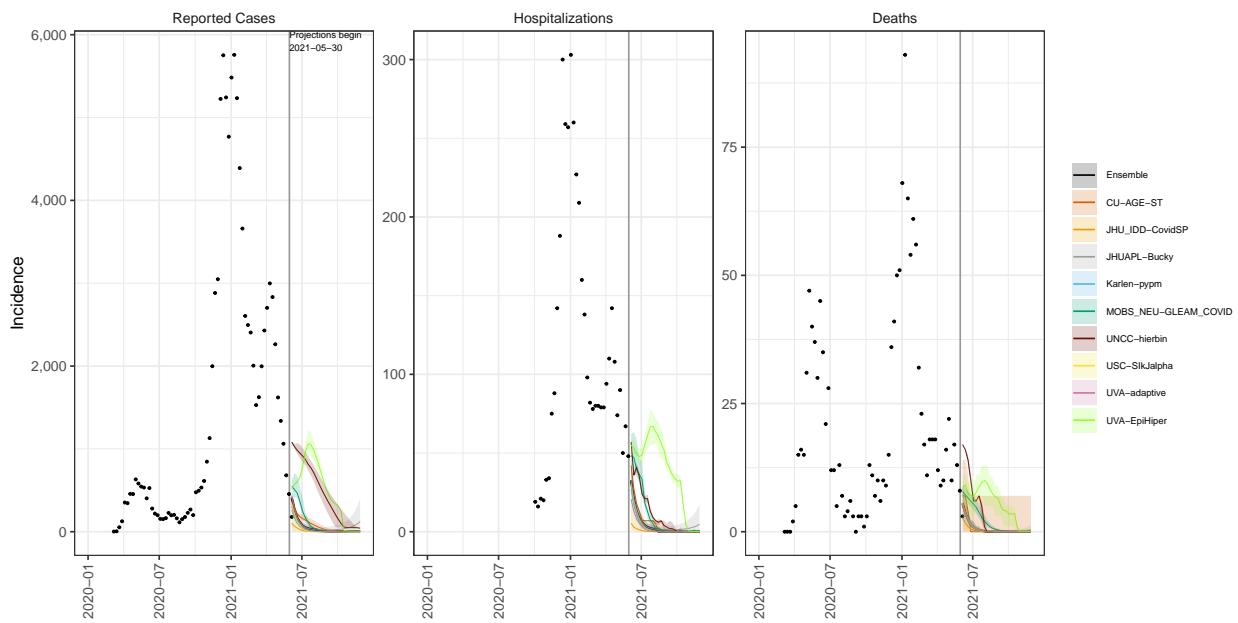
NE model variance & 50% projection intervals – High vaccination, Low variant transmissibility



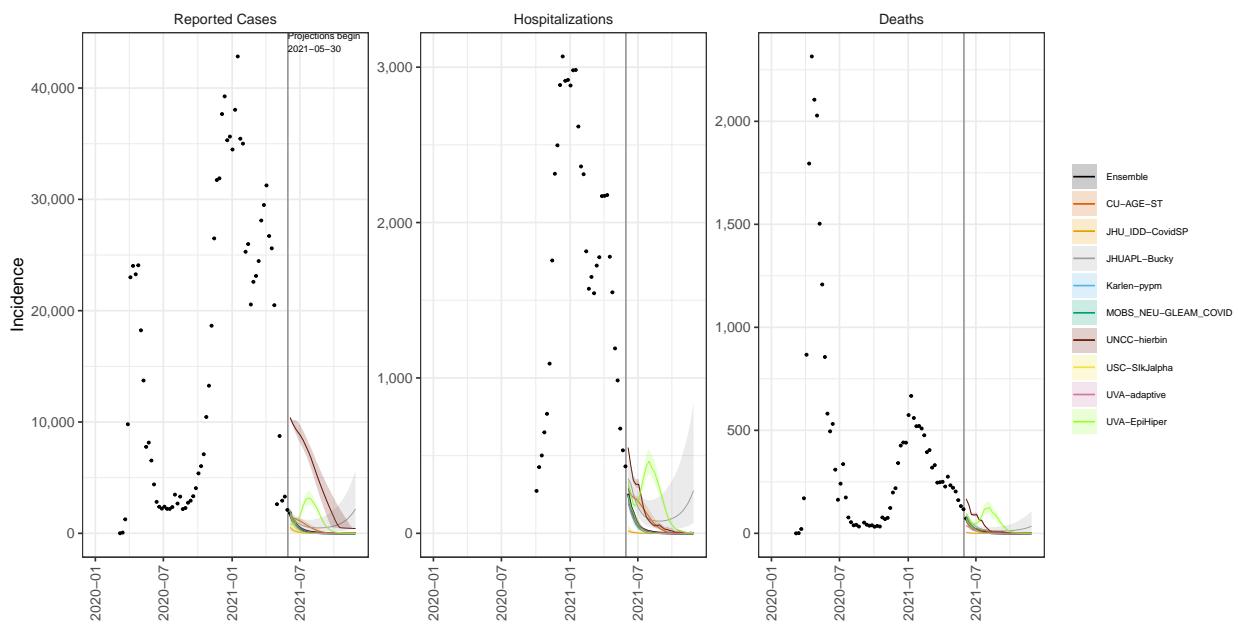
NV model variance & 50% projection intervals – High vaccination, Low variant transmissibility



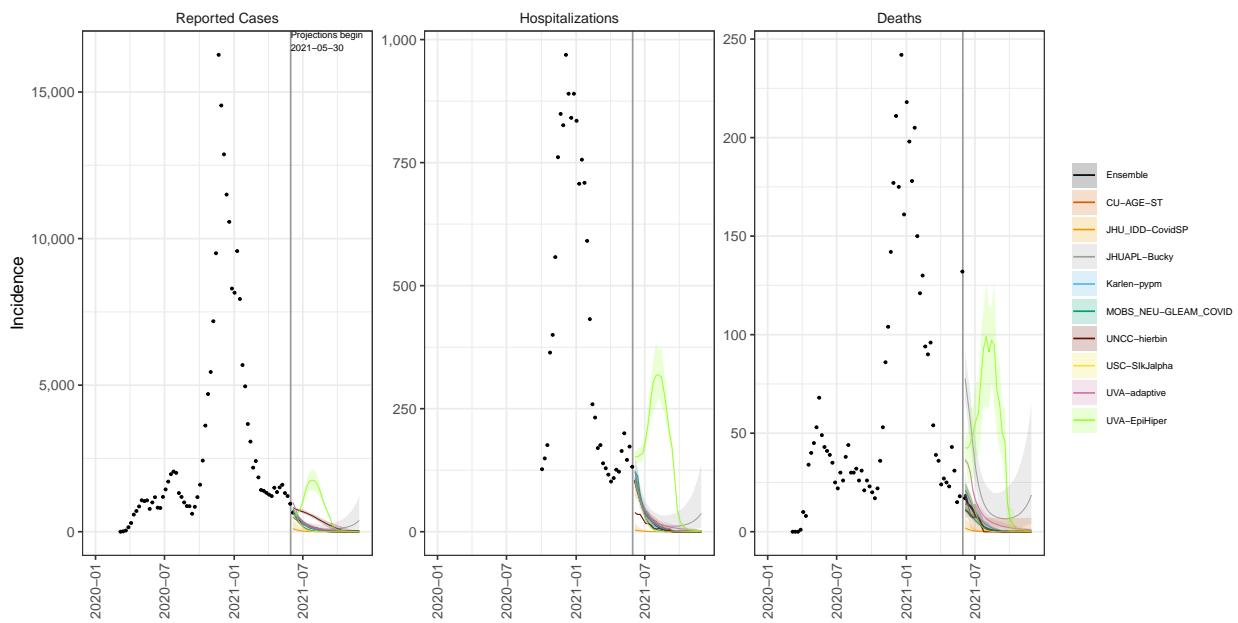
NH model variance & 50% projection intervals – High vaccination, Low variant transmissibility



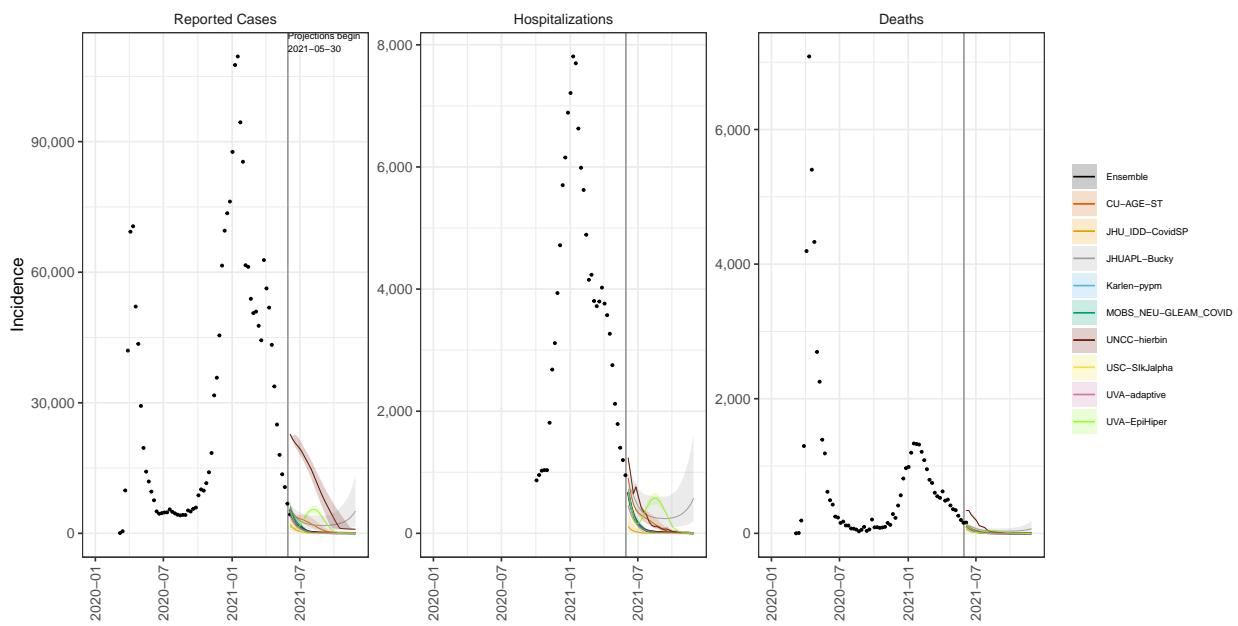
NJ model variance & 50% projection intervals – High vaccination, Low variant transmissibility



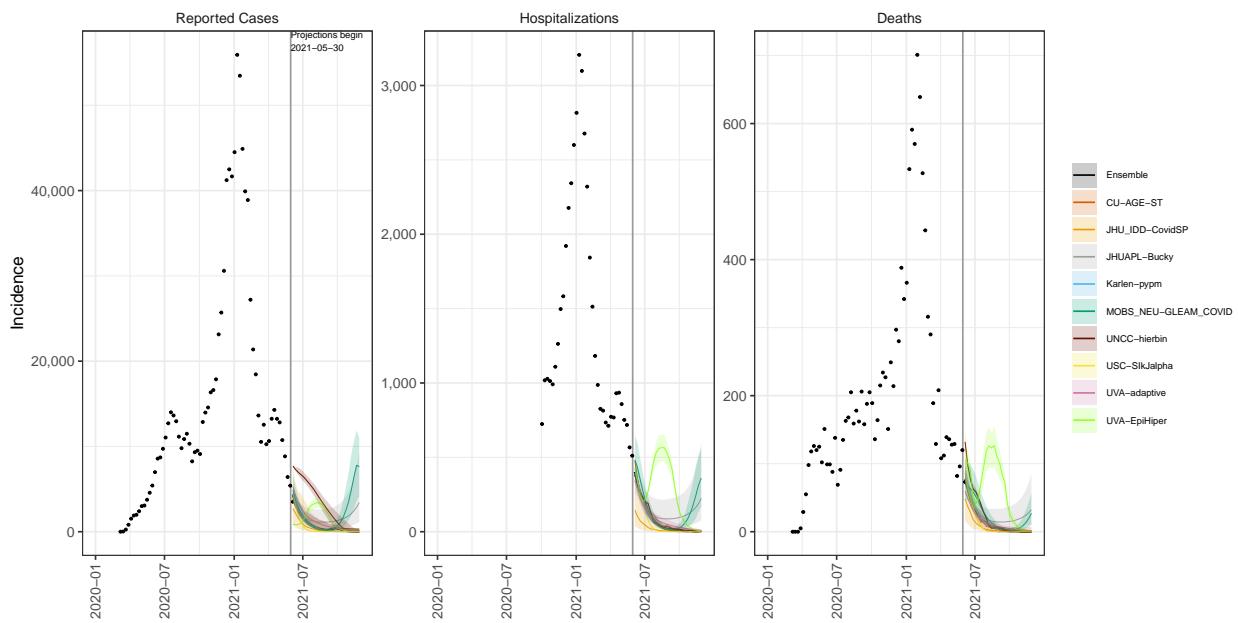
NM model variance & 50% projection intervals – High vaccination, Low variant transmissibility



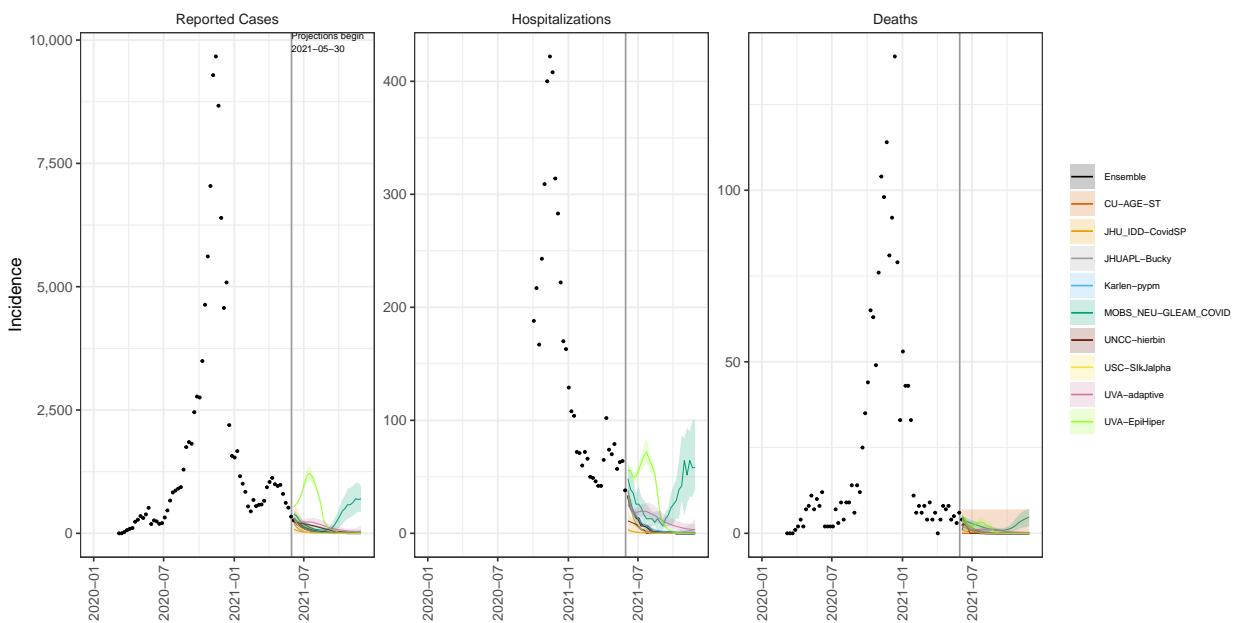
NY model variance & 50% projection intervals – High vaccination, Low variant transmissibility



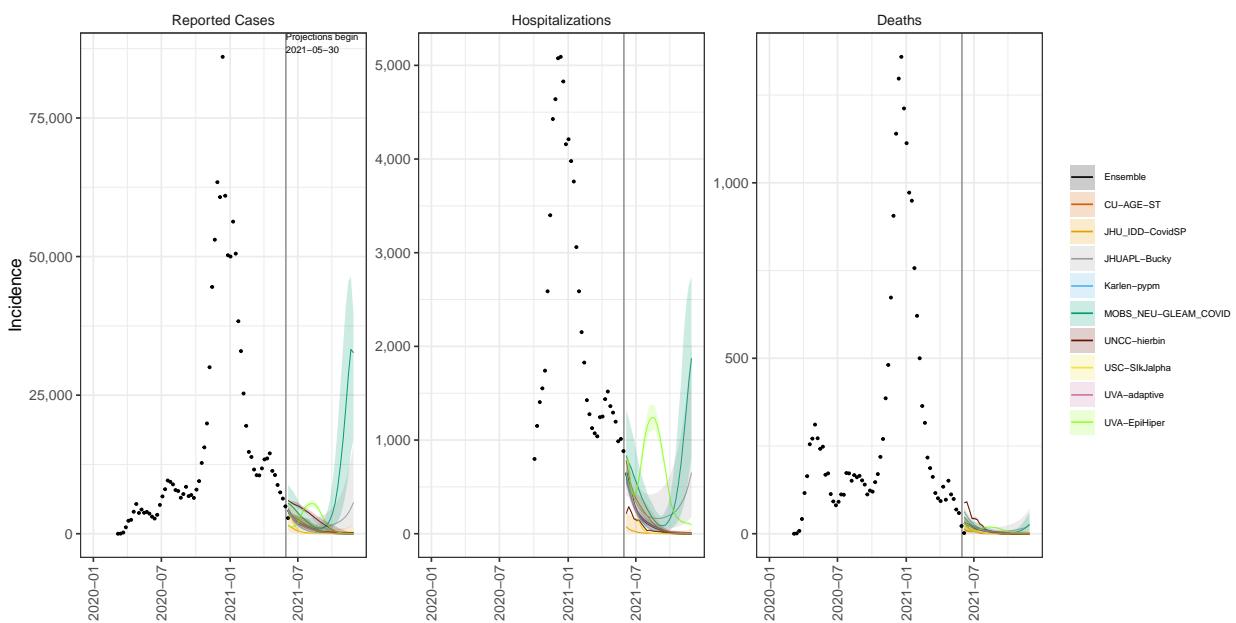
NC model variance & 50% projection intervals – High vaccination, Low variant transmissibility



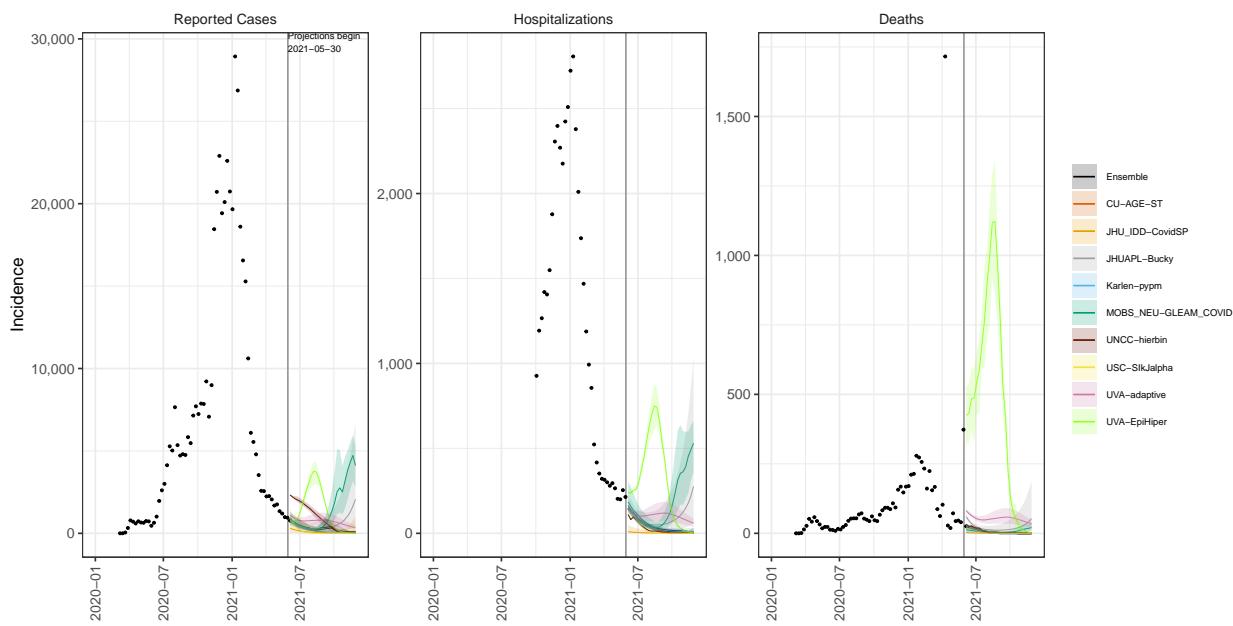
ND model variance & 50% projection intervals – High vaccination, Low variant transmissibility



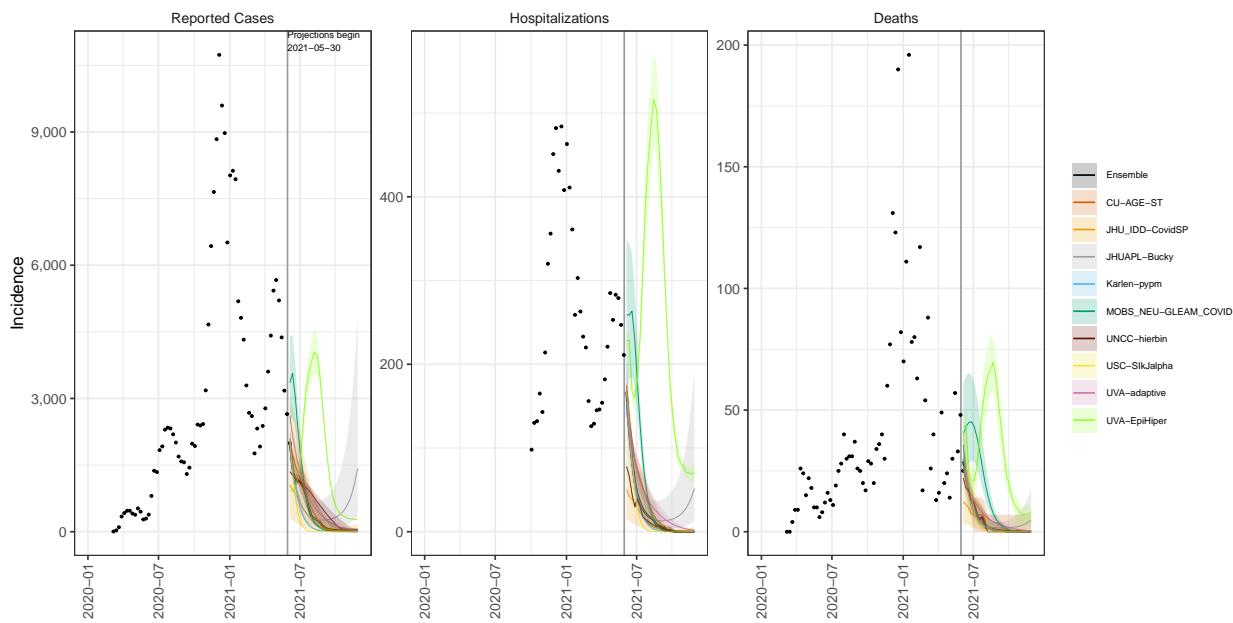
OH model variance & 50% projection intervals – High vaccination, Low variant transmissibility



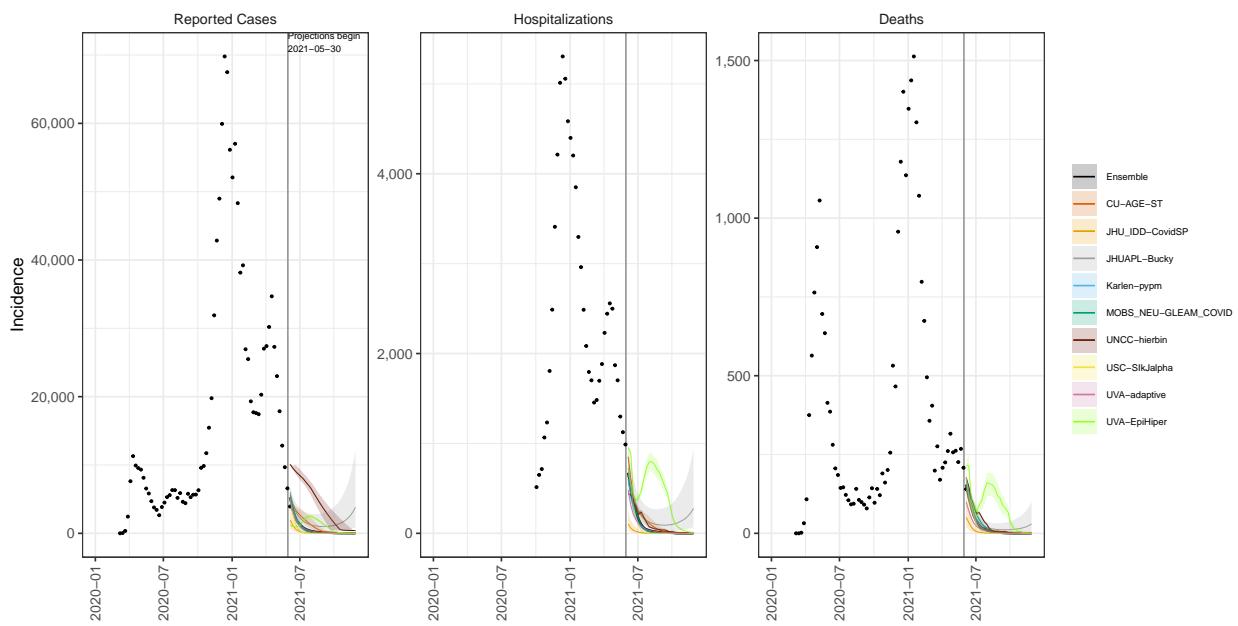
OK model variance & 50% projection intervals – High vaccination, Low variant transmissibility



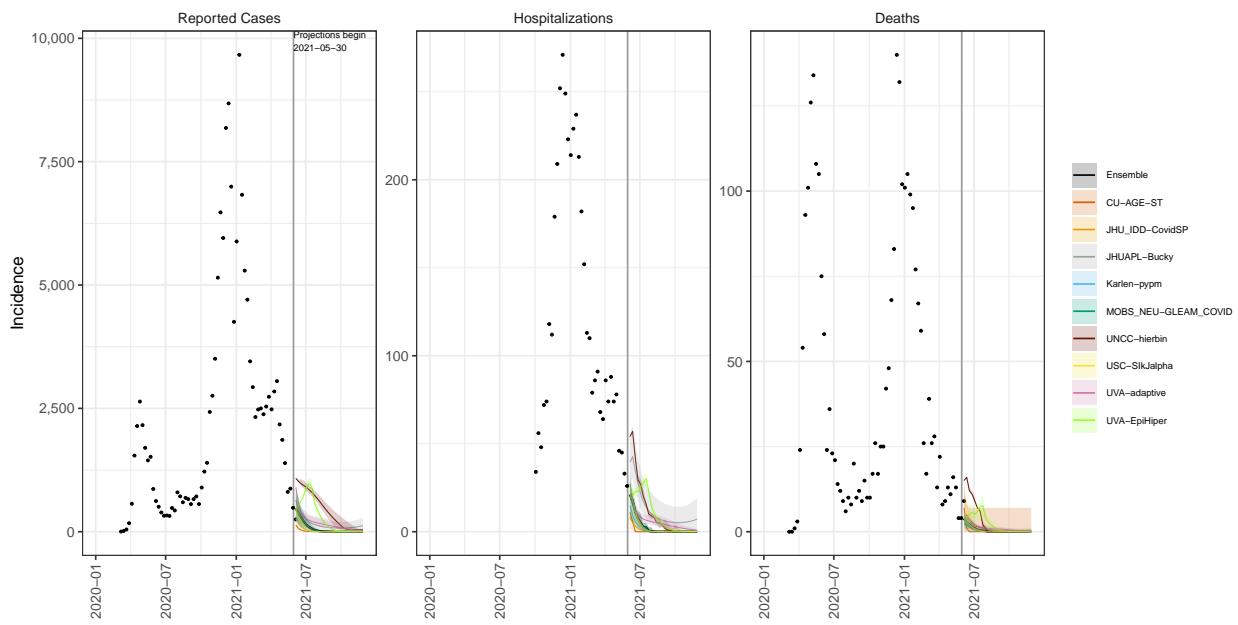
OR model variance & 50% projection intervals – High vaccination, Low variant transmissibility



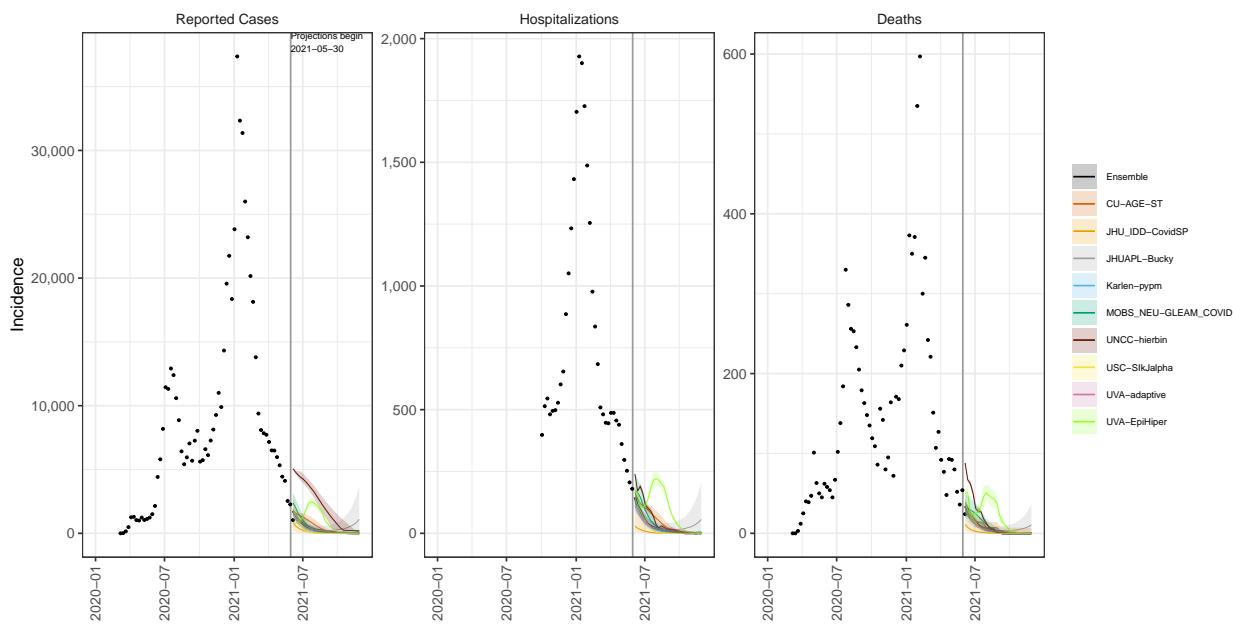
PA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



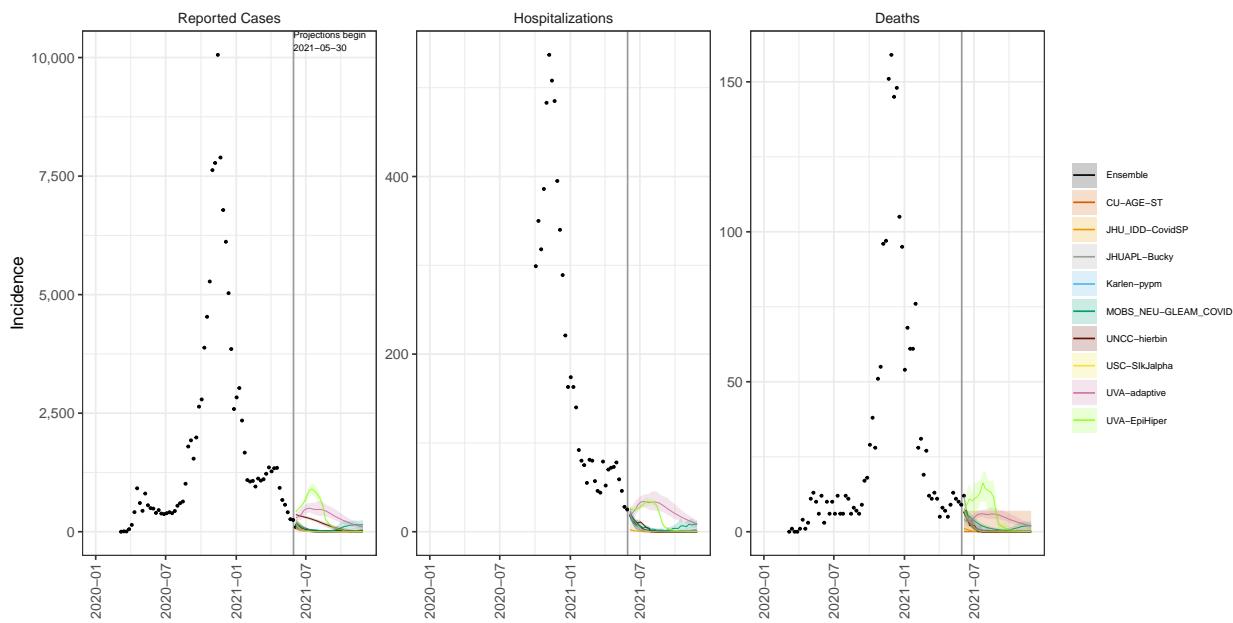
RI model variance & 50% projection intervals – High vaccination, Low variant transmissibility



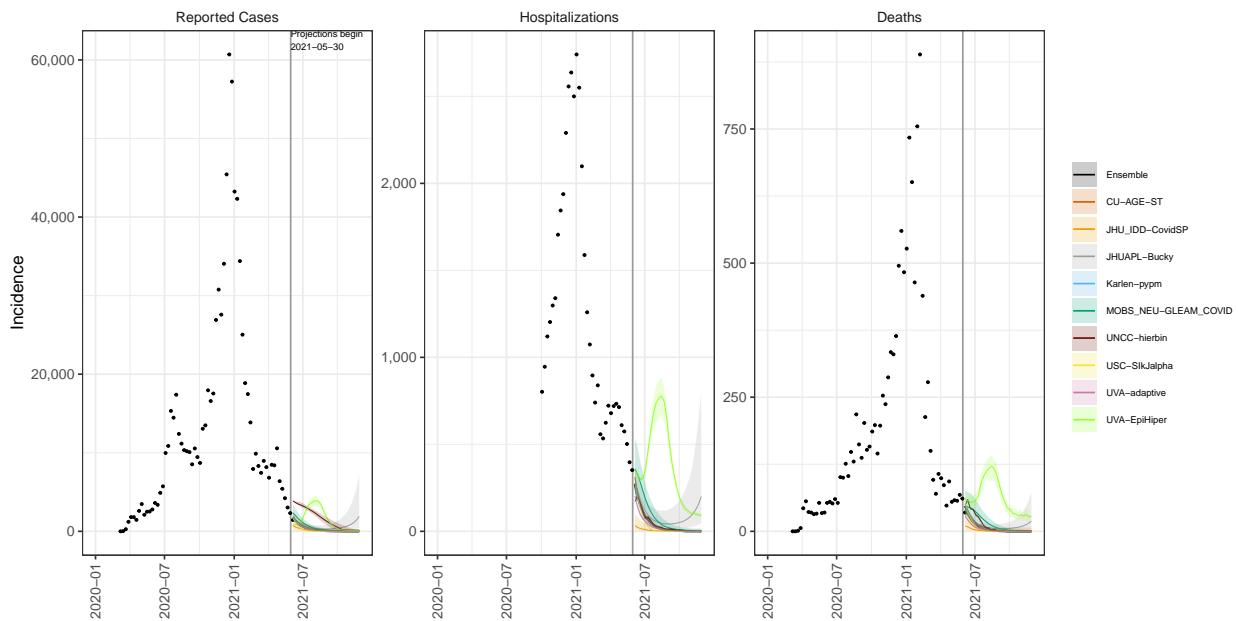
SC model variance & 50% projection intervals – High vaccination, Low variant transmissibility



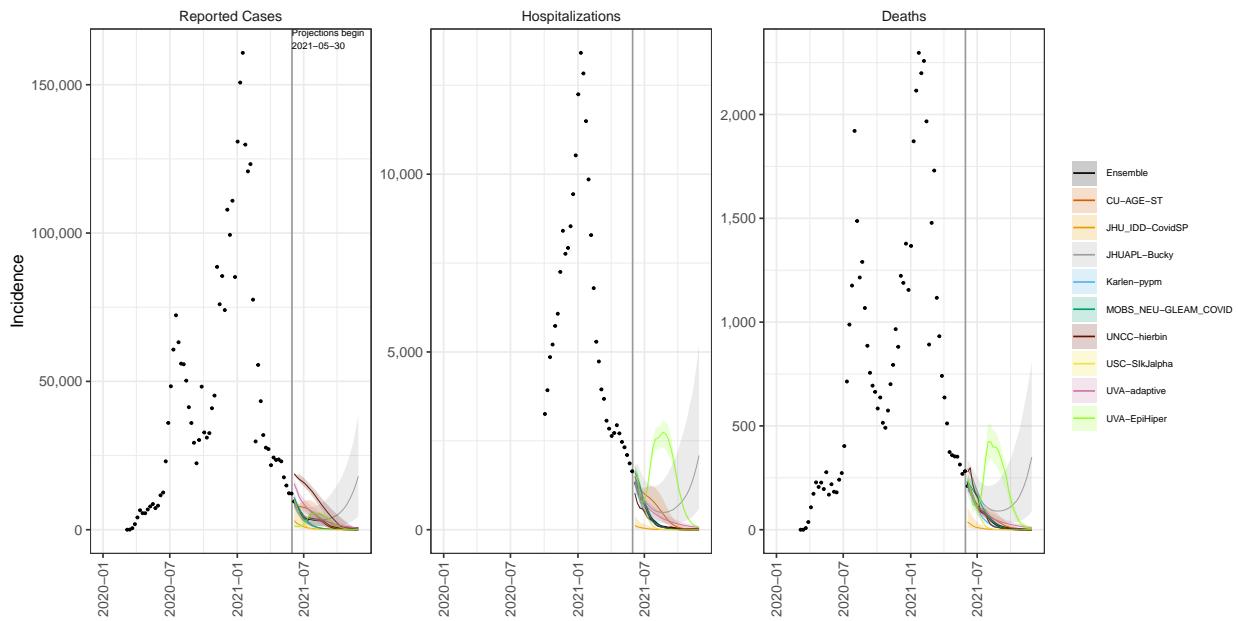
SD model variance & 50% projection intervals – High vaccination, Low variant transmissibility



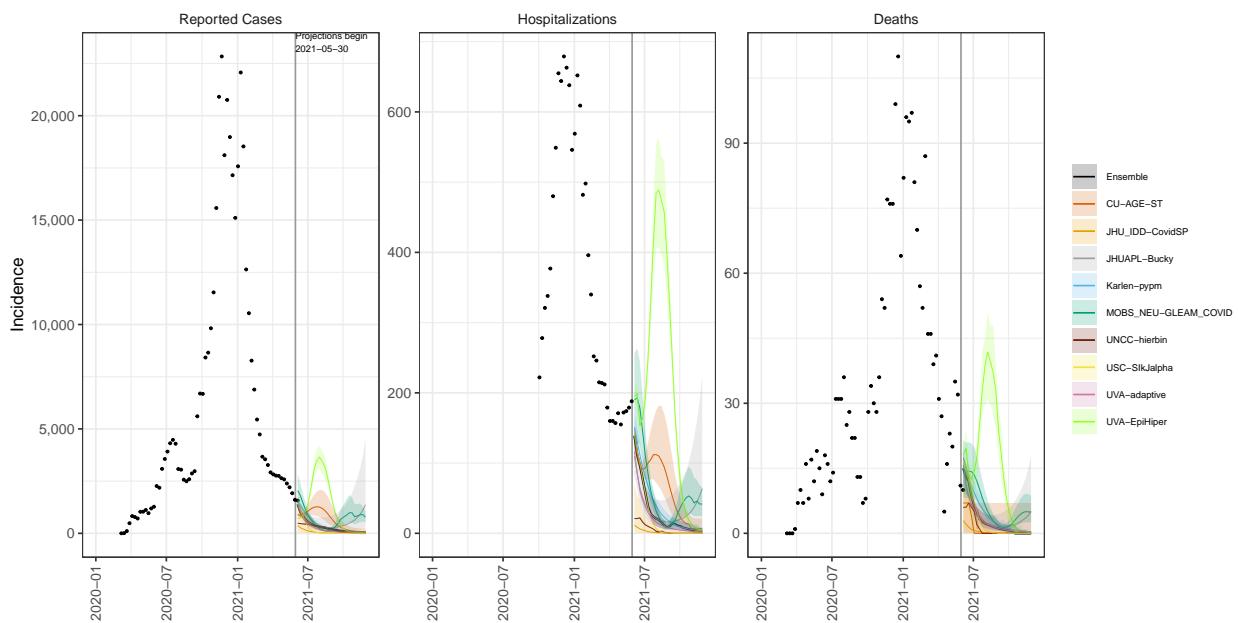
TN model variance & 50% projection intervals – High vaccination, Low variant transmissibility



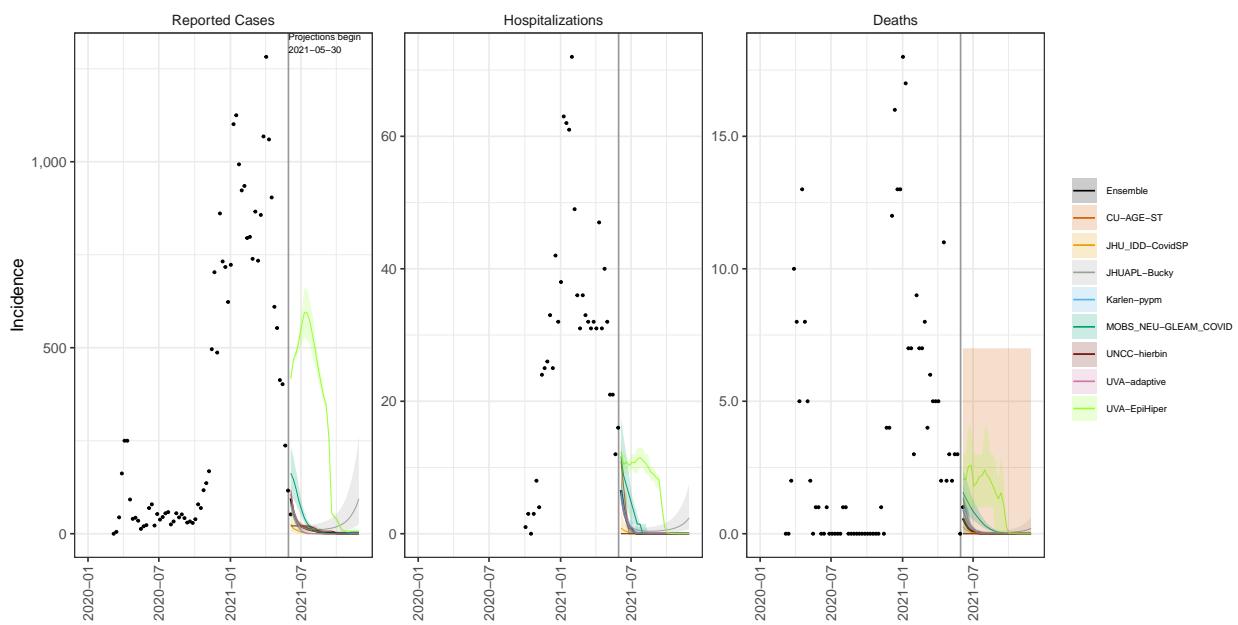
TX model variance & 50% projection intervals – High vaccination, Low variant transmissibility



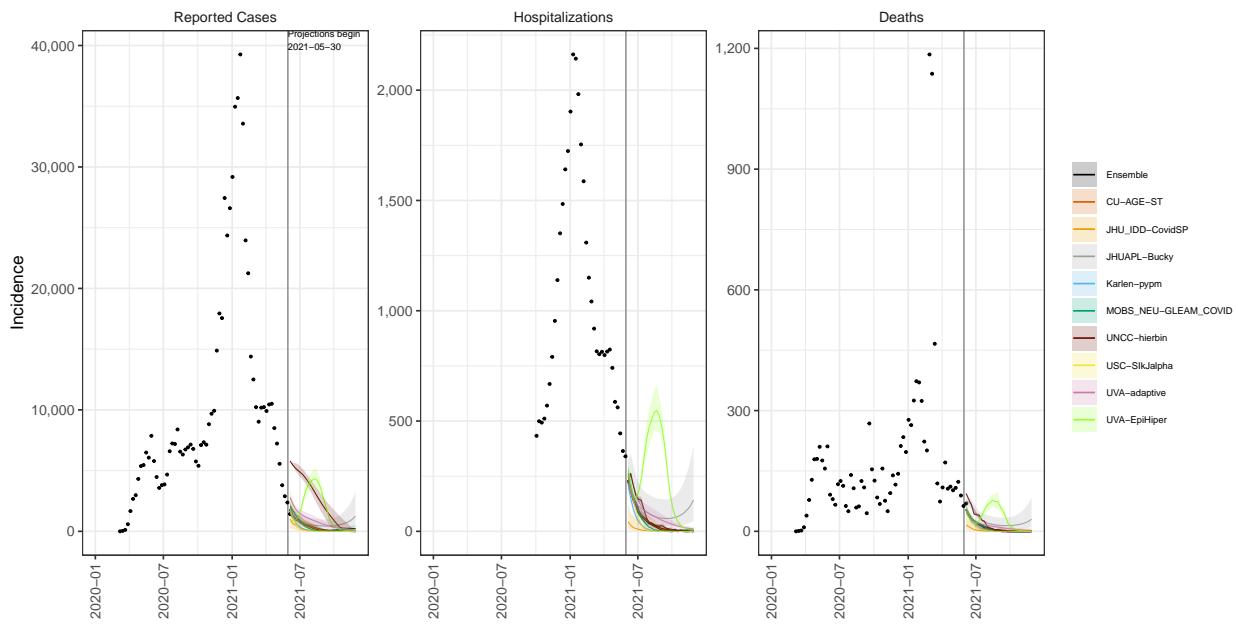
UT model variance & 50% projection intervals – High vaccination, Low variant transmissibility



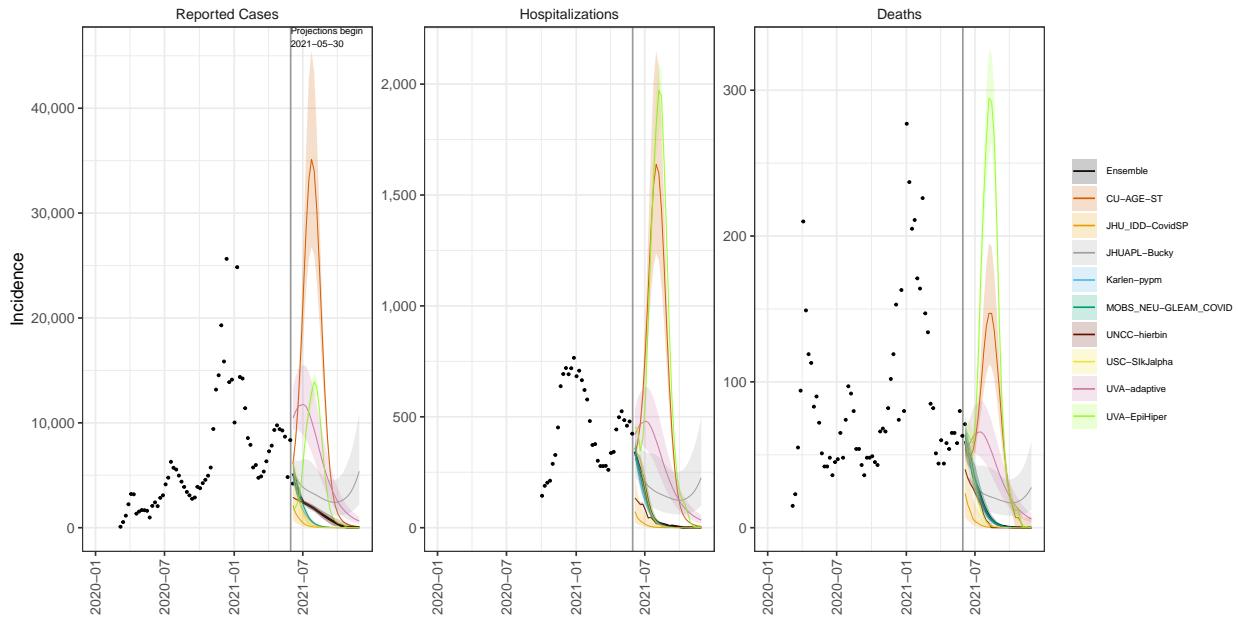
VT model variance & 50% projection intervals – High vaccination, Low variant transmissibility



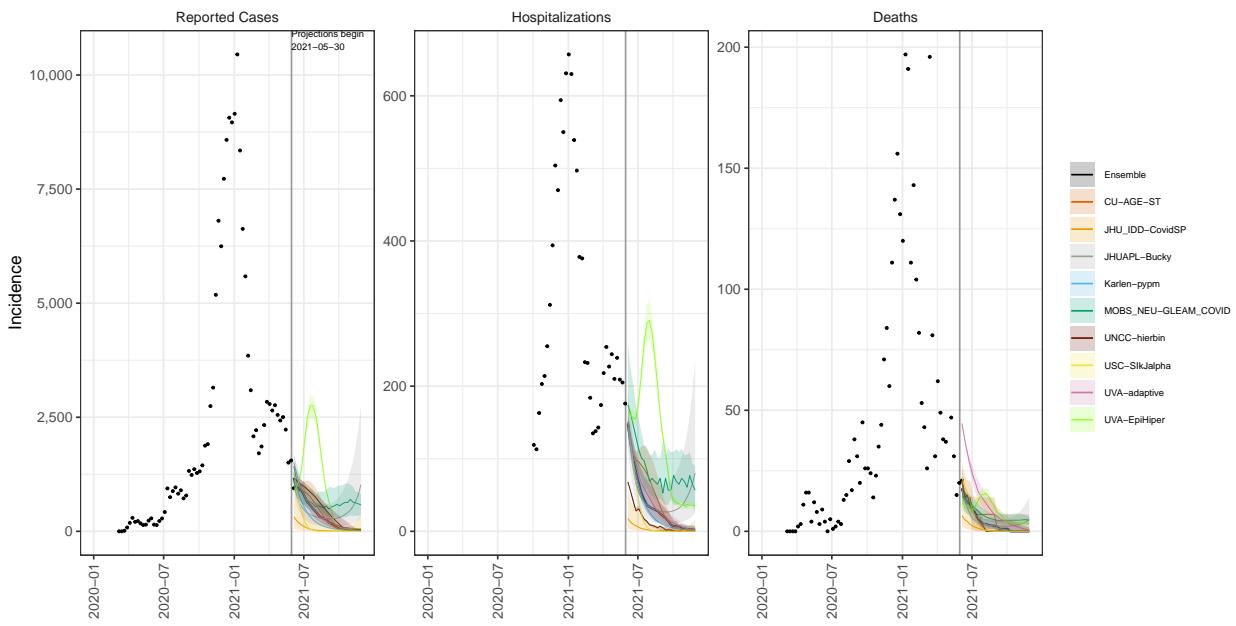
VA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



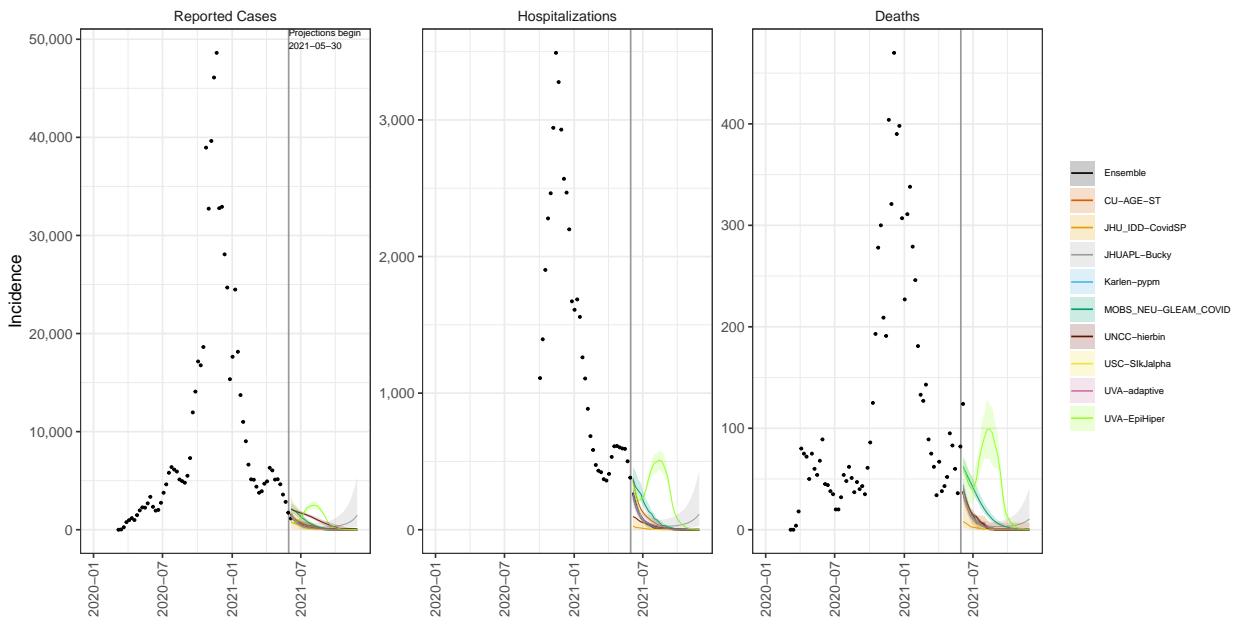
WA model variance & 50% projection intervals – High vaccination, Low variant transmissibility



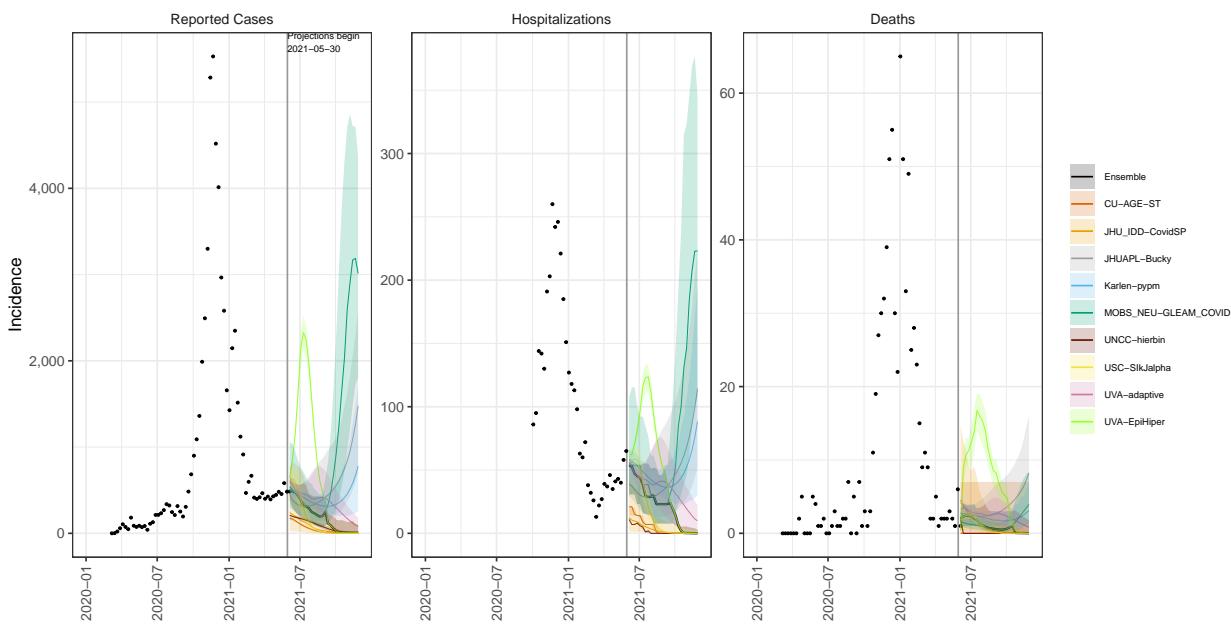
WV model variance & 50% projection intervals – High vaccination, Low variant transmissibility



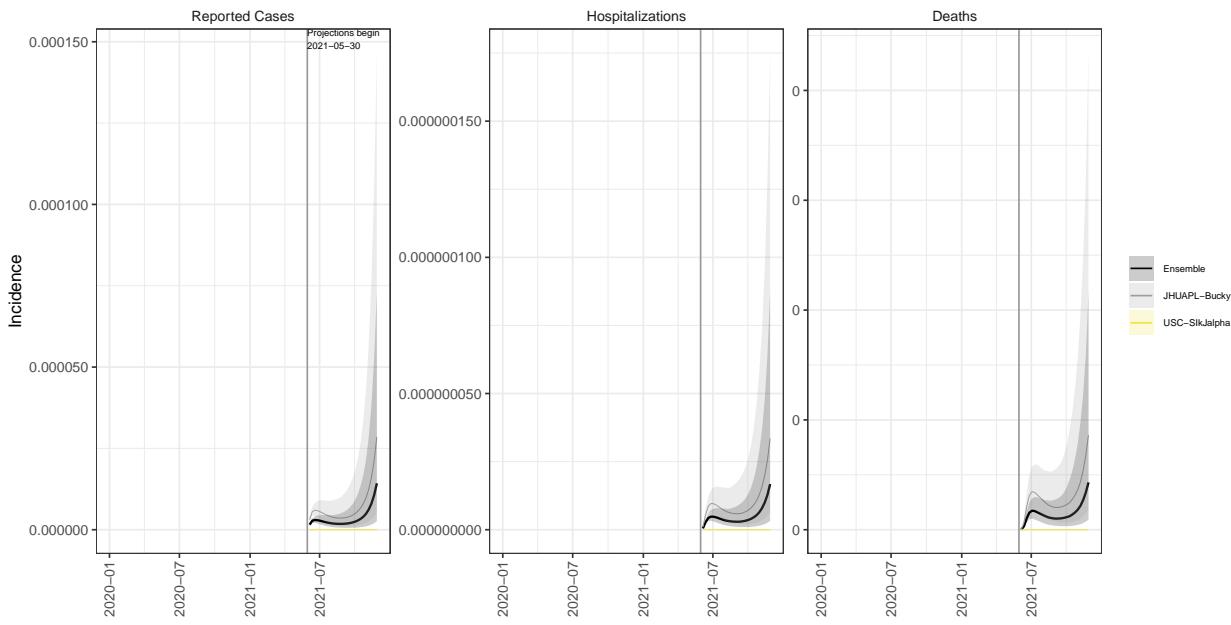
WI model variance & 50% projection intervals – High vaccination, Low variant transmissibility



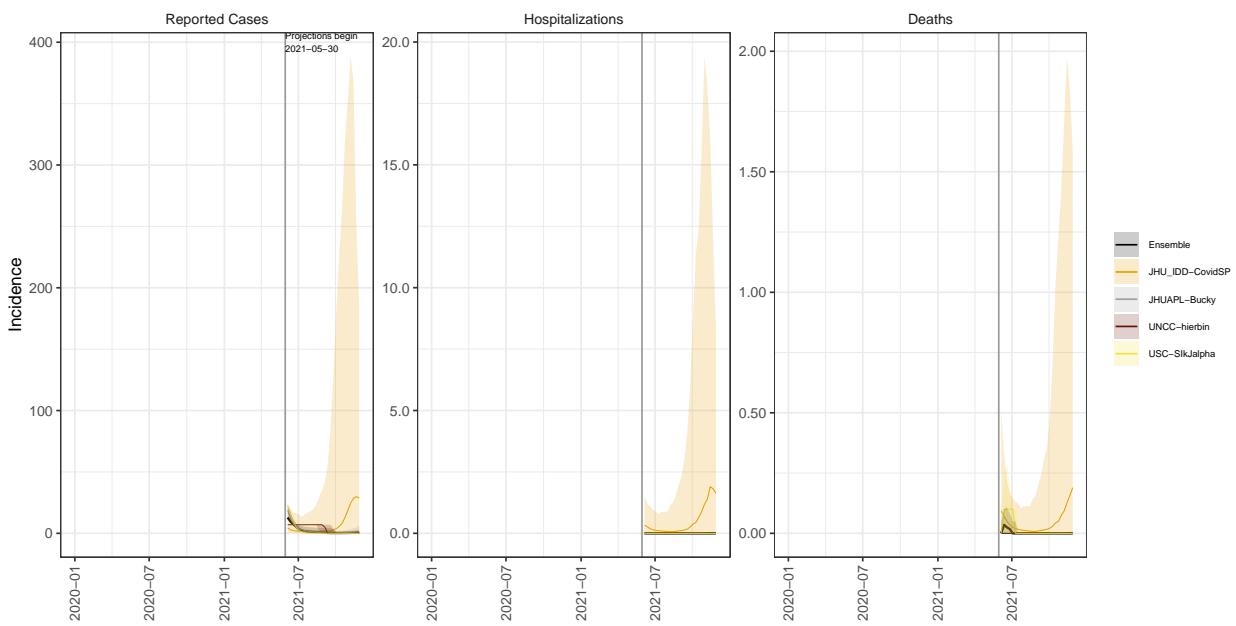
WY model variance & 50% projection intervals – High vaccination, Low variant transmissibility



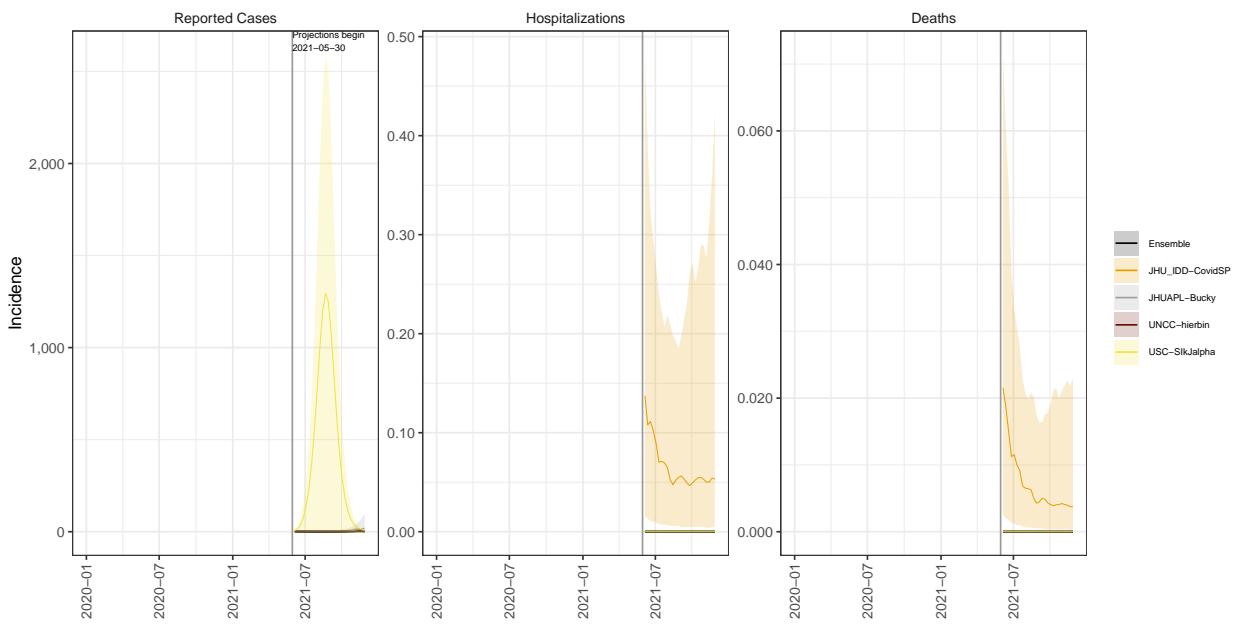
AS model variance & 50% projection intervals – High vaccination, Low variant transmissibility



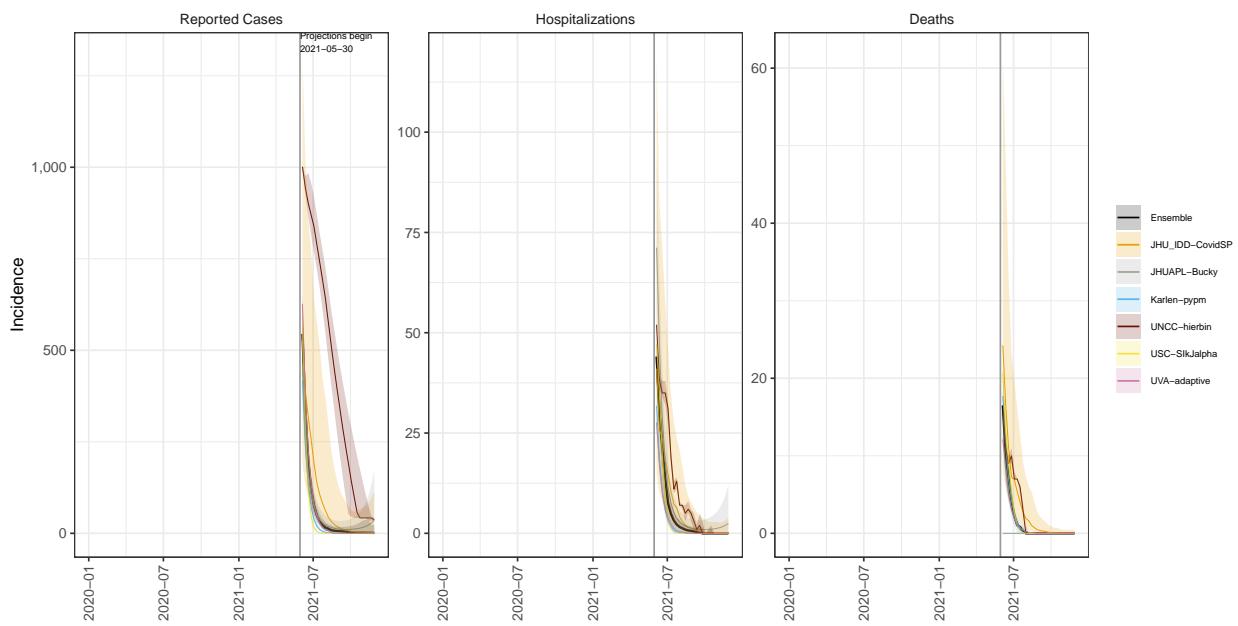
GU model variance & 50% projection intervals – High vaccination, Low variant transmissibility



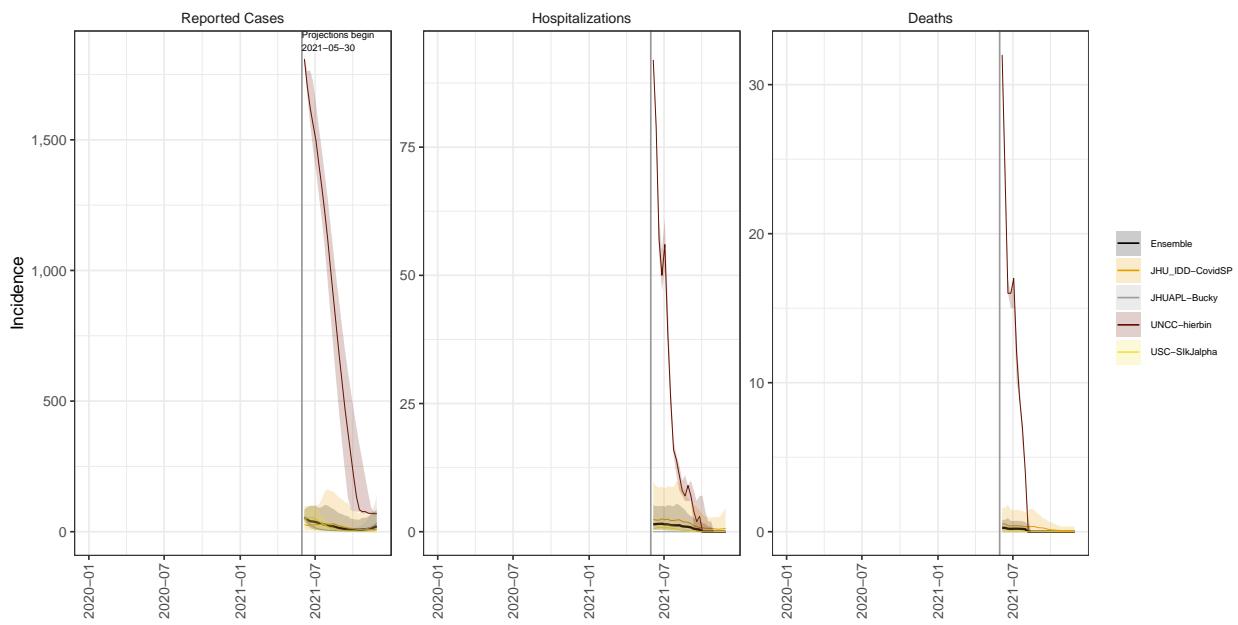
MP model variance & 50% projection intervals – High vaccination, Low variant transmissibility



PR model variance & 50% projection intervals – High vaccination, Low variant transmissibility

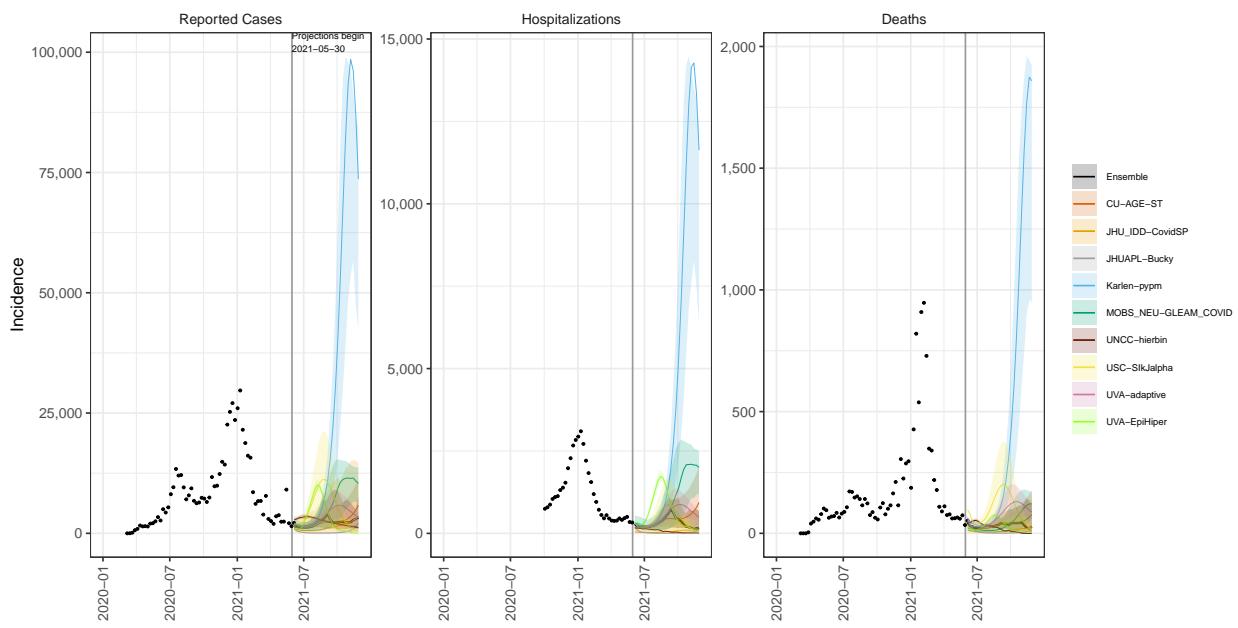


VI model variance & 50% projection intervals – High vaccination, Low variant transmissibility

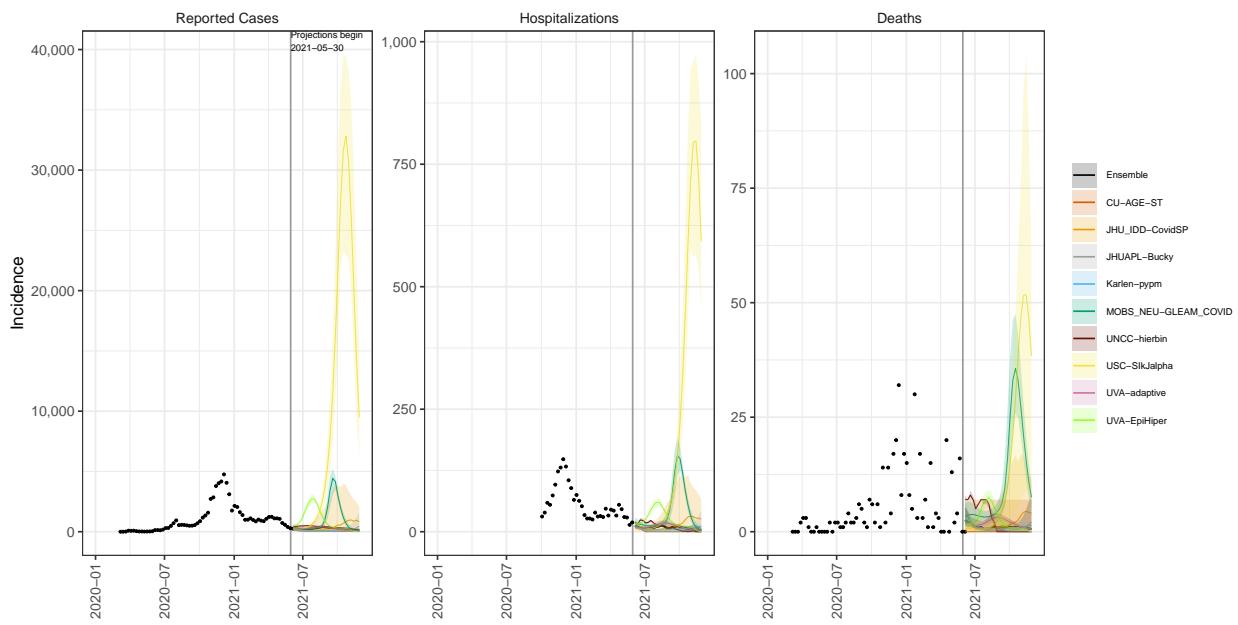


National model variation for the low vaccination, high variant transmissibility scenario

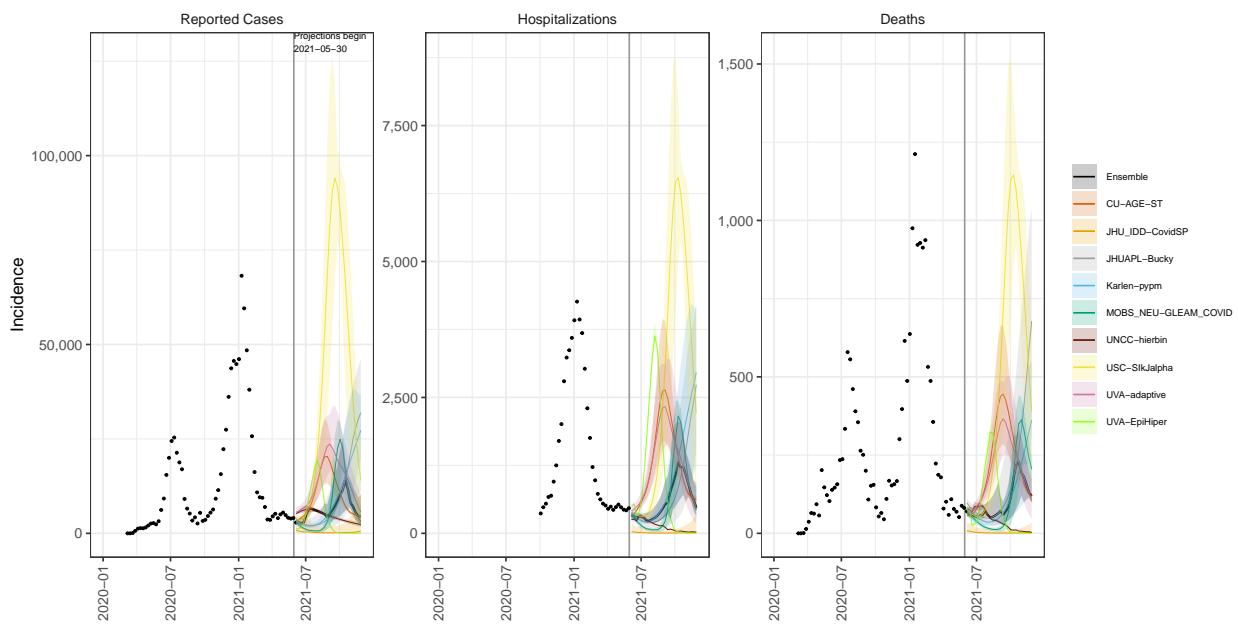
AL model variance & 50% projection intervals – Low vaccination, High variant transmissibility



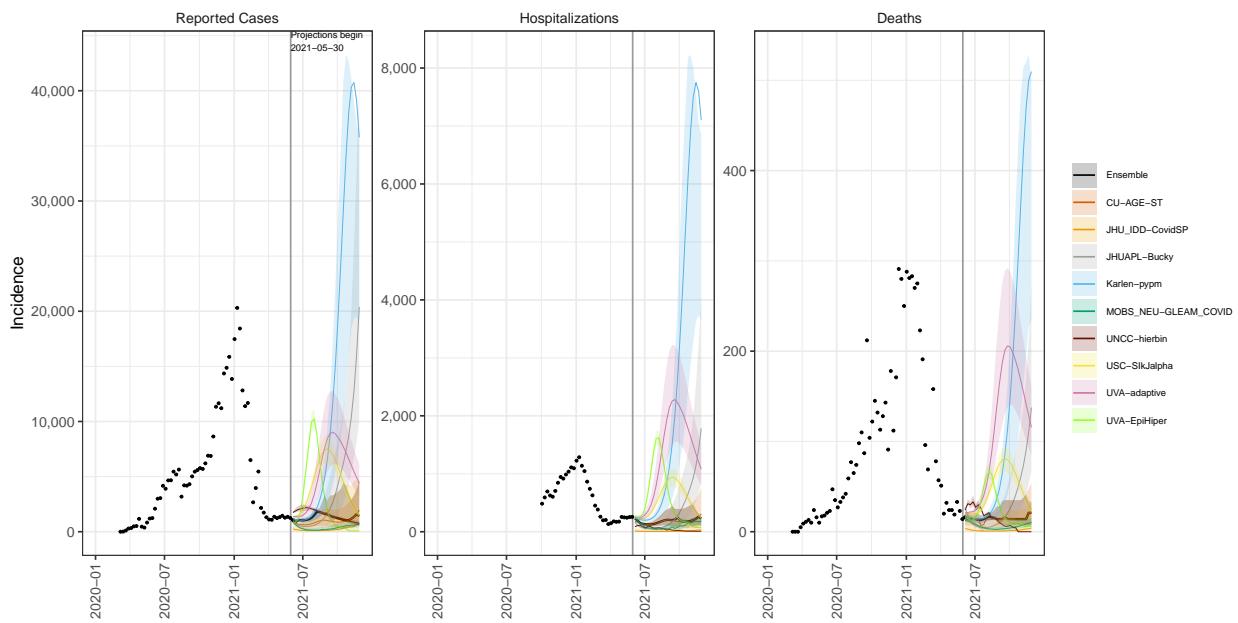
AK model variance & 50% projection intervals – Low vaccination, High variant transmissibility



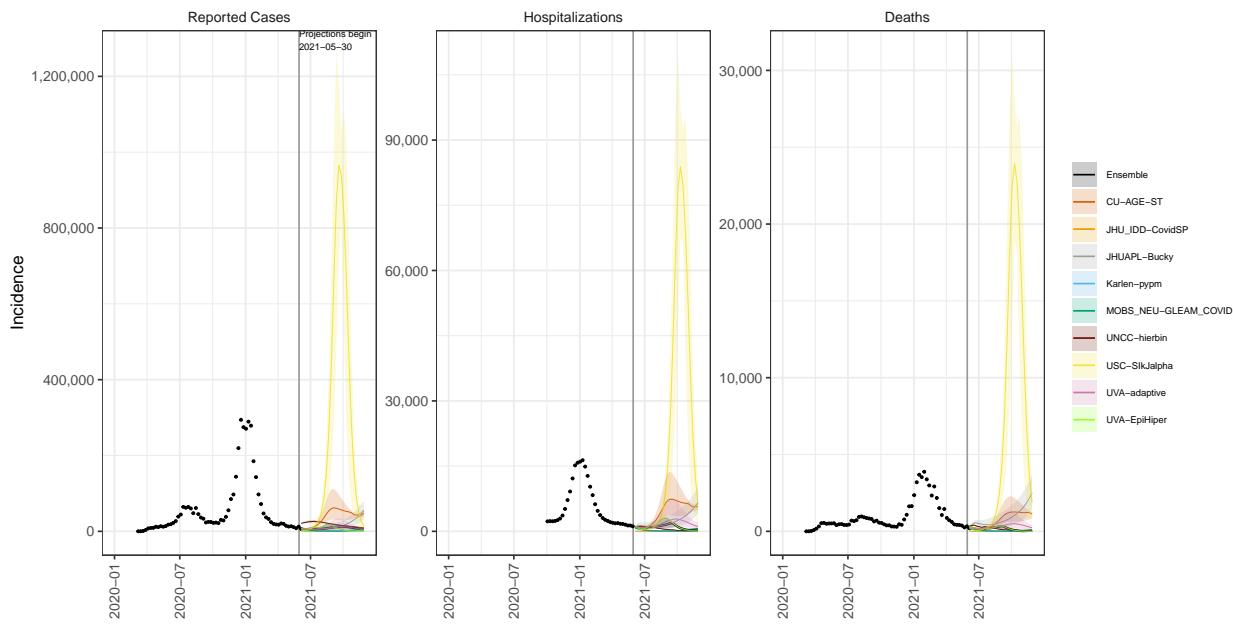
AZ model variance & 50% projection intervals – Low vaccination, High variant transmissibility



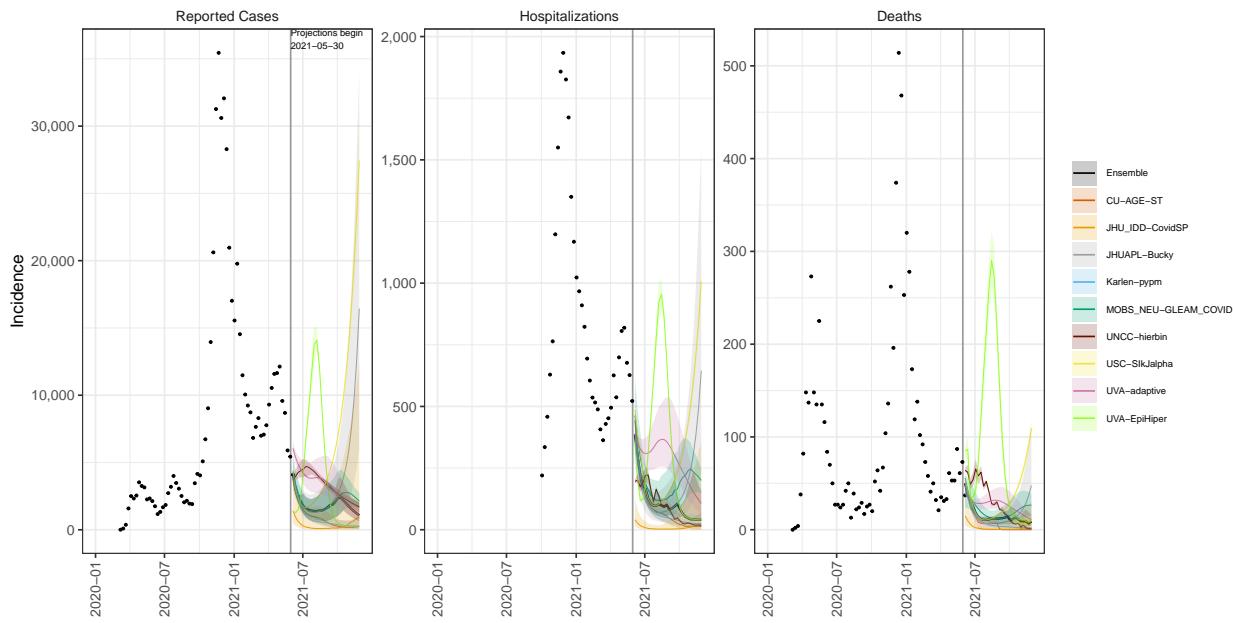
AR model variance & 50% projection intervals – Low vaccination, High variant transmissibility



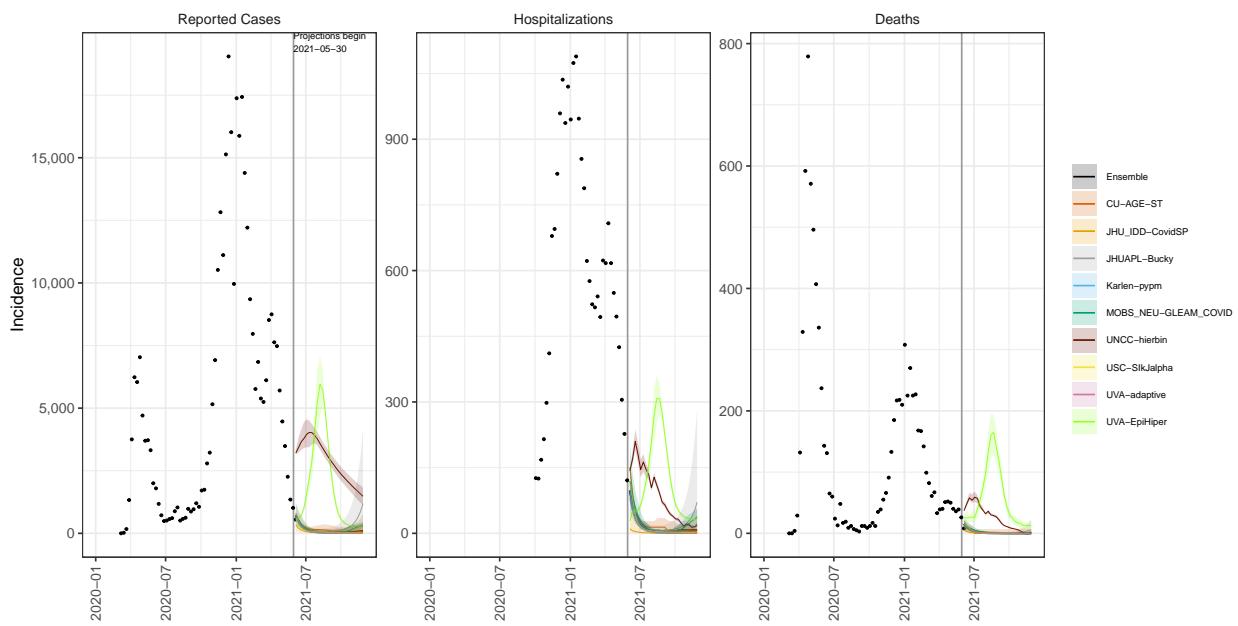
CA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



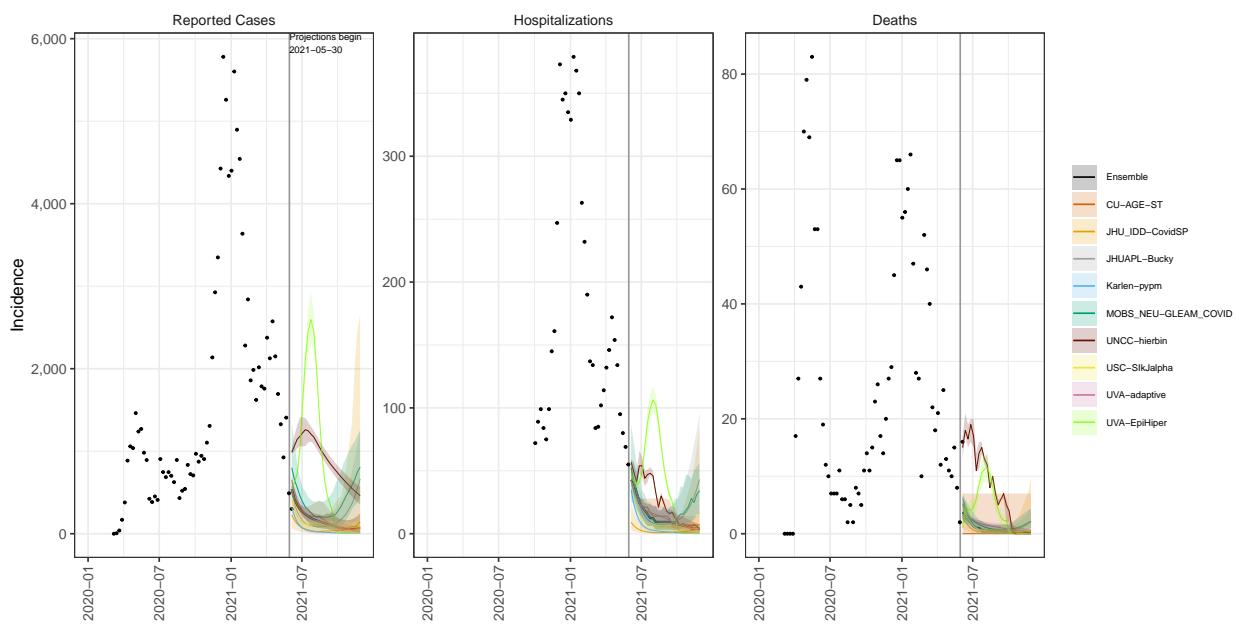
CO model variance & 50% projection intervals – Low vaccination, High variant transmissibility



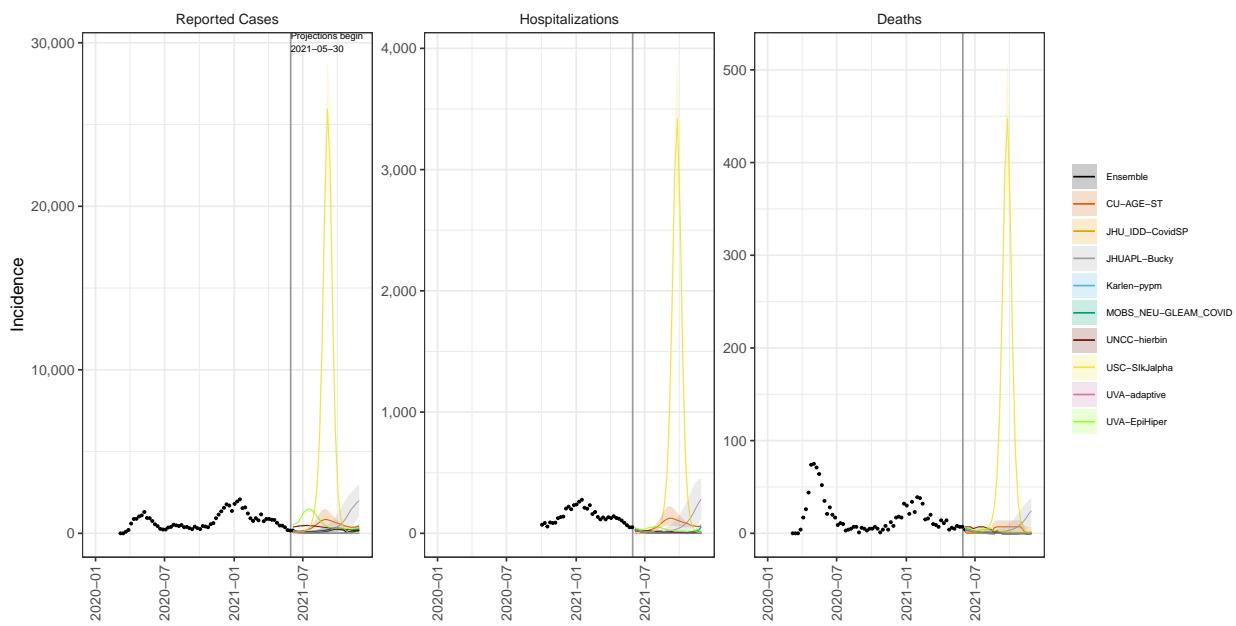
CT model variance & 50% projection intervals – Low vaccination, High variant transmissibility



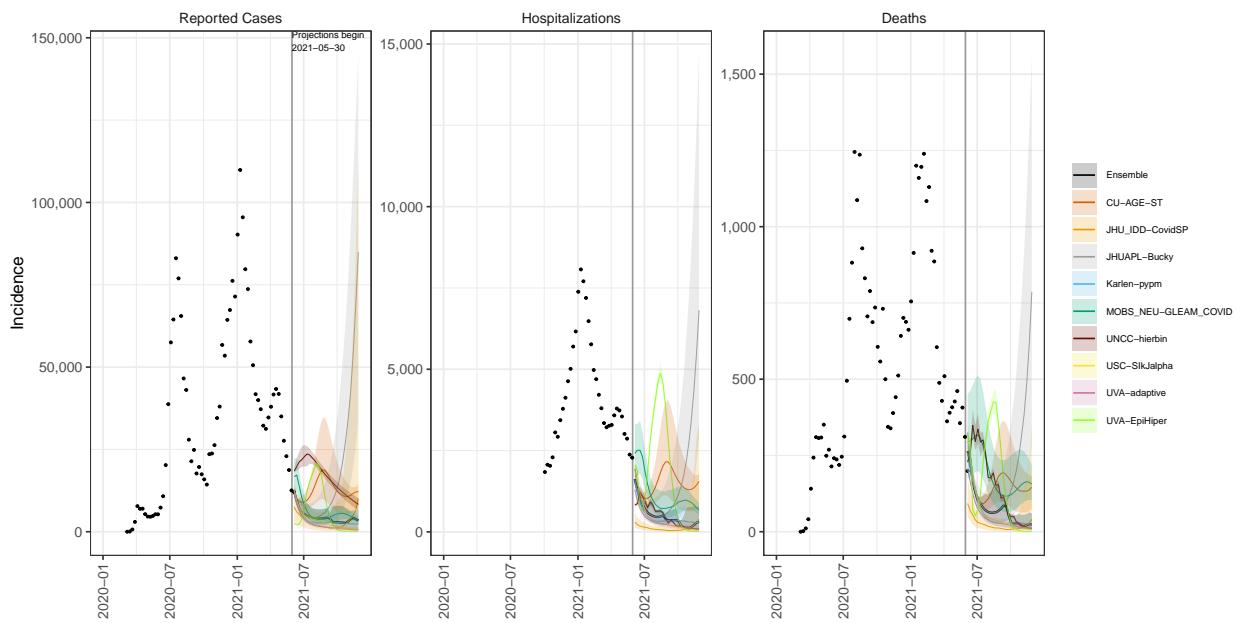
DE model variance & 50% projection intervals – Low vaccination, High variant transmissibility



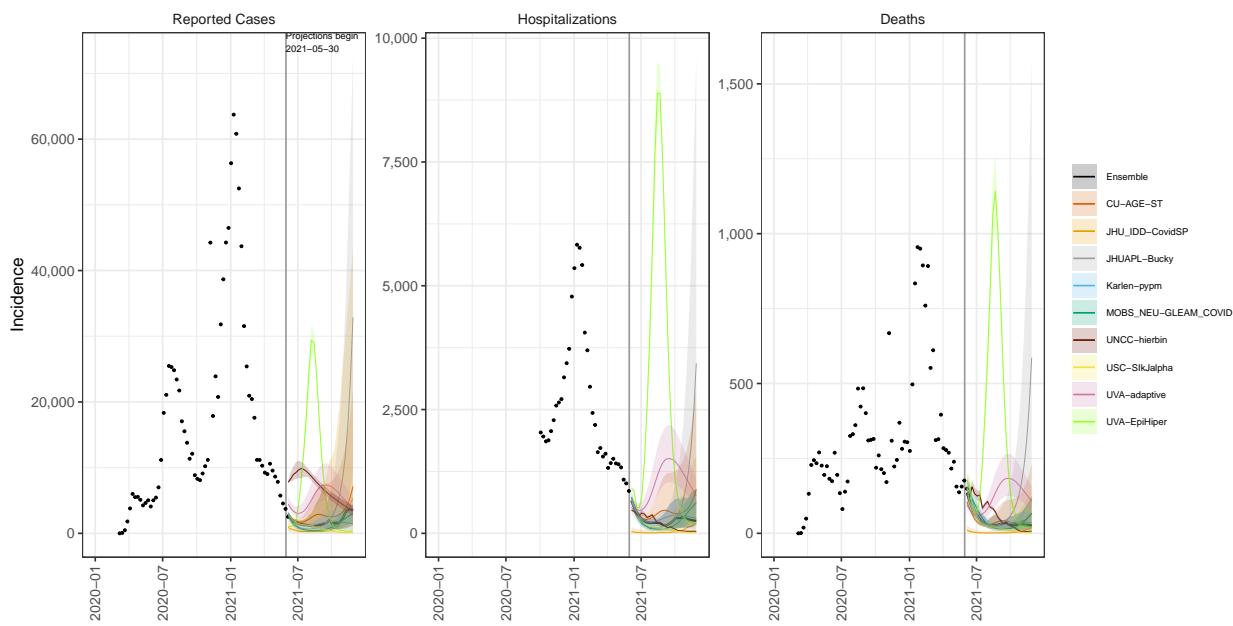
DC model variance & 50% projection intervals – Low vaccination, High variant transmissibility



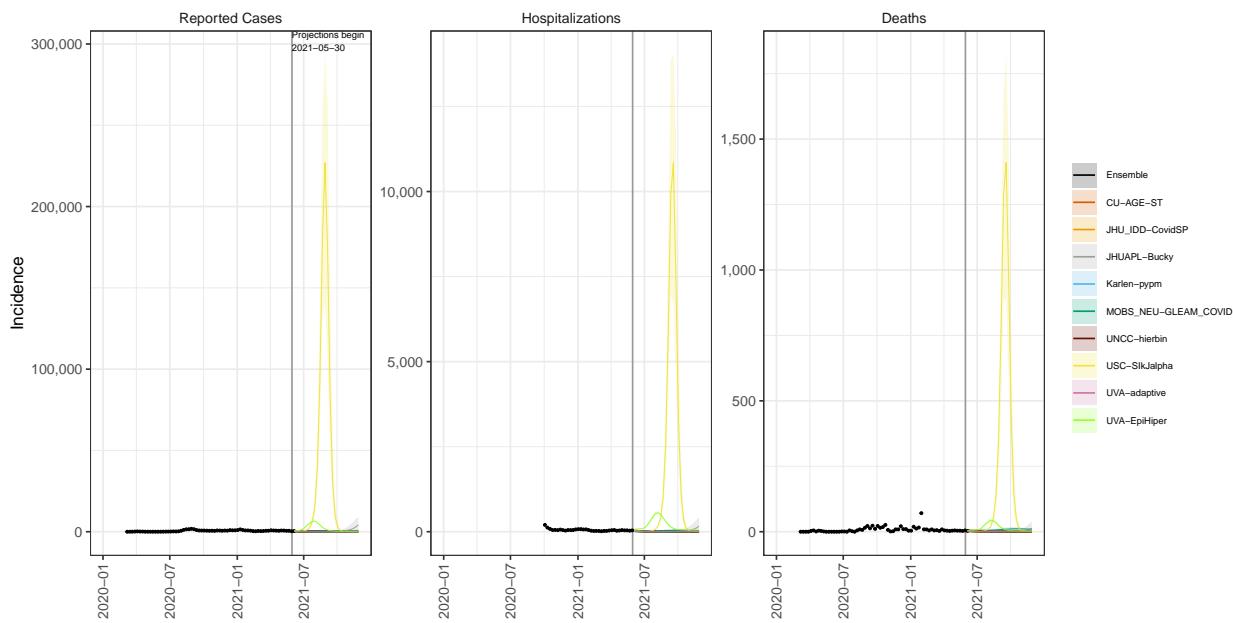
FL model variance & 50% projection intervals – Low vaccination, High variant transmissibility



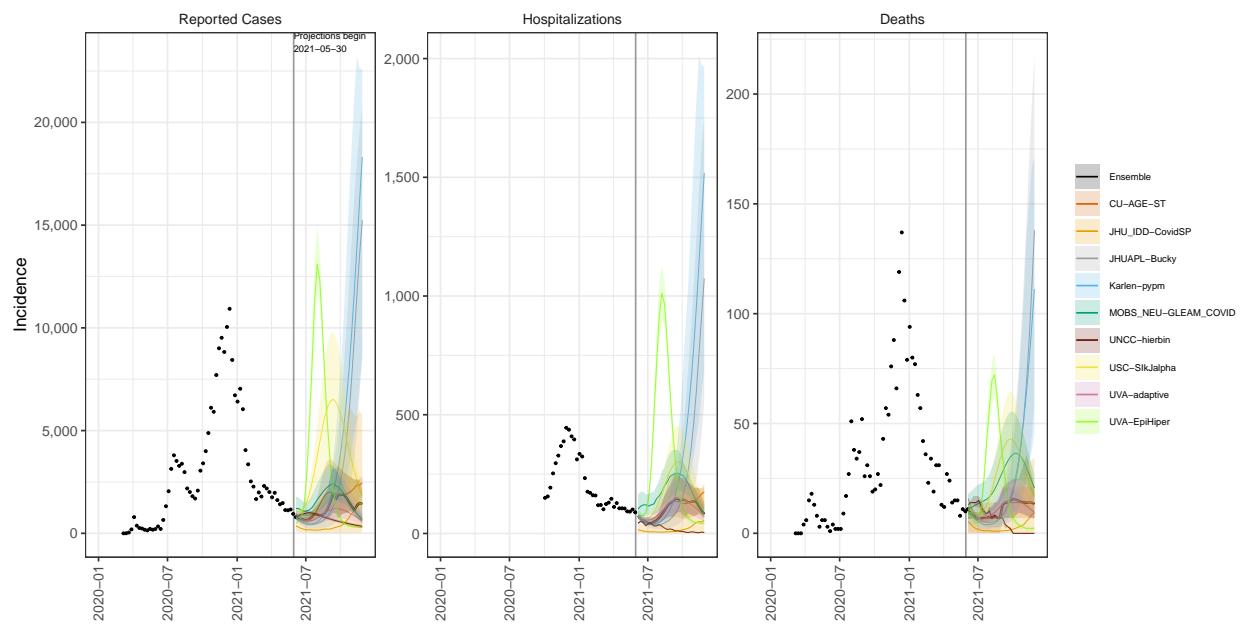
GA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



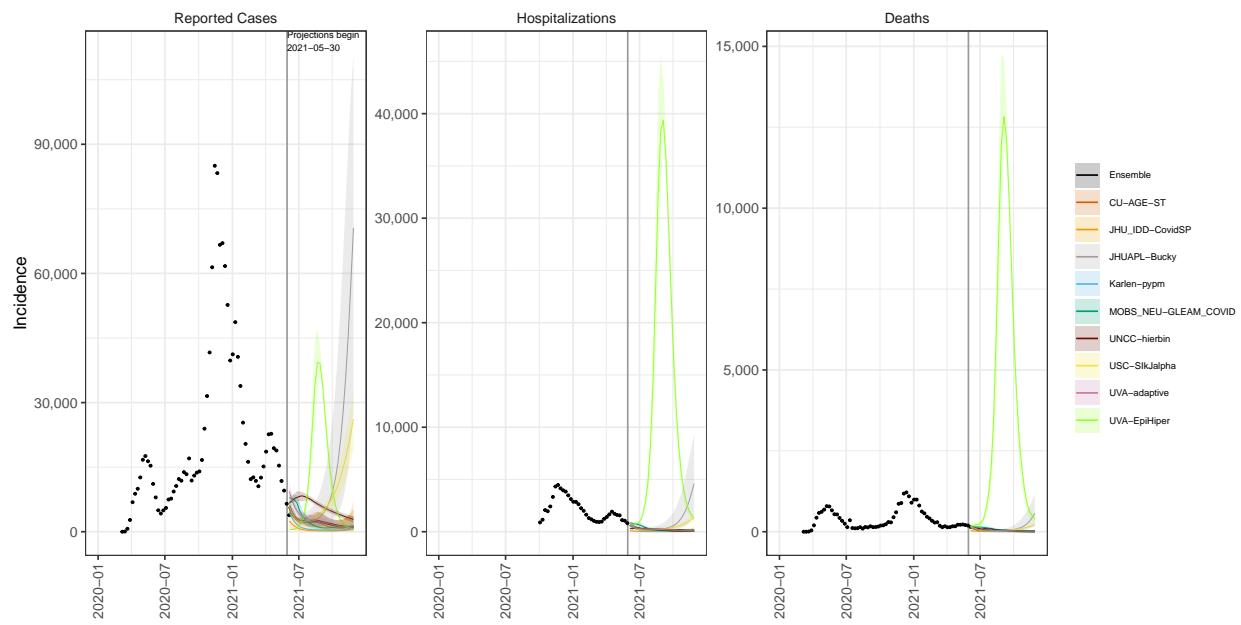
HI model variance & 50% projection intervals – Low vaccination, High variant transmissibility



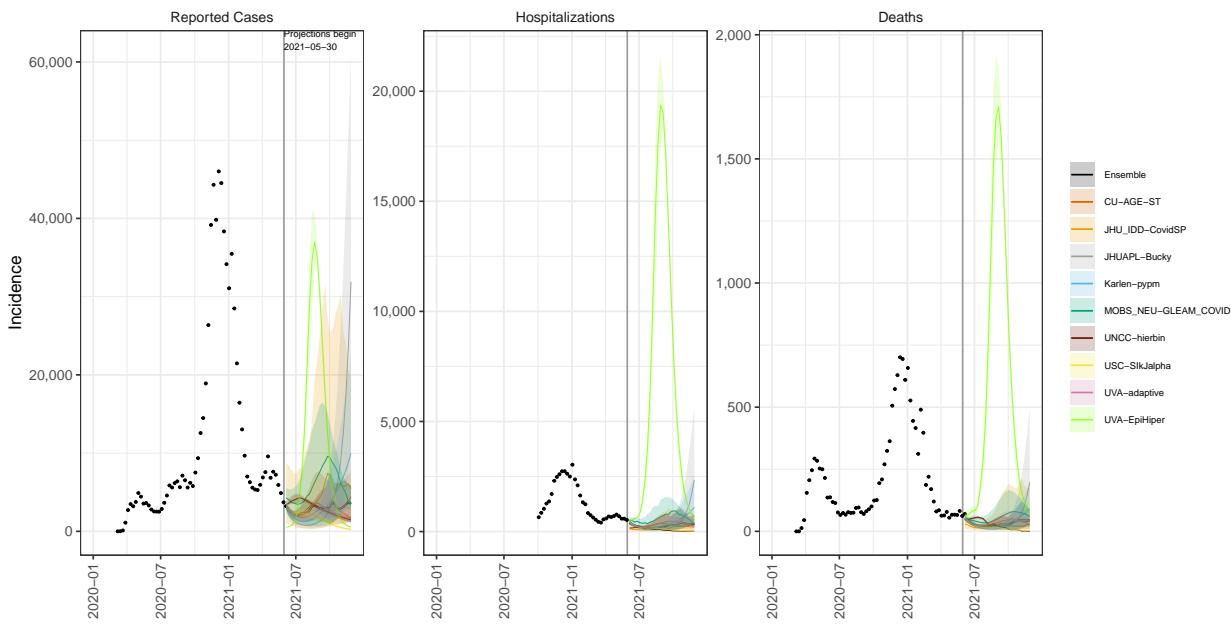
ID model variance & 50% projection intervals – Low vaccination, High variant transmissibility



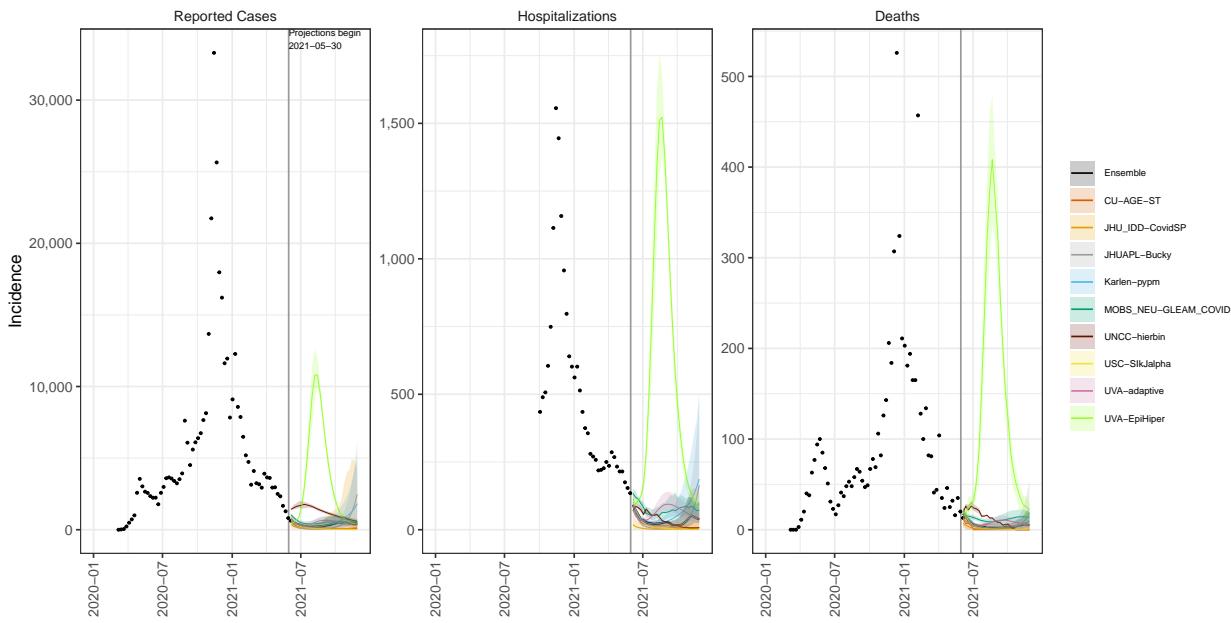
IL model variance & 50% projection intervals – Low vaccination, High variant transmissibility



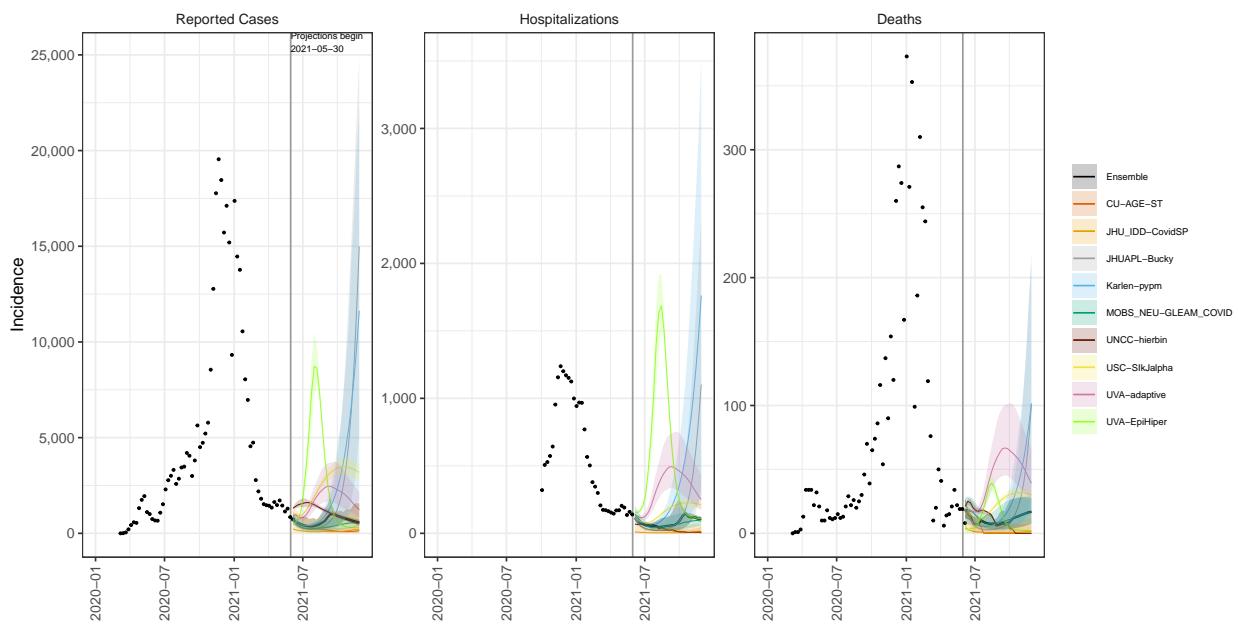
IN model variance & 50% projection intervals – Low vaccination, High variant transmissibility



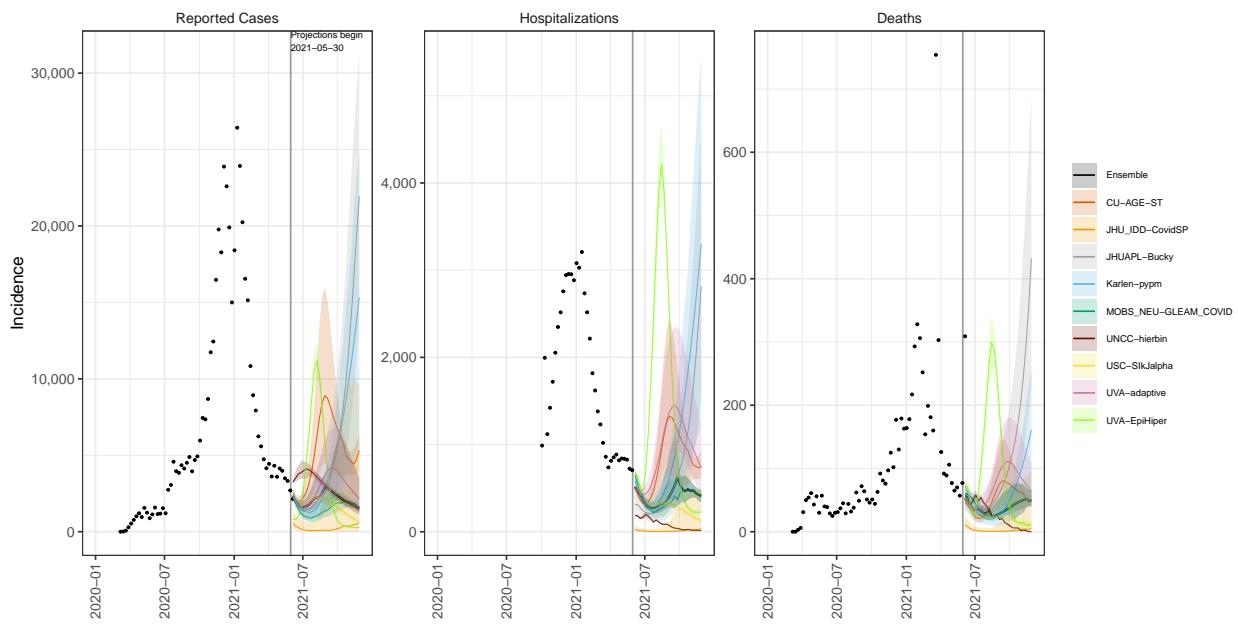
IA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



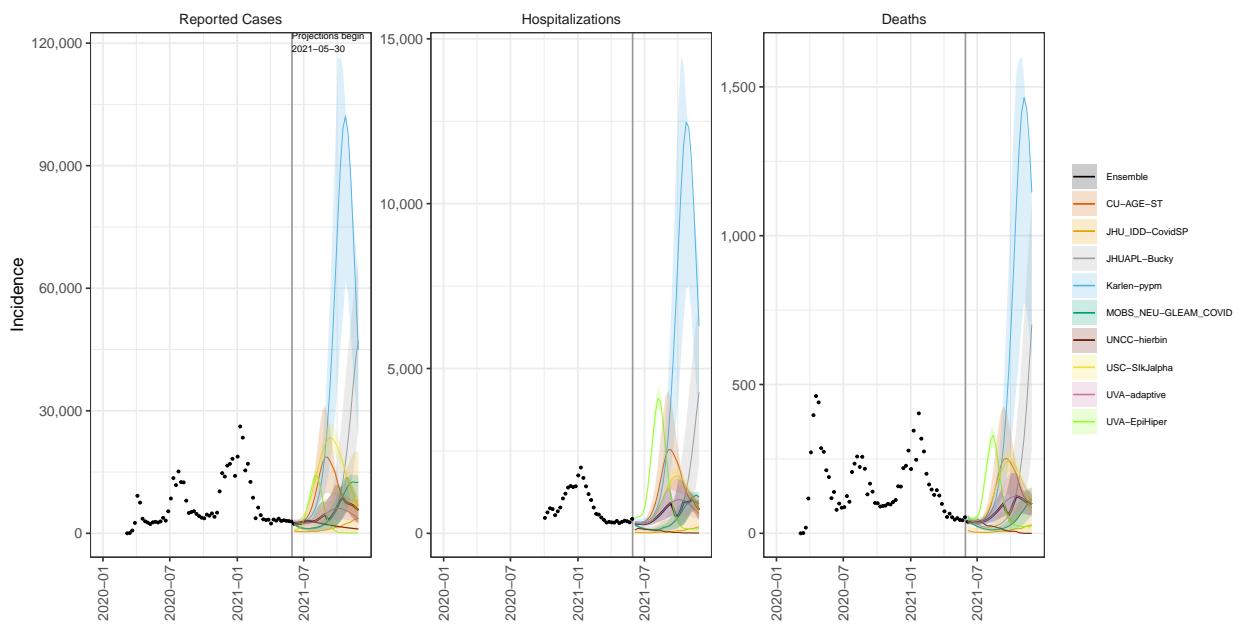
KS model variance & 50% projection intervals – Low vaccination, High variant transmissibility



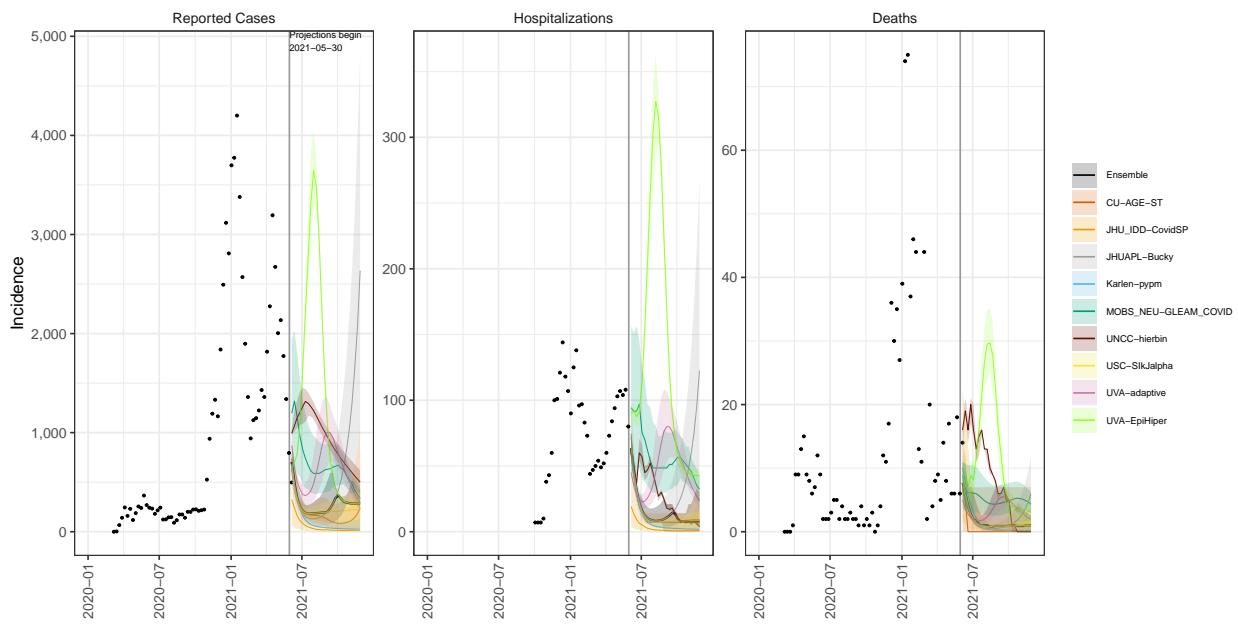
KY model variance & 50% projection intervals – Low vaccination, High variant transmissibility



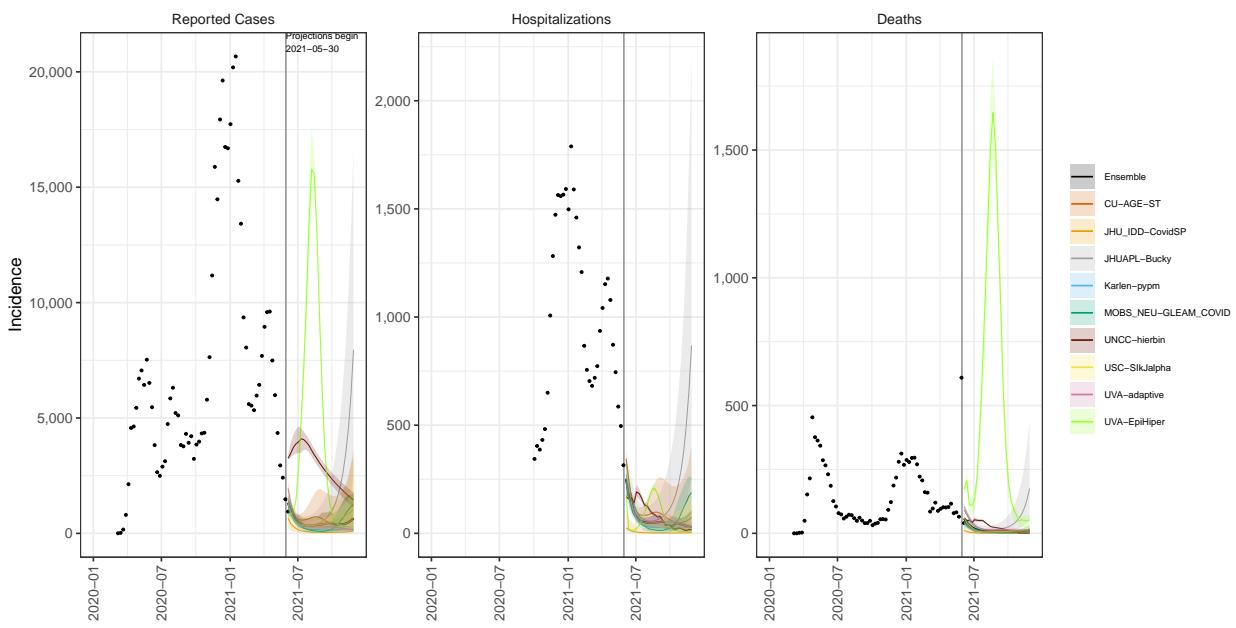
LA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



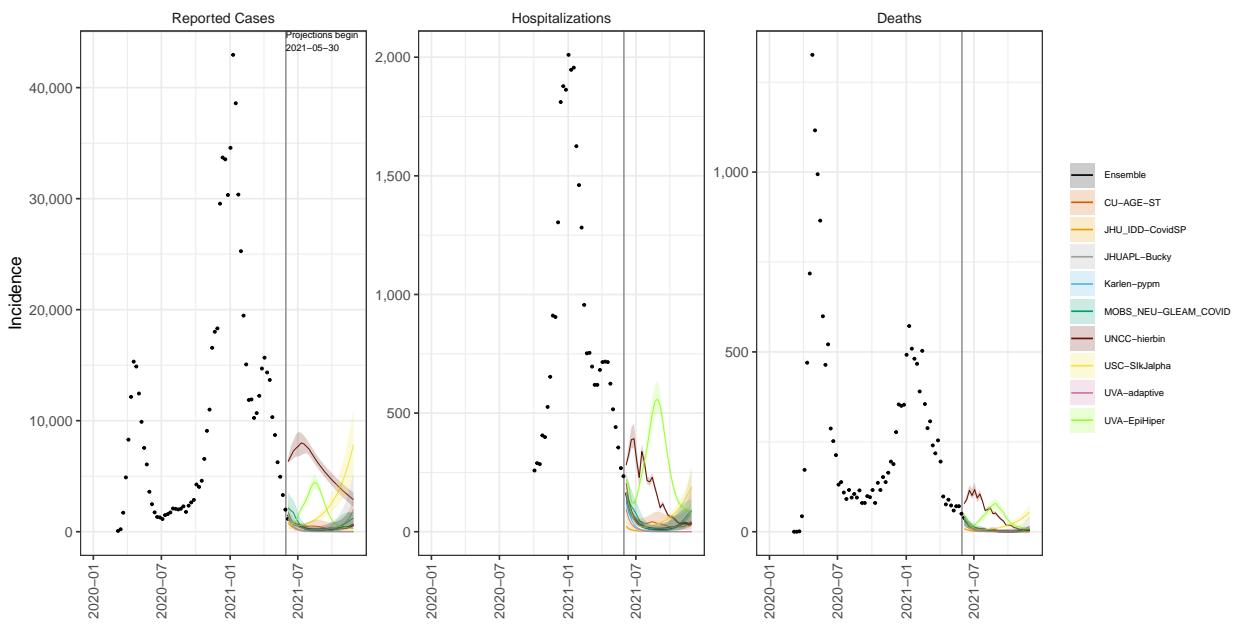
ME model variance & 50% projection intervals – Low vaccination, High variant transmissibility



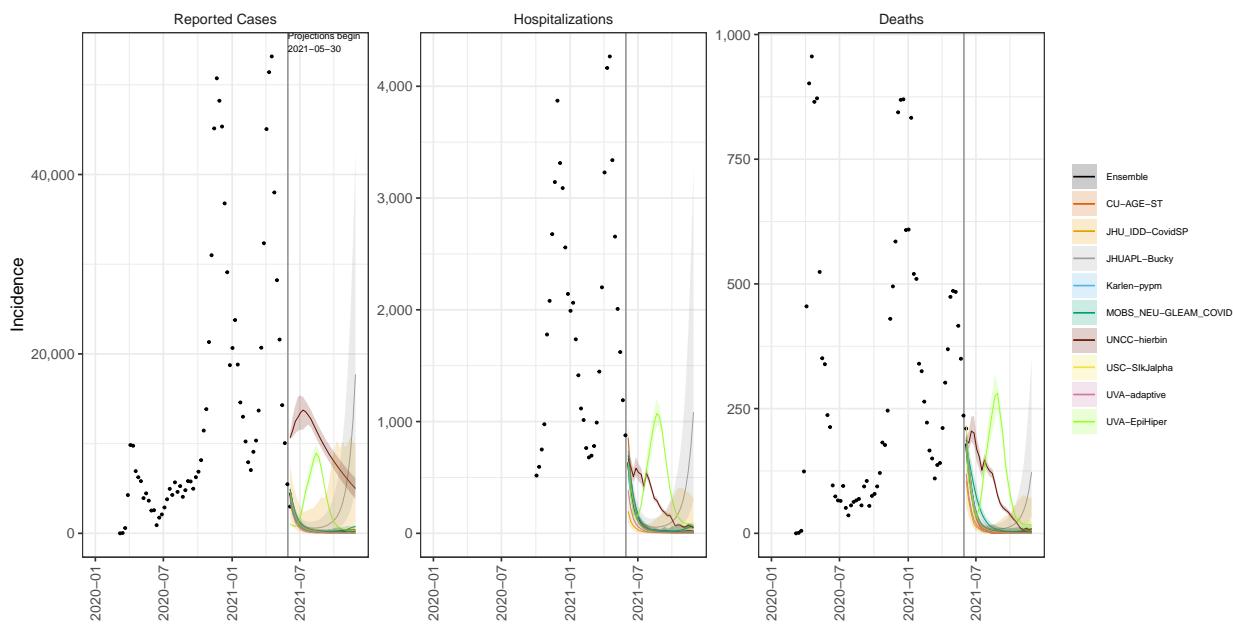
MD model variance & 50% projection intervals – Low vaccination, High variant transmissibility



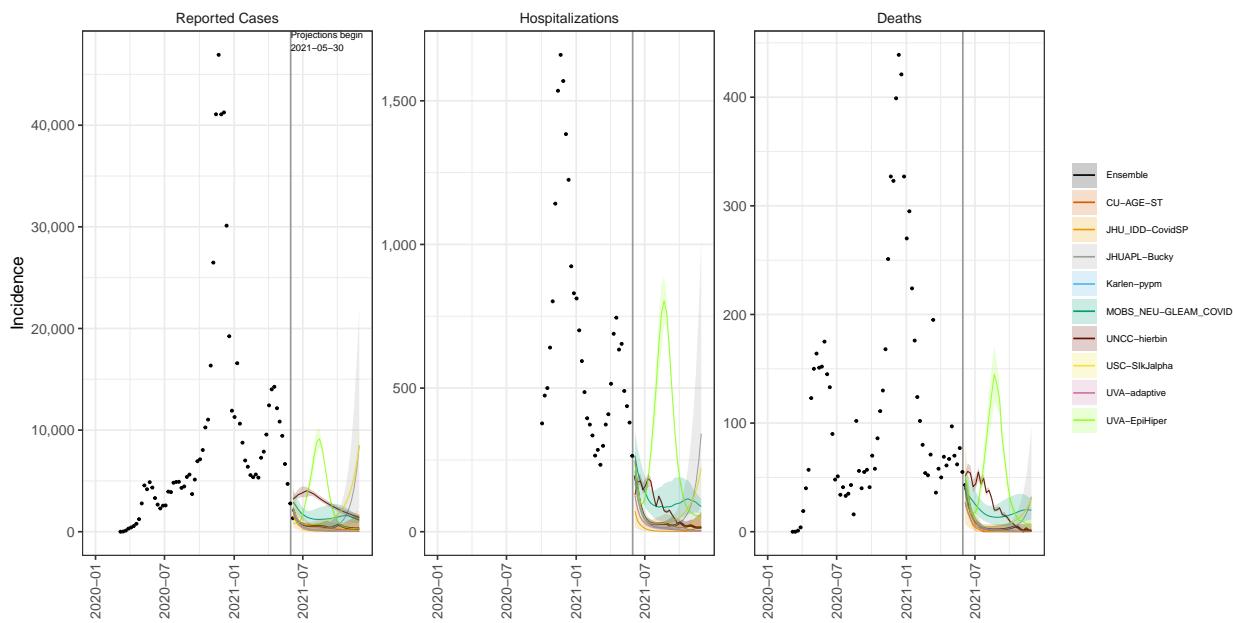
MA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



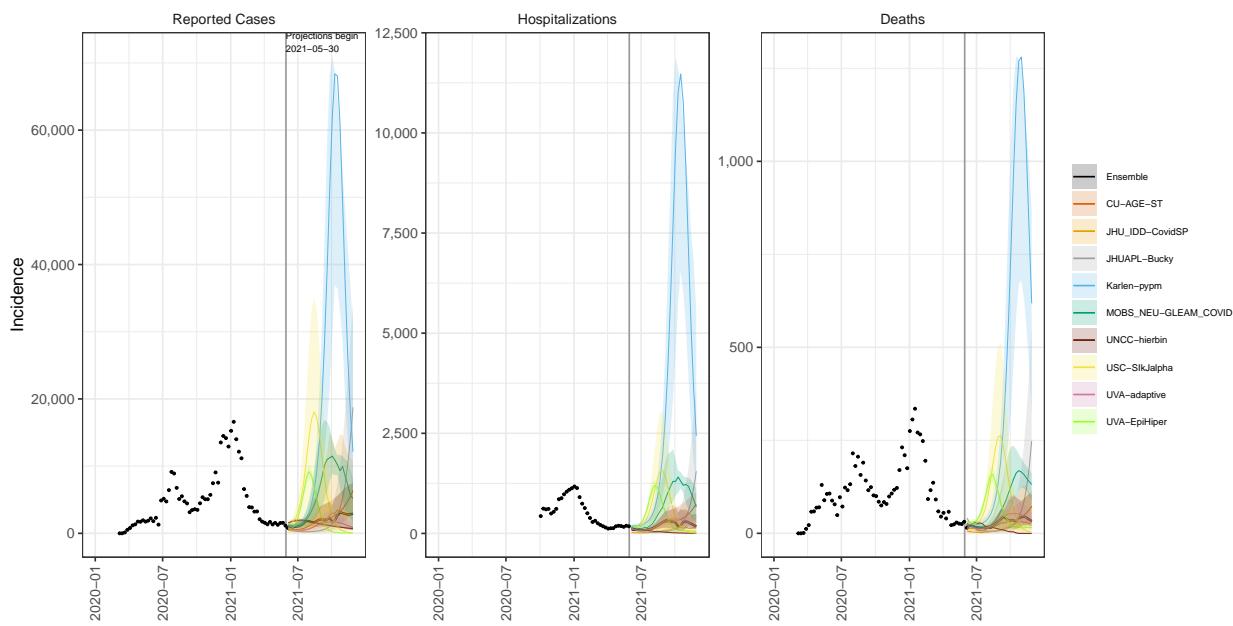
MI model variance & 50% projection intervals – Low vaccination, High variant transmissibility



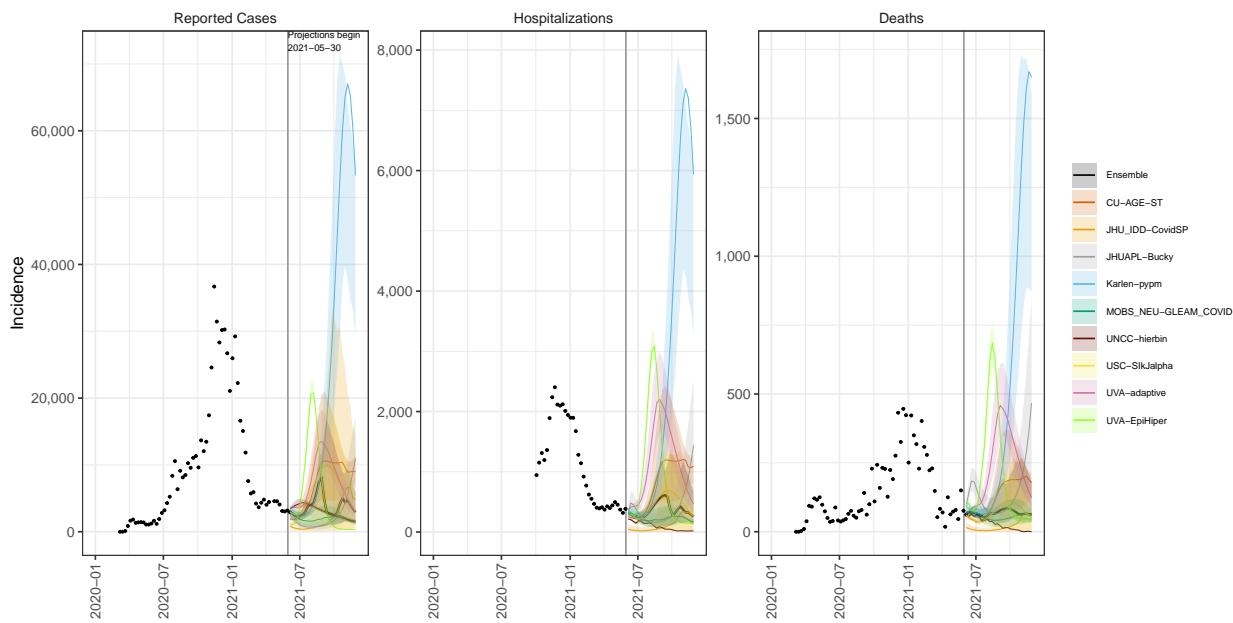
MN model variance & 50% projection intervals – Low vaccination, High variant transmissibility



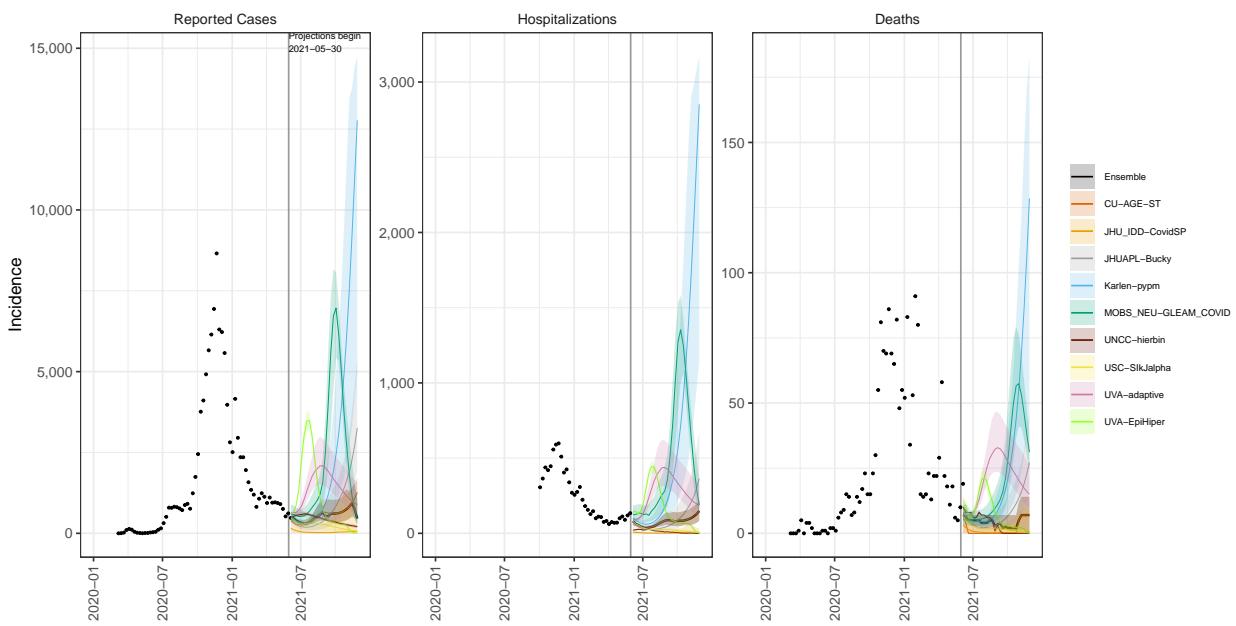
MS model variance & 50% projection intervals – Low vaccination, High variant transmissibility



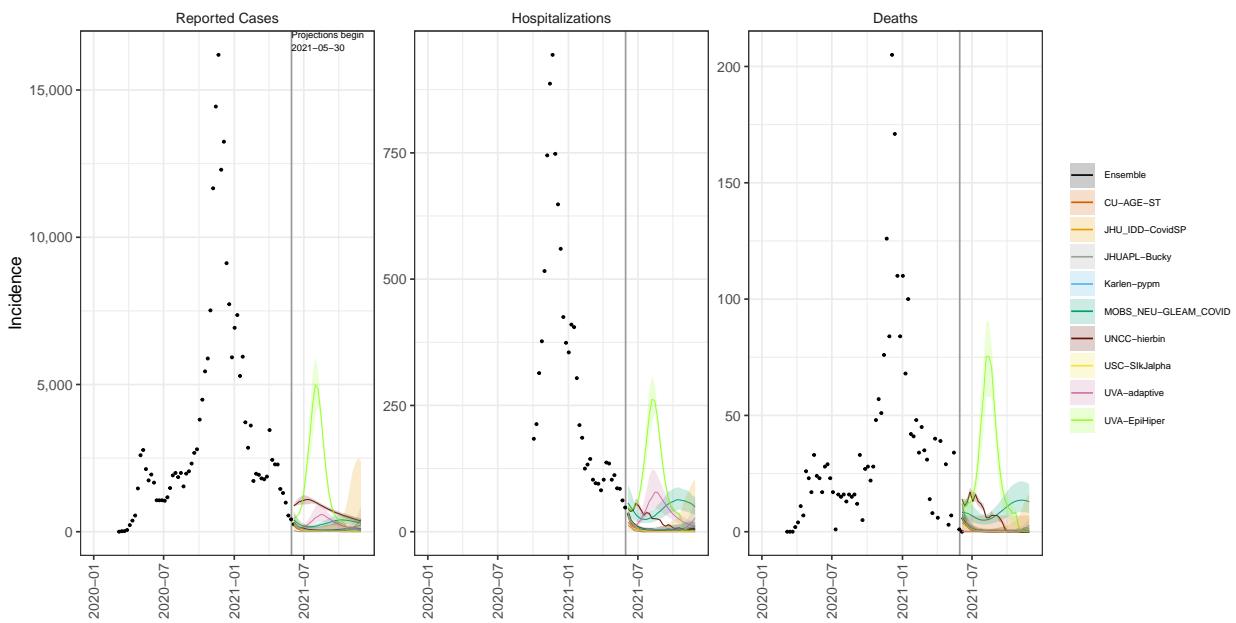
MO model variance & 50% projection intervals – Low vaccination, High variant transmissibility



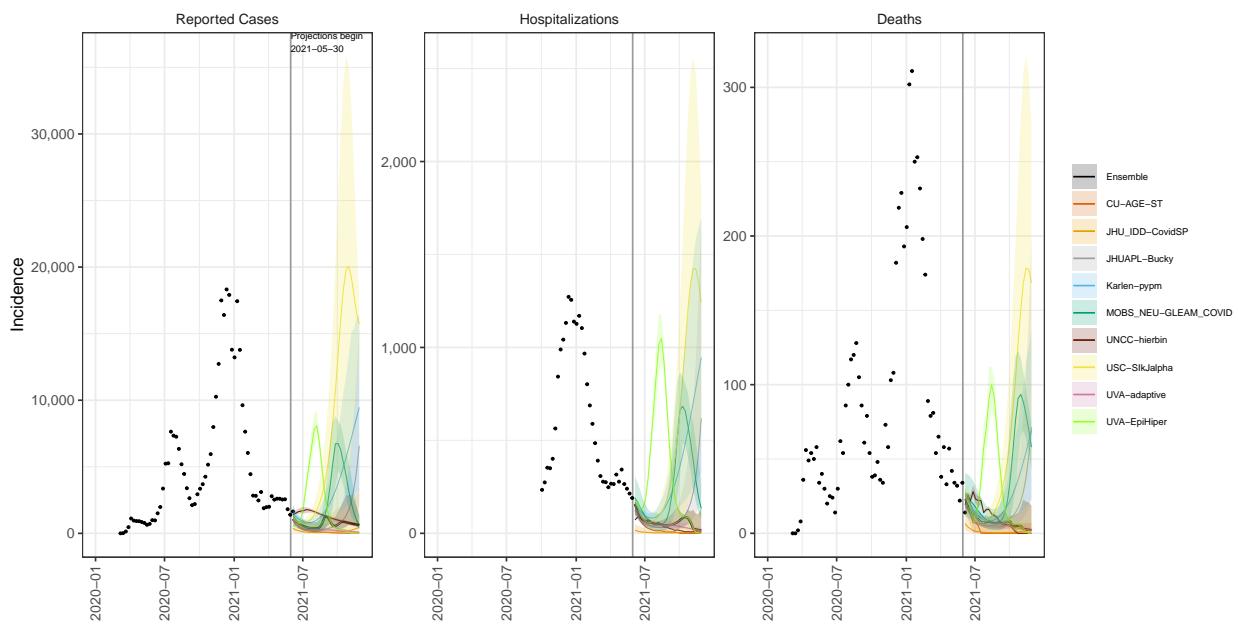
MT model variance & 50% projection intervals – Low vaccination, High variant transmissibility



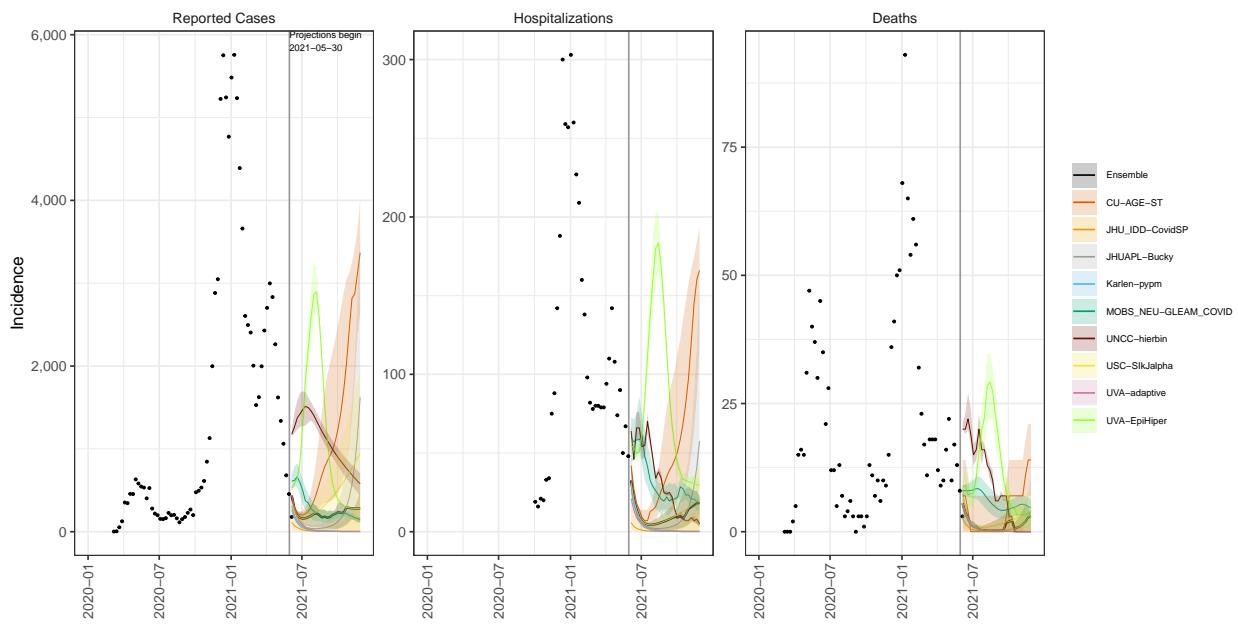
NE model variance & 50% projection intervals – Low vaccination, High variant transmissibility



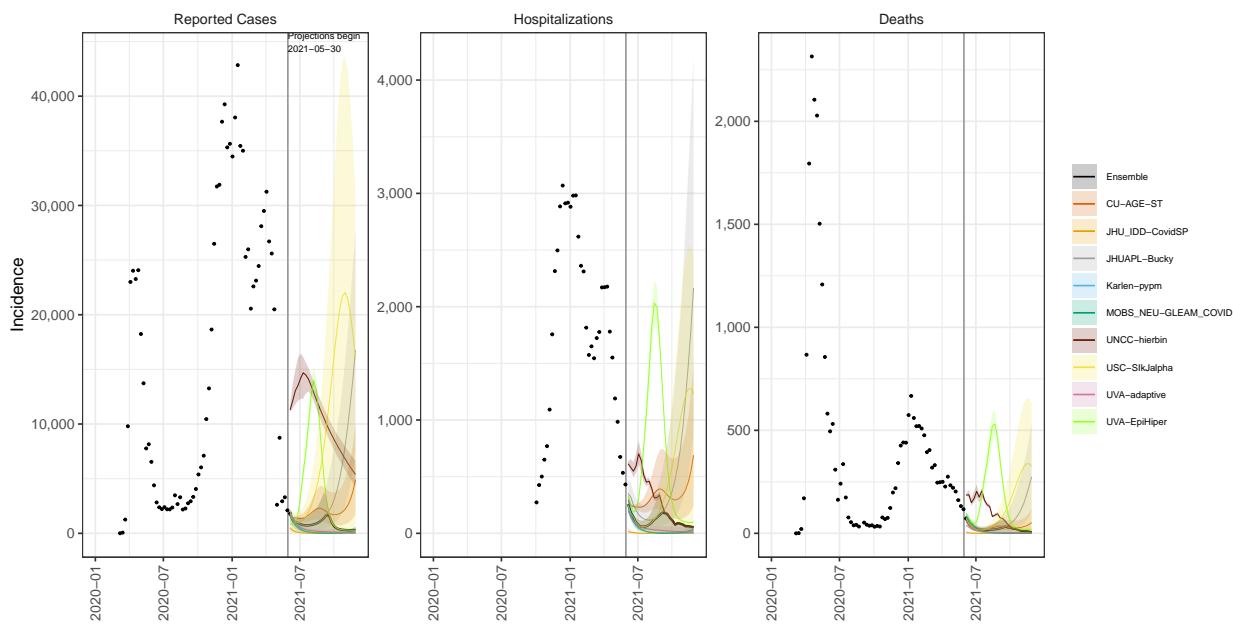
NV model variance & 50% projection intervals – Low vaccination, High variant transmissibility



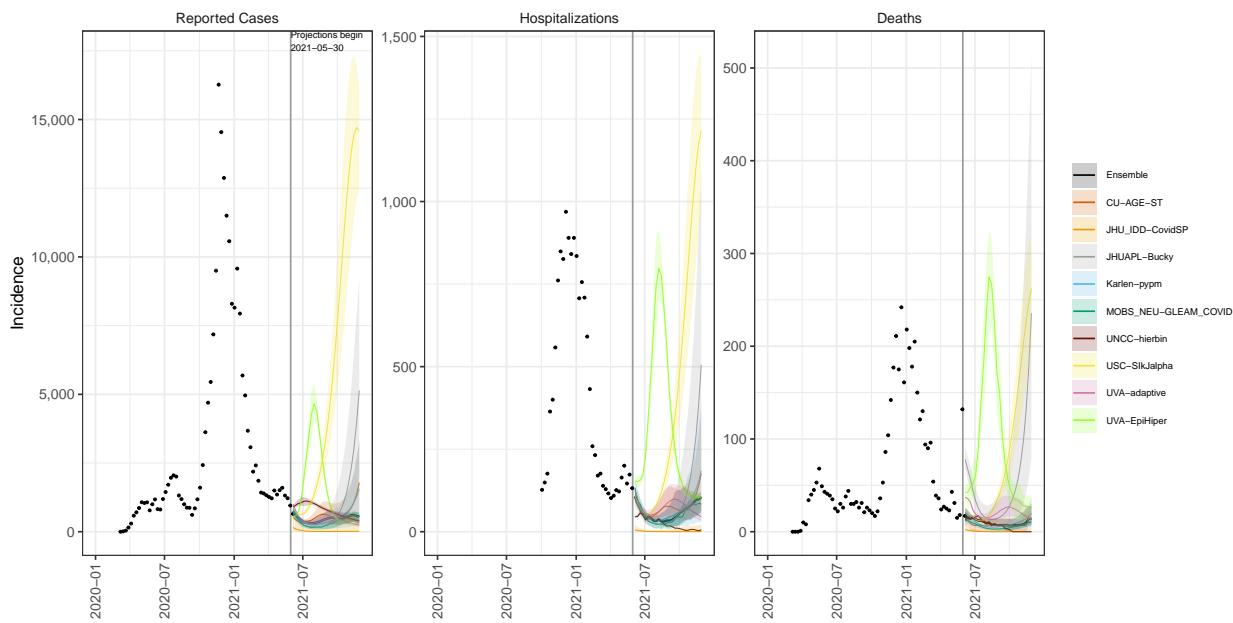
NH model variance & 50% projection intervals – Low vaccination, High variant transmissibility



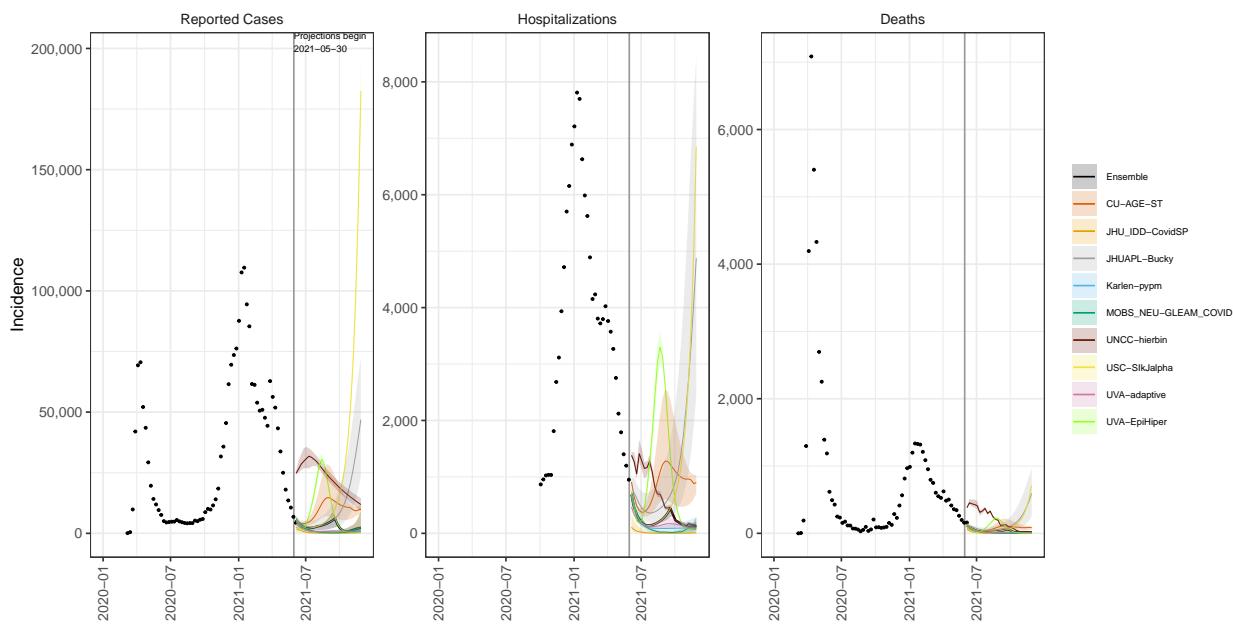
NJ model variance & 50% projection intervals – Low vaccination, High variant transmissibility



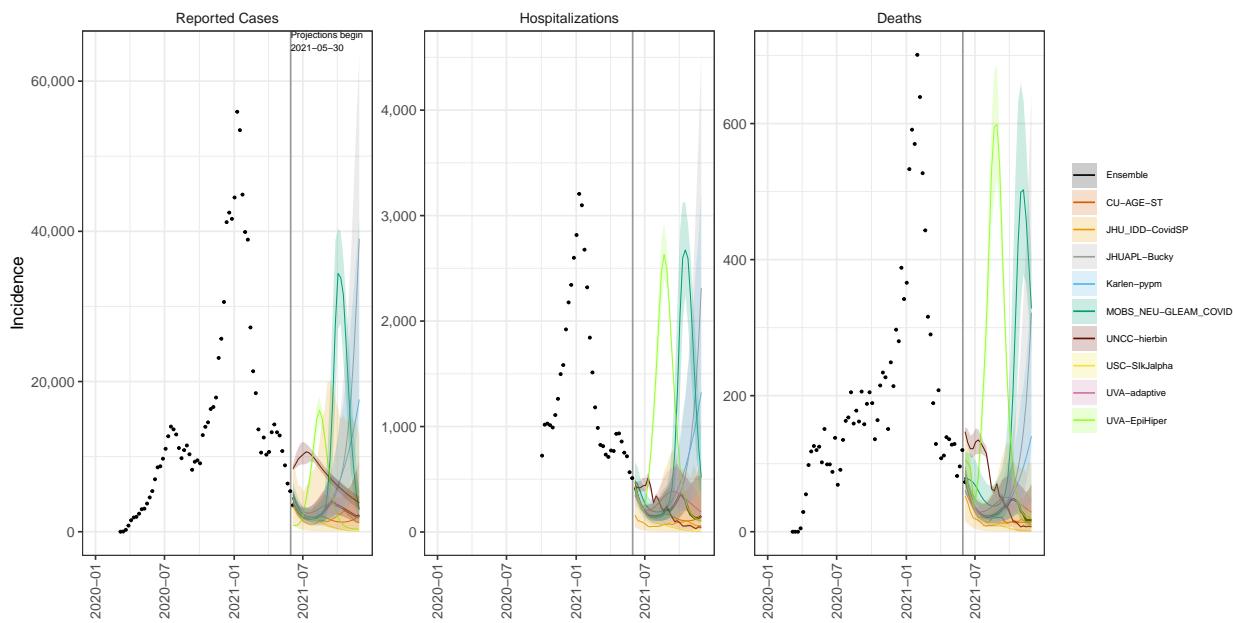
NM model variance & 50% projection intervals – Low vaccination, High variant transmissibility



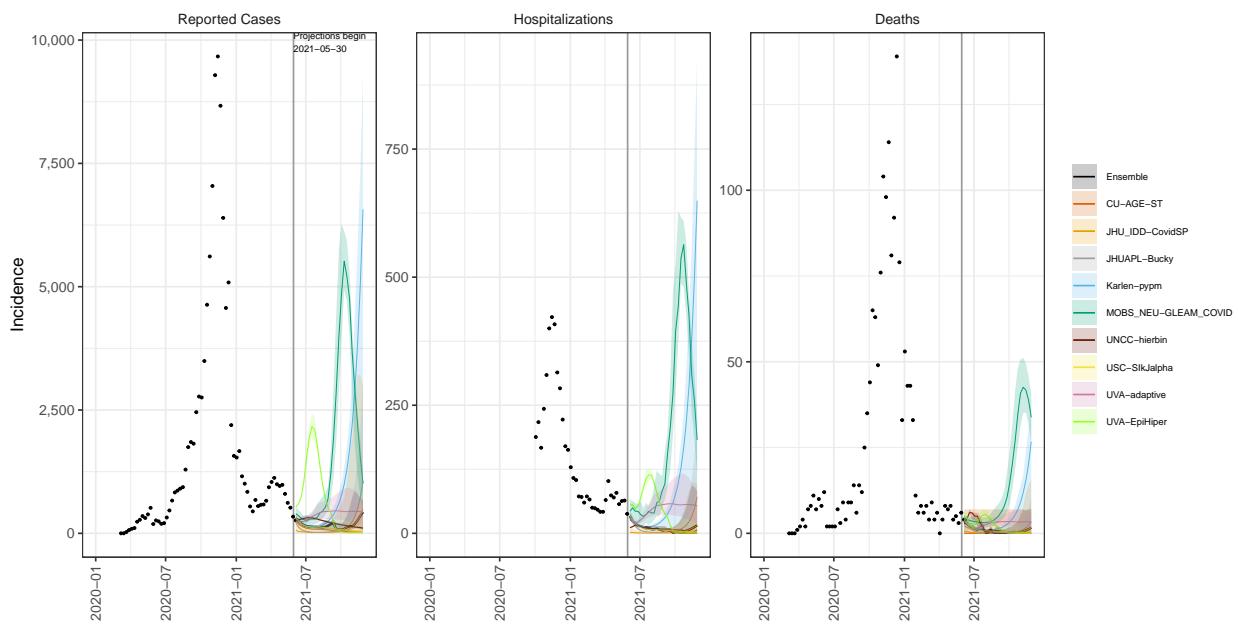
NY model variance & 50% projection intervals – Low vaccination, High variant transmissibility



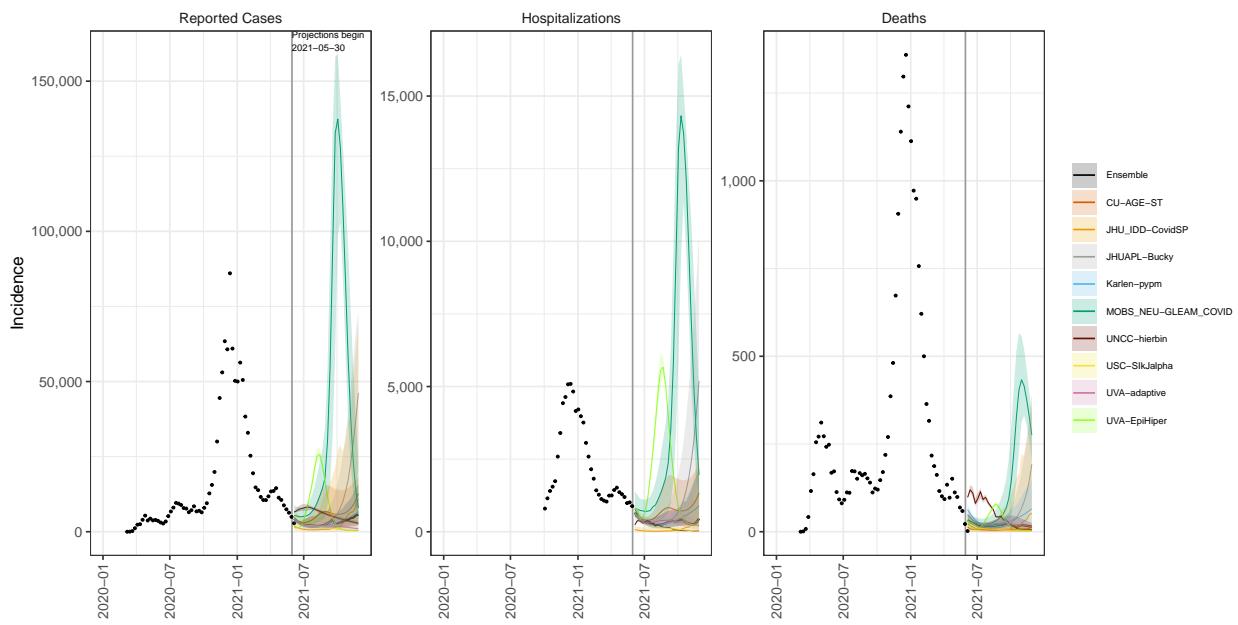
NC model variance & 50% projection intervals – Low vaccination, High variant transmissibility



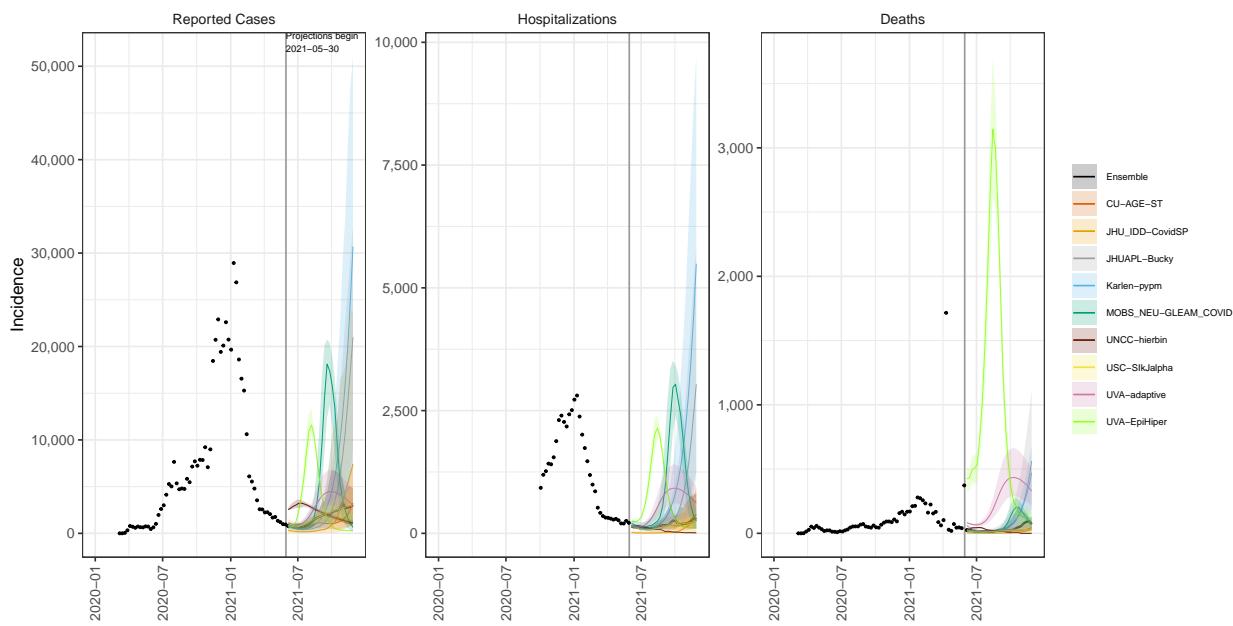
ND model variance & 50% projection intervals – Low vaccination, High variant transmissibility



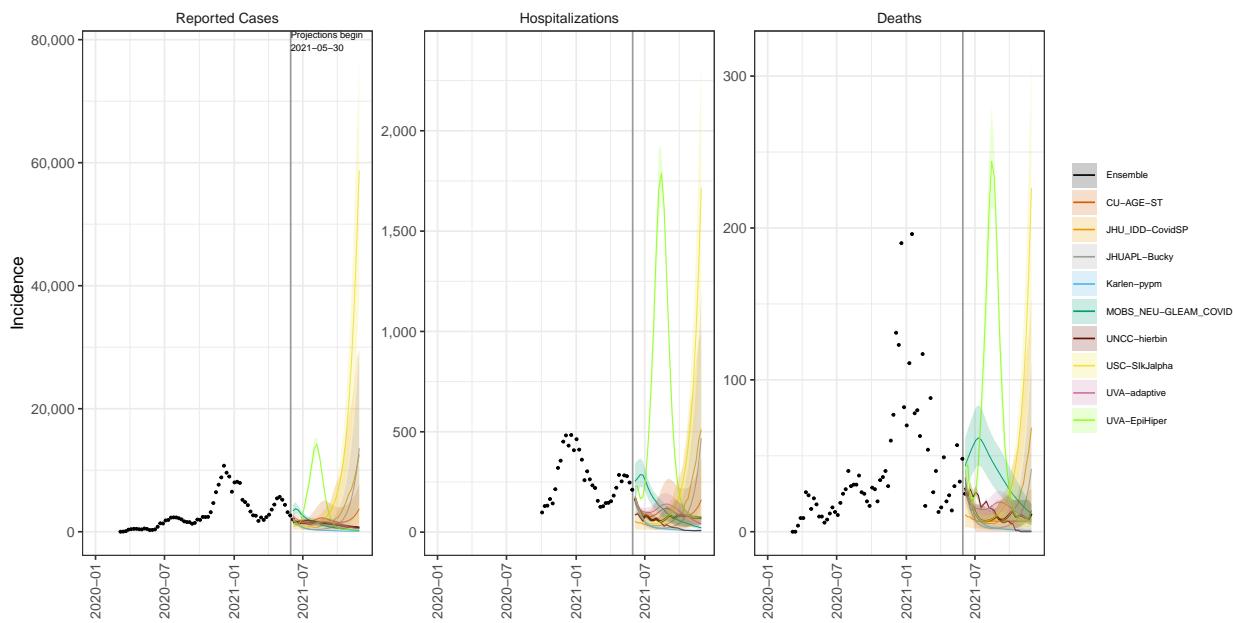
OH model variance & 50% projection intervals – Low vaccination, High variant transmissibility



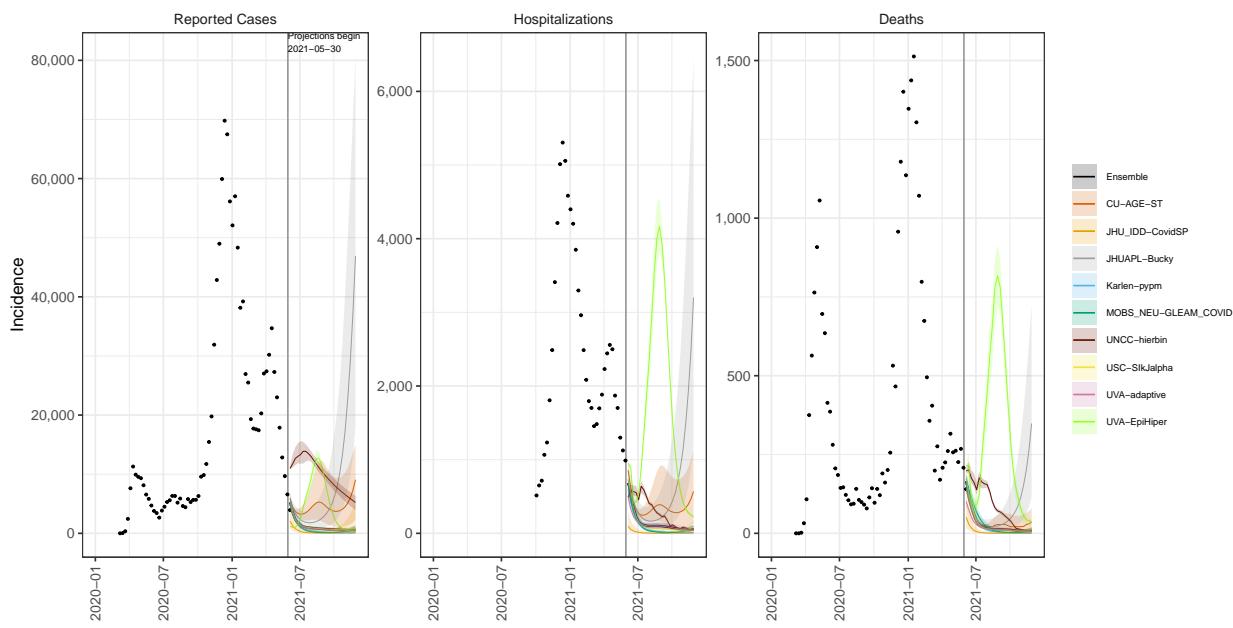
OK model variance & 50% projection intervals – Low vaccination, High variant transmissibility



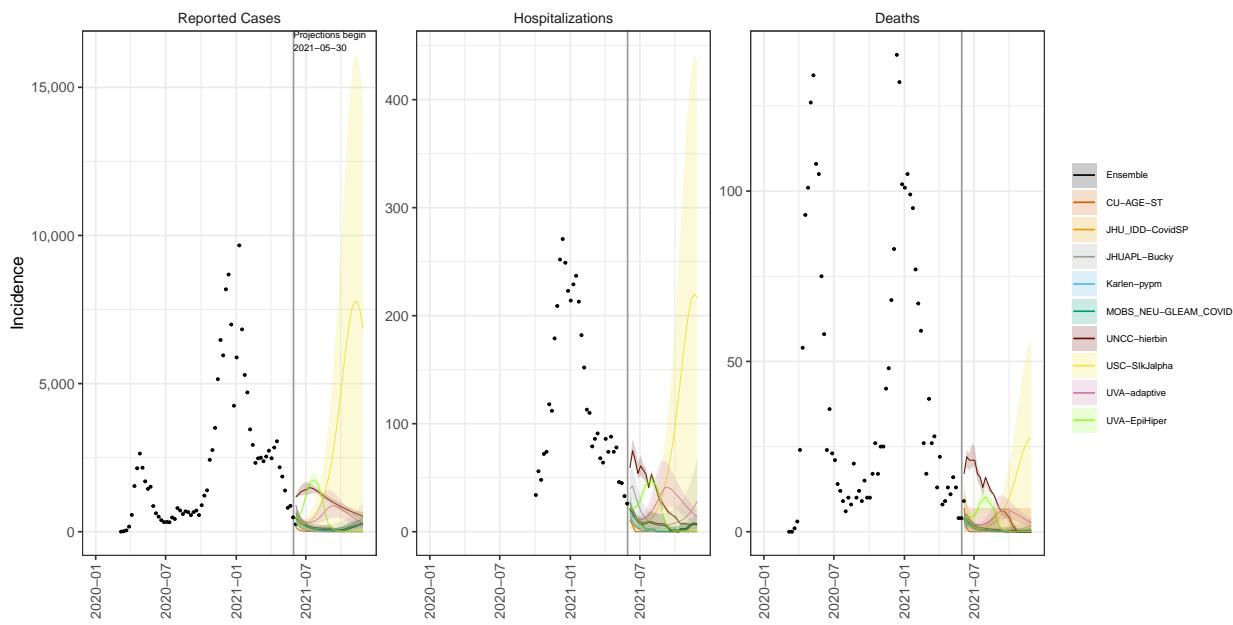
OR model variance & 50% projection intervals – Low vaccination, High variant transmissibility



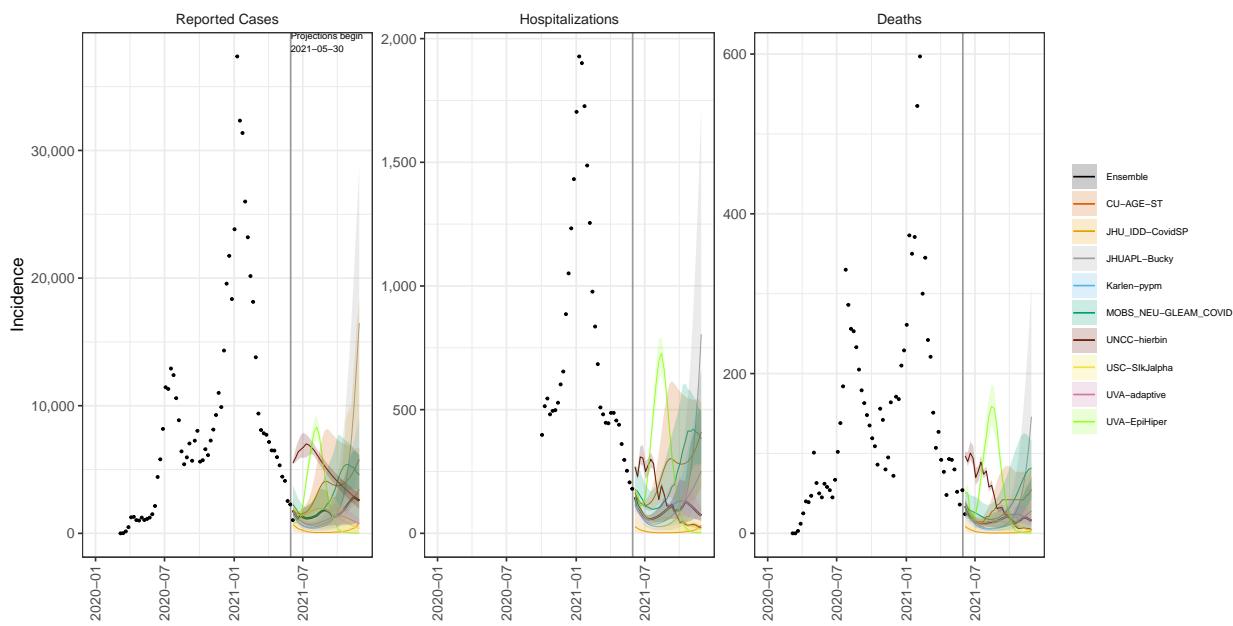
PA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



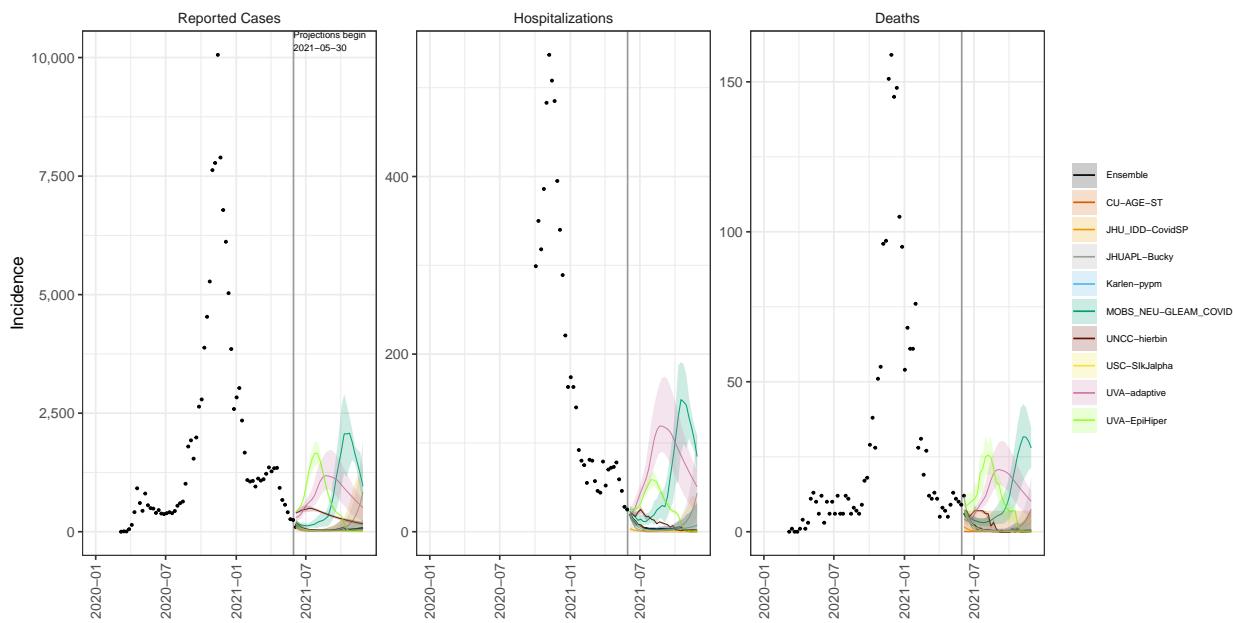
RI model variance & 50% projection intervals – Low vaccination, High variant transmissibility



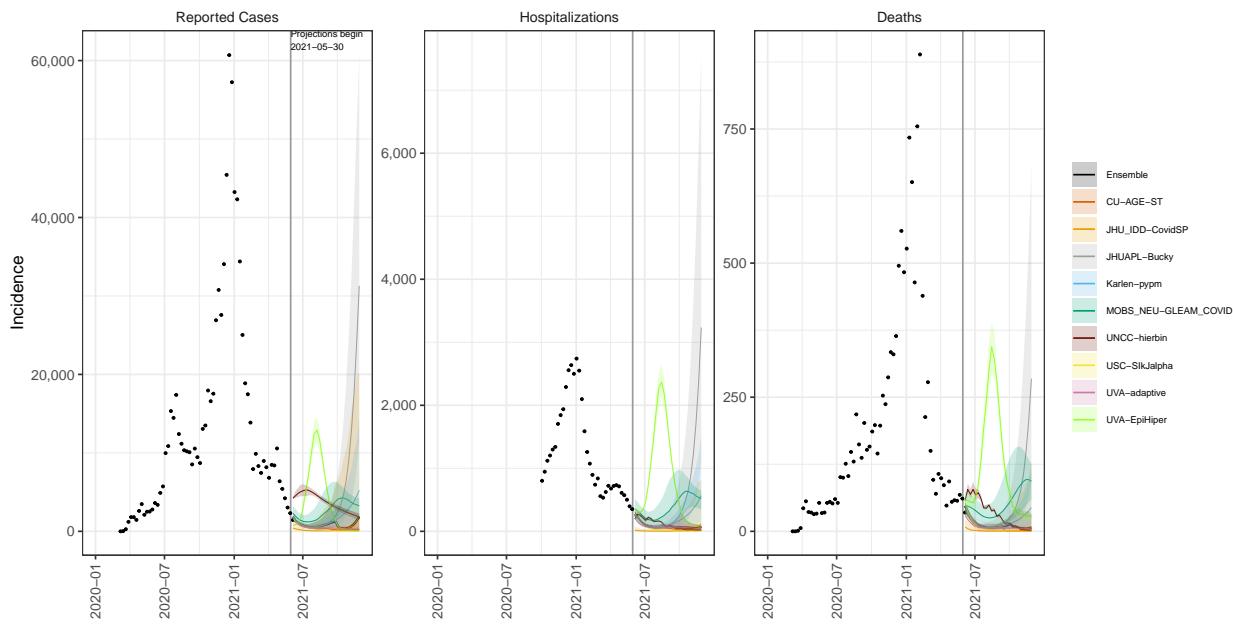
SC model variance & 50% projection intervals – Low vaccination, High variant transmissibility



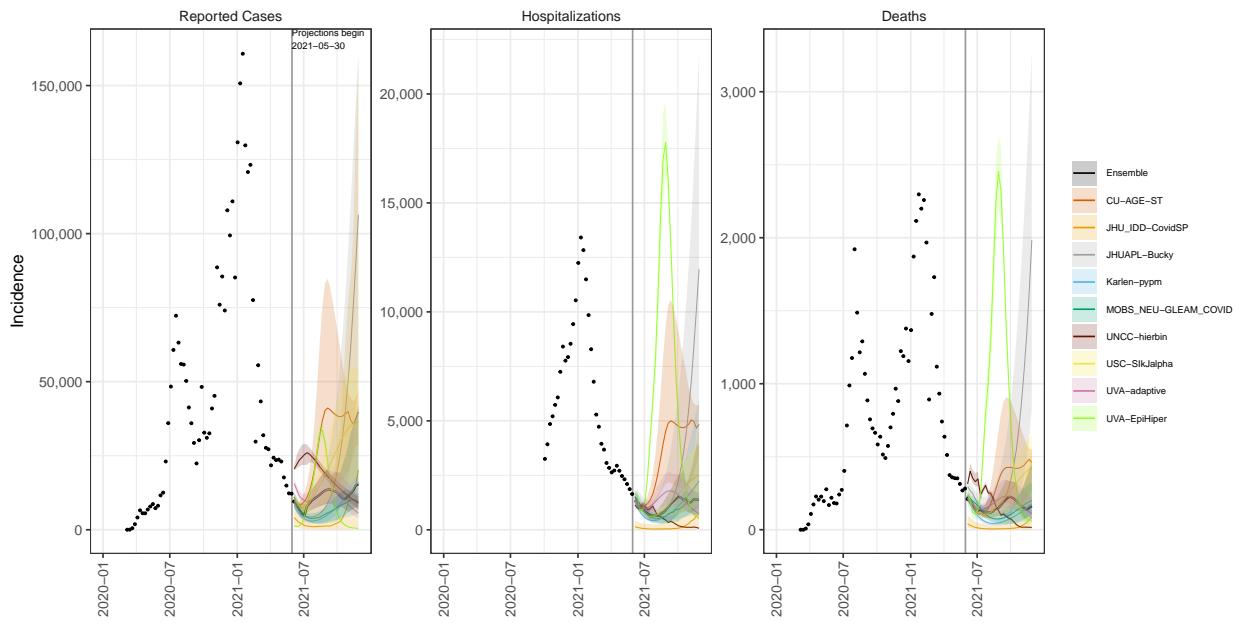
SD model variance & 50% projection intervals – Low vaccination, High variant transmissibility



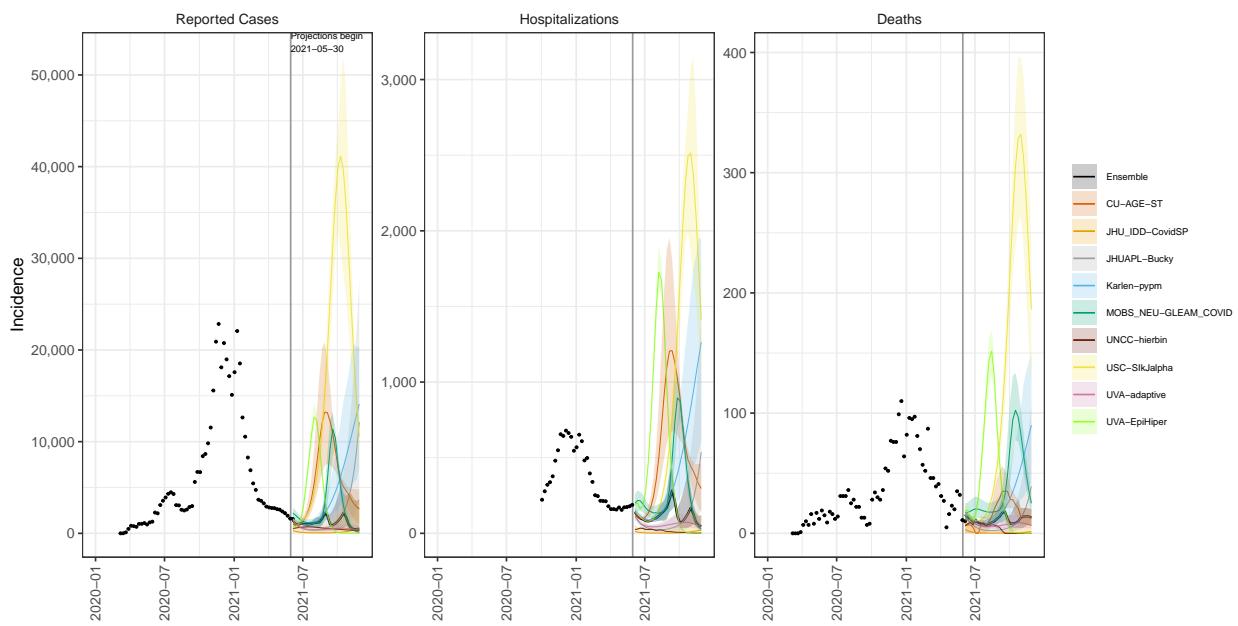
TN model variance & 50% projection intervals – Low vaccination, High variant transmissibility



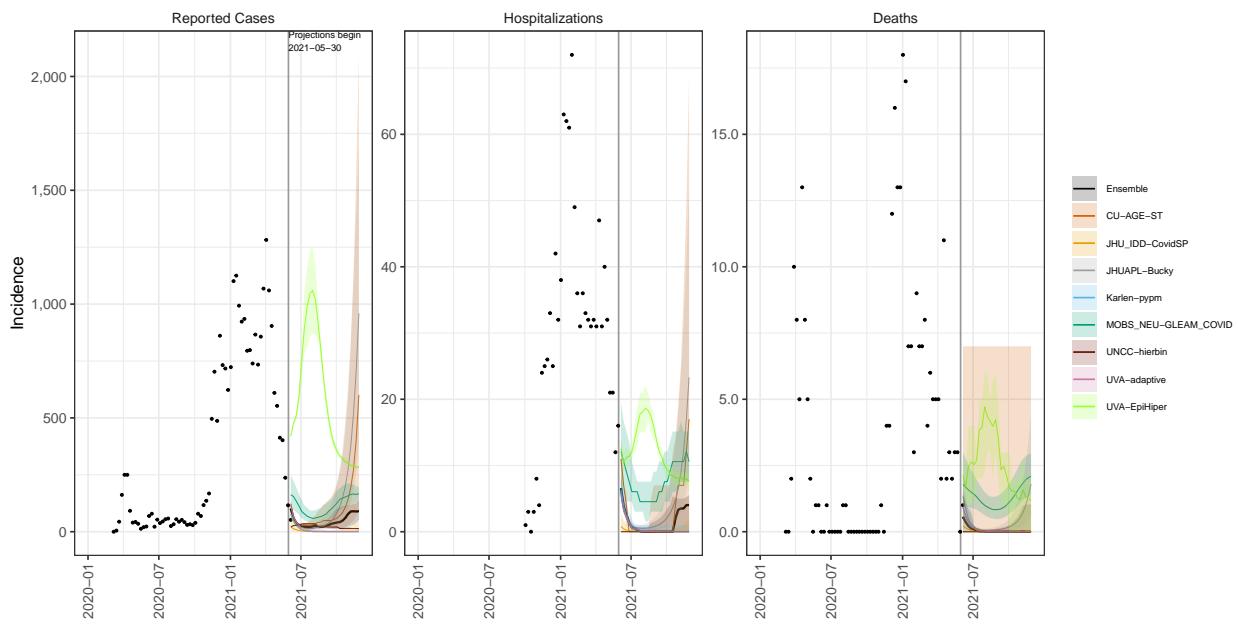
TX model variance & 50% projection intervals – Low vaccination, High variant transmissibility



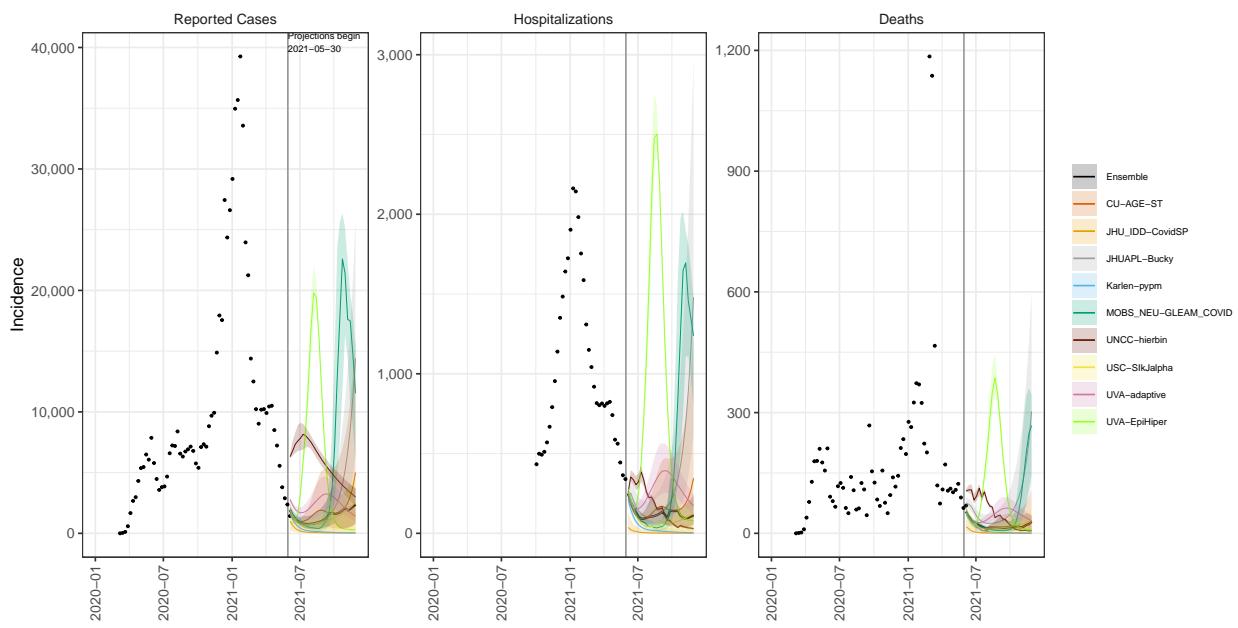
UT model variance & 50% projection intervals – Low vaccination, High variant transmissibility



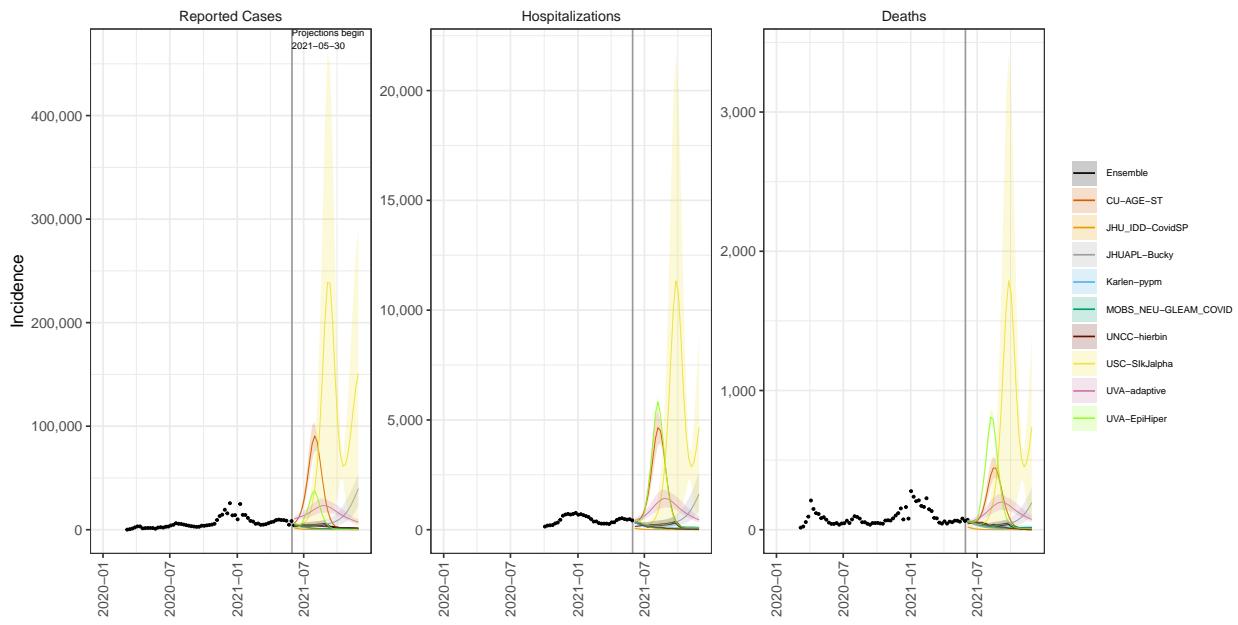
VT model variance & 50% projection intervals – Low vaccination, High variant transmissibility



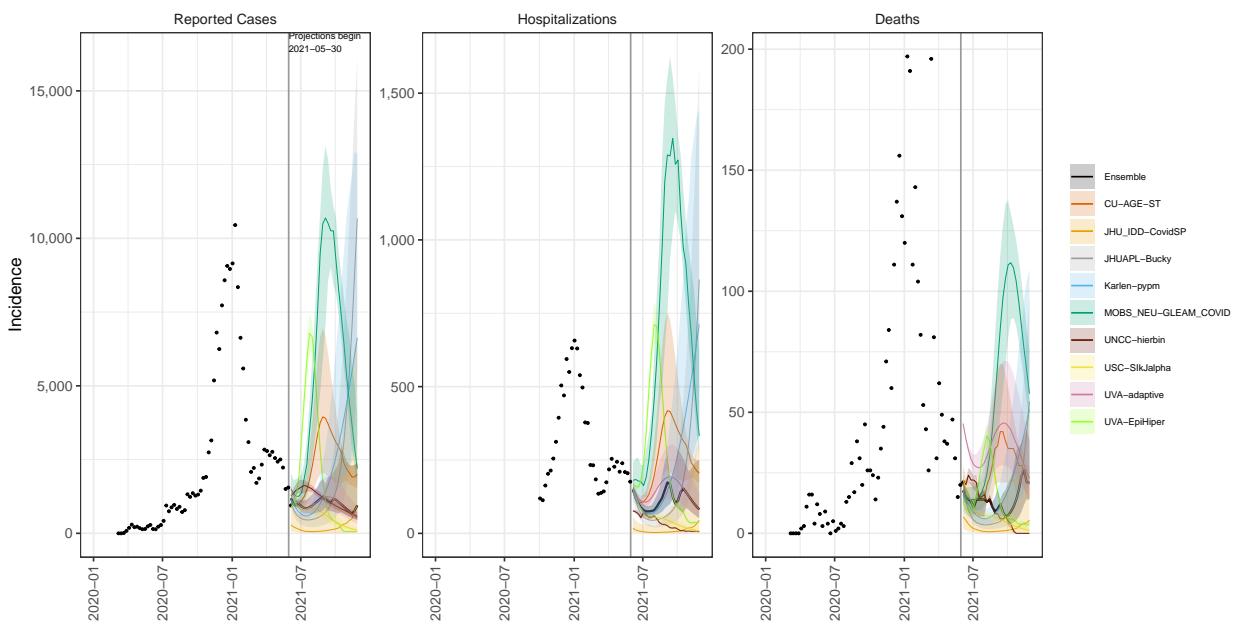
VA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



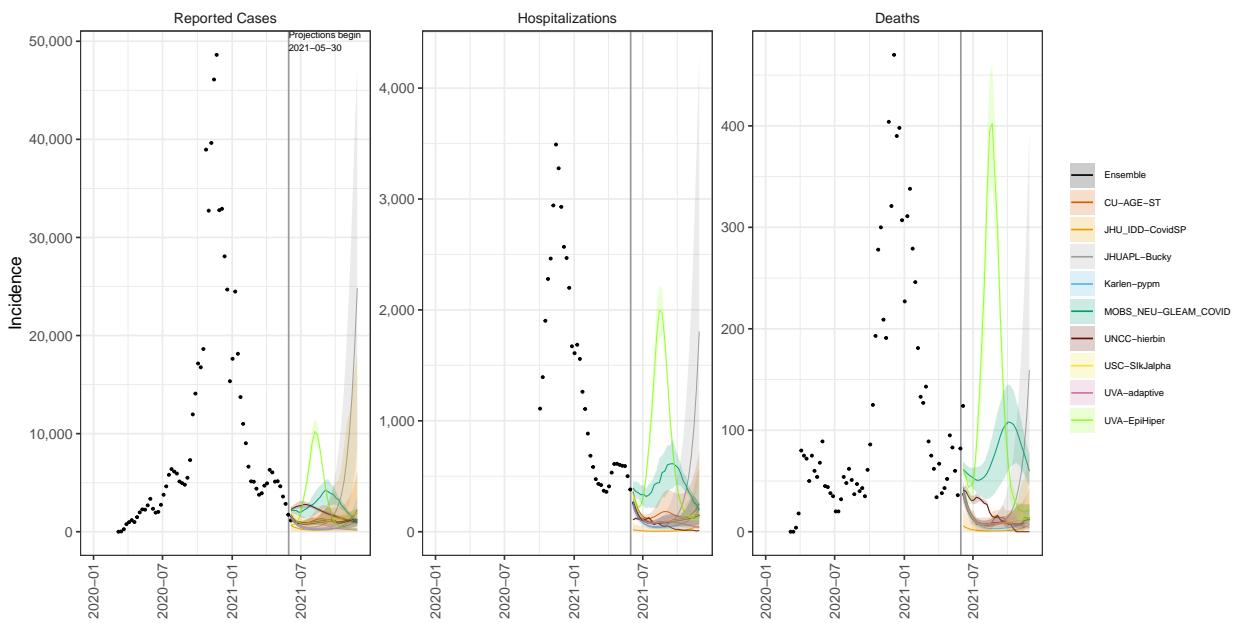
WA model variance & 50% projection intervals – Low vaccination, High variant transmissibility



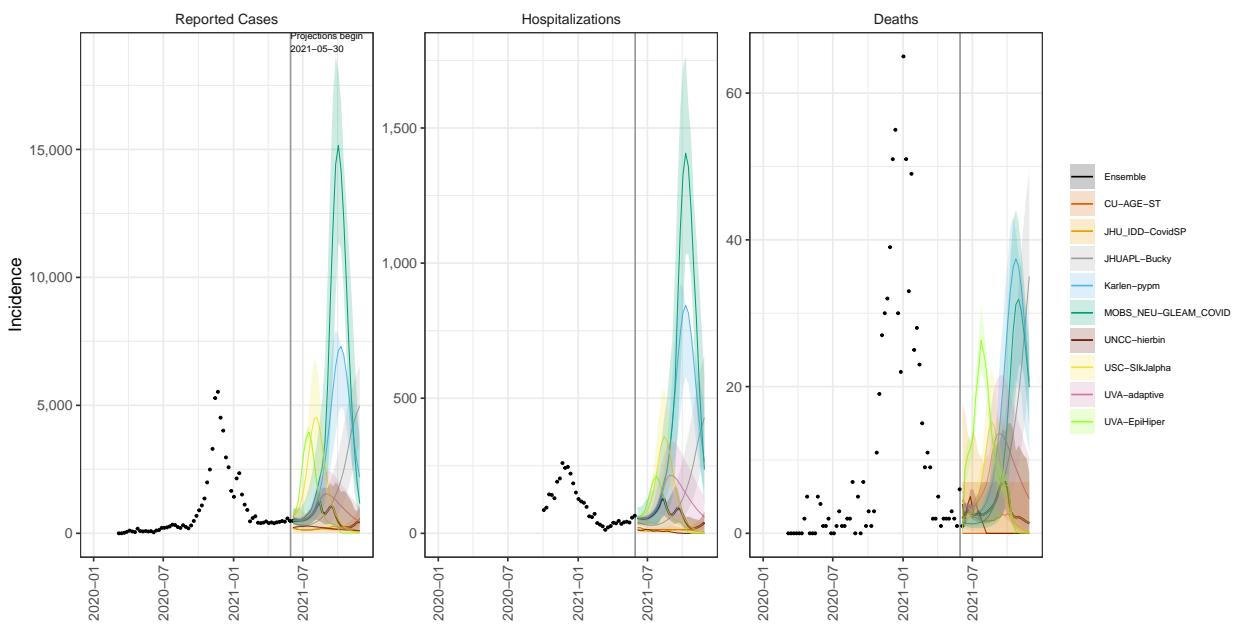
WV model variance & 50% projection intervals – Low vaccination, High variant transmissibility



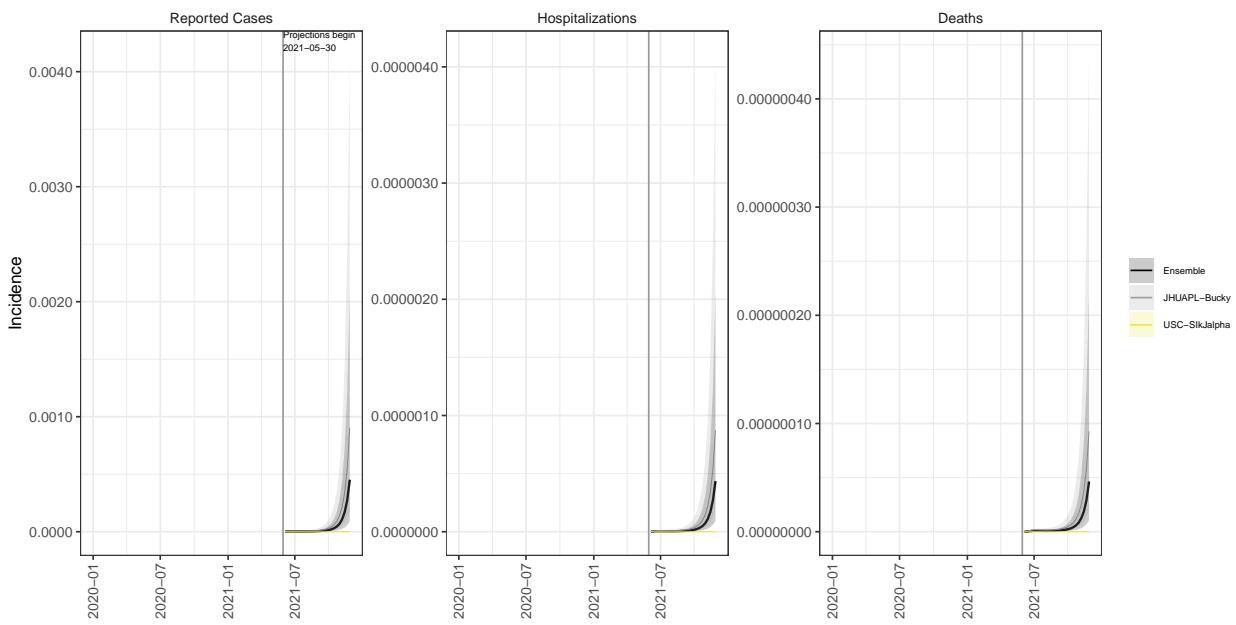
WI model variance & 50% projection intervals – Low vaccination, High variant transmissibility



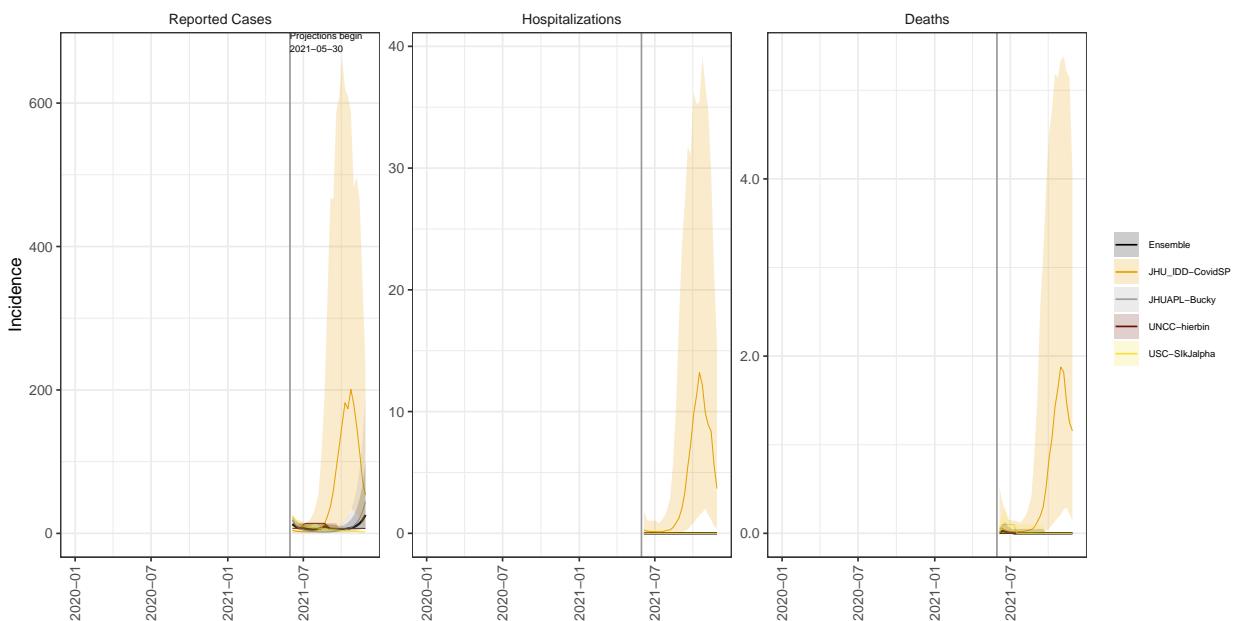
WY model variance & 50% projection intervals – Low vaccination, High variant transmissibility



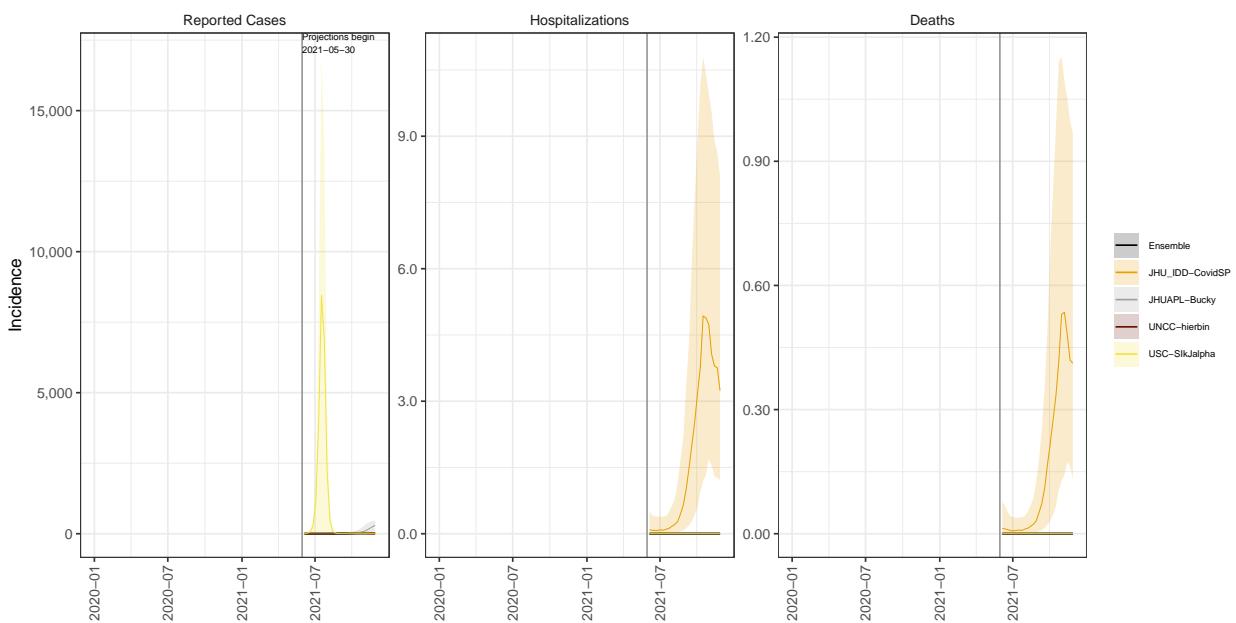
AS model variance & 50% projection intervals – Low vaccination, High variant transmissibility



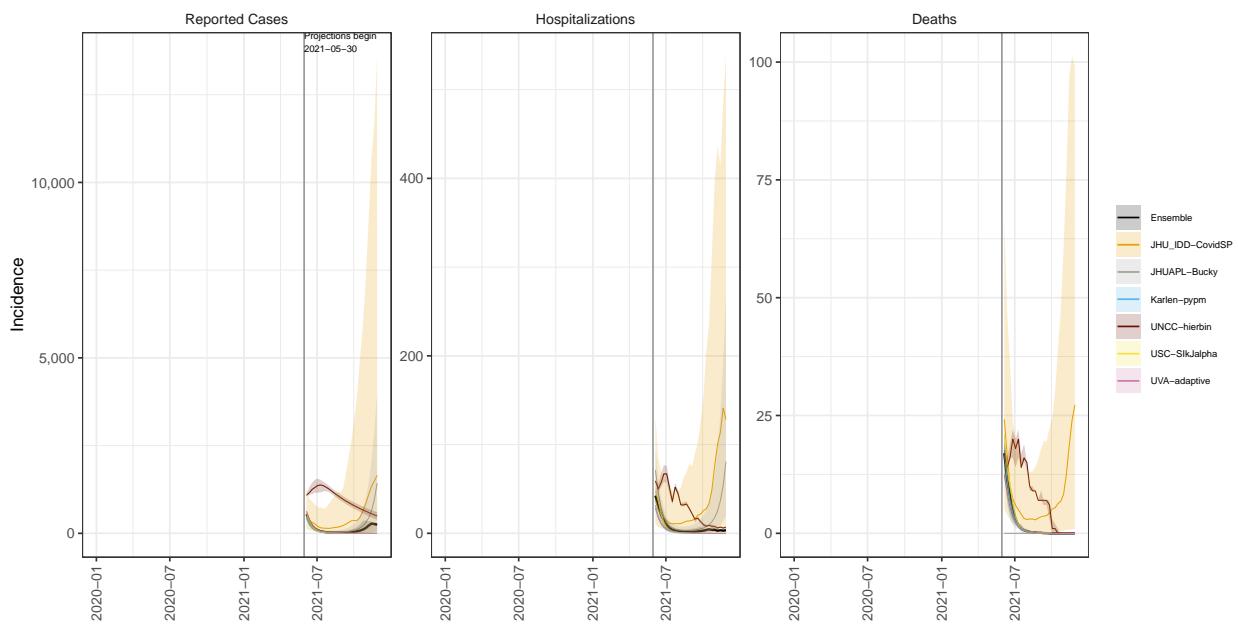
GU model variance & 50% projection intervals – Low vaccination, High variant transmissibility



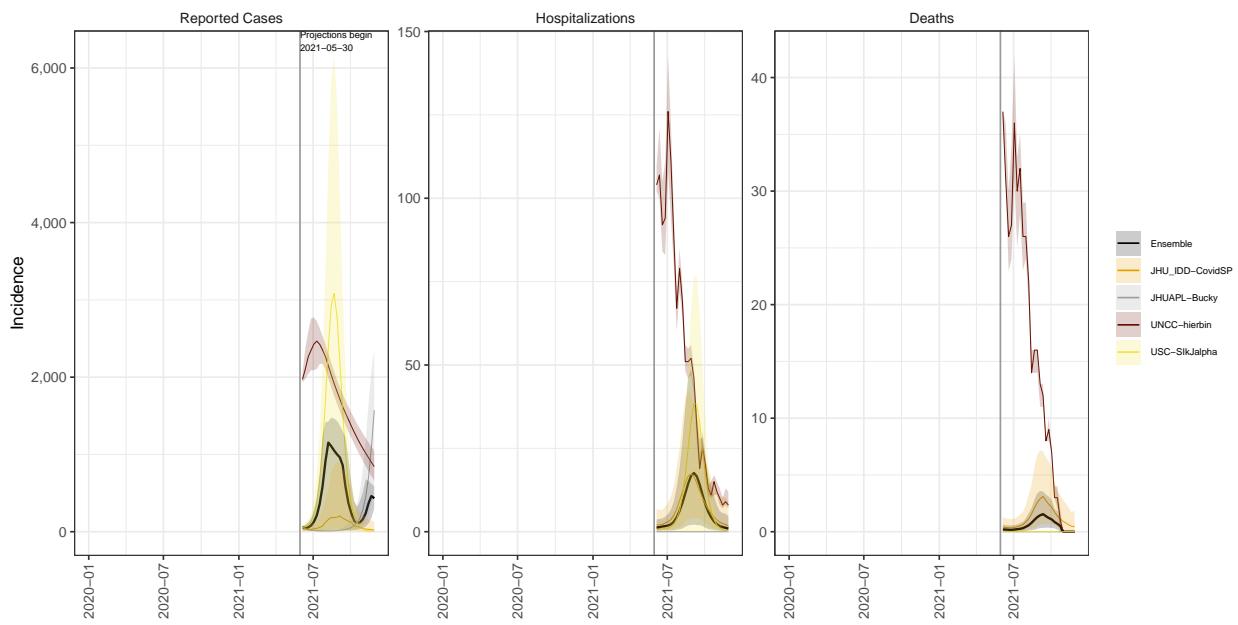
MP model variance & 50% projection intervals – Low vaccination, High variant transmissibility



PR model variance & 50% projection intervals – Low vaccination, High variant transmissibility

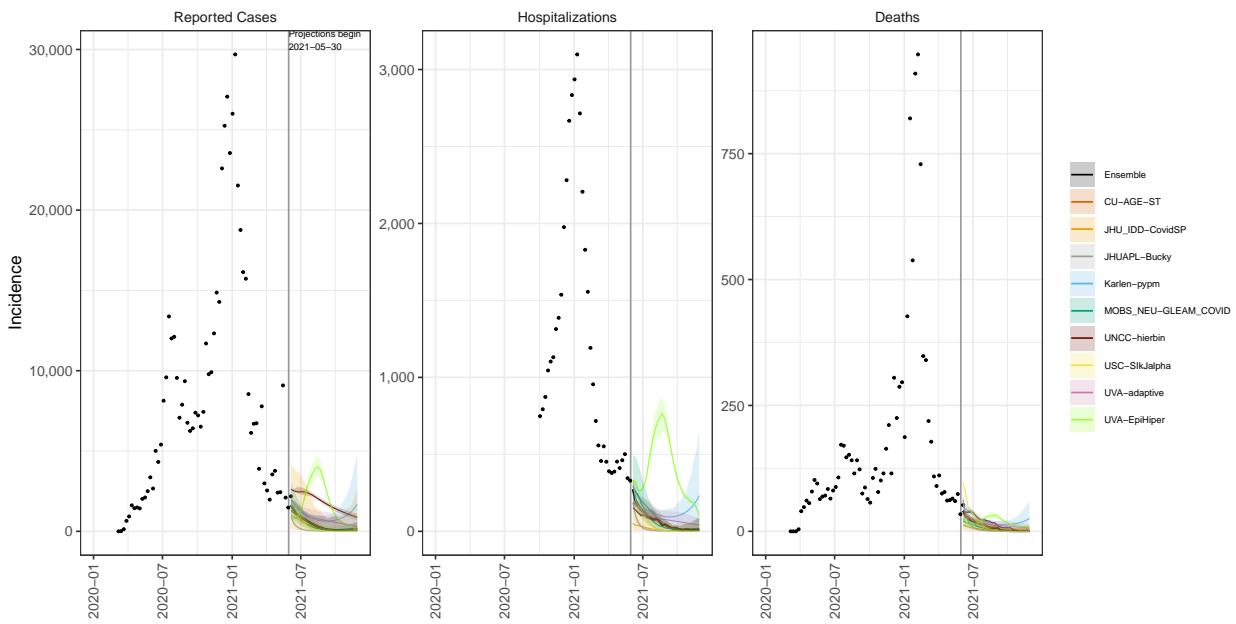


VI model variance & 50% projection intervals – Low vaccination, High variant transmissibility

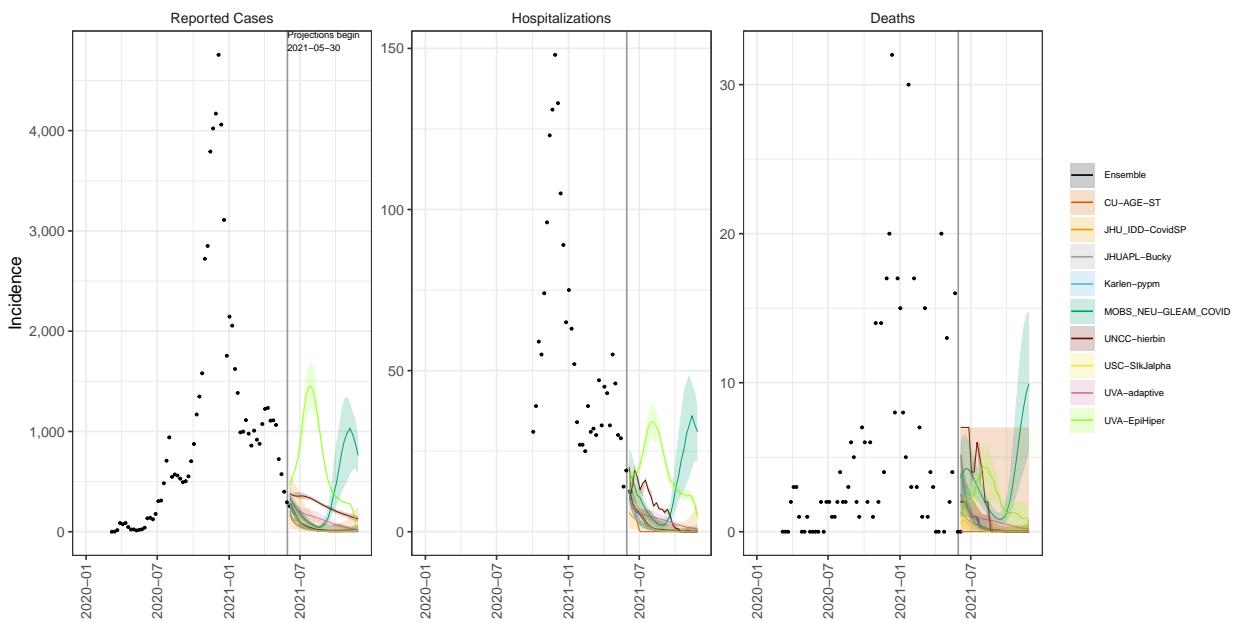


National model variation for the low vaccination, low variant transmissibility scenario

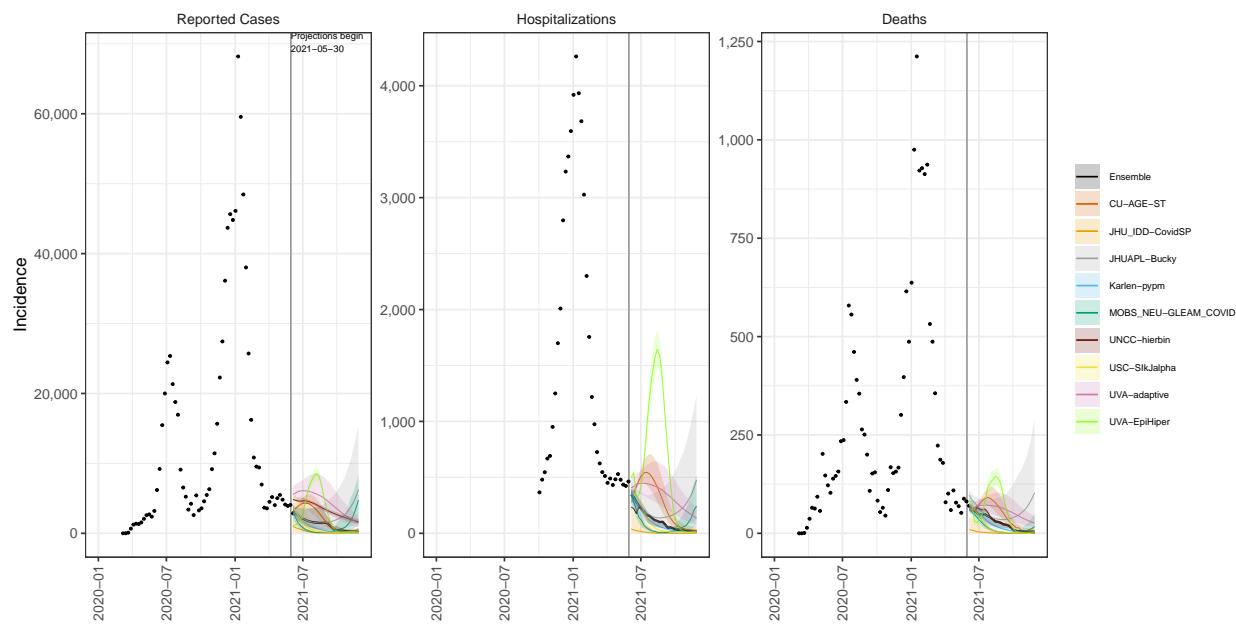
AL model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



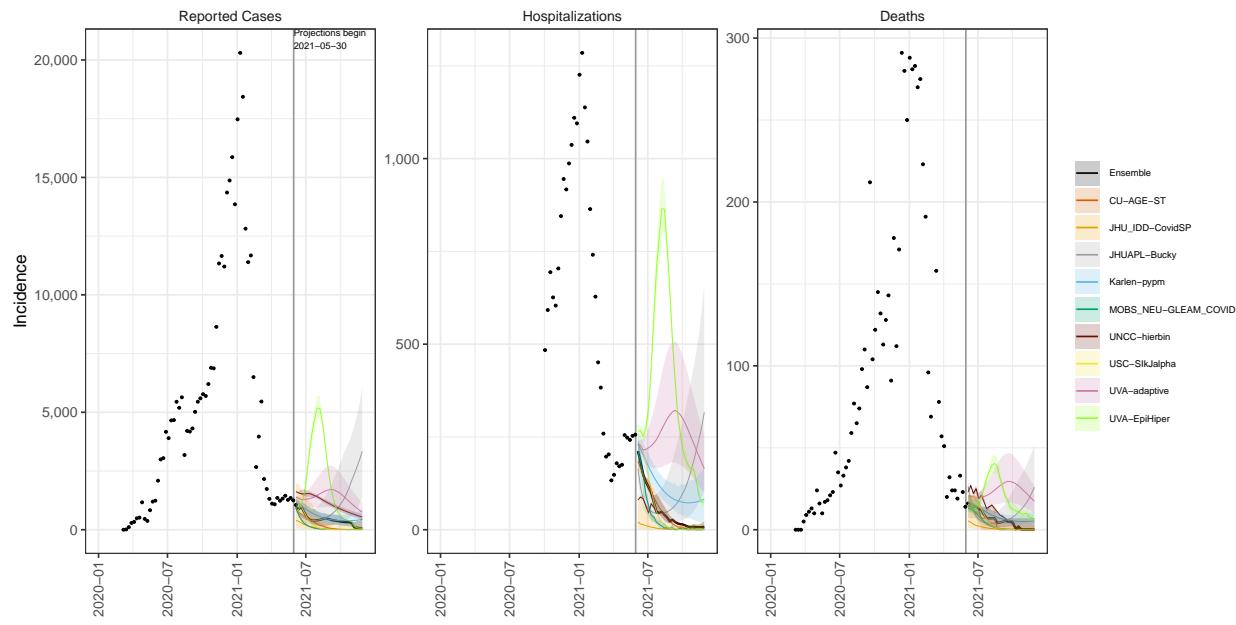
AK model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



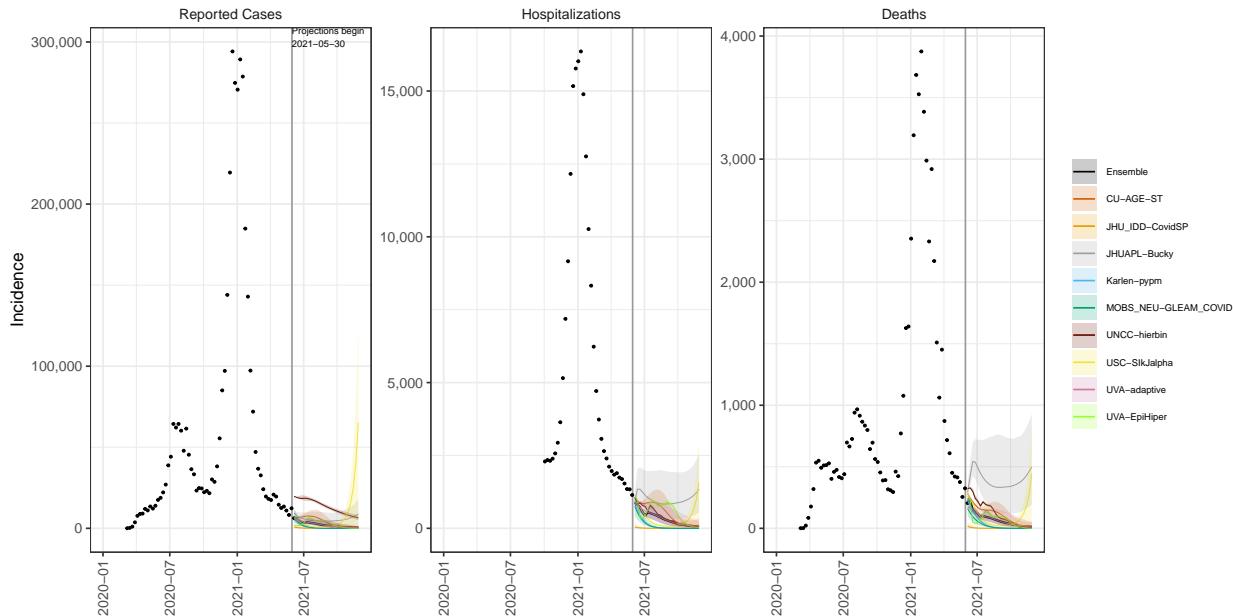
AZ model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



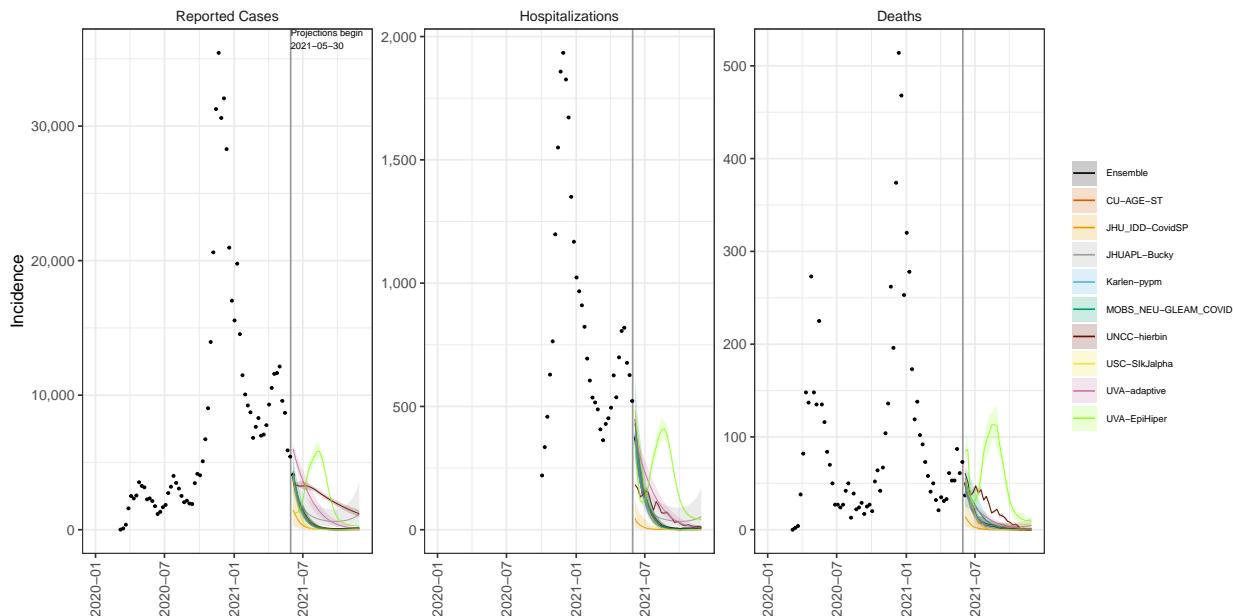
AR model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



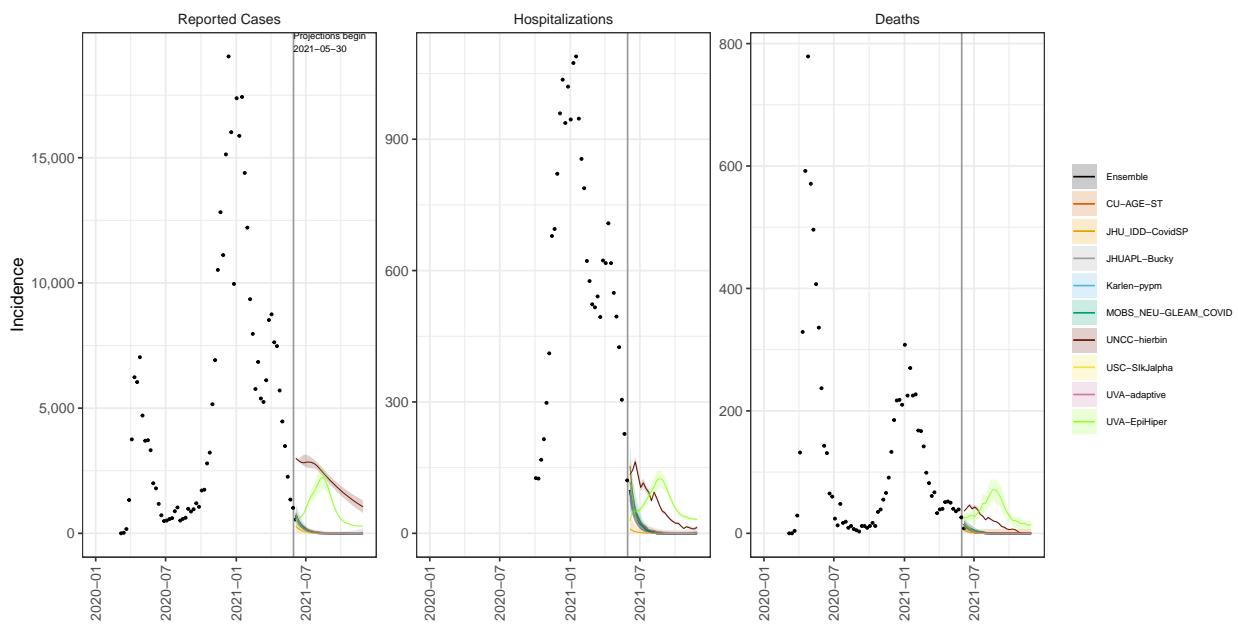
CA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



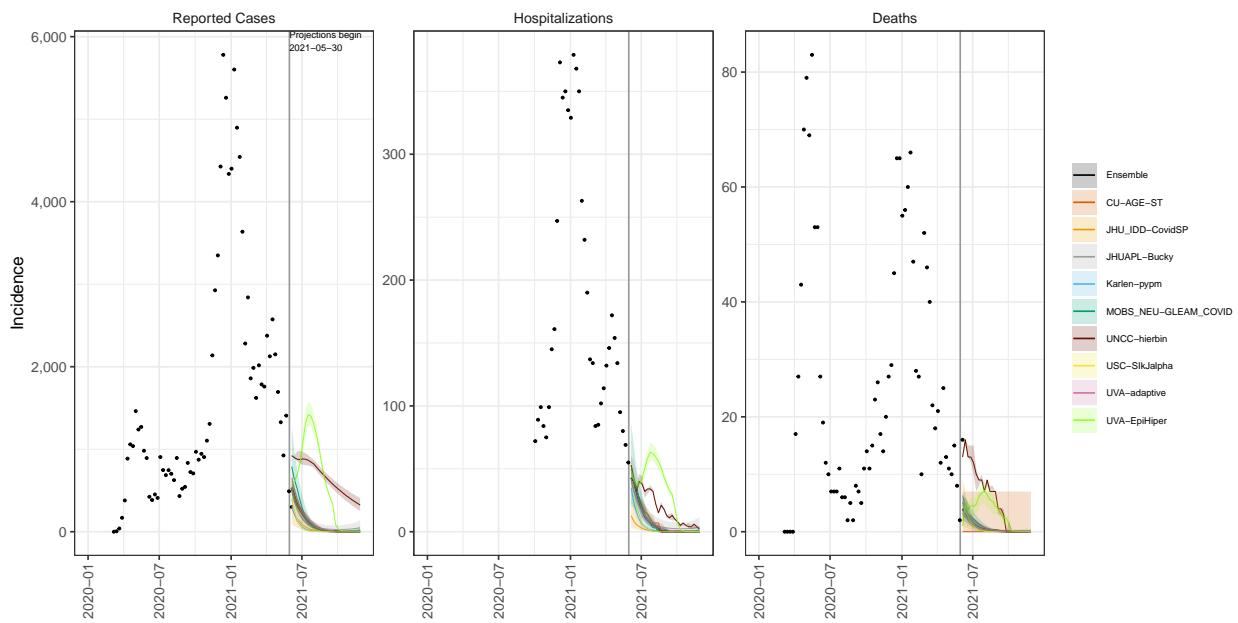
CO model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



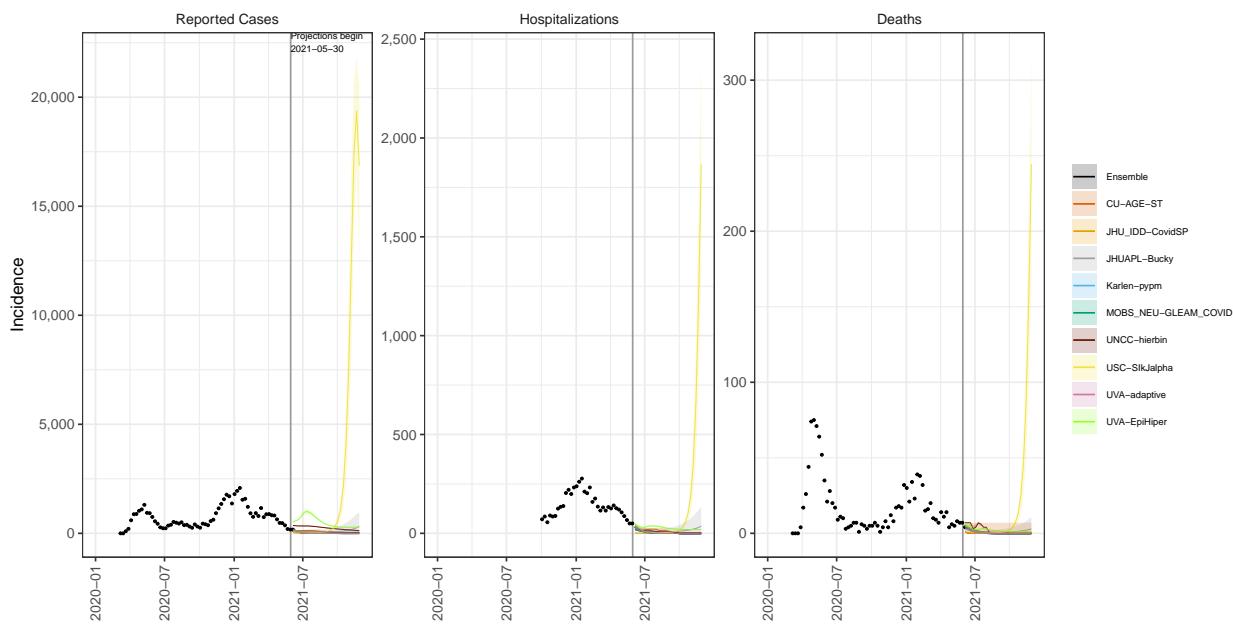
CT model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



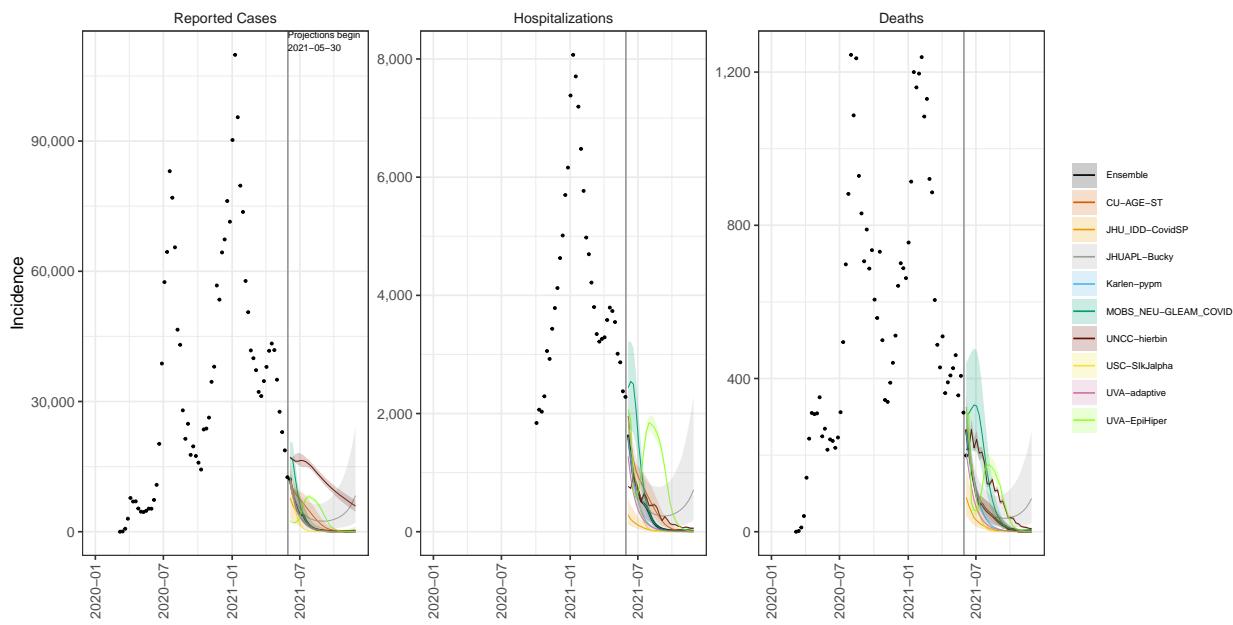
DE model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



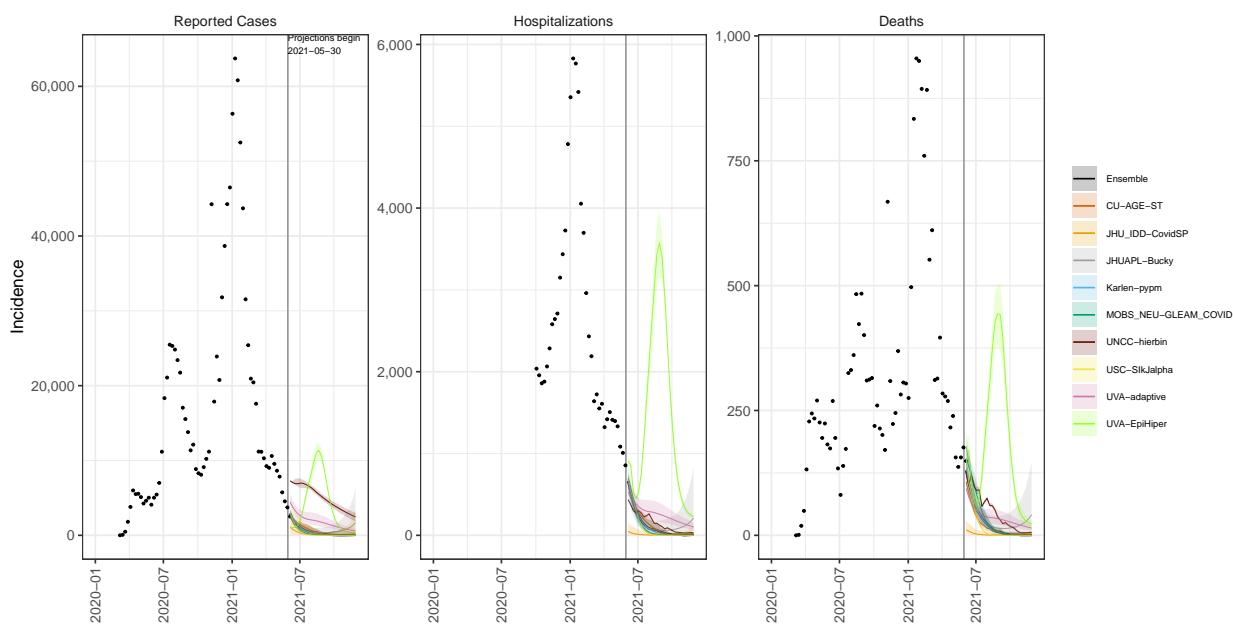
DC model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



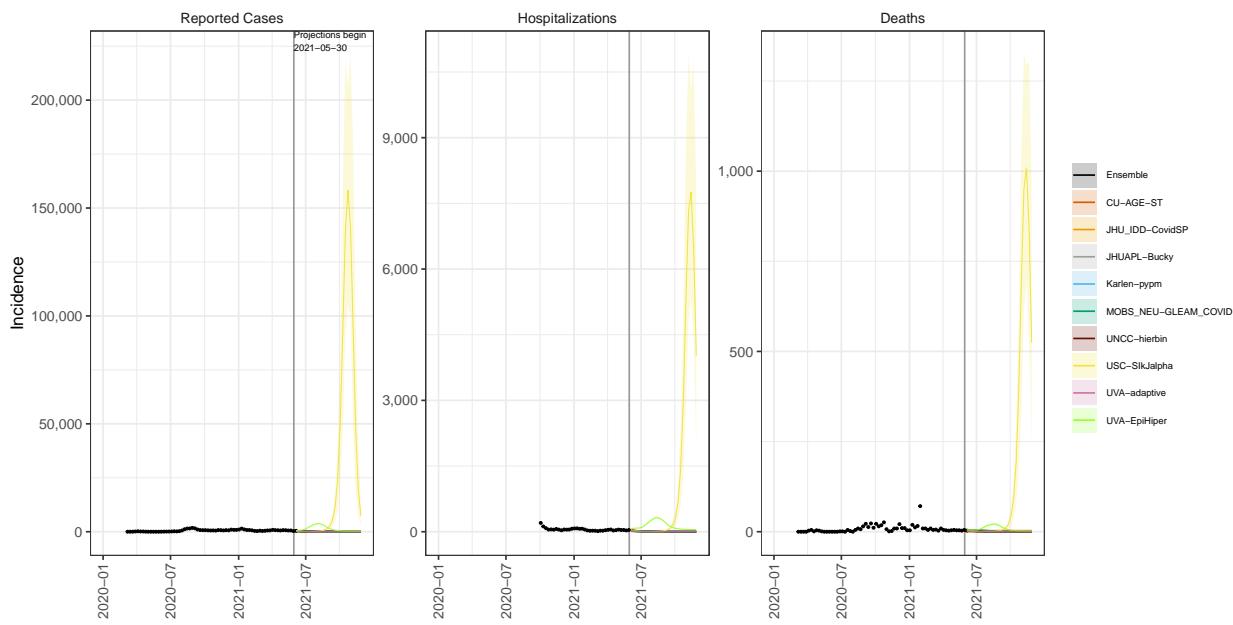
FL model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



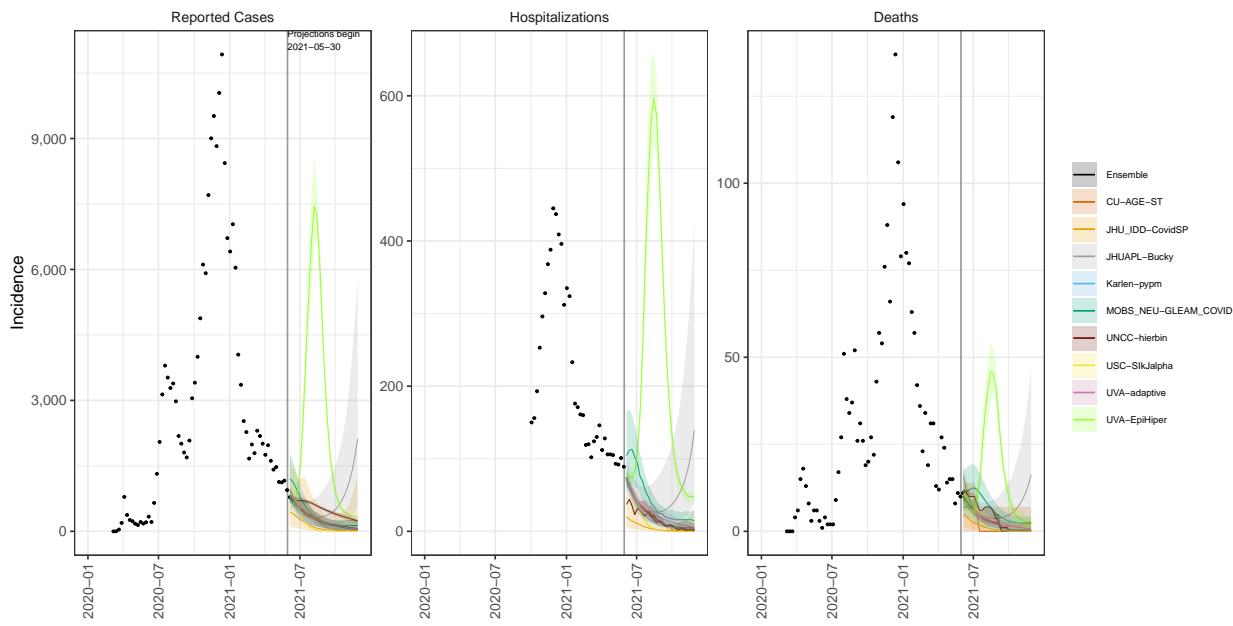
GA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



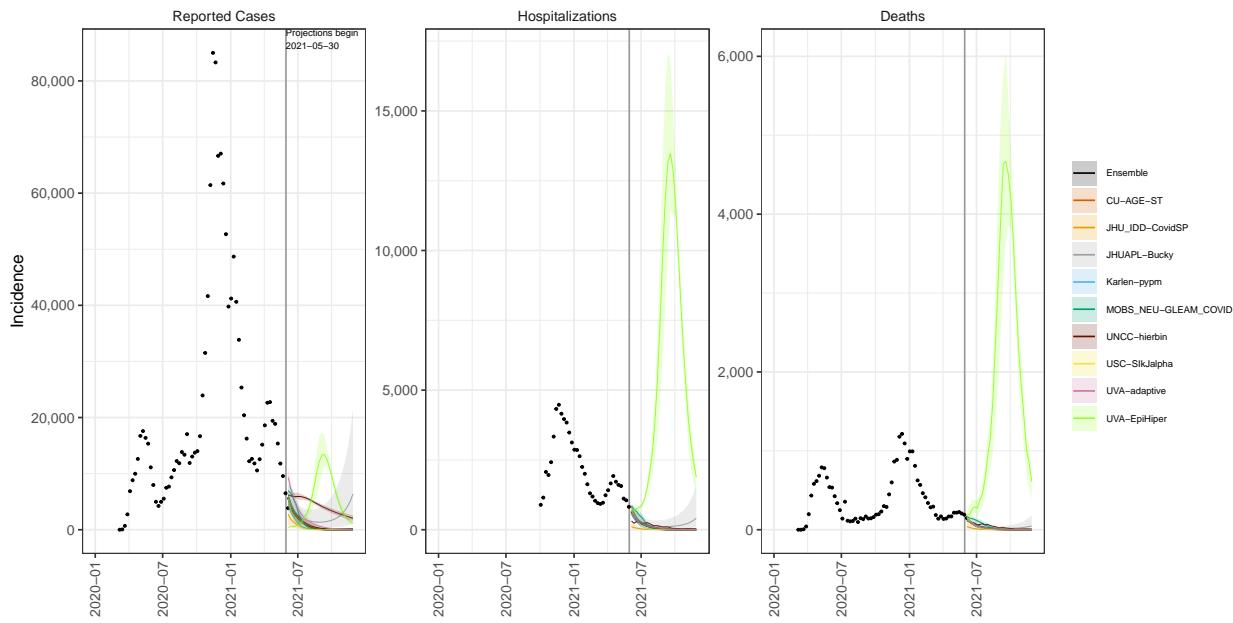
HI model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



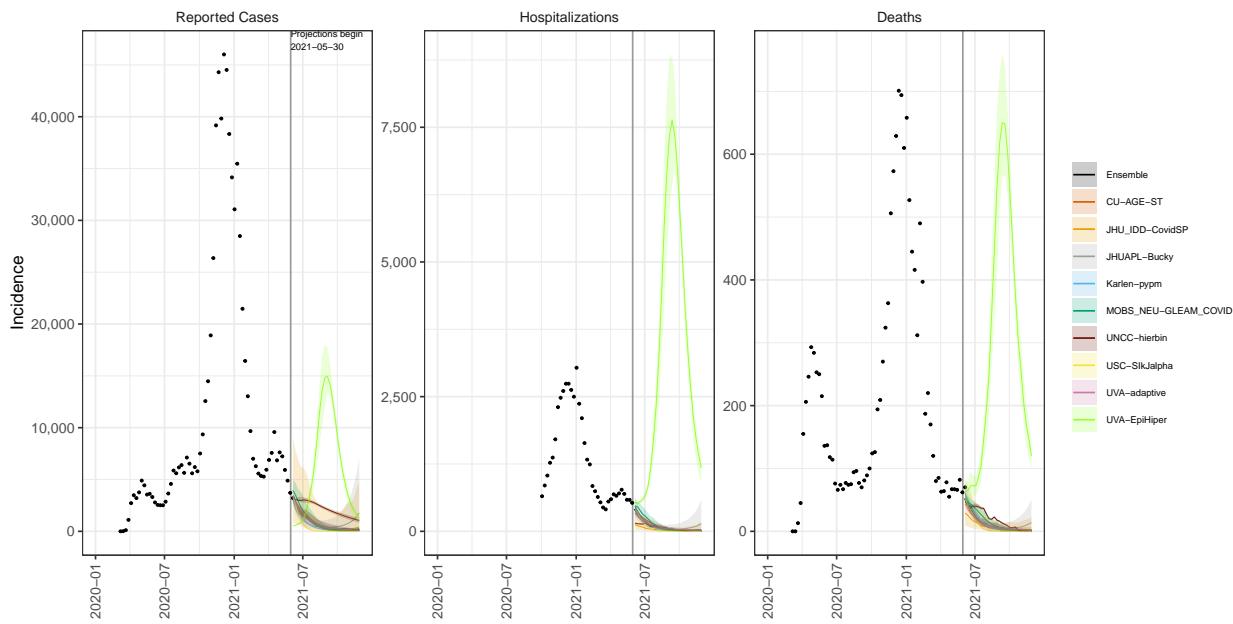
ID model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



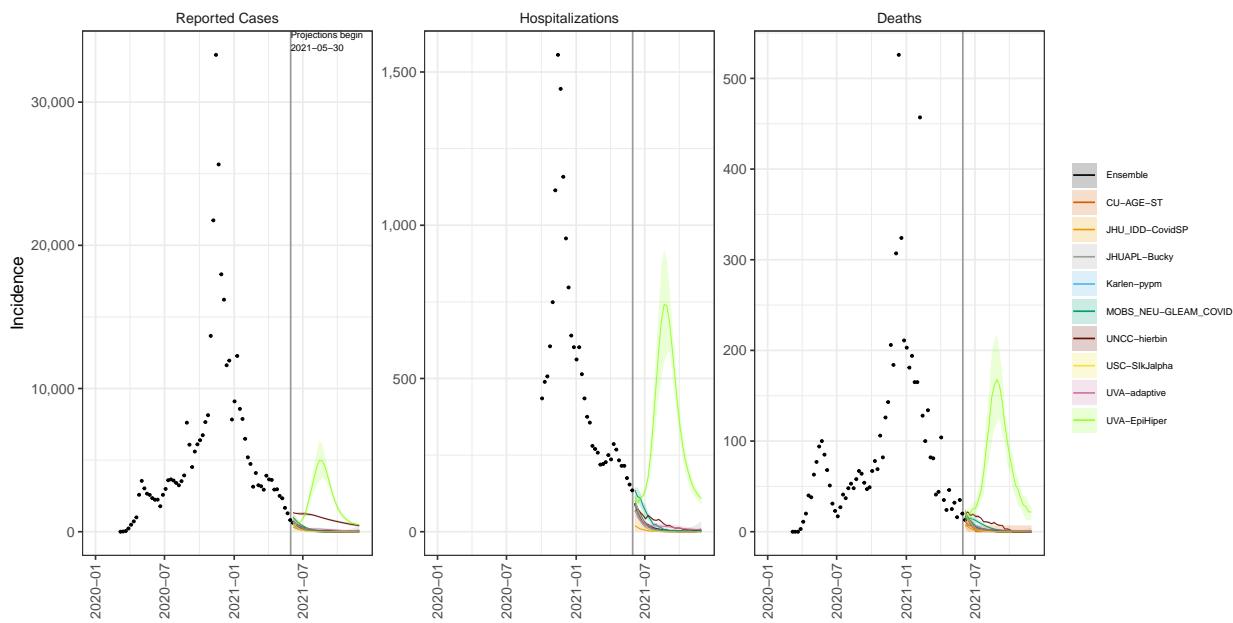
IL model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



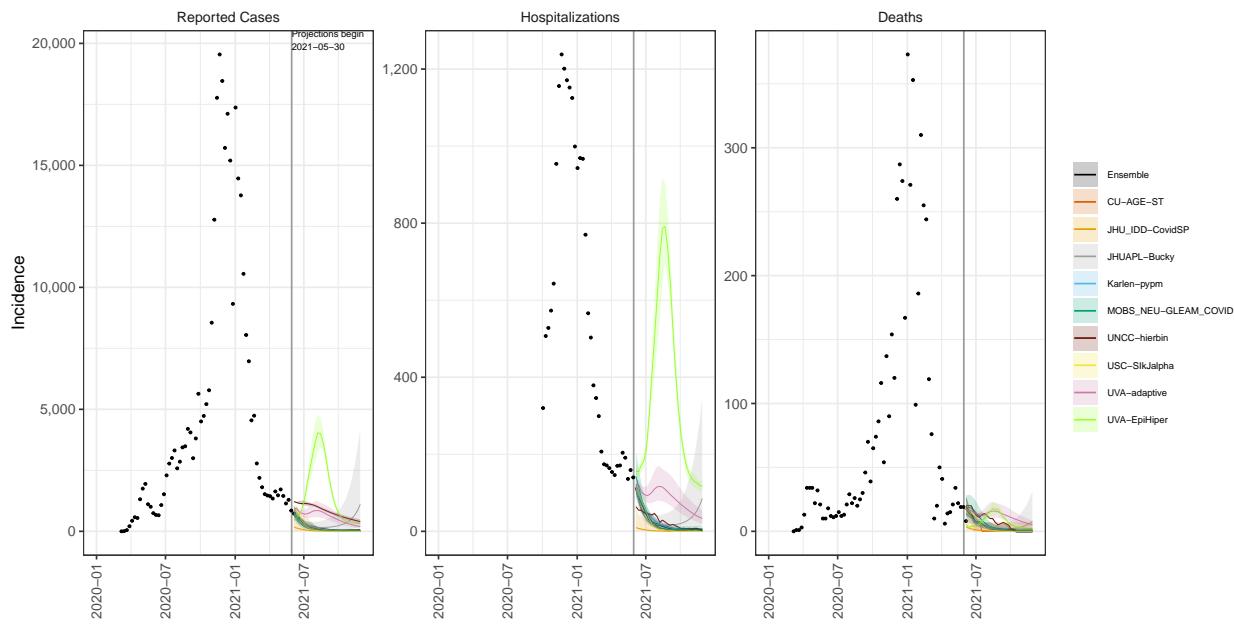
IN model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



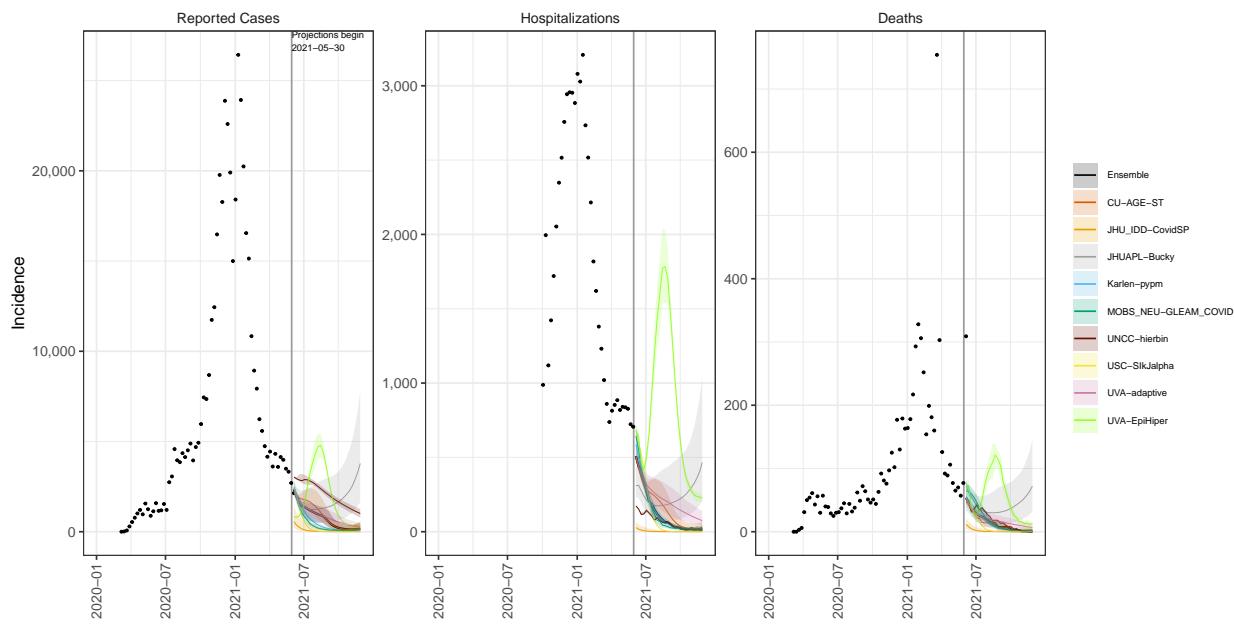
IA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



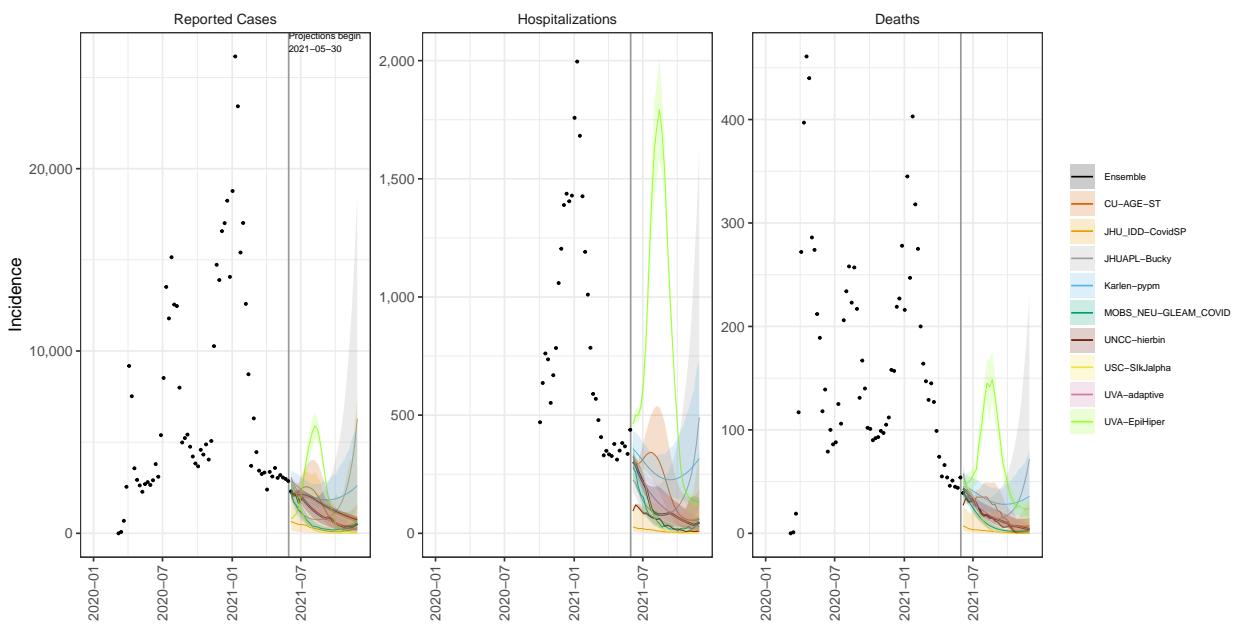
KS model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



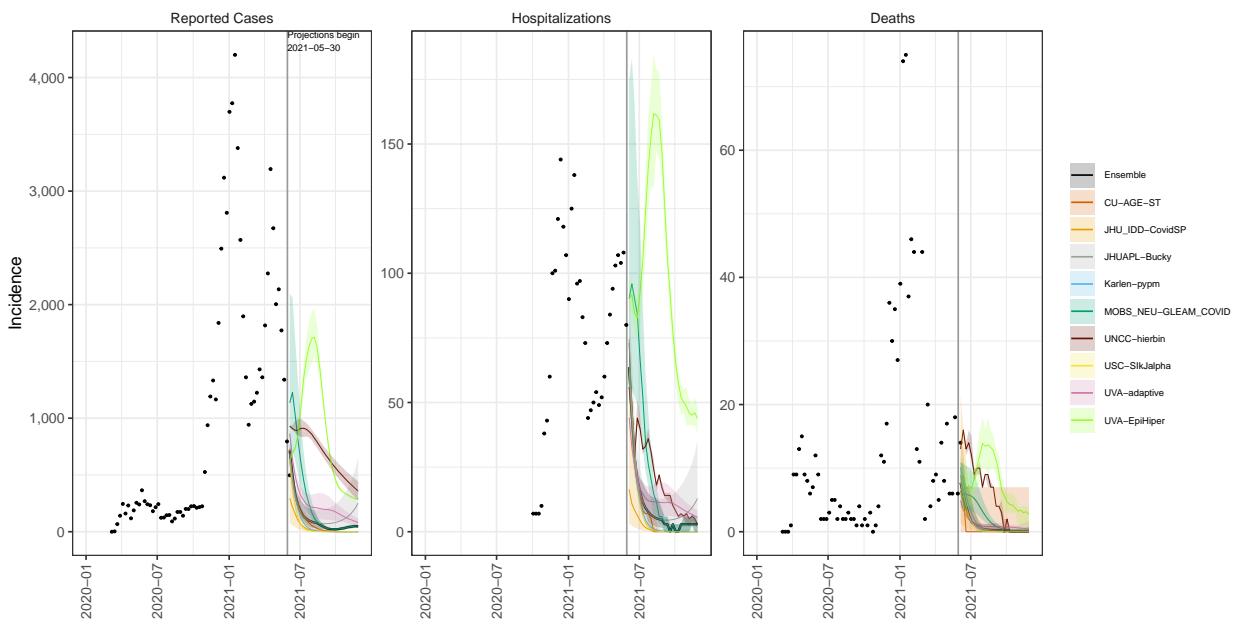
KY model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



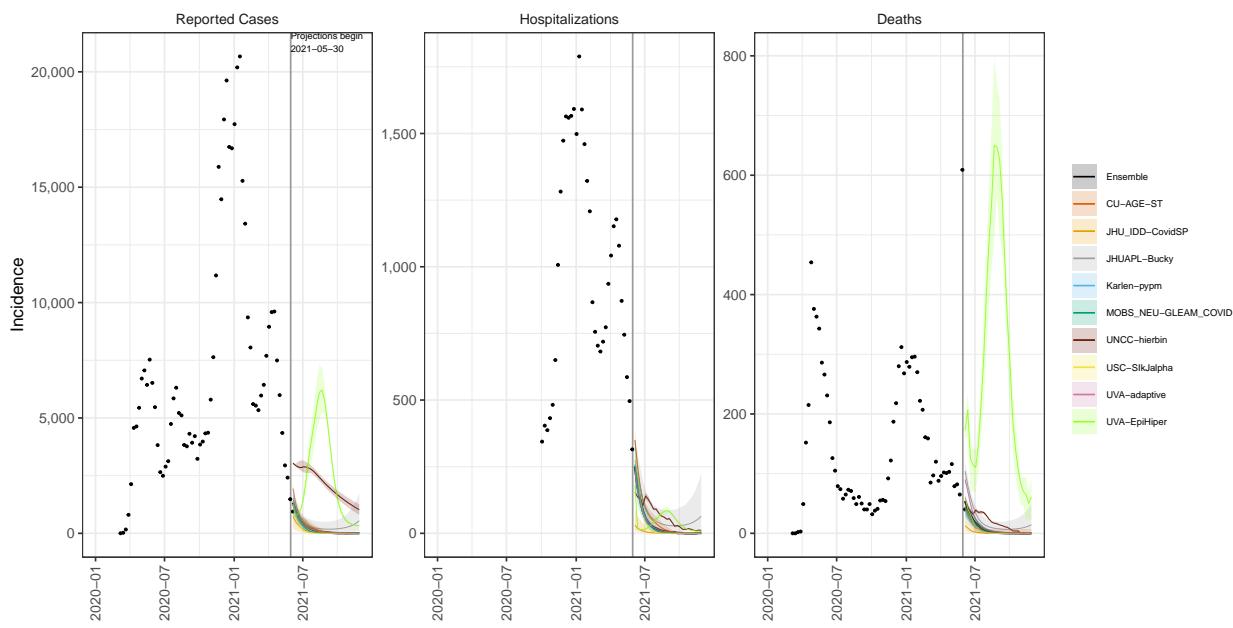
LA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



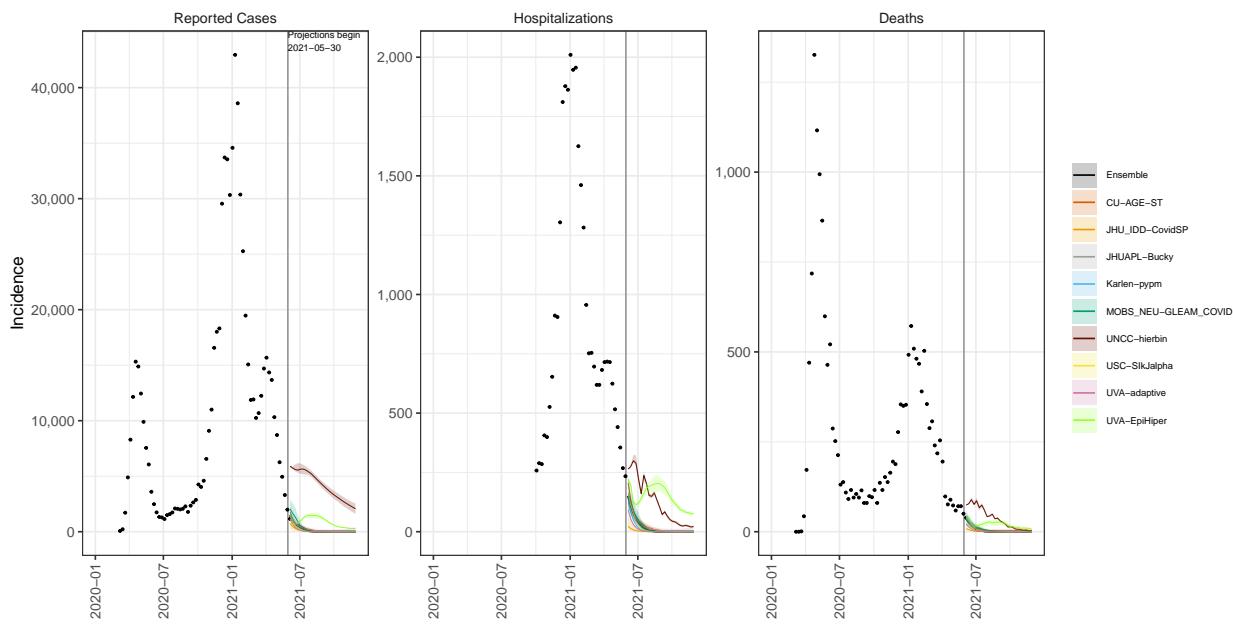
ME model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



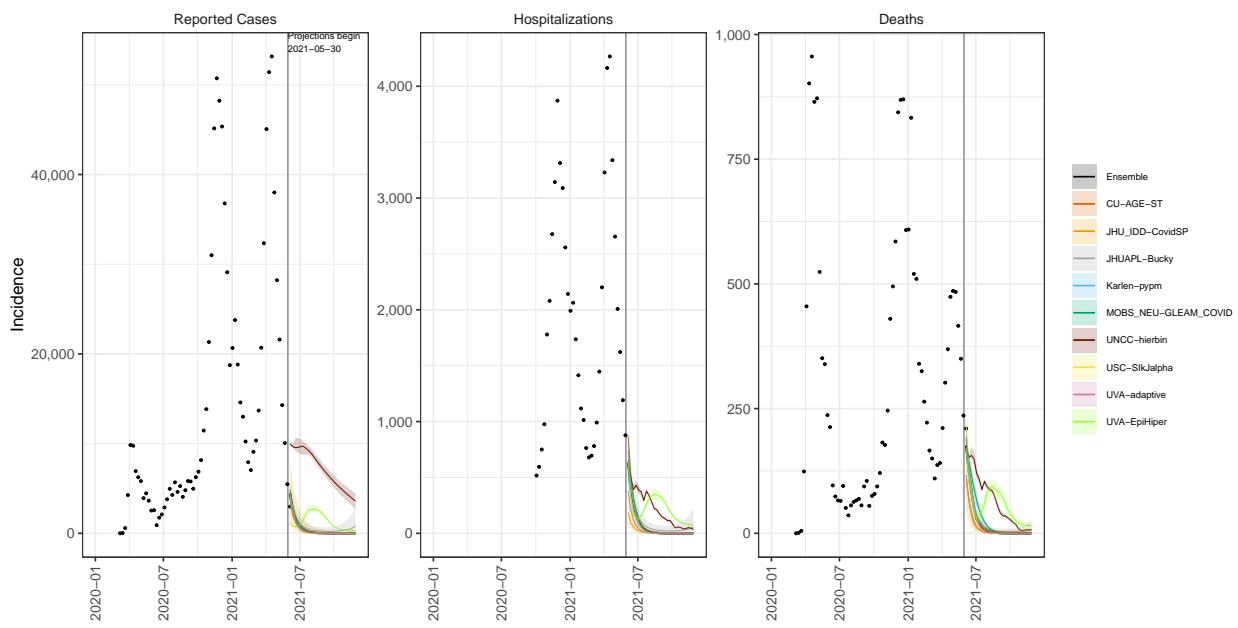
MD model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



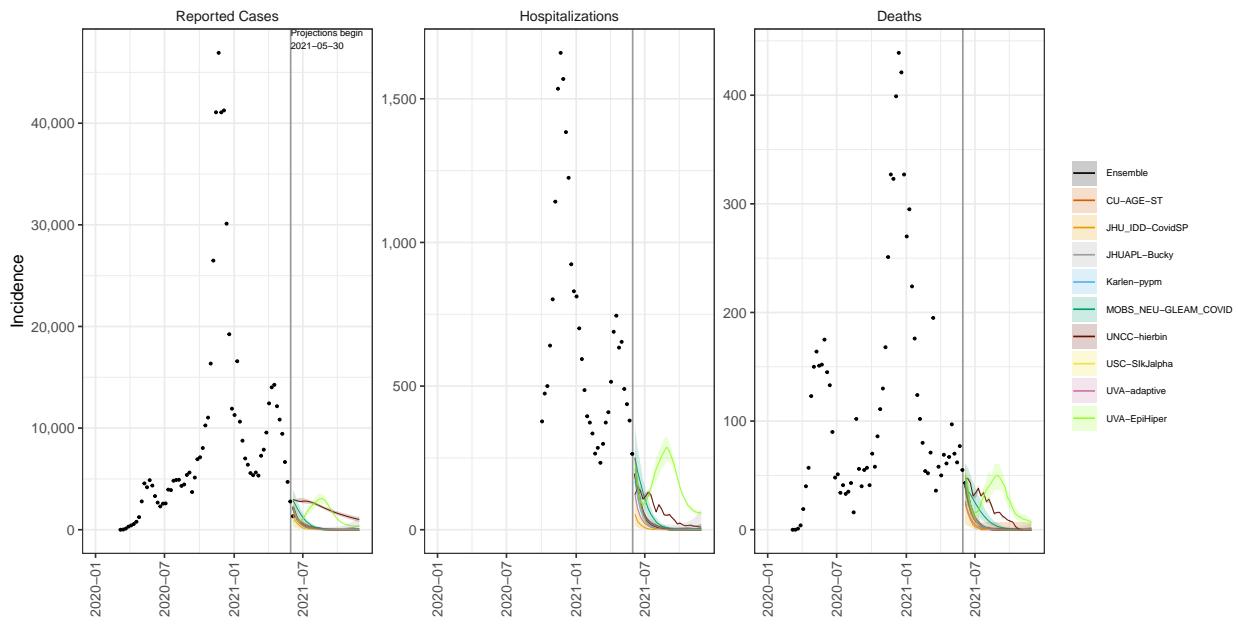
MA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



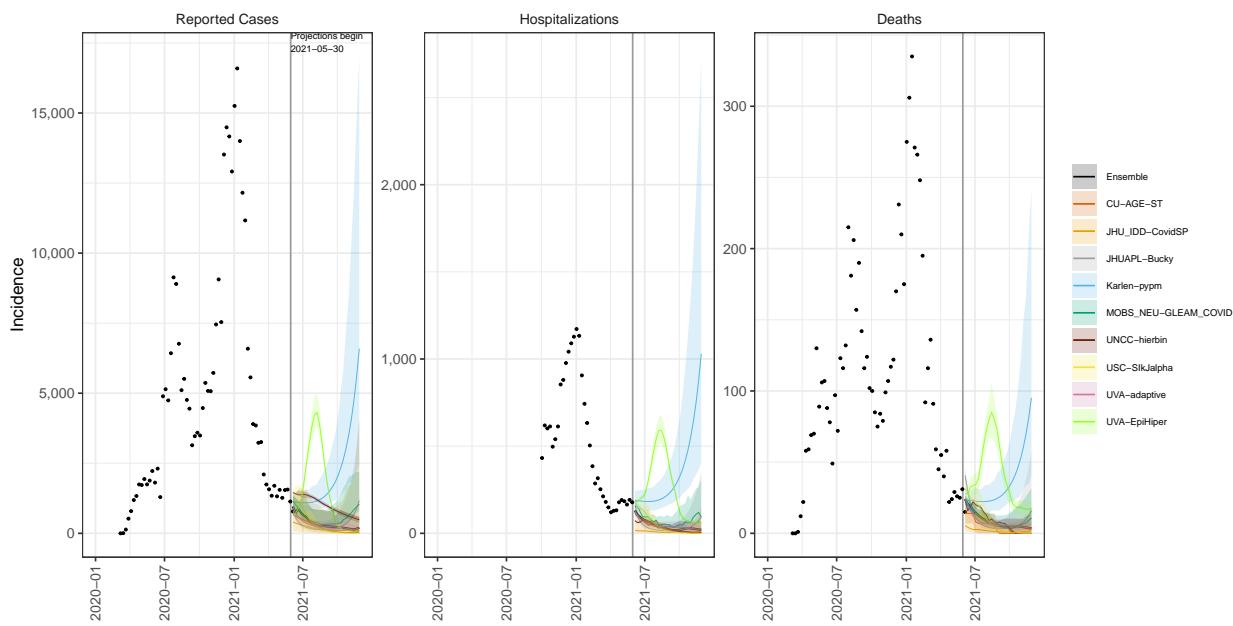
MI model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



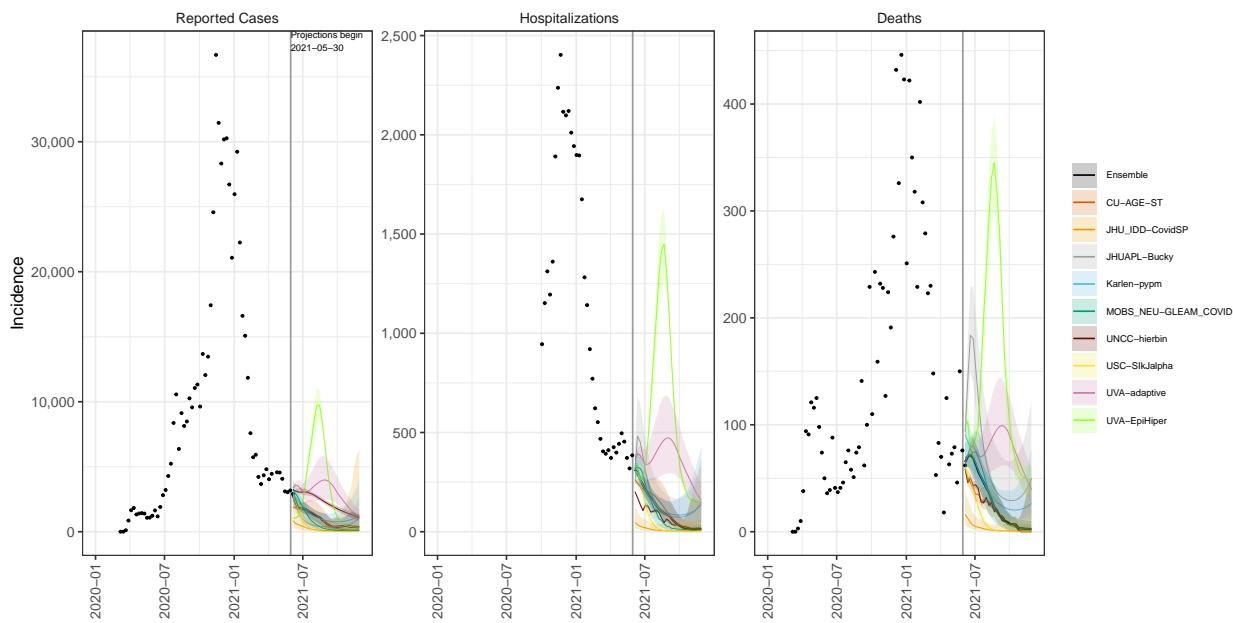
MN model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



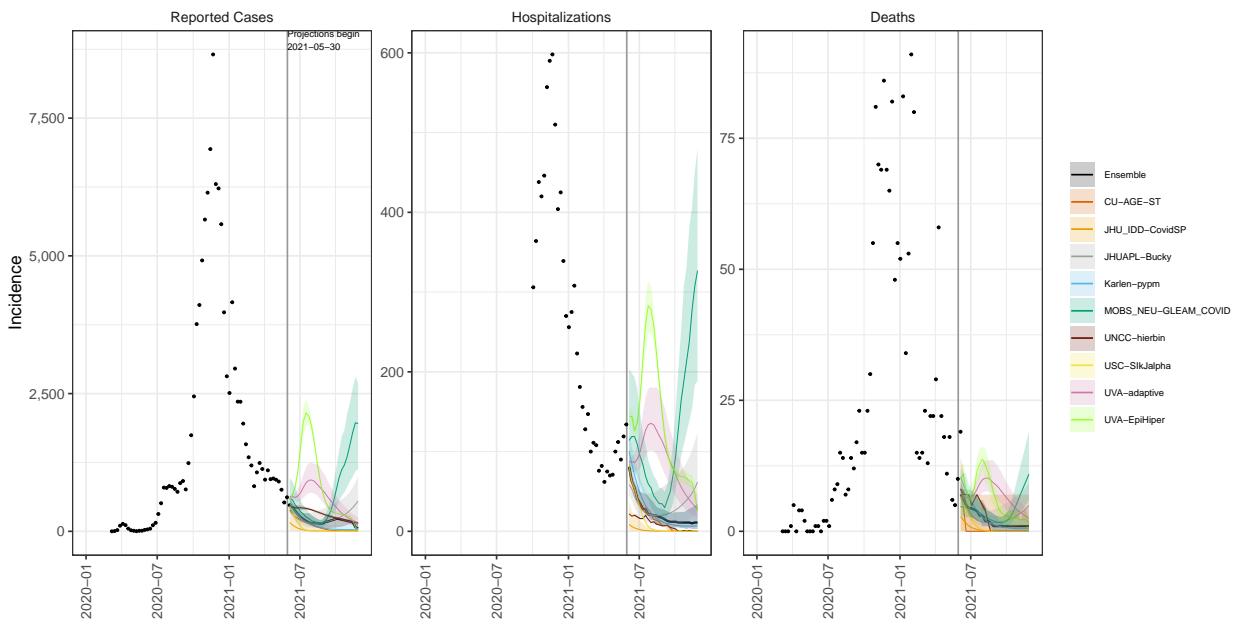
MS model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



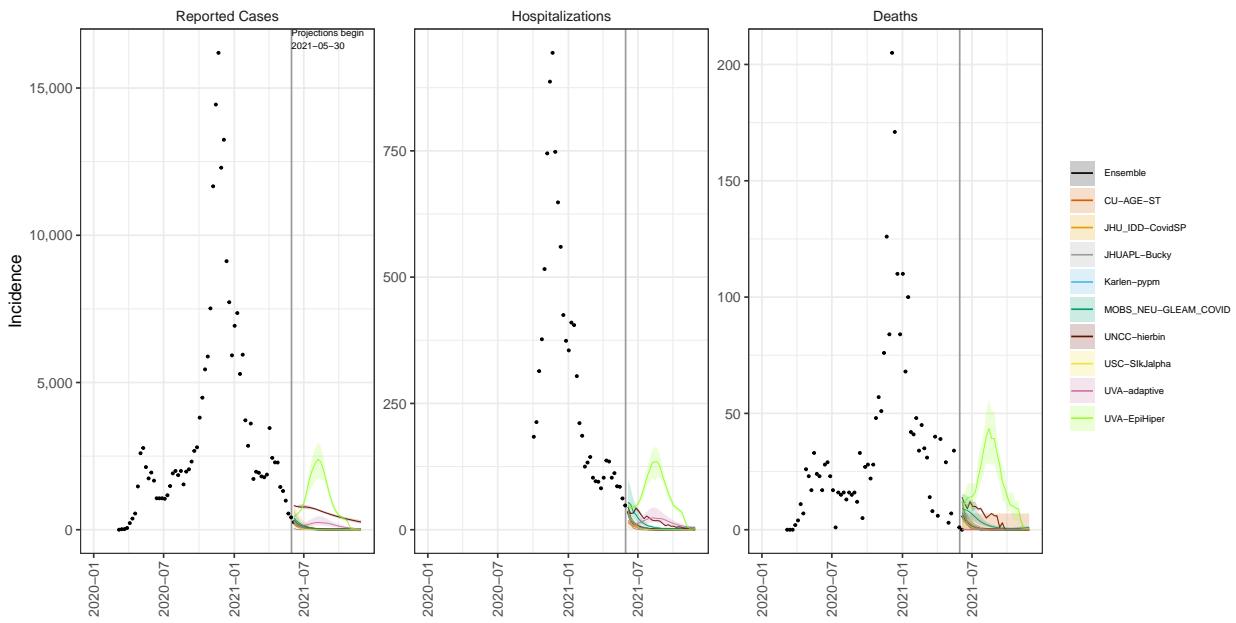
MO model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



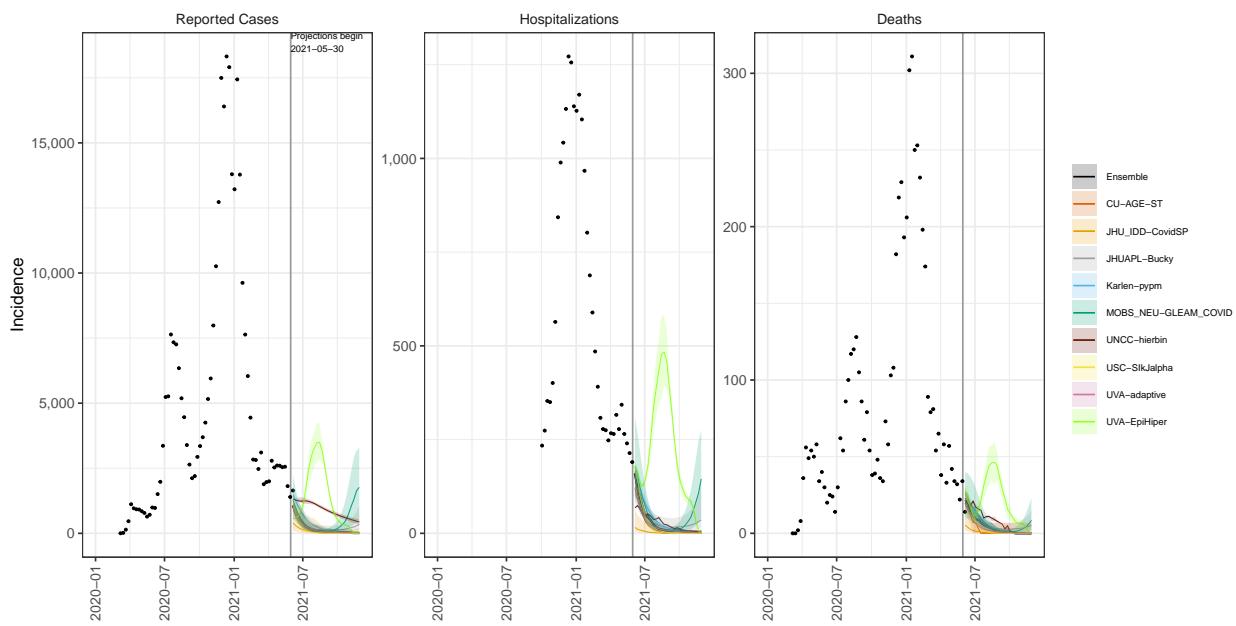
MT model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



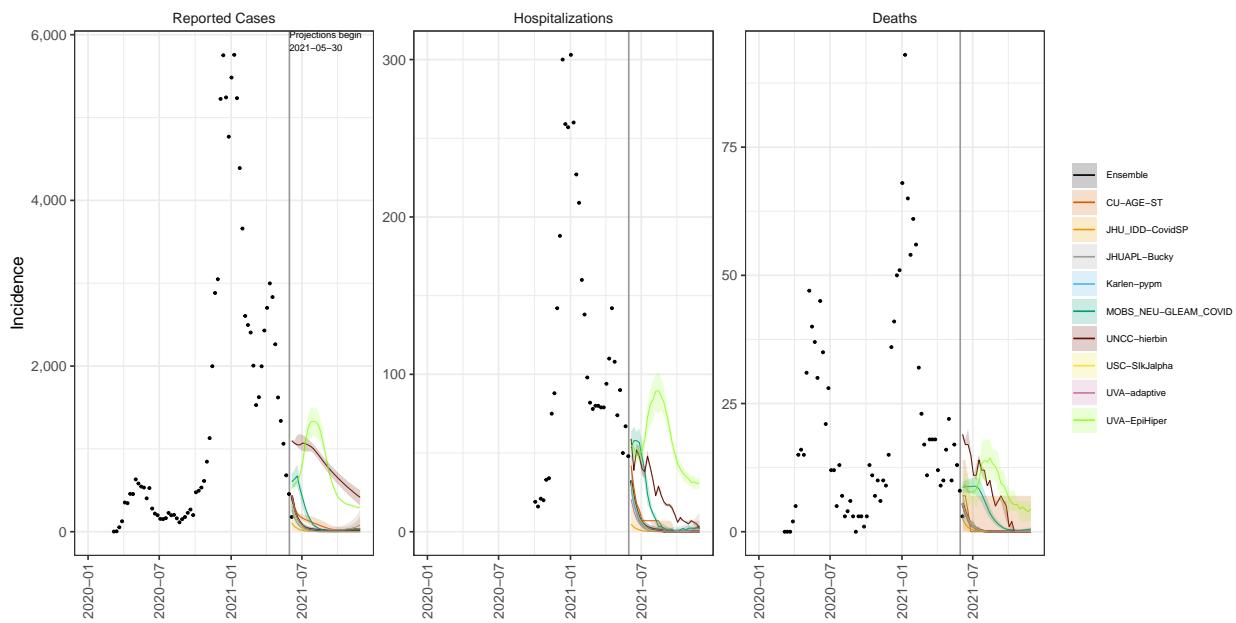
NE model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



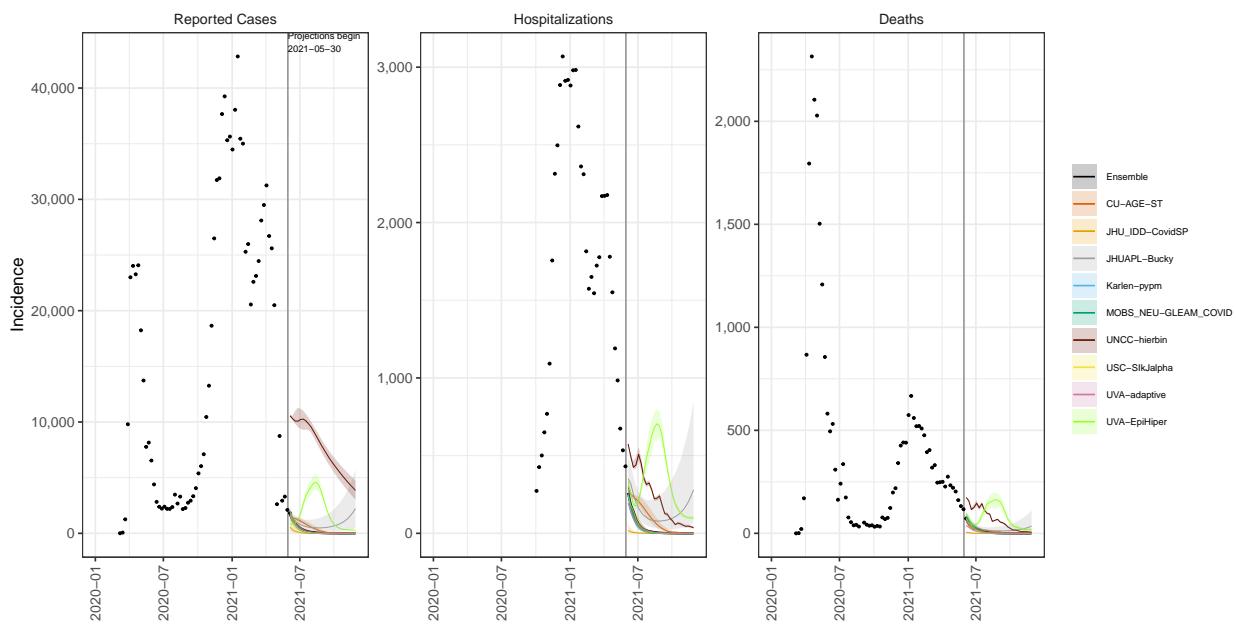
NV model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



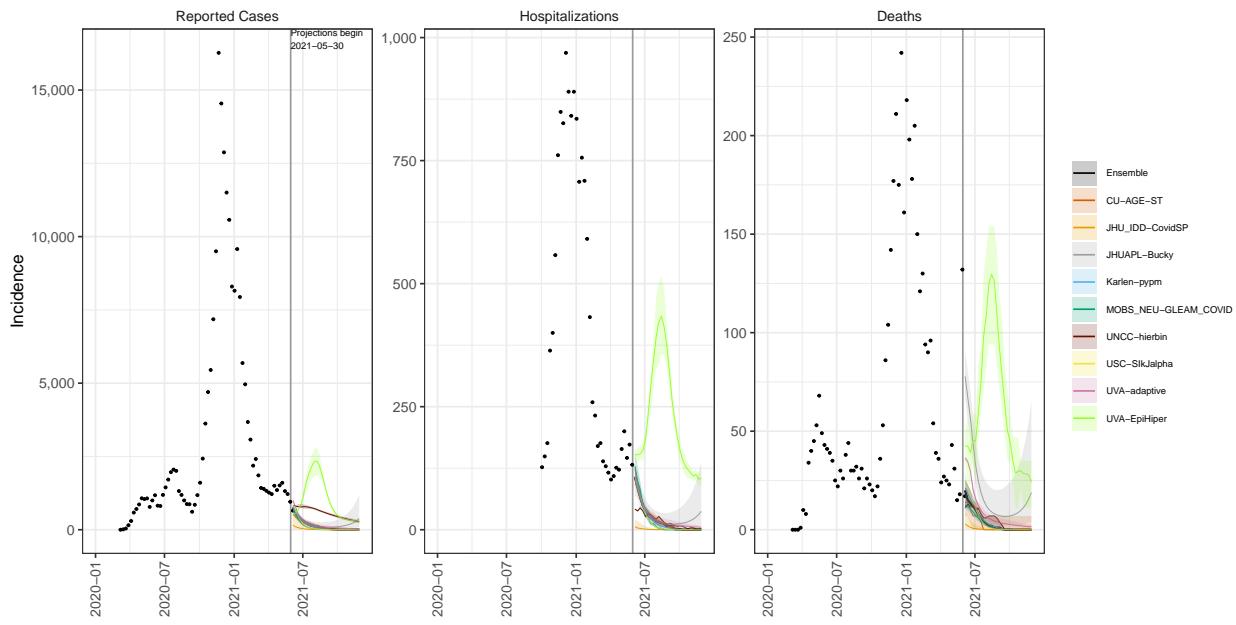
NH model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



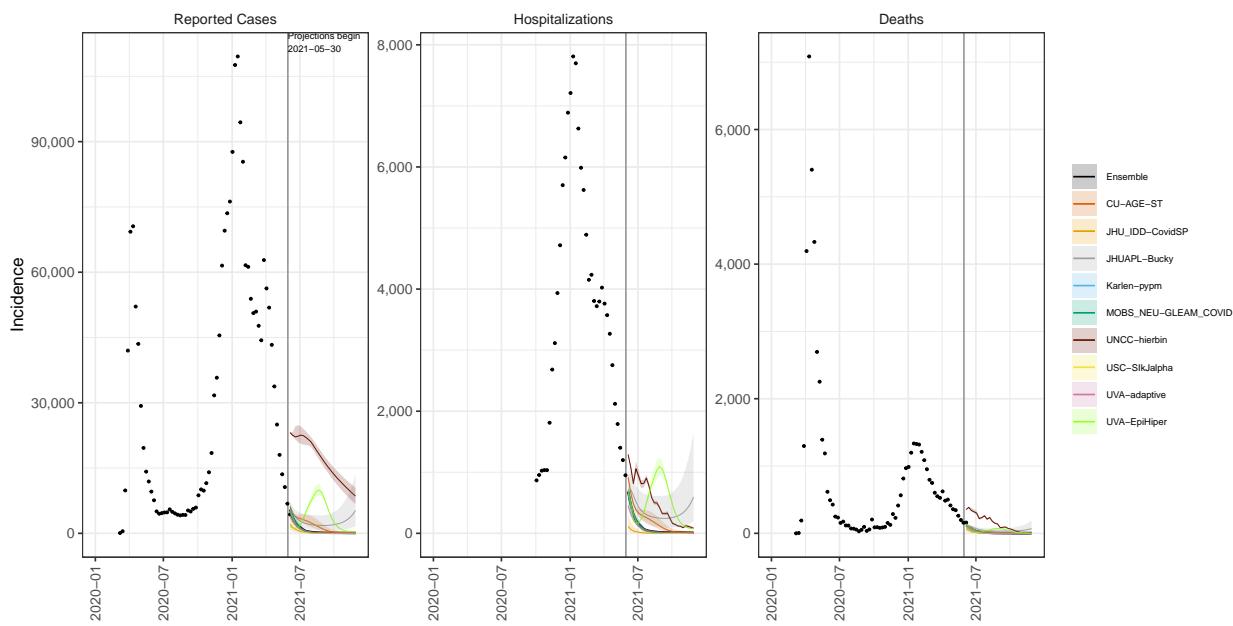
NJ model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



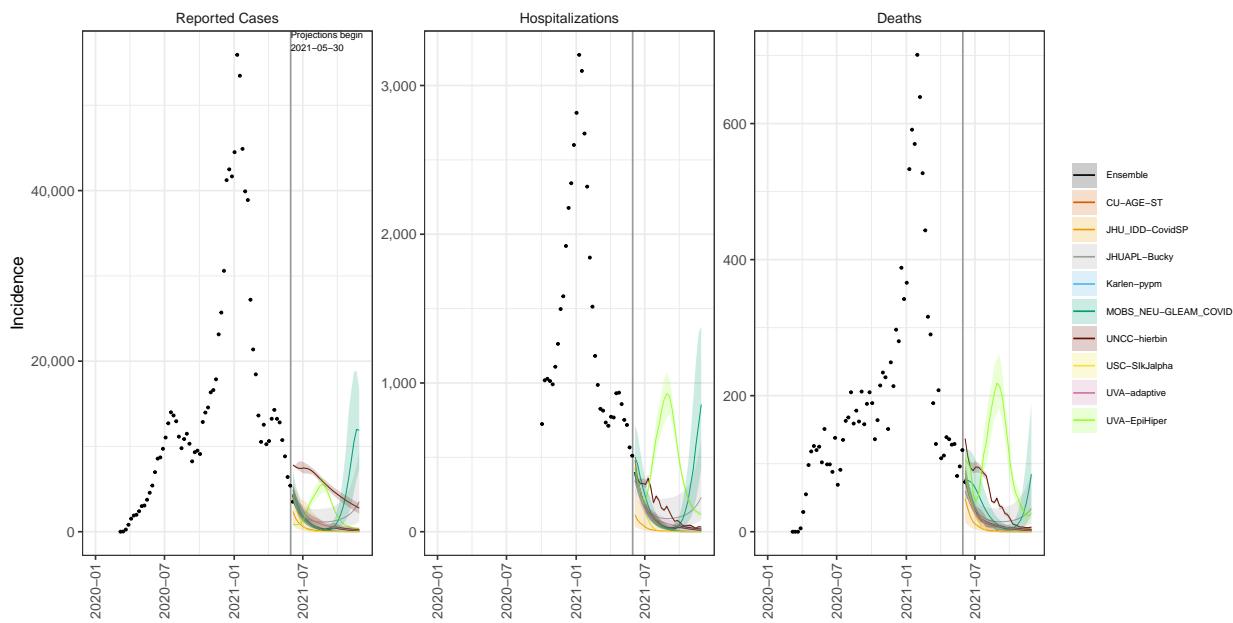
NM model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



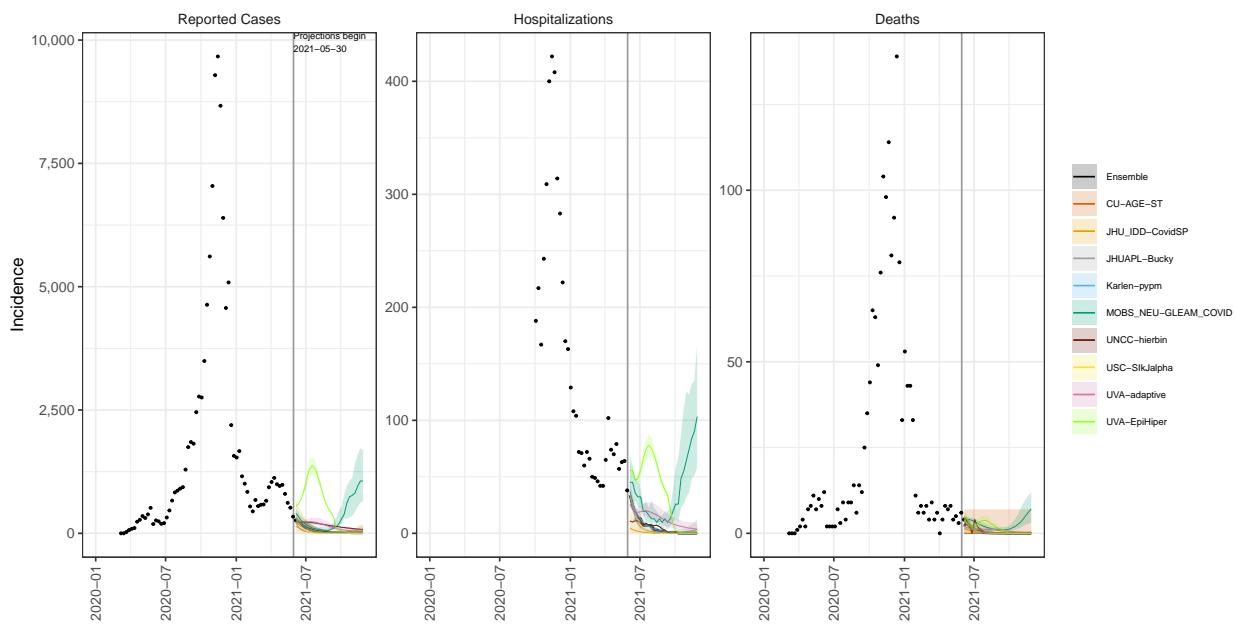
NY model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



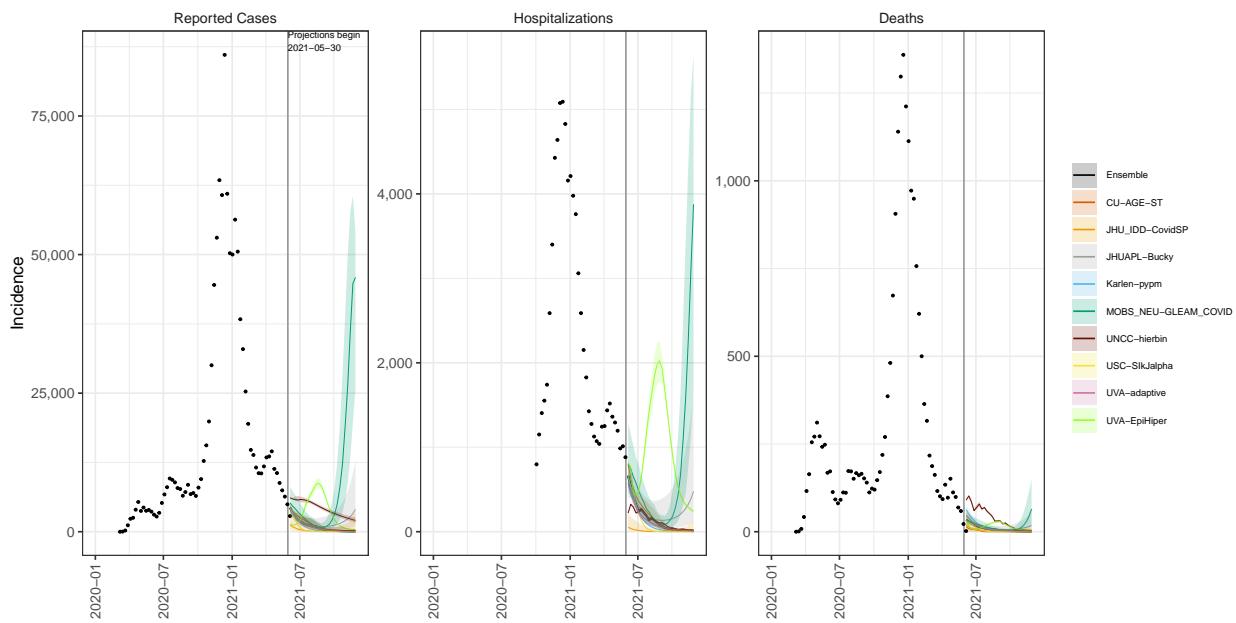
NC model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



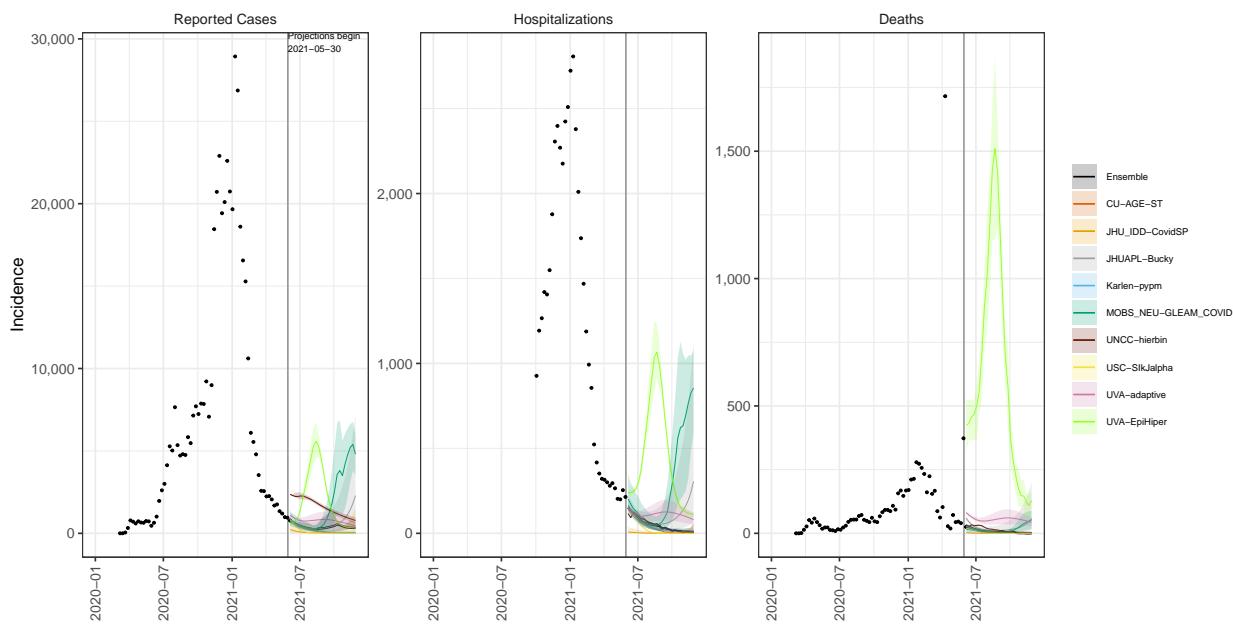
ND model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



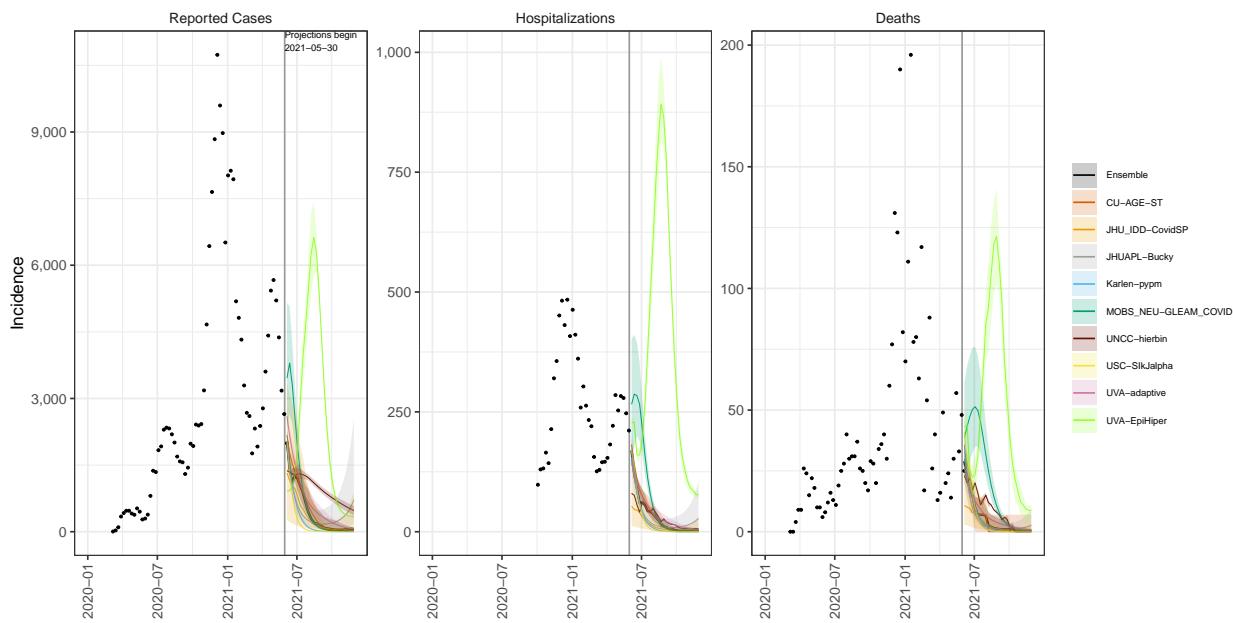
OH model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



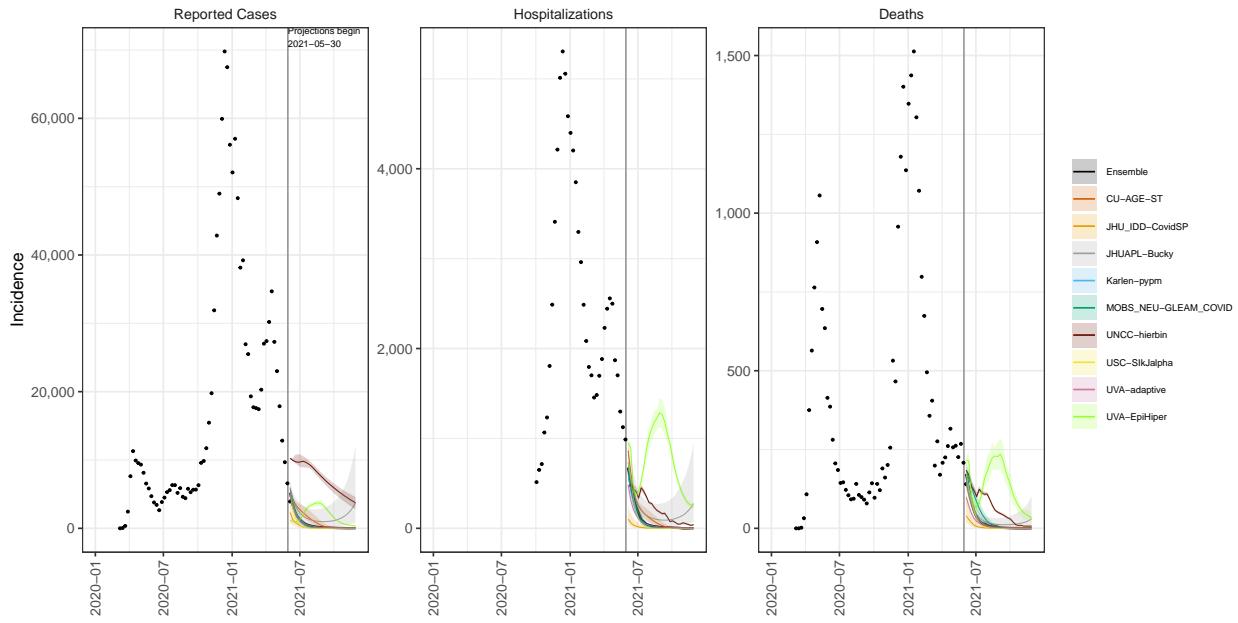
OK model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



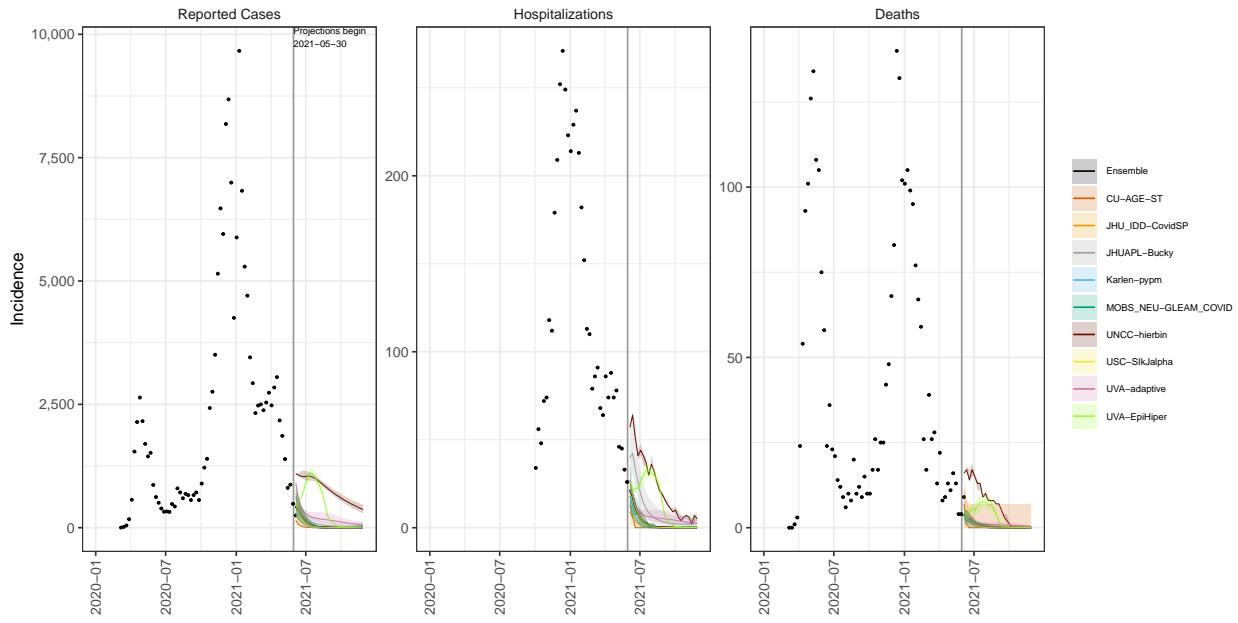
OR model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



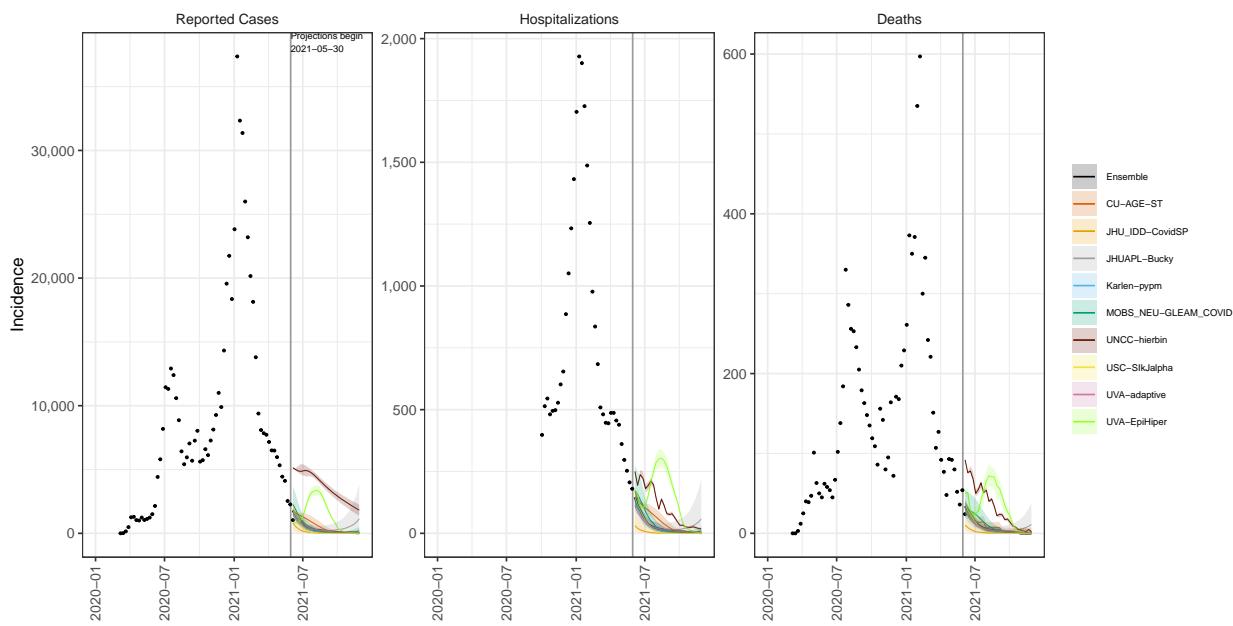
PA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



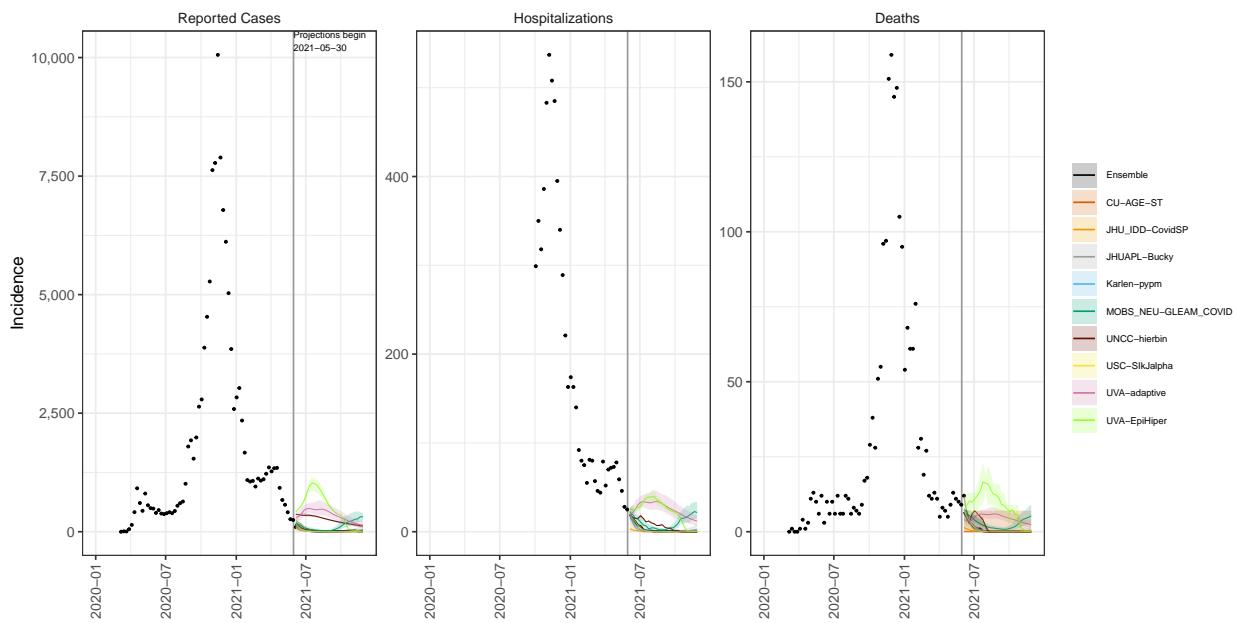
RI model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



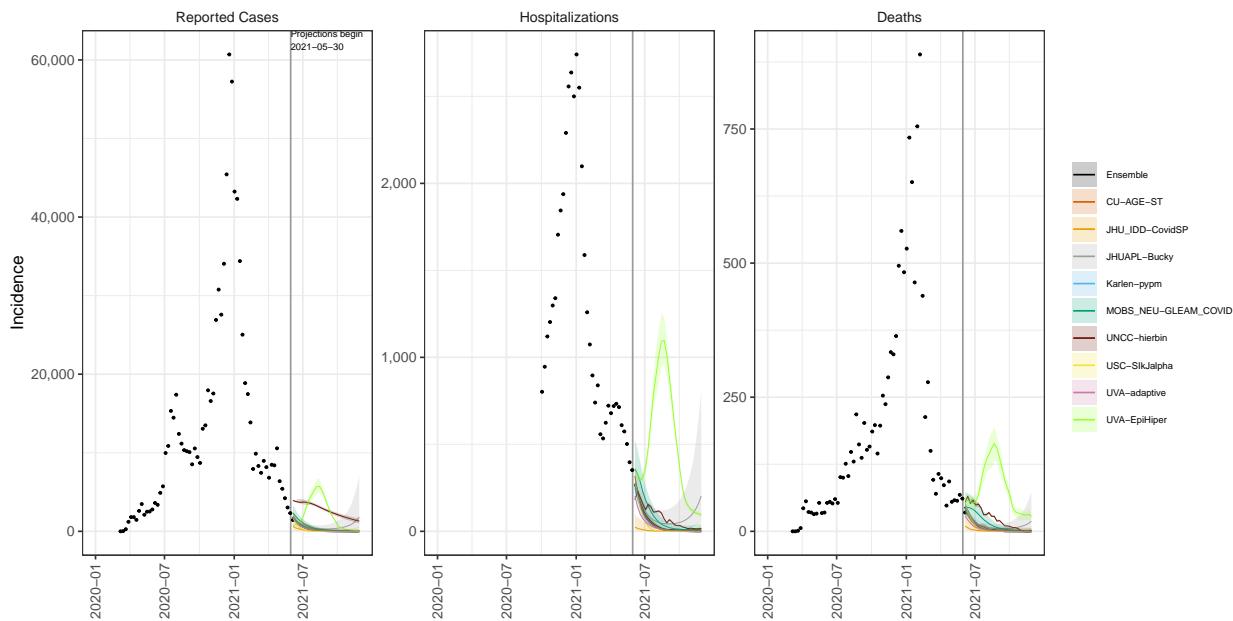
SC model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



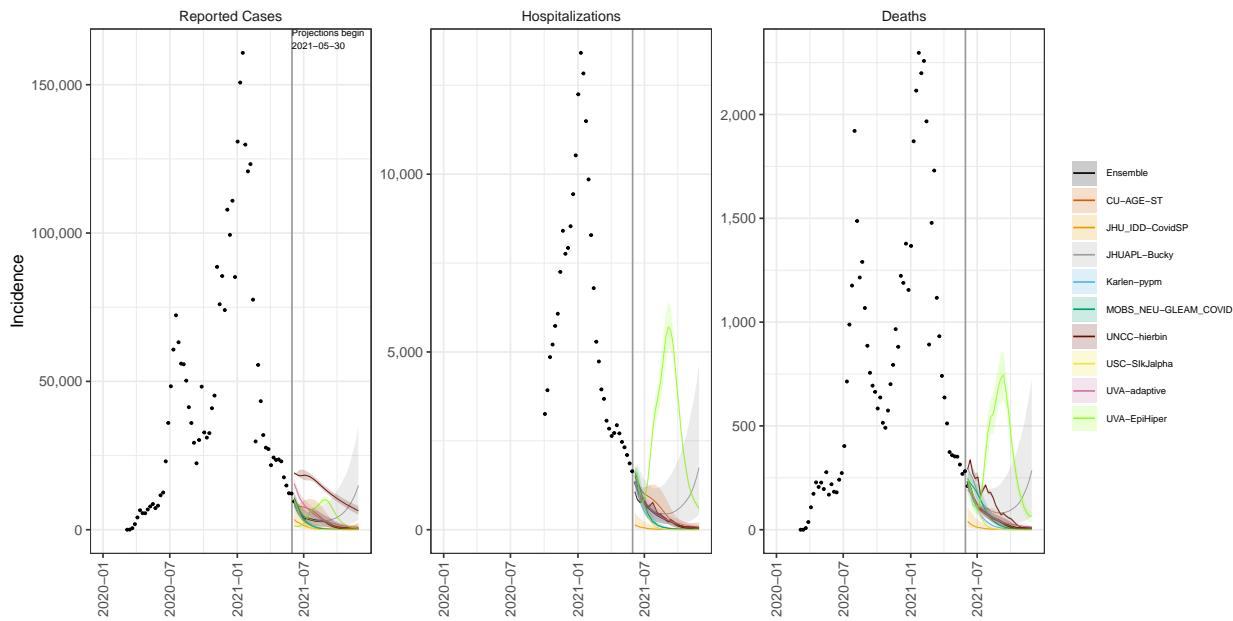
SD model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



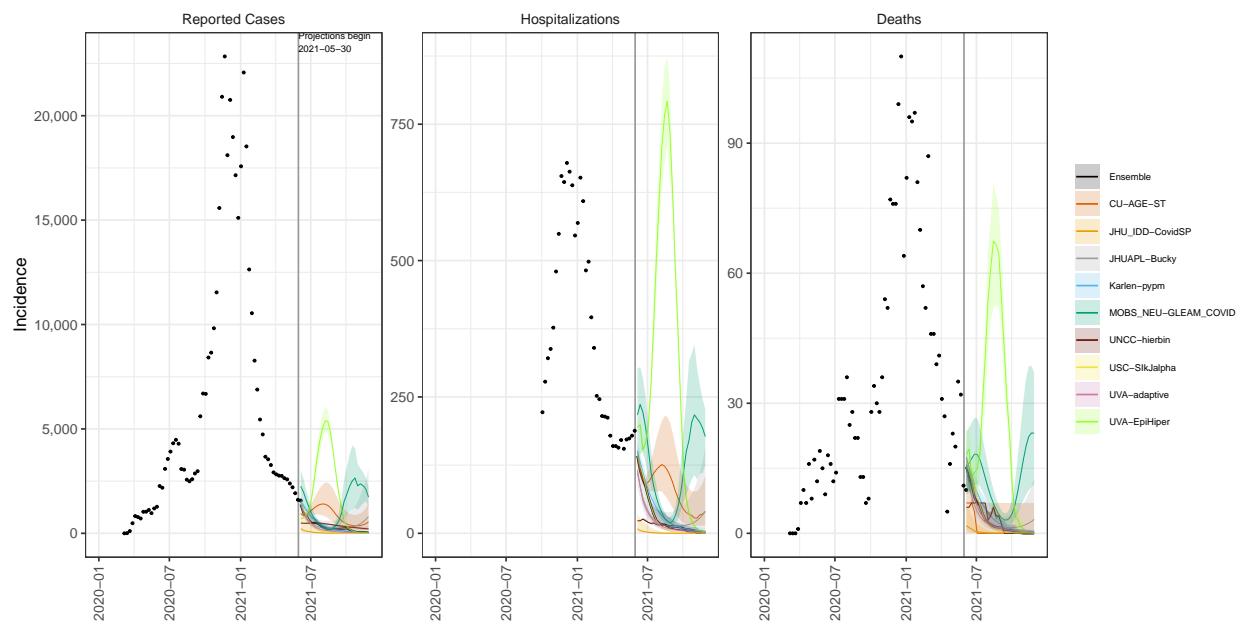
TN model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



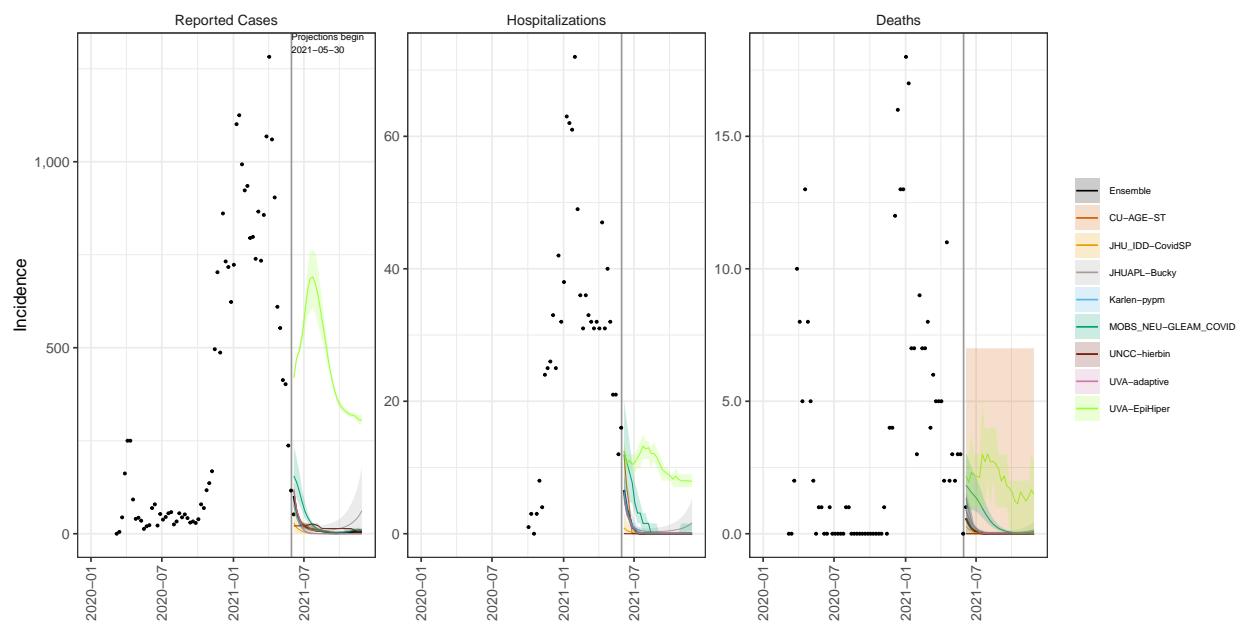
TX model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



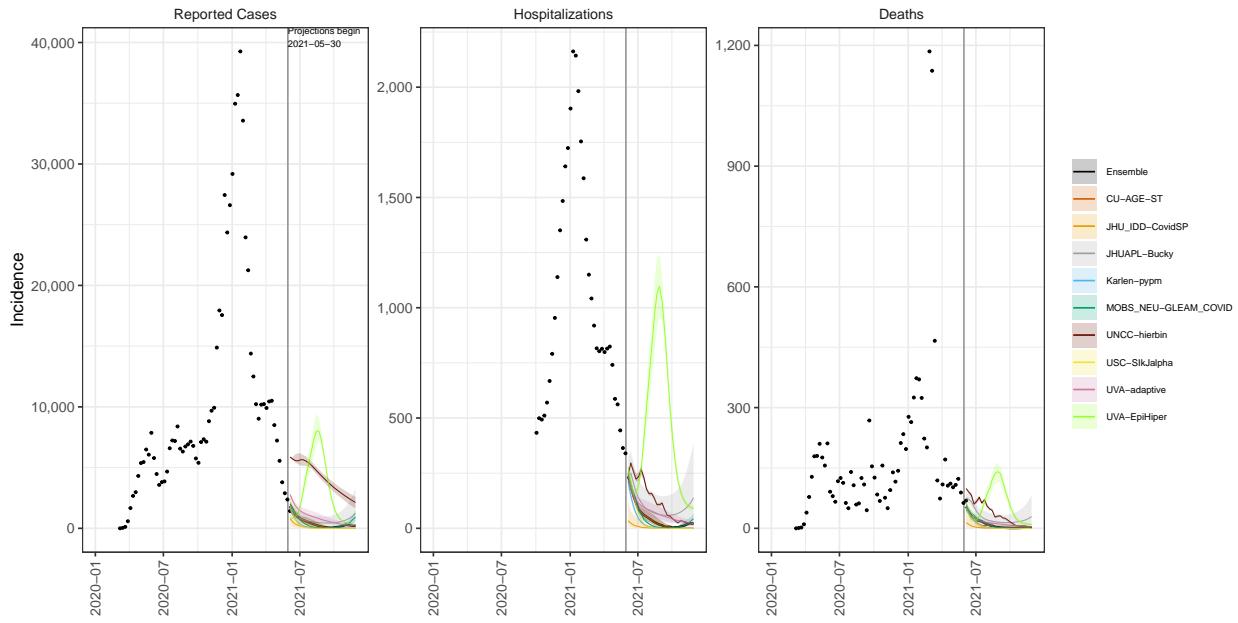
UT model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



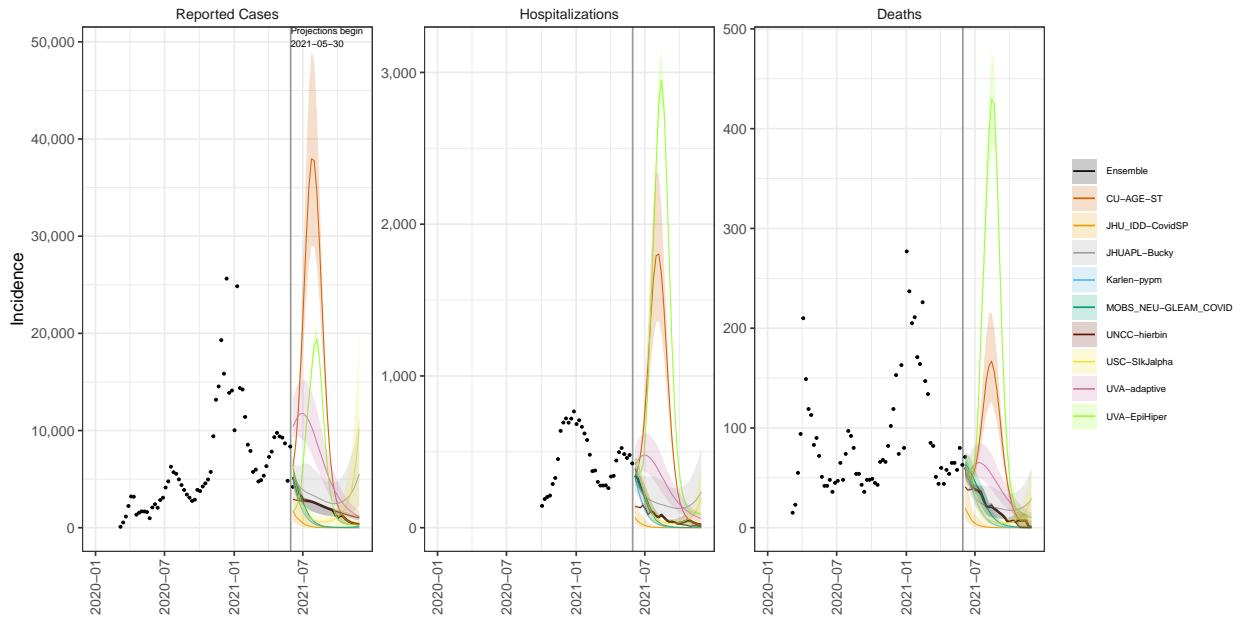
VT model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



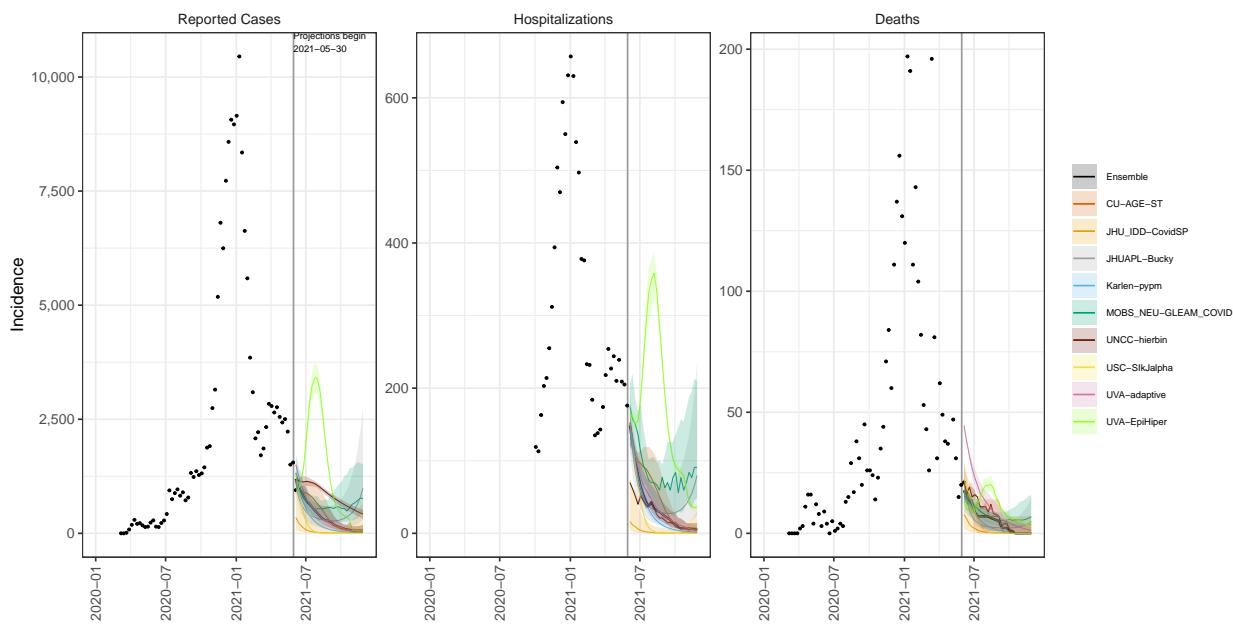
VA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



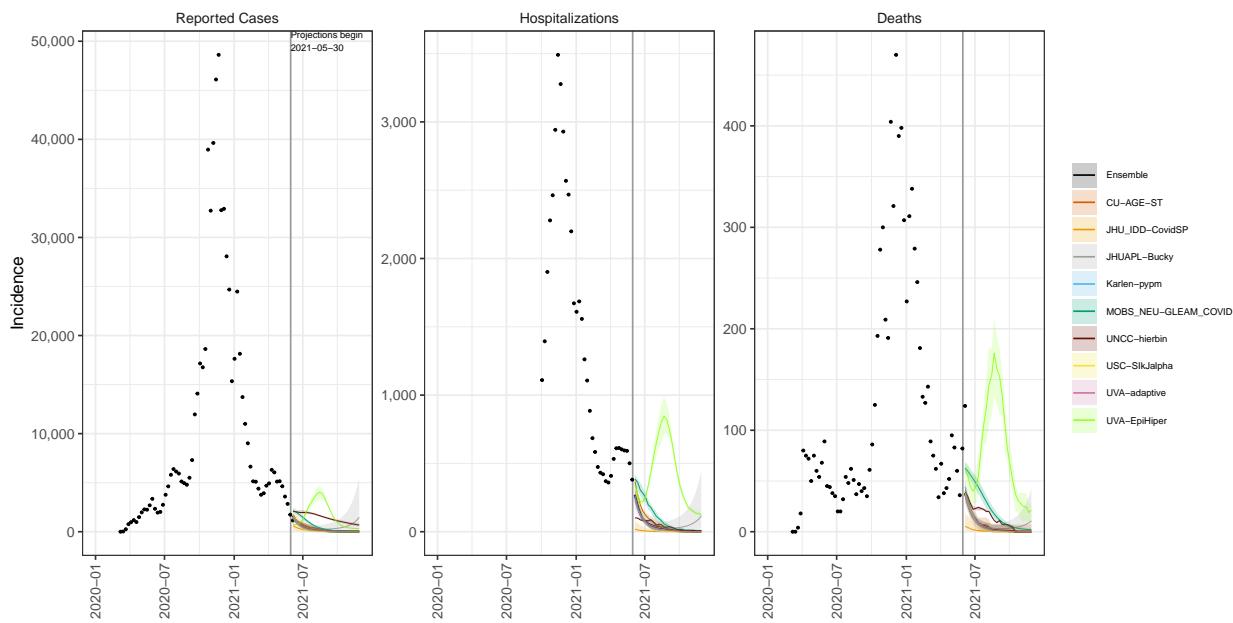
WA model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



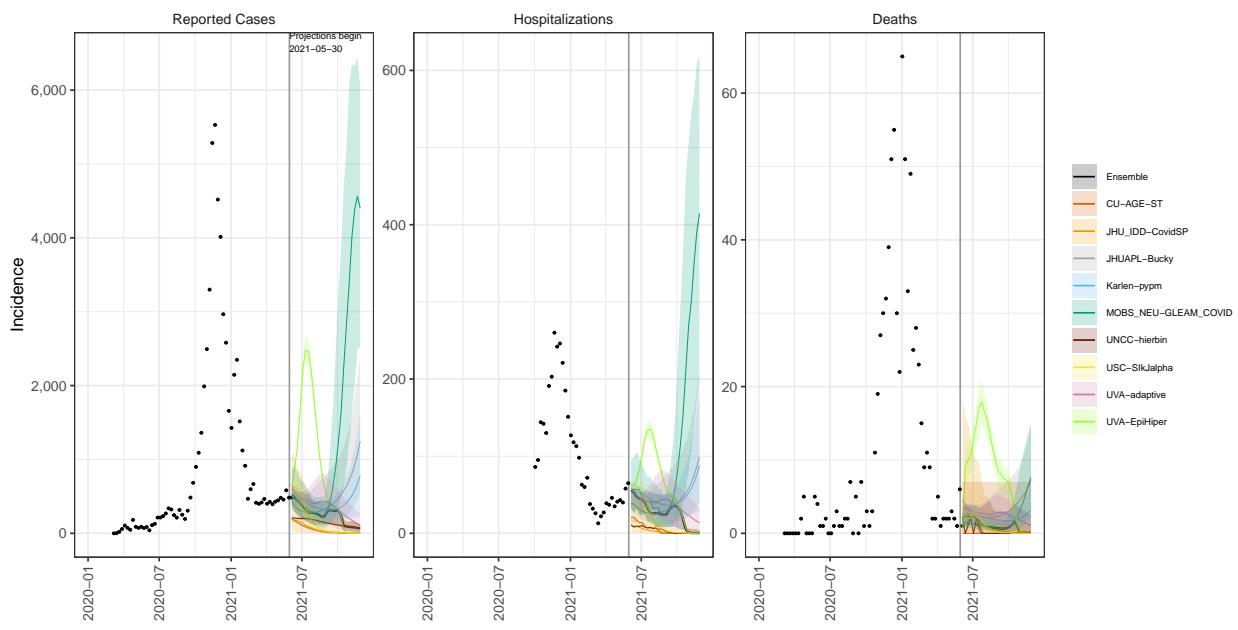
WV model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



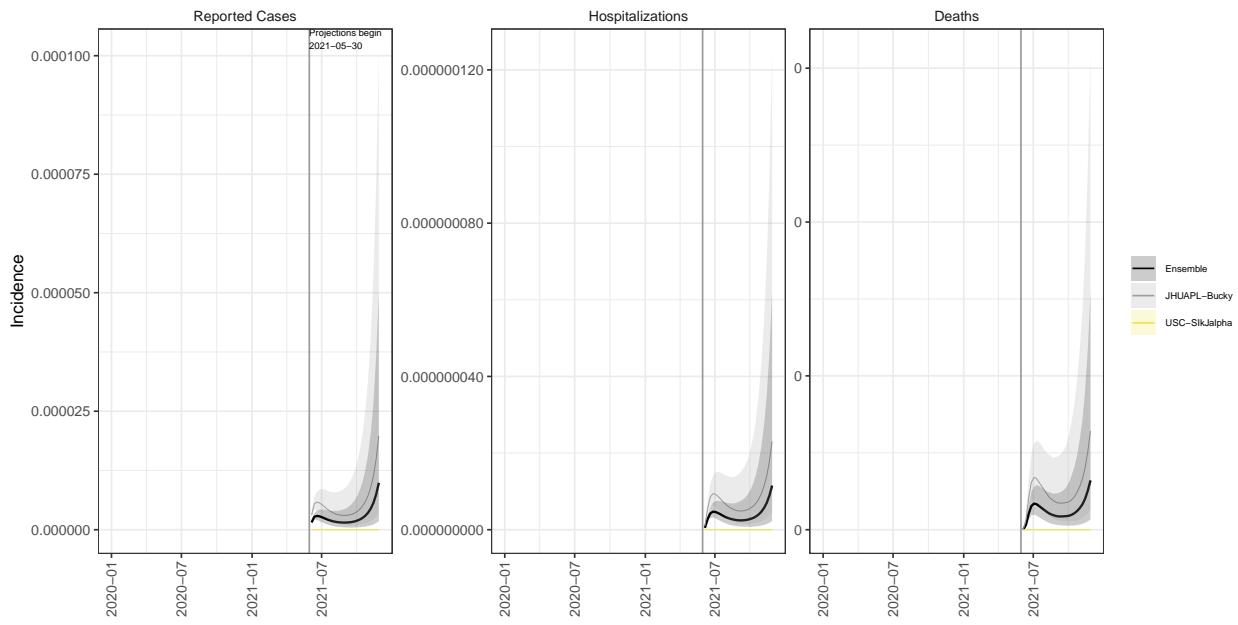
WI model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



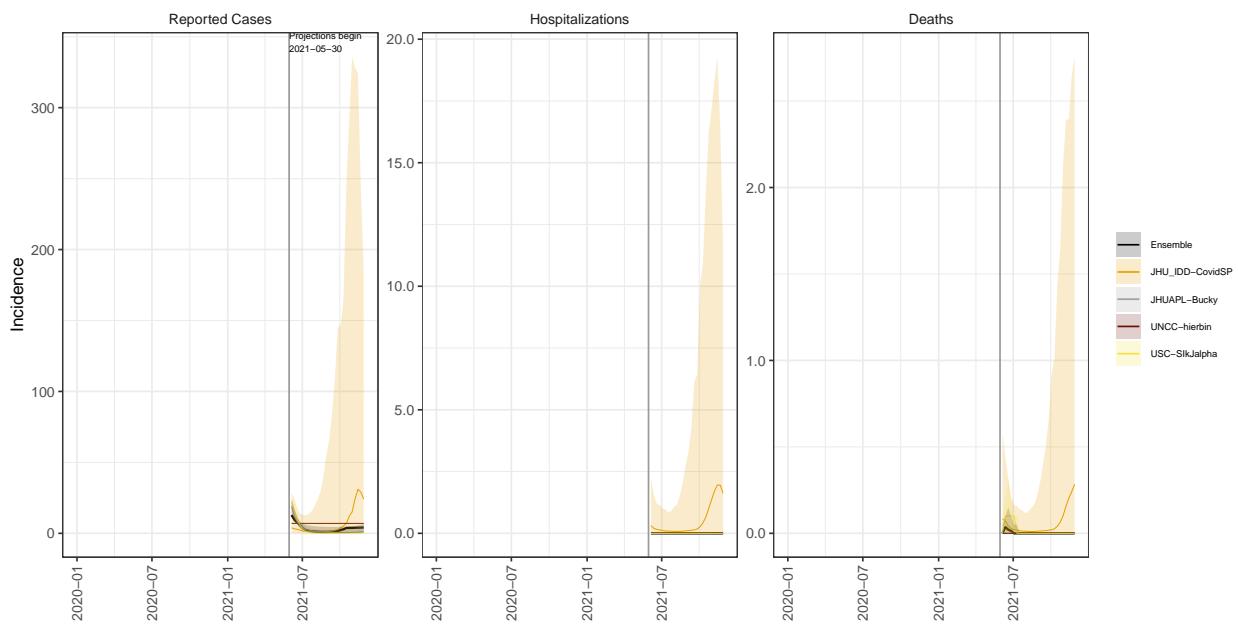
WY model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



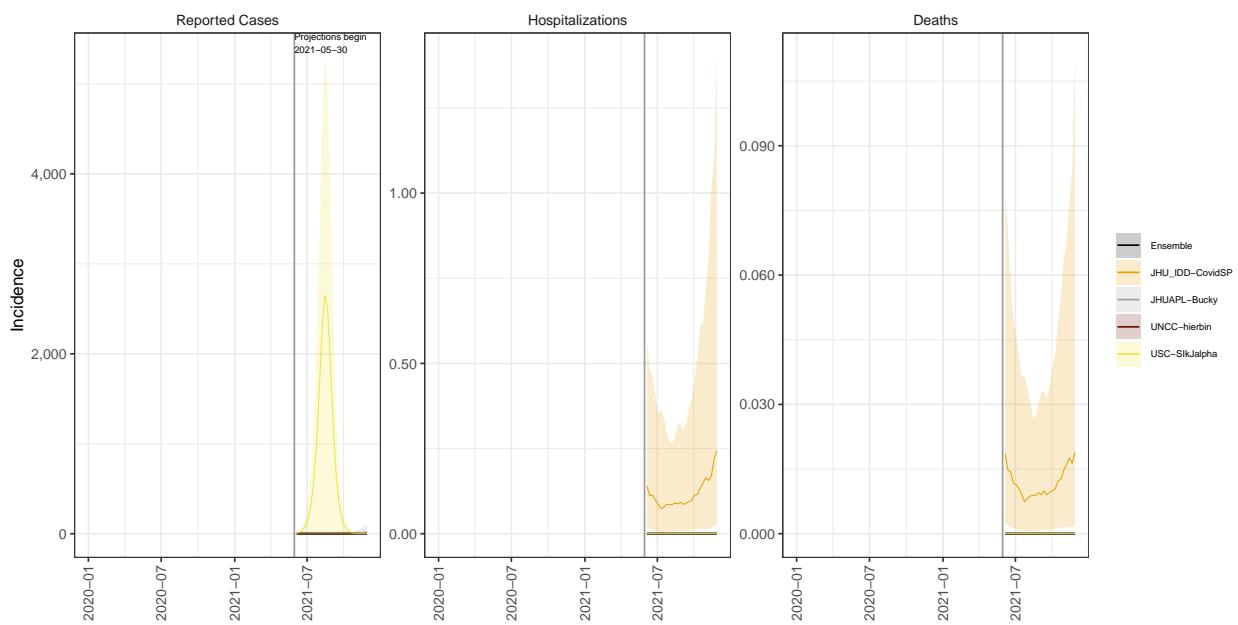
AS model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



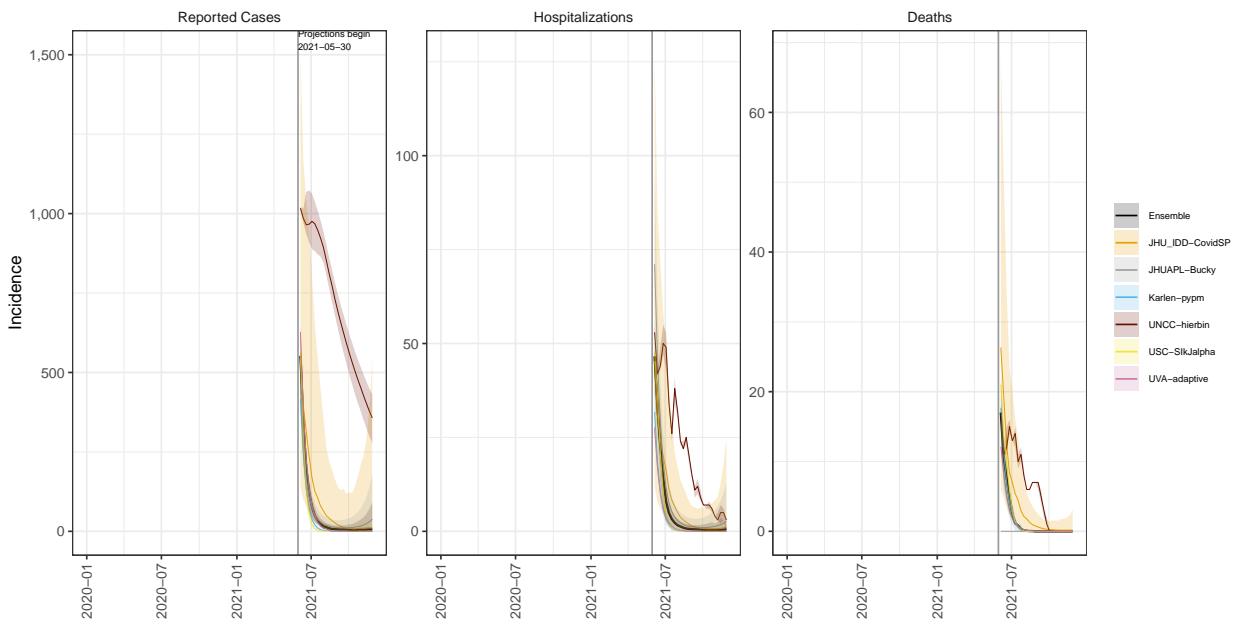
GU model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



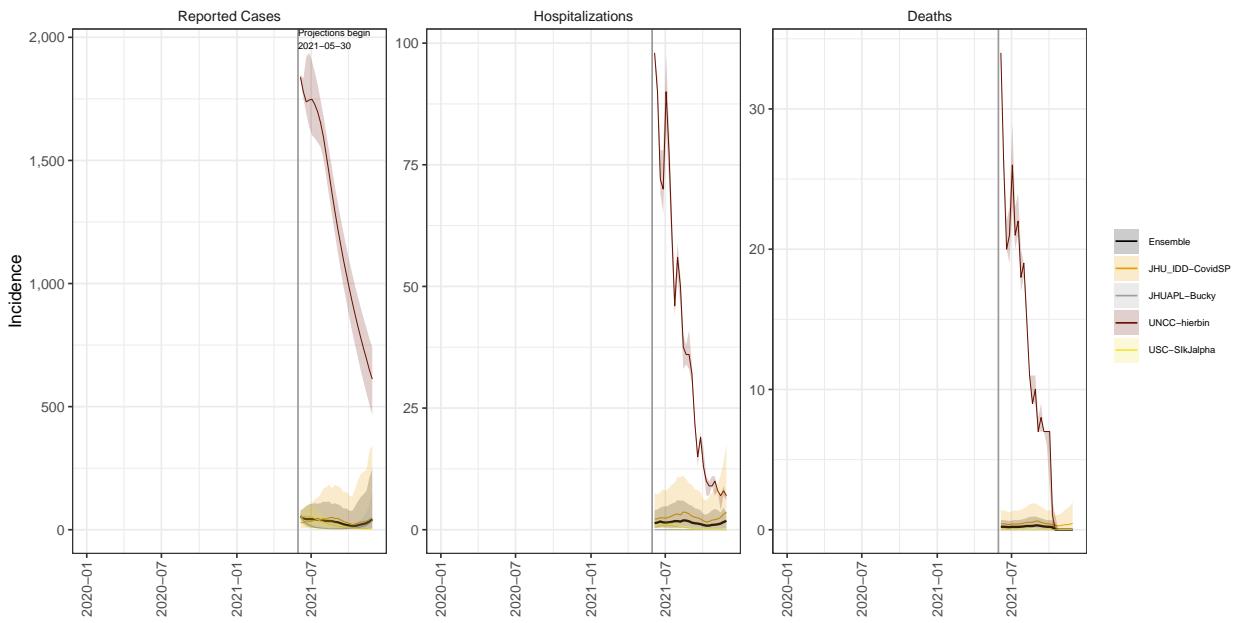
MP model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



PR model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



VI model variance & 50% projection intervals – Low vaccination, Low variant transmissibility



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