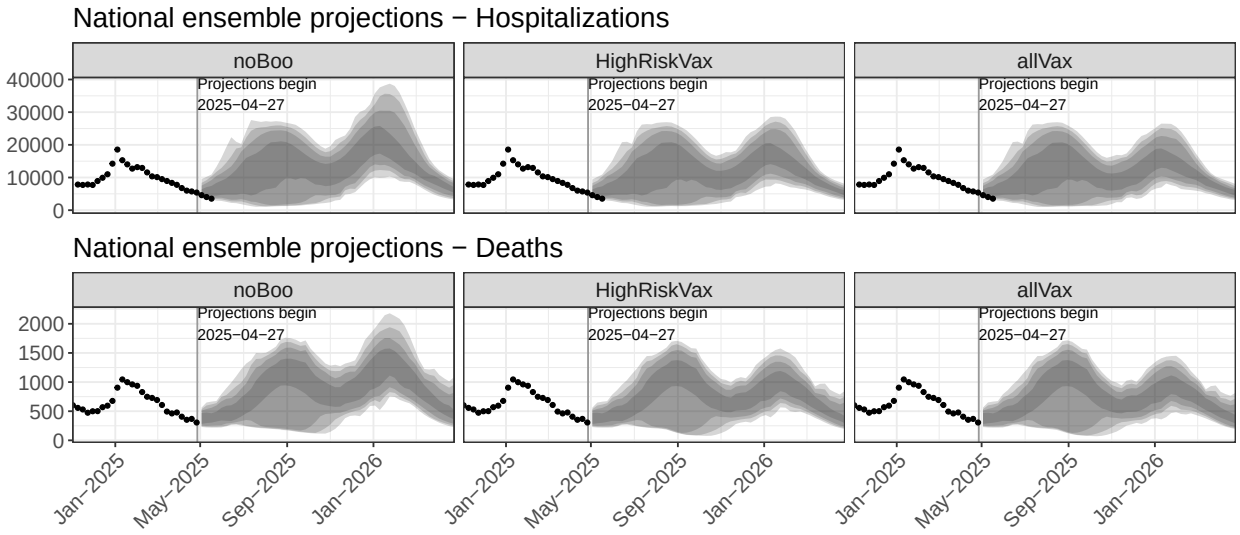
Round 19 Executive Summary Report

COVID-19 Scenario Modeling Hub, 05 June, 2025

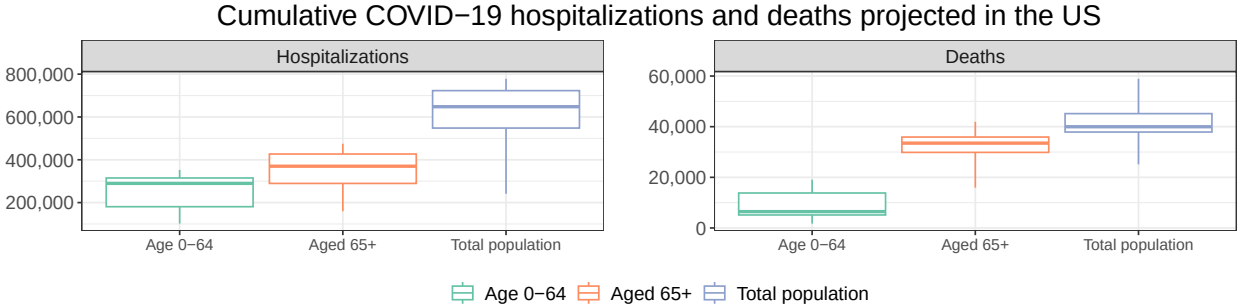
General Dynamics

- **Based on the national ensemble, we expect two periods of increased COVID-19 activity, in summer 2025 and winter 2025-26, in each scenario**, with a first peak projected in late August 2025 and a second peak in January 2026, for both hospitalizations and deaths. Based on the 50% projection interval, both peaks are expected to remain close to that of last winter season (i.e., 20,000 weekly hospitalizations nationally).
- **Among all scenarios, continued substantial burden of disease from COVID-19 is expected**, with 648,000 cumulative hospitalizations (95% PI 241,000–778,000) and 40,000 deaths (95% PI 25,000-59,000) due to COVID-19 projected over the course of the projection period (April 27, 2025 to April 25, 2026) in the high risk group scenario (i.e., booster vaccination only among individuals aged 65+ or otherwise at high risk for elevated severity).



From lightest to darkest shading represents 95%, 90%, 80% and 50% projection intervals

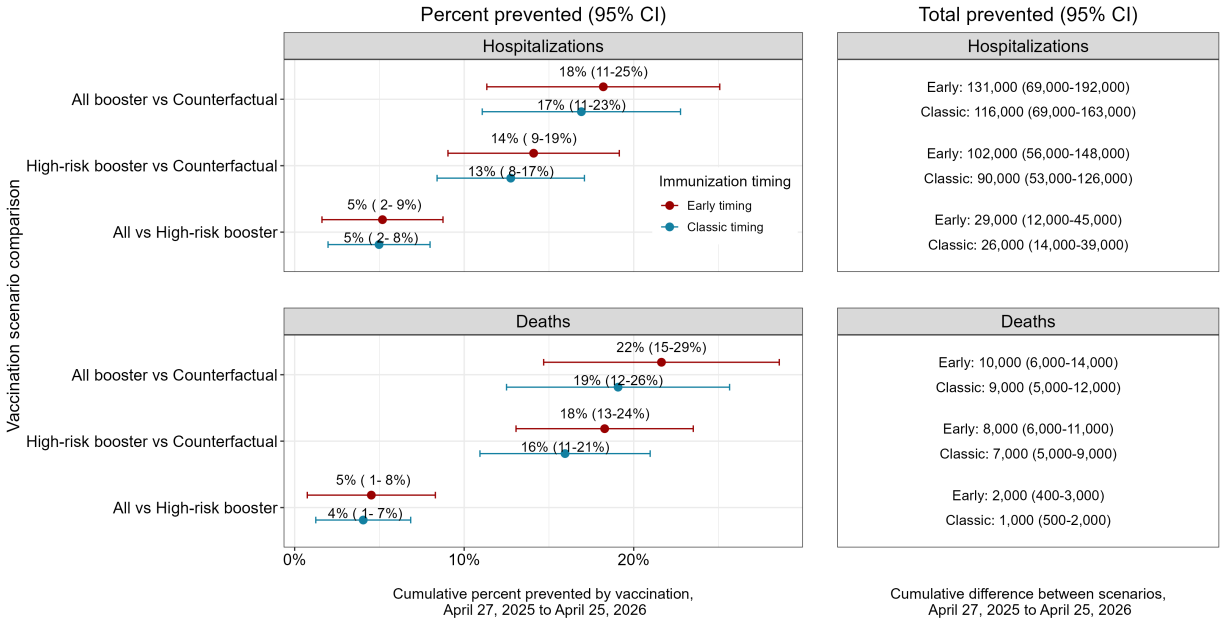
- **The majority of hospitalization and death burden from COVID-19 is expected to occur in individuals 65+**, with 56% of hospitalizations and 84% of deaths occurring in 65+ in the high-risk group recommendation scenario.



Median ensemble projections with 50% and 95% projection intervals, April 27, 2025 to April 25, 2026
High−risk vaccination scenario

Impact of Vaccination

- **Both vaccination strategies are projected to significantly reduce disease burden compared to no vaccination**.
- **Compared to no vaccination, vaccination of high-risk groups reduces hospitalizations by 13% (8-17%) and deaths by 16% (11-23%)**, over the full time period. Vaccinating high-risk groups would result in 90,000 (53,000-126,000) fewer hospitalizations and 7,000 (4,000-9,000) fewer deaths nationally over the projection period, compared to no vaccination.
- **Vaccination for all age groups increases these reductions to 116,000 (69,000-163,000) hospitalizations and 9,000 (5,000-12,000) deaths averted.** As compared to vaccinating only 65+ and high-risk individuals, vaccinating all ages would prevent an extra 26,000 hospitalizations and 1,000 deaths.



- **The majority of the overall vaccination benefits (i.e., direct and indirect effects) is expected to come from reductions in this age group,** with 67,000 (38,000-96,000) hospitalizations and 6,000 (4,000-7,000) deaths averted among 65+ individuals in the high-risk group recommendation scenario compared to no vaccination.
- **We estimate that indirect effects of universal vaccine recommendations could reduce disease burden by 4% among people 65+**, representing an additional ~12,000 hospitalizations and ~1,000 deaths averted among this age group.

Impact of Vaccination Timing

- **An earlier vaccination campaign is projected reduce COVID-19 outcomes**, compared to classic influenza vaccination timing. Moving the vaccination campaign 1.5 months earlier is projected to reduce the numbers of deaths by 3% (1-6%) and hospitalizations by 2% (-2-6%).