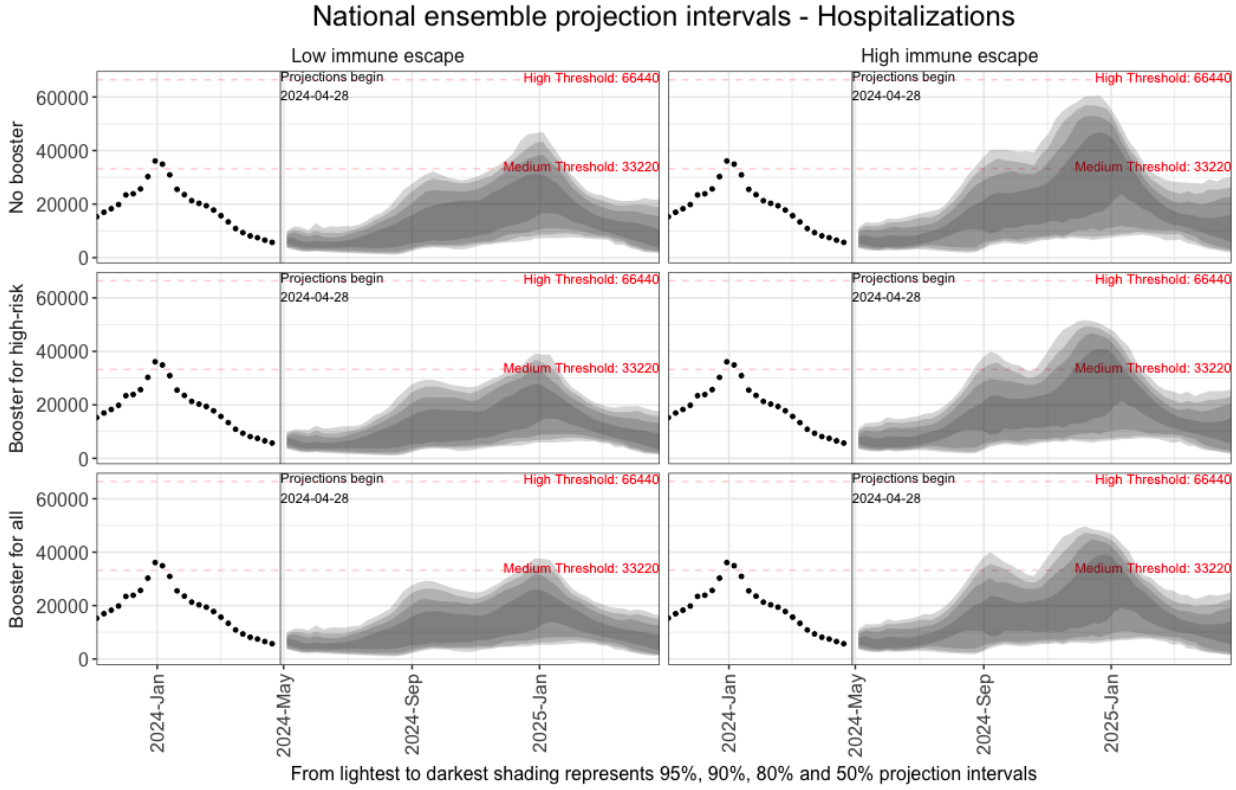
Scenario Modeling Hub Round 18 Executive Summary

GENERAL DYNAMICS

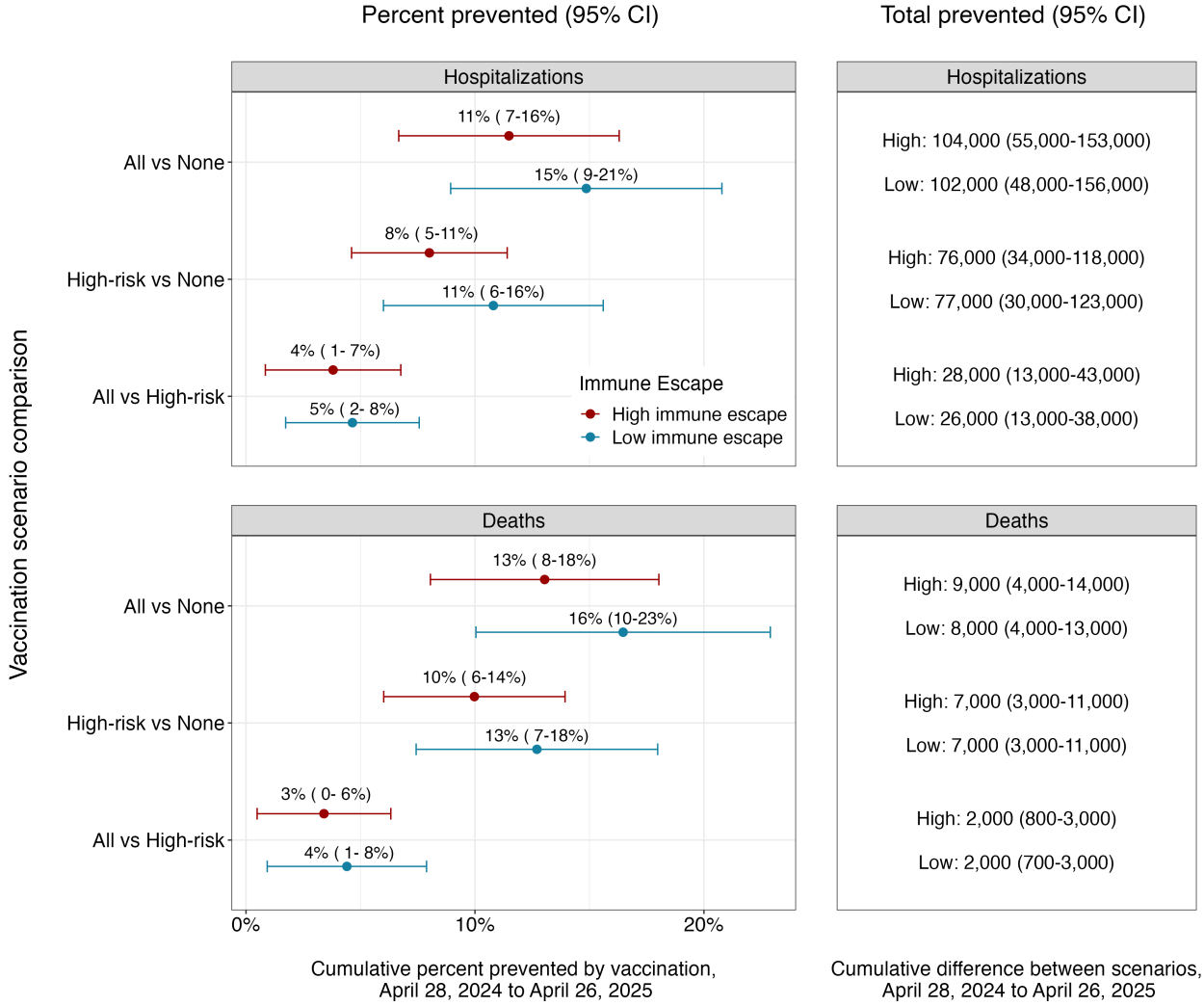
- **COVID-19 Hospitalizations and deaths will begin to rise nationally in late summer 2024 and peak in mid-December 2024 through mid-January 2025.** Peak hospitalizations will be similar to the 2023-24 season assuming the same vaccination recommendation (all eligible individuals) and high immune escape.



- **Over the course of the projection period (April 28, 2024-April 26, 2025) we project 814,000 hospitalizations (95% PI 0.4-1.2 million) and 54,000 deaths (95% PI 17,000-98,000).** This presumes high immune escape and vaccination recommended to all eligible individuals (conditions similar to the 2023-24 season). Our worst case (no vaccination, high immune escape) projects 931,000 hospitalizations and 62,000 deaths, while the best case (universal vaccination, low immune escape) projects 550,000 hospitalizations and 42,000 deaths.
- **Without vaccination, 52% of hospitalizations and 87% of deaths are projected to be in those 65+.** This is presuming high immune escape. It is expected most deaths and hospitalizations in younger age groups would be in high-risk individuals, however these numbers were not explicitly modeled.

VACCINE IMPACT

- **Vaccination of high-risk individuals is projected to prevent over 76,000 hospitalizations and 7,000 deaths.** Assuming high immune escape, hospitalizations are reduced by 76,000 [8%] (95% CI: 34,000-118,000) and deaths by 7,000 [10%] (95% CI: 3,000-11,000), compared to a no vaccine recommendation scenario. The majority of this impact comes from reductions in hospitalizations and deaths in those 65+ (71,000 and 7,000, respectively).



- **A recommendation for vaccination on all individuals leads to further reductions in hospitalizations and deaths, including in those 65 and older.** Assuming high immune escape, a universal vaccine recommendation reduces hospitalizations by an additional 28,000 [4%] (95% CI 13,000-43,000) and deaths by an additional 2,000 [3%] (95% CI 800-3,000), compared to a high-risk recommendation. This further reduction includes reductions in hospitalizations and deaths in those 65+ from indirect vaccine protection (11,000 and 1,000, respectively).