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THE IMPACT OF INCREASED RECOMBINANT ZOSTER VACCINE USE ON THE BURDEN OF HERPES ZOSTER AMONG ADULTS AGED 50 TO 59 YEARS

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BACKGROUND

50+ RZV vaccination was recommended for immunocompetent adults aged ≥50 years by the Advisory Committee on Immunization Practices in 2018.¹

Vaccination coverage remains suboptimal for adults aged 50–59 years compared with adults aged ≥50 years overall.²

The objective of this study was to project the change in outcomes associated with increased RZV coverage among adults aged 50–59 years in the US.

METHODS

- A multicohort Markov model³ was used to compare the current RZV coverage (based on 2020 NHIS data) for adults aged 50–59 years to scenarios assuming higher coverage:

43 million US adults aged 50–59 years in 2020
(population size based on 2020 census estimates)

Model inputs: age-specific HZ epidemiology, RZV efficacy, real-world RZV series completion, utilities, direct and indirect costs from published literature and US sources³

Real-world RZV coverage in adults 50–59y:	compared with	Scenario Analyses
7.3%	Real-world coverage in adults 60–64 years = 14.6%	BASE CASE
	Coverage 5% higher than current coverage in adults 50–59y = 12.3%	SCENARIO ANALYSES
	Coverage 10% higher than current coverage in adults 50–59y = 17.3%	
	Coverage 20% higher than current coverage in adults 50–59y = 27.3%	

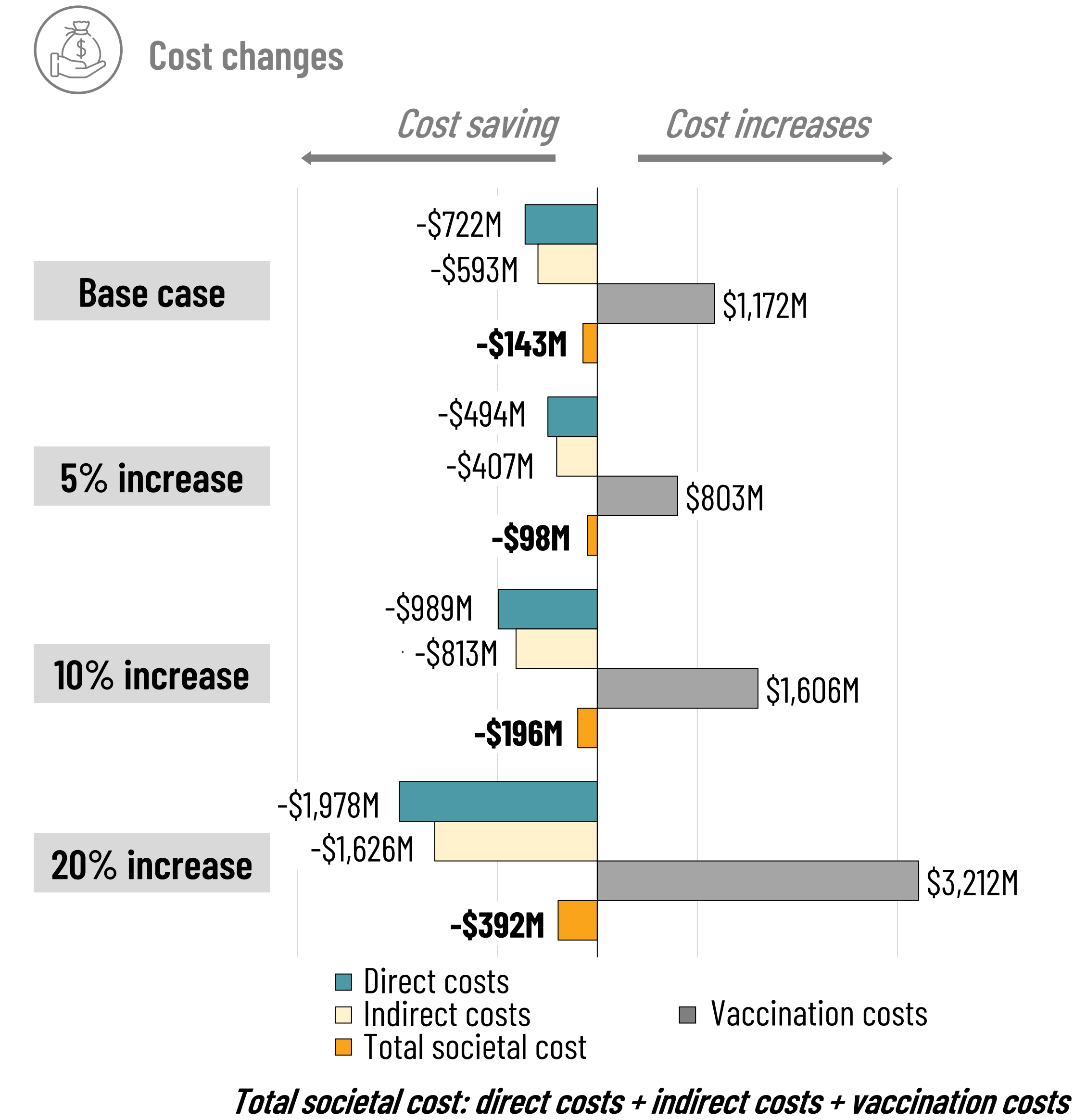
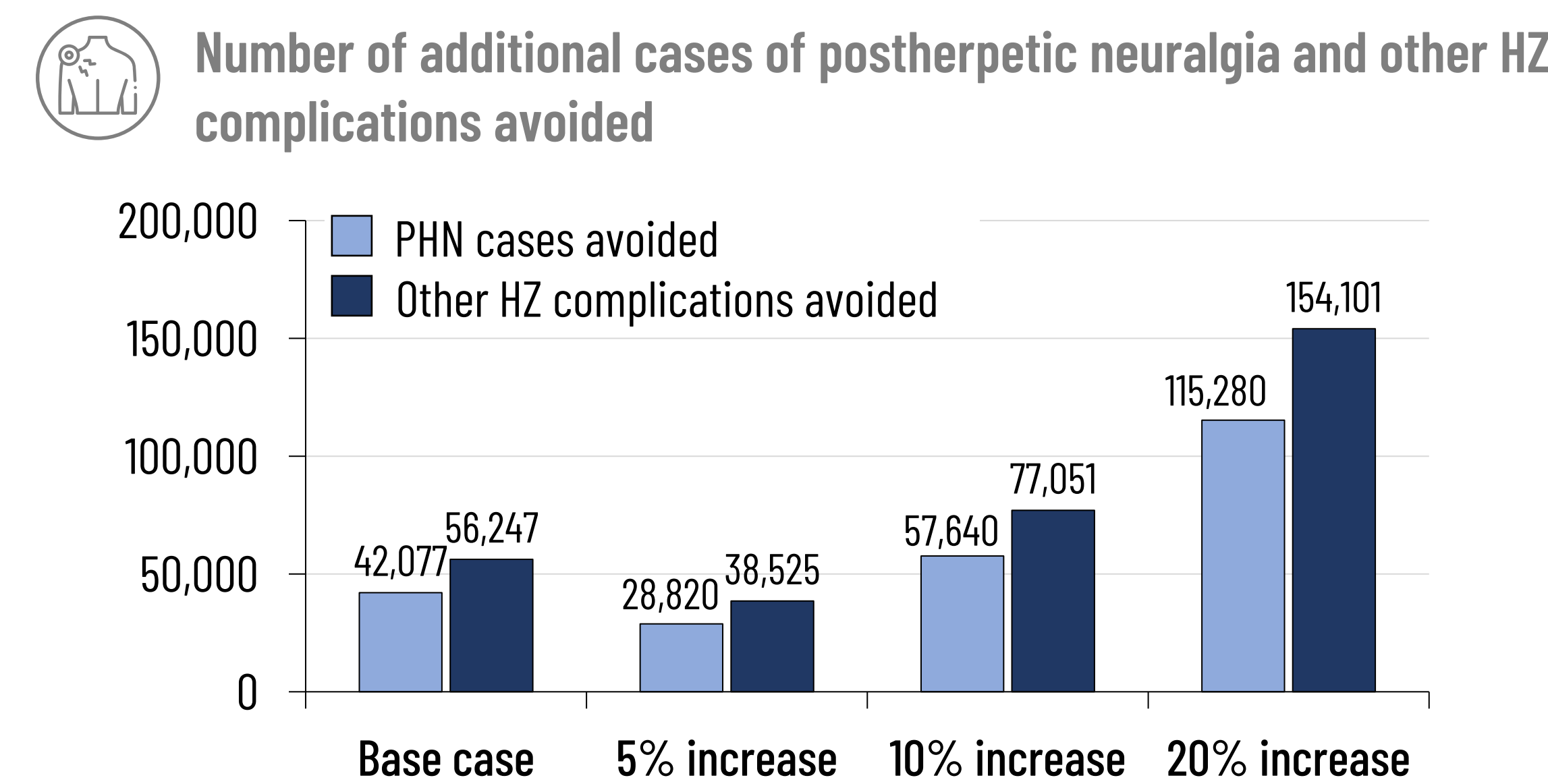
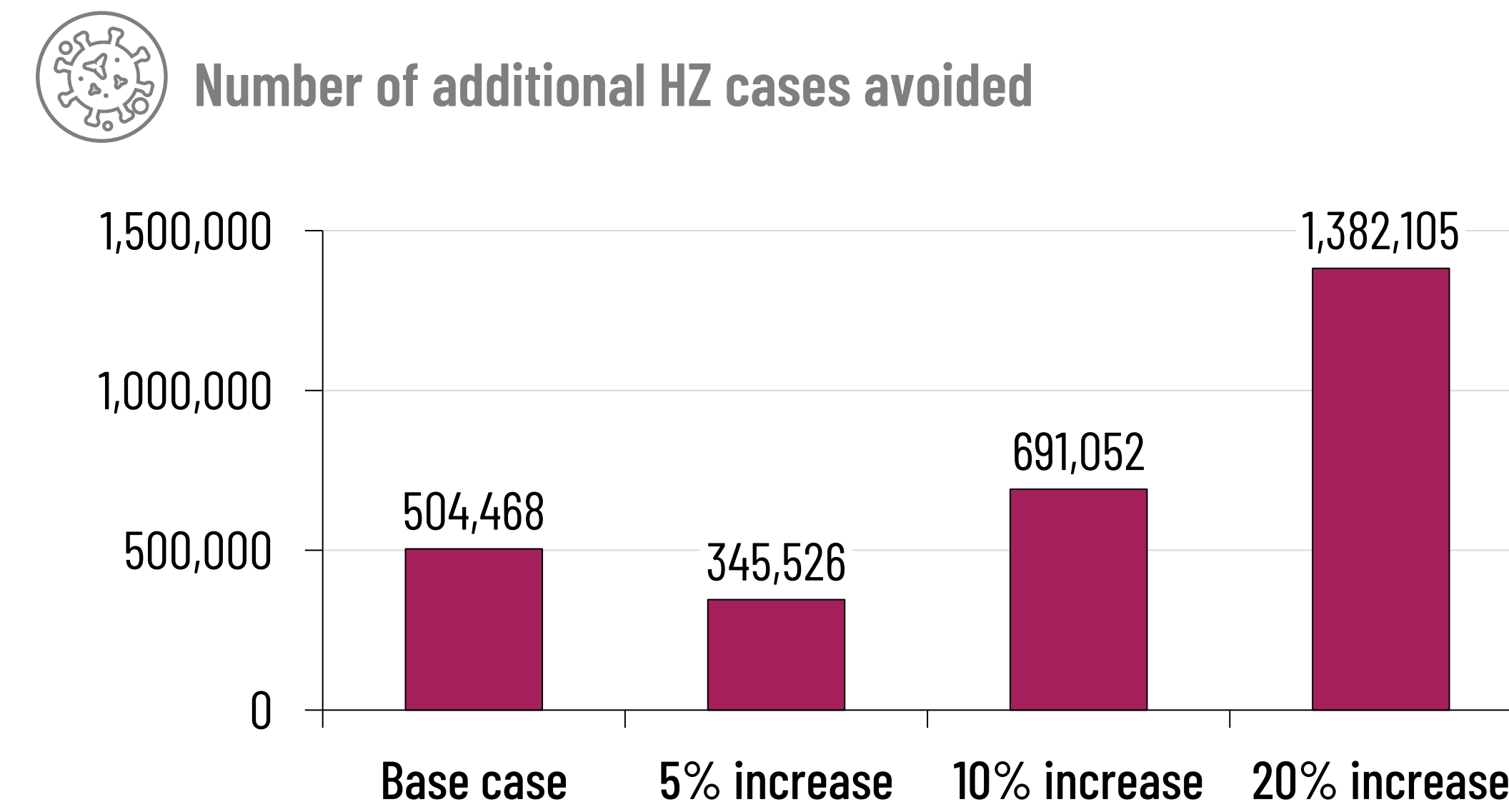
Outcomes: number of HZ cases and complications* averted, QALYs, and costs

Model used a lifetime time horizon and a 1-year cycle length; real-world coverage based on reference 2. Coverage stated is based on the first dose. Series completion (two doses) is assumed to be 80%.

*Ocular, cutaneous, neurological, other non-pain complications.

RESULTS

The model included 43 million adults aged 50–59 years



BASE CASE ANALYSIS

- Increasing RZV coverage from 7.3% to 14.6% resulted in an estimated:
 - Additional **504,468 HZ cases** avoided,
 - Additional **42,077 postherpetic neuralgia cases** avoided,
 - Additional **56,247 other HZ complication cases** avoided,
 - Additional **5,230 discounted QALYs** gained
- From a societal perspective, this would realize cost savings of approximately **\$143 million**

SCENARIO ANALYSES

In the various scenarios, **between 345,526 and 1,382,105 additional HZ cases** could be avoided, with reductions in societal costs ranging from approximately **\$98 million to \$392 million**

Abbreviations:

FDA: Food and Drug Administration; HZ: herpes zoster; NHIS: National Health Interview Survey; PHN: postherpetic neuralgia; QALYs: quality adjusted life-years; RZV: recombinant zoster vaccine; US: United States; y: years-old.

CONCLUSIONS

Increasing RZV vaccination among adults aged 50–59 years could **reduce the burden associated with HZ cases, PHN and other complications.**

These findings are a result of the long-term protection offered by RZV, **particularly in younger individuals.**⁴

From a societal perspective, cost savings could be achieved in this population in addition to improved clinical outcomes.

These findings demonstrate the potential **value of increasing RZV vaccination for adults in the US aged 50–59 years.**

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