



# ELICITING PREFERENCES FOR ZOSTER VACCINATION IN US ADULTS AGED 50 YEARS AND OLDER

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## BACKGROUND

- In October 2017, the Advisory Committee on Immunization Practices preferentially recommended recombinant zoster vaccine for immunocompetent adults aged ≥50 years, regardless of previous vaccination.
- Little is known about what drives personal shingles vaccination decisions.
- The primary aim of this study is to quantify preferences for attributes of Herpes Zoster (HZ) vaccines, from the perspective of adults aged ≥50 years in the US.
- Additionally, it examines differences in preferences among subgroups: likely vaccinated, at-risk, health plan, and African Americans (AA) of which the latter have been shown to vaccinate against HZ less than others.

## METHODS

### Survey design

- A discrete choice experiment survey was completed by 1,454 US adults aged ≥50 years in January 2019.



### Discrete Choice Experiment

- HZ vaccine profiles were characterized using seven attributes.
- Respondents made 8 choices between a pair of hypothetical HZ vaccine profiles, determined by an efficient experimental design, with a no vaccination option.



### Second Dose Compliance

- Respondents stated intentions to complete a 2-dose vaccination series as conditioned on varying levels of adverse events with a sequence of out-of-pocket (OOP) costs.



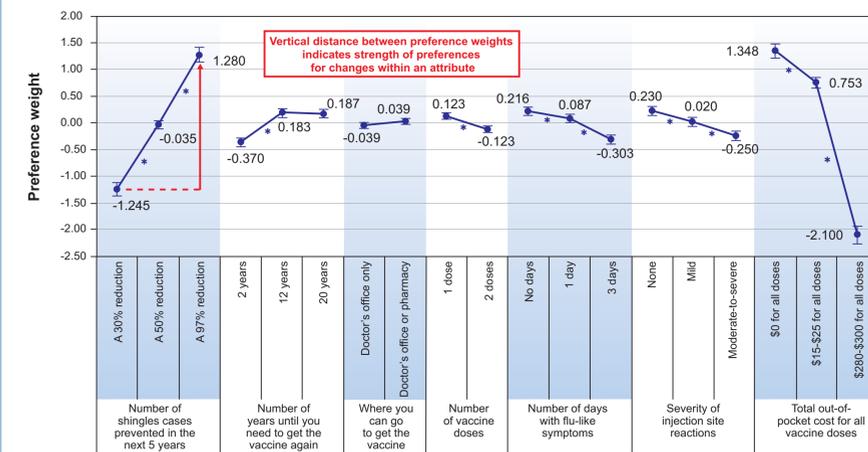
### Statistical Analyses

- Random-parameters logit (RPL) regression analysis was used to analyze the choice data.
- Preference weights from the RPL model were used to estimate the conditional relative importance of vaccine features and the minimum acceptable benefits (MAB) for changes in undesirable features.
- Preference weights were estimated for subgroups to test for systematically different preferences.
- Post-hoc latent class analysis was used to identify subgroups of AA respondents with distinct preference profiles.



## RESULTS

Preferences across vaccine attributes highlight the importance of full out-of-pocket costs and are useful in showing relative weights of attributes on HZ vaccination

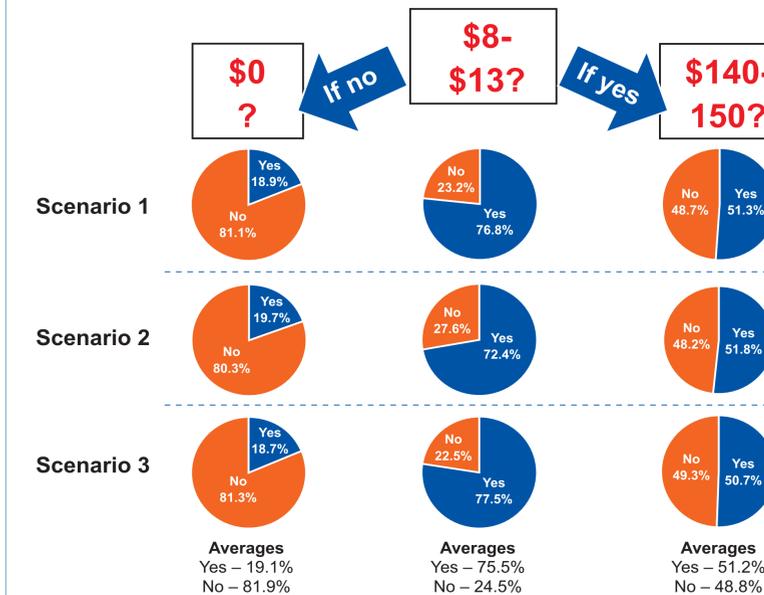


The relative importance of vaccine effectiveness is approximately 10.5 (2.52/0.24) times more important than a decrease in the number of vaccine doses from 2 doses to 1 dose. The preference weight and the relative importance of opting out of vaccination was -3.3 (95% confidence interval (CI), -3.7 to -2.9). \*Indicates the segments or differences in attribute levels that were significant at the 95% confidence level.

Second-dose compliance is also influenced by out-of-pocket costs, however costs don't explain entirely preference weights.

Three scenarios are presented to respondents. A first dose of the shingles vaccine (\$8-\$13) with randomly allocated flu-like symptoms or injection site reactions is given.

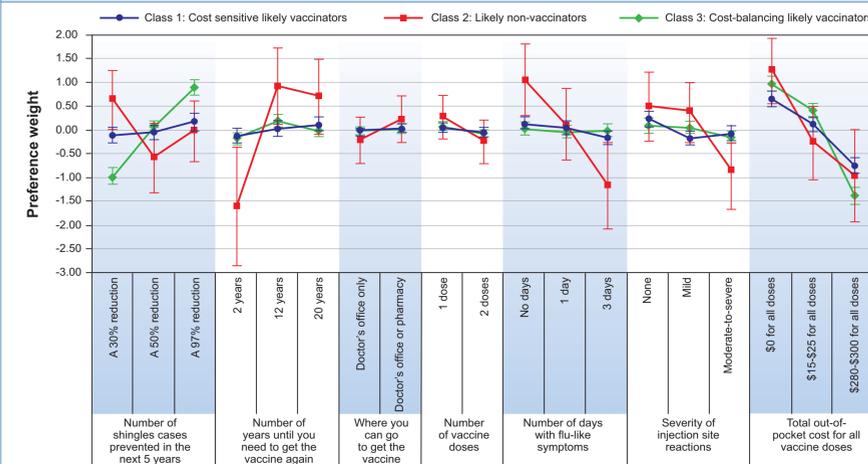
Respondents are then asked two questions: Conditioned on the adverse event profile of the first dose, would you get a second dose, if it cost...



Systematic differences in preferences among subgroups were largely driven by cost, vaccine efficacy, and the utility associated with the no-vaccine alternative

| Subgroup  | Systematic Difference in Preferences |
|---|--------------------------------------|
| Respondents had a flu vaccination in the past 2 years vs. those who had not           | Yes                                  |
| Respondents with autoimmune diseases or other at-risk conditions vs. those who do not | No                                   |
| Respondents who are African American vs. those who are not                            | Yes                                  |
| Respondents aged 50-64 years vs. respondents aged 65 years and older                  | Yes                                  |

Post-hoc latent class model identified 3 distinct subgroups of African Americans respondents with distinct preferences



The preference weight and the relative importance of opting out of vaccination was -1.0 (95% confidence interval (CI), -1.4 to -0.7) for class 1, 2.4 (95% CI, 1.2 to 3.5) for class 2 and -4.3 (95% CI, -5.1 to -3.6) for class 3

## CONCLUSIONS

- On average, adults aged 50 years and older prefer getting a shingles vaccine over no vaccine.
- Total out-of-pocket costs for all Zoster vaccine doses was the most important attribute followed by vaccine efficacy. Adverse events also influence HZ vaccination decisions but to a lesser extent.
- Almost 75% respondents stated that they would complete the series of a shingles vaccine with 2 doses at a fixed OOP cost of \$8 to \$13 per dose.
- Differences in HZ vaccination preferences across African Americans are in the importance of getting a shingles vaccine over no vaccine, total OOP costs, and the duration of effectiveness.



Zoster vaccine decisions appear to be mostly driven by costs. However, healthcare professionals should continue to educate patients on other vaccine attributes, as they also influence vaccination decisions.

## Disclosures

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