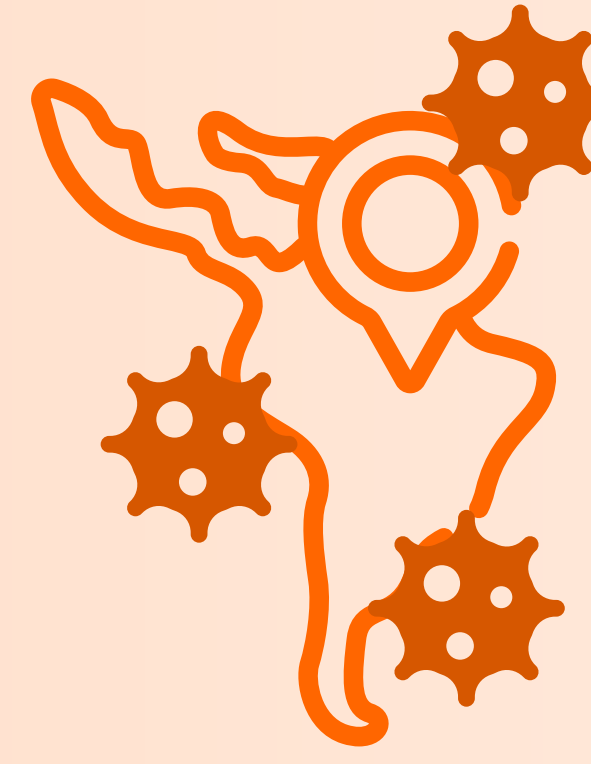


Modelling Herpes Zoster Burden and Public Health Impact of Adjuvanted Recombinant Zoster Vaccine among Adults Aged ≥50 Years Old in Seven Countries in Central and South America

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Conclusions



This modelling study suggests a **substantial HZ disease burden** in Central and South America **among 50+ adults**. **RZV vaccination** might significantly **reduce this burden**.

Aims



Modelling the **HZ-related public health burden** (number of cases) and **public health impact of RZV** (number of cases avoided) in 50+ Y/O population

Background

- Varicella zoster virus is a neurotropic herpes zoster virus causing chickenpox (primary infection) in children and shingles (HZ reactivation) in adults.¹
- Studies in Latin America have indicated an incidence density of 6–37 HZ cases per 1,000 person-year among higher-risk patients.²
- A pooled analysis of studies from Argentina, Brazil, and Mexico found that 79% of patients with HZ visited a doctor's office, 49% visited the emergency room, 38% visited a specialist, and 6% were hospitalized, resulting in a direct cost of \$763 per case (2015 US\$).³
- A modelling study predicted that nearly 5 millions of an estimated 24 millions cases of HZ could be avoided by vaccinating 35% of older adults with RZV in Argentina, Brazil, Mexico, Chile, and Colombia.⁴
- RZV has gained approval in Argentina, Brazil, and Mexico.⁴
- Modelling studies can help assess the public health burden (PHB) of HZ and the public health impact (PHI) of RZV in Central and South America, where data is limited.⁵

Demographics

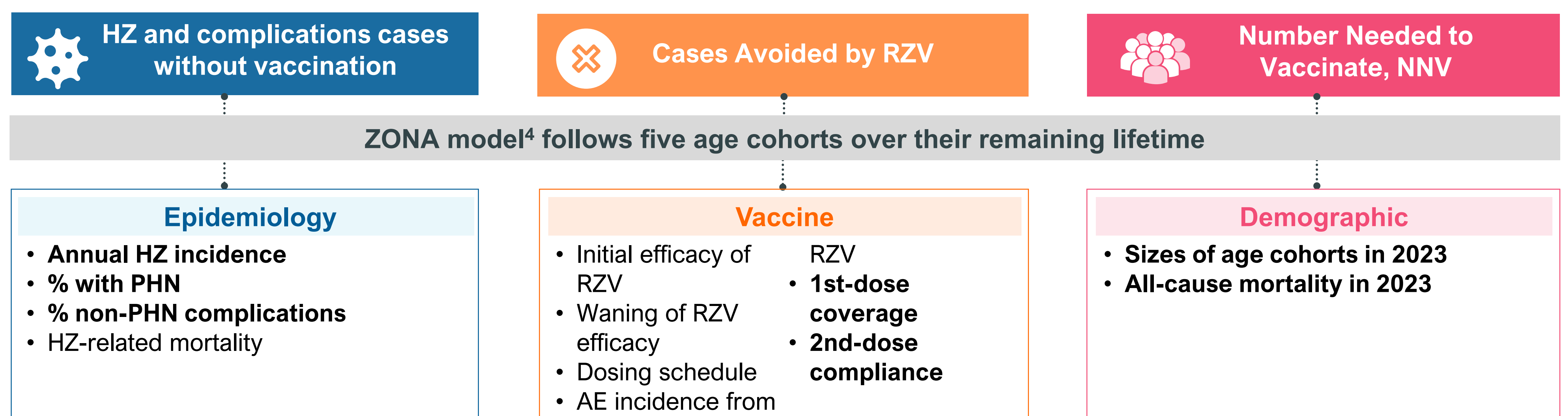


50+



The RZV vaccinated 50+ Y/O population of **Peru, Ecuador, Panama, Guatemala, Dominican Republic, Costa Rica, Trinidad & Tobago**, compared with non vaccinated comparable population during their remaining lifetime.

Study design



Each model input was adjusted $\pm 20\%$ or 95% confidence interval from the base case value to evaluate the relative impact on the number of HZ cases avoided from vaccination.
*Bolded inputs are local values.

Results

Baseline vs RZV avoided cases of HZ, PHN, non-PHN complications, and NNV* per country

In total, 734,491 HZ cases and 179,664 PHN cases were avoided via vaccination with 35% 1st-dose coverage and 75% 2nd-dose compliance rate, leading to a reduction of 20% of HZ cases across the countries assessed

Guatemala				
Cases:	without RZV	avoided with RZV	NNV	
HZ	116,464	24,560	HZ: 11	
PHN	97,578	19,622	PHN: 44	
Complications (non-PHN)	388,700	81,970		

Panama				
Cases:	without RZV	avoided with RZV	NNV	
HZ	67,103	12,903	HZ: 9	
PHN	58,257	10,639	PHN: 35	
Complications (non-PHN)	223,956	43,063		

Ecuador				
Cases:	without RZV	avoided with RZV	NNV	
HZ	231,640	45,793	HZ: 9	
PHN	199,792	37,605	PHN: 36	
Complications (non-PHN)	773,097	152,835		

Costa Rica				
Cases:	without RZV	avoided with RZV	NNV	
HZ	88,469	17,605	HZ: 9	
PHN	76,658	14,560	PHN: 35	
Complications (non-PHN)	295,267	58,757		

Dominican Republic				
Cases:	without RZV	avoided with RZV	NNV	
HZ	455,381	27,286	HZ: 15	
PHN	116,675	22,170	PHN: 68	
Complications (non-PHN)	136,444	91,066		

Trinidad & Tobago				
Cases:	without RZV	avoided with RZV	NNV	
HZ	83,675	5,081	HZ: 10	
PHN	21,589	4,173	PHN: 39	
Complications (non-PHN)	25,071	16,959		

Peru				
Cases:	without RZV	avoided with RZV	NNV	
HZ	424,495	86,844	HZ: 10	
PHN	362,780	70,894	PHN: 38	
Complications (non-PHN)	1,416,753	289,841		

*NNV is the number of individuals needed to vaccinate to avoid one case of HZ and PHN.

Abbreviations

AE: adverse events; HZ: herpes zoster; NNV: number needed to vaccinate; PHB: public health burden; PHI: public health impact; PHN: post-herpetic neuralgia; RZV: recombinant zoster vaccine; US: United States; VZV: varicella zoster virus; Y/O: year old.

Acknowledgements

Javier Nieto for his study contribution. The authors also thank Business & Decision Life Sciences platform for editorial assistance, manuscript coordination and writing support, on behalf of GSK. Malack Abbas provided medical writing support.

Disclosures

Ru Han and Laura Naranjo are employed by GSK. Désirée A. M. van Oorschot, Tamara Rosales, Adriana Guzman-Holst and Jorge A. Gomez are employed by and hold shares in GSK. The authors declare no other financial and non-financial relationships and activities.

Funding: GlaxoSmithKline Biologicals SA (VEO-000673).



Digital poster
Supplemental data
References
Narrated summary



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Audio File