POST-MARKETING SAFETY SURVEILLANCE FOR THE ADJUVANTED RECOMBINANT ZOSTER VACCINE: REVIEW OF SPONTANEOUS REPORTS SINCE INTRODUCTION

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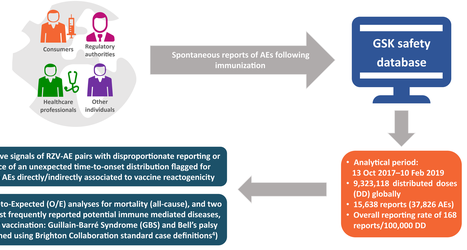
BACKGROUND AND AIMS

- The adjuvanted recombinant zoster vaccine (RZV, *Shingrix*, GSK), indicated for the prevention of herpes zoster (HZ) in adults ≥50 years of age, received its first marketing authorization in October 2017.
- Pre-licensure data showed that RZV is highly efficacious in preventing HZ in individuals ≥50 years of age and did not identify any safety concerns.[1–3]
- In this study, the post-marketing spontaneous adverse event (AE) reports submitted to GSK's worldwide safety database since RZV introduction were reviewed.

METHODS

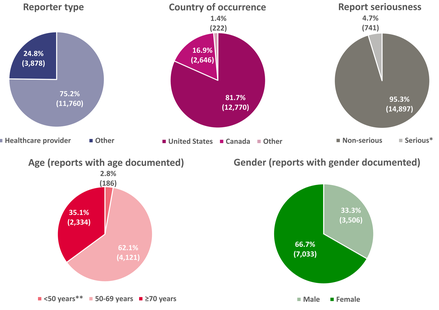
Descriptive analyses on spontaneous reports involving RZV



, **RZV**: 50 µg varicella-zoster virus glycoprotein E antigen plus AS01$_B$ Adjuvant System.[5]

DEMOGRAPHIC CHARACTERISTICS

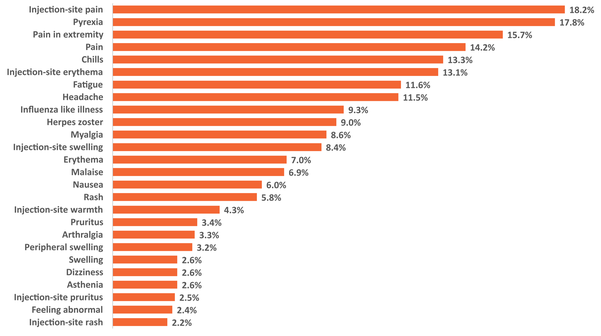
Most of the 15,638 spontaneous reports received were medically verified, non-serious and mainly from individuals 50–69 years of age



Note: Percentage (number of reports) are shown. *Includes hospitalization, prolongation of existing hospitalization, life-threatening illness, permanent disability, congenital anomaly or birth defect, medically significant, and death. **RZV is not approved for this age group.

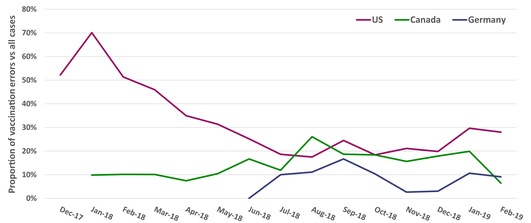
RESULTS

The most commonly reported AEs were consistent with reactogenicity to RZV



Note: Only signs/symptoms with a reporting rate >2.0 per 100,000 RZV DD are shown. A single report may contain ≥1 Medical Dictionary for Regulatory Activities (MedDRA) preferred term. Vaccination errors were not included in the list.

Following RZV launch, the proportion of vaccination error reports vs all reports involving RZV decreased or remained relatively low and stable

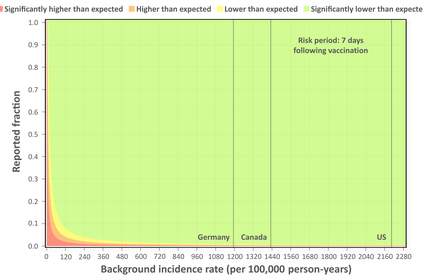


Note: In Germany, RZV received its marketing authorization in Mar 2018.

Top vaccination error reports described errors in vaccine preparation and reconstitution

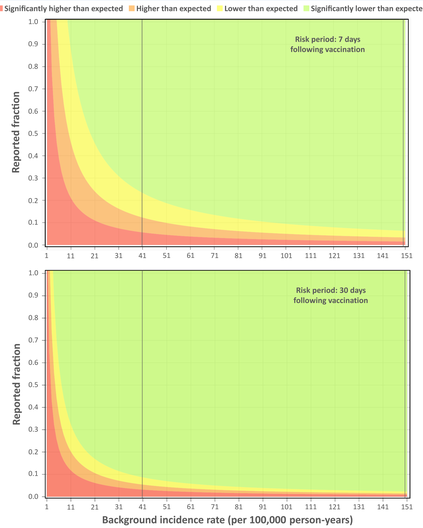
Note: A report may describe ≥1 error. A group contains multiple MedDRA preferred terms.

The O/E analysis for all-cause mortality was below the expected range, indicating a very high underreporting of this outcome



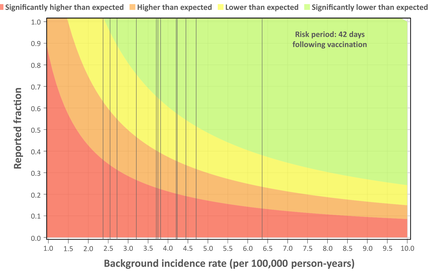
Note: Vertical lines indicate incidence rates adjusted by age to the RZV exposed population for all-cause mortality (literature data).[6–8]

The O/E analyses for Bell's palsy were below the expected number, considering several scenarios of underreporting and background incidence rates (for both risk periods)



Note: Vertical lines indicate incidence rates adjusted by age to the RZV exposed population for Bell's palsy (literature data).[9,10]

The O/E analyses for GBS were below the expected number, considering several scenarios of underreporting and background incidence rates



Note: Vertical lines indicate incidence rates adjusted by age to the RZV exposed population for GBS (literature data).[9,11–17]

CONCLUSIONS

- Despite the limitations of post-marketing passive surveillance (reporting bias, underreporting, missing information, etc.), these data provide important safety information.
- Vaccination errors accounted for a substantial proportion of spontaneous reports. Overall, following the first year of post-marketing surveillance, the safety profile of RZV is consistent with that observed in clinical trials. The benefit risk profile remains favorable.
- Surveillance will continue to monitor RZV safety, as it is in the early stage of implementation, when real-life data are limited.

PLAIN LANGUAGE SUMMARY

What is the context?

- Herpes zoster, also known as shingles, is typically a painful and debilitating disease that is caused by reactivation of latent varicella-zoster virus (VZV).
- The risk of VZV reactivation, and subsequent herpes zoster development, rises to 68% for adults ≥50 years as a consequence of age-related decline in immunity or immune system impairment.

What is new?

- The adjuvanted recombinant zoster vaccine (RZV, *Shingrix*, GSK), was licensed in several countries more than 1 year ago.
- Since first licensure until the date of this review, an estimated 9.3 million RZV doses were distributed and 15,638 spontaneous adverse event reports were received. Most reports were consistent with the known vaccine injection site and systemic reactions observed with RZV in clinical trials.

What is the impact?

- This review, based on spontaneous data gathered post-marketing, reinforces the clinically-acceptable safety profile of RZV, previously demonstrated in clinical study settings and in other post-marketing surveillance studies.
- Vaccination errors accounted for a substantial proportion of spontaneous reports.

References

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Trademark statement
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