

Effect of specialty pharmacist intervention on recombinant zoster vaccine immunization rates in immunocompromised adults in oncology and HIV clinics

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Background

- Herpes zoster (shingles) is a reactivation of latent varicella zoster virus.
- Immunocompromised patients, including people living with HIV (PLWH) or cancer, are at increased risk for shingles compared to the general population.^{1,2}
- Despite demonstrated efficacy and the 2021 FDA approval of the recombinant zoster vaccine (RZV) for prevention of shingles in immunocompromised patients aged ≥19 years, immunization rates in this population are low in the US.³
- A 2023 medication use evaluation revealed that 0.74% of over 7300 adults aged 19 to 49 with HIV or cancer were fully immunized with RZV. This finding led to development of this quality improvement project.

Objectives

To evaluate the impact of specialty pharmacist education on herpes zoster vaccination rates in immunocompromised patients at one health system specialty pharmacy in Northern Virginia.

Methods

- This prospective quality improvement project took place over 24 weeks, from February to August 2024.
- Inclusion criteria:
 - PLWH on antiretroviral therapy or people with cancer on oral chemotherapy or supportive medications
 - Age ≥19 years
 - Utilize health system specialty pharmacy
 - No documented doses of RZV or only one dose
- Patients were evaluated for their immunization status for shingles by:
 - Pharmacists who clinically follow patients on specialty medications via telephone (i.e., clinical specialty pharmacists), and
 - Specialty pharmacists in operations
- Patients were deemed “immunized” if they received two doses of RZV ≥2 months apart and “partially immunized” if only one dose.
- If patients were partially immunized or had no doses, pharmacists recommended they receive sufficient doses to be fully immunized during telephonic assessments or prescription pick up.

Results

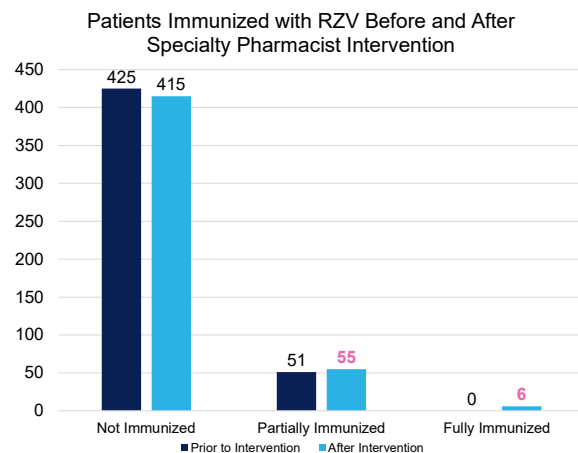


Figure 1. Proportion of oncology and HIV patients considered “immunized” with RZV 24 weeks after implementing intervention

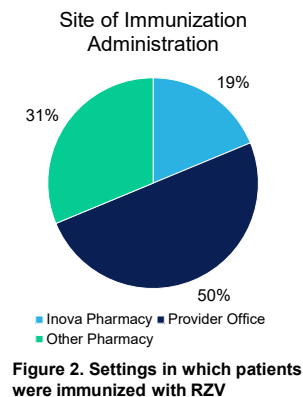


Figure 2. Settings in which patients were immunized with RZV

Table 1. Baseline characteristics of the study population

Characteristic	Clinical Specialty Pharmacist Intervention (n = 448)		Operations Specialty Pharmacist Intervention (n = 28)	
	Oncology (n = 330)	HIV (n = 118)	Oncology (n = 24)	HIV (n = 4)
Age – yr	62.2	43.3	55.6	43
Sex* - no. (%)				
Male	139 (42.1)	81 (68.6)	9 (37.5)	4 (100)
Female	191 (57.9)	37 (31.3)	15 (62.5)	-
Race – no. (%)				
Asian	48 (14.5)	6 (5.1)	1 (4.2)	-
Black	66 (20)	64 (54.2)	7 (29.1)	4 (100)
Other	12 (3.6)	5 (4.2)	-	-
White				
Hispanic	36 (10.9)	24 (20.3)	4 (16.7)	-
Non-Hispanic	158 (47.9)	18 (15.3)	12 (50)	-
Unknown	10 (3)	1 (0.8%)	-	-

*Denotes legal sex.

Discussion

- Out of the 476 patients included in this quality improvement project, 16 had a change in immunization status after specialty pharmacist intervention.
 - 10 patients changed from not immunized to partially immunized and 6 changed from partially immunized to fully immunized
 - 2.4% decrease in those “not immunized”
 - 7.3% increase in those “partially immunized”
 - 1.3% increase in those “fully immunized”
- All occurred after clinical specialty pharmacist intervention
 - Operations pharmacist intervention did not result in any immunizations with RZV
- Half of immunizations occurred at a provider office during a patient visit.
 - Unclear whether pharmacist intervention or physician intervention was driver of immunization
- Strengths included large patient population and demographics representative of real world.
- Limitations:
 - Inconsistent reporting of patient immunization status
 - Short duration for operations intervention compared to clinical intervention (3 weeks vs 24 weeks)

Conclusion

- Specialty pharmacist intervention had a modest positive impact on immunization rates of RZV in this population.
- Longer follow up time may allow for improved outcomes with operations specialty pharmacist interventions.
- Interventions to continue, next assessment of operations intervention to occur 10 weeks after implementation.

Disclosures

The authors have nothing to disclose.

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