The Epidemiology of Rotavirus Gastroenteritis in Palestine 2014 - 2025

Wolfgang Rennert

Musa Hindiyeh

Majd Allahham

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For the Health of Children
Rostropovich Vishnevskaya Foundation

Caritas
Baby Hospital
Bethlehem

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Study Design

- **Study background**
  - RV is responsible for 25-30% of diarrhea
  - Rotarix May 2016 – July 2018
  - Rotavac November 2018 – present
  - Vaccination interruptions since July 2024
- **Study location**
  - Caritas Baby Hospital
  - Catchment area of 750,000 individuals
    - Bethlehem / Hebron
- **Study objective**
  - Prevalence of Rotavirus in stool samples of children under 5 presenting with acute watery diarrhea
  - Impact of vaccination on disease incidence
  - Impact of vaccination on Rotavirus seasonality
  - RV genotype prevalence over time

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RV positive cases at CBH

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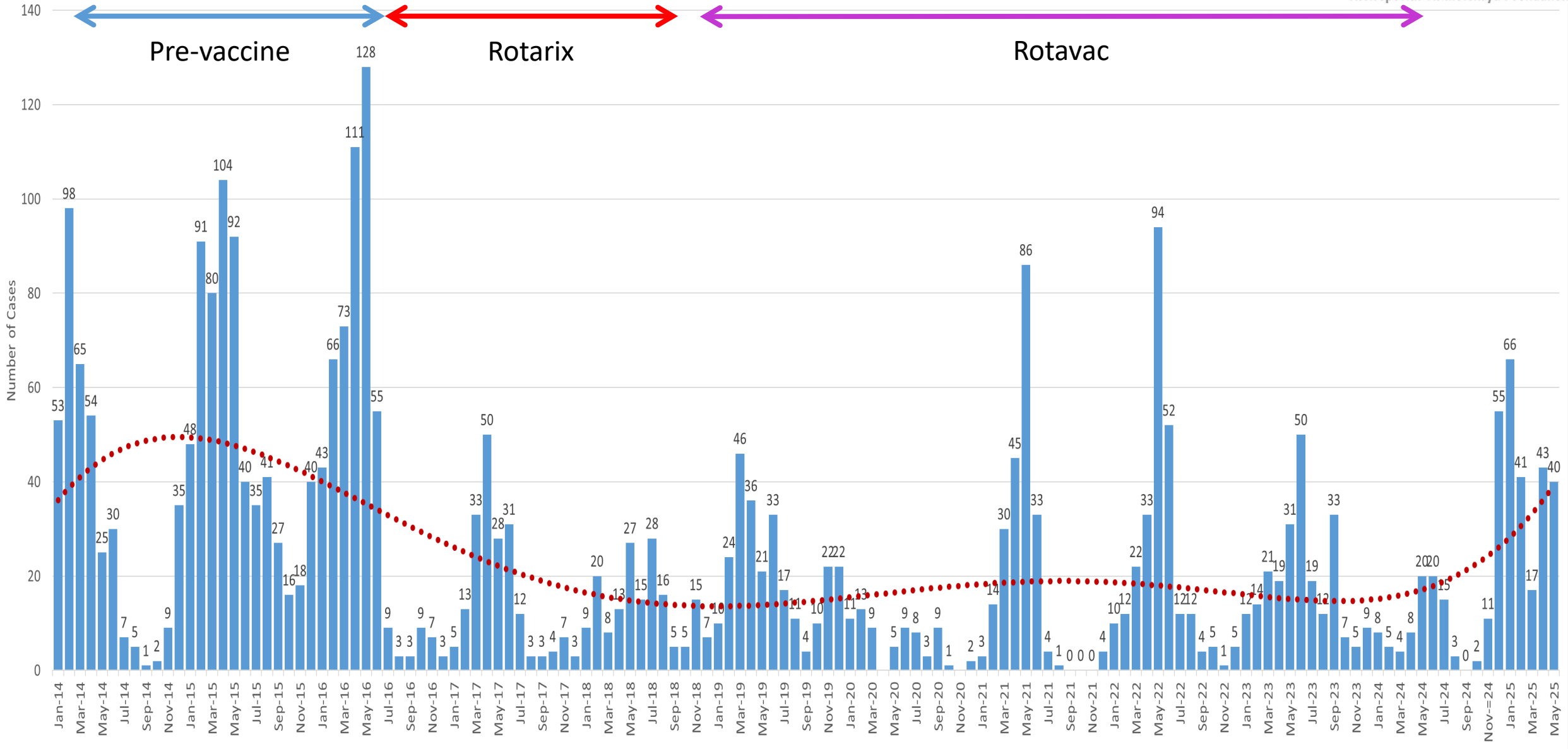

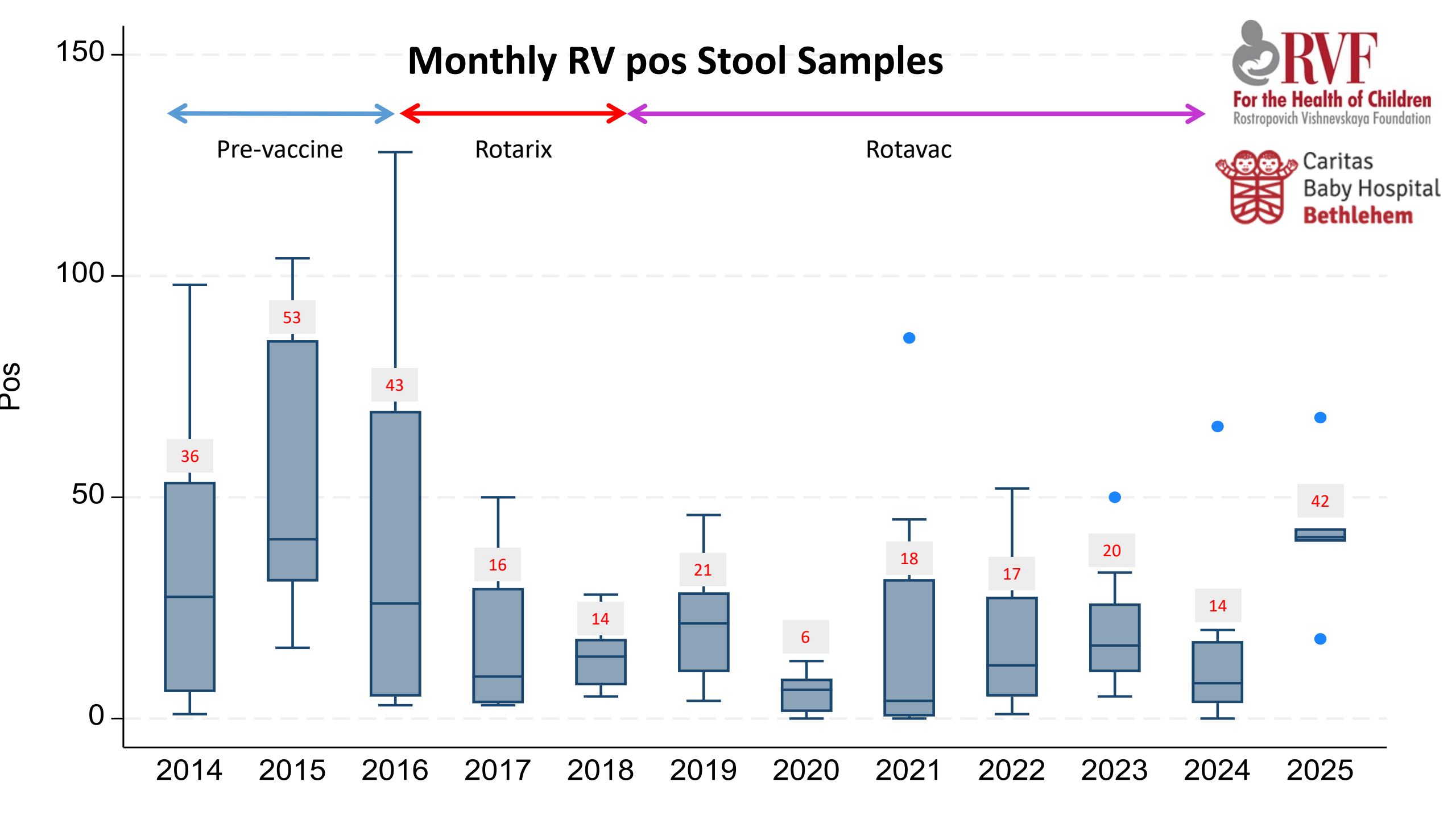
Monthly RV pos Stool Samples
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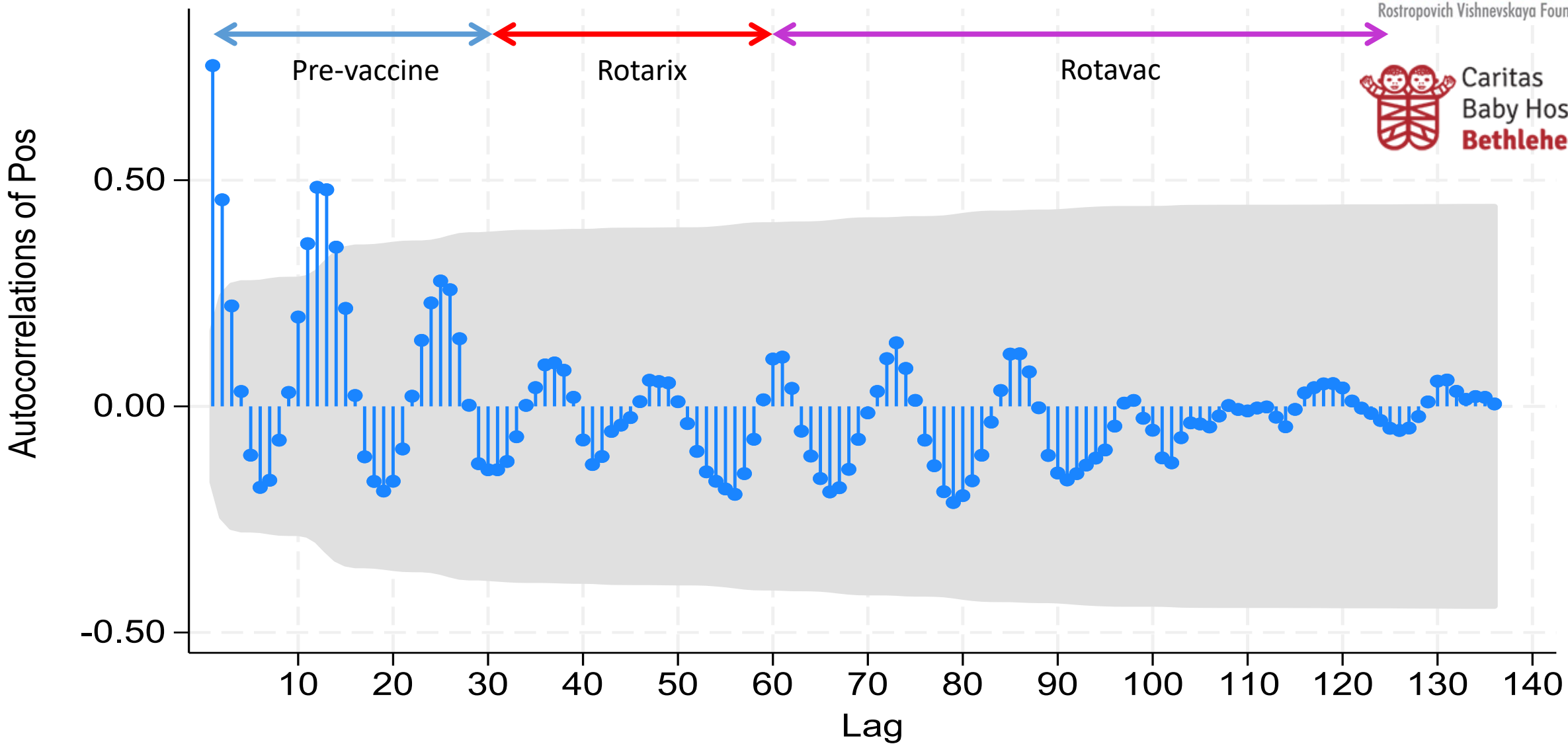
Pre-vaccine
Rotarix
Rotavac
Pos
150
100
50
0
36
53
43
16
14
21
6
18
17
20
14
42
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

RV positive moving averages Jan 2014 – June 2025



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RV seasonality patterns 2014 – May 2025

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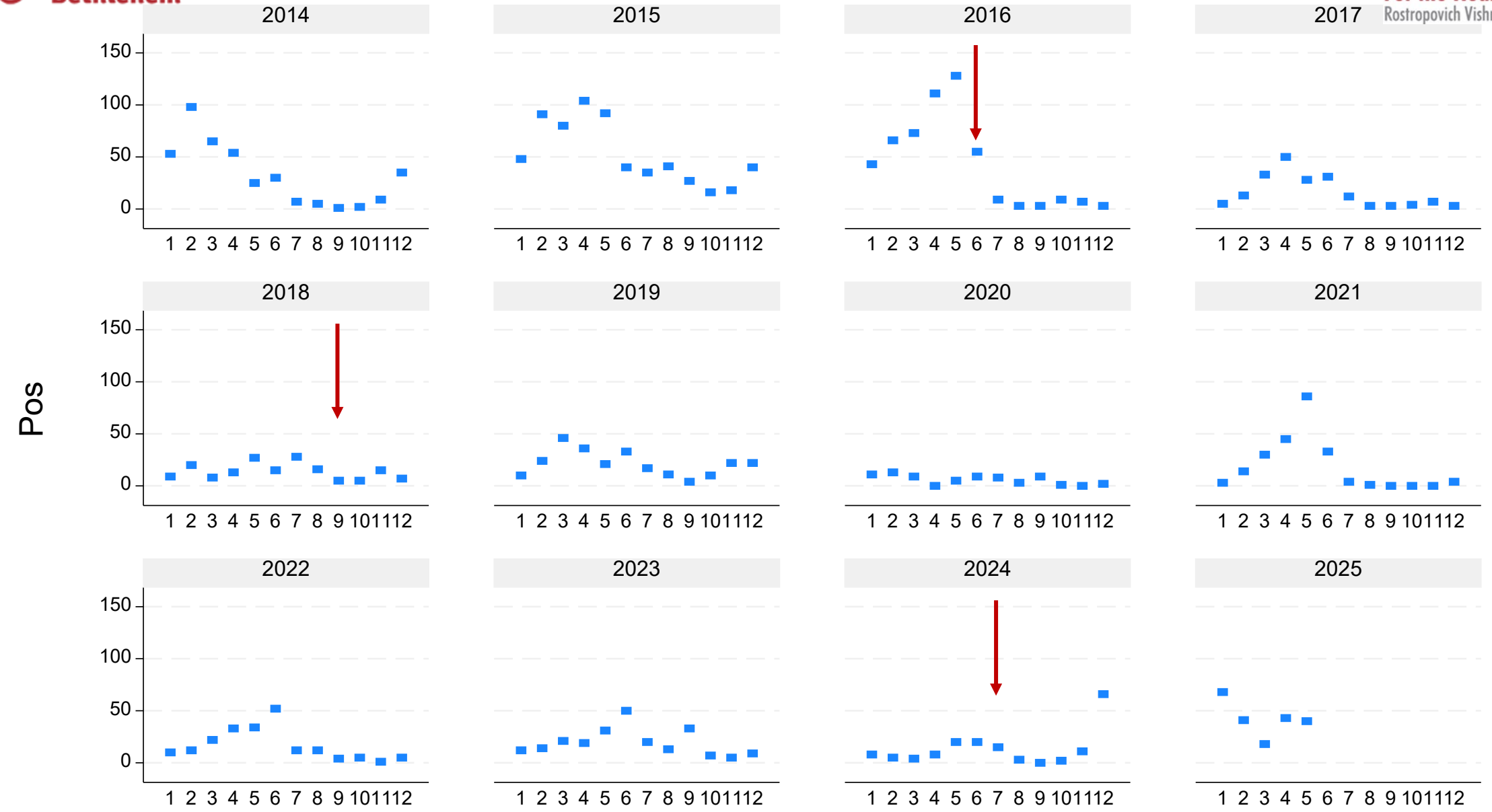

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Vaccine Efficacy

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Year	2015/2016	2017/2018	2019/2020	2021/2022	2023/2024	2025
Mean	47.6	15	13.6	20.1	16.5	42.3
Δ Mean (CI; p-value)	- 68.5% (16.3, 48.9; 0.002*)					
Δ Mean (CI; p-value)		-9.3% (-5.6, 8.4; 0.6865)				
Δ Mean (CI; p-value)			32.3% (-18.3, 5.3; 0.2737)			
Δ Mean (CI; p-value)				-17.9% (-8.9, 16.1; 0.5664)		
Δ Mean (CI; p-value)		7.9% (-9.9, 6.4; 0.6756)				

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Genotype Prevalence : 2014-2025

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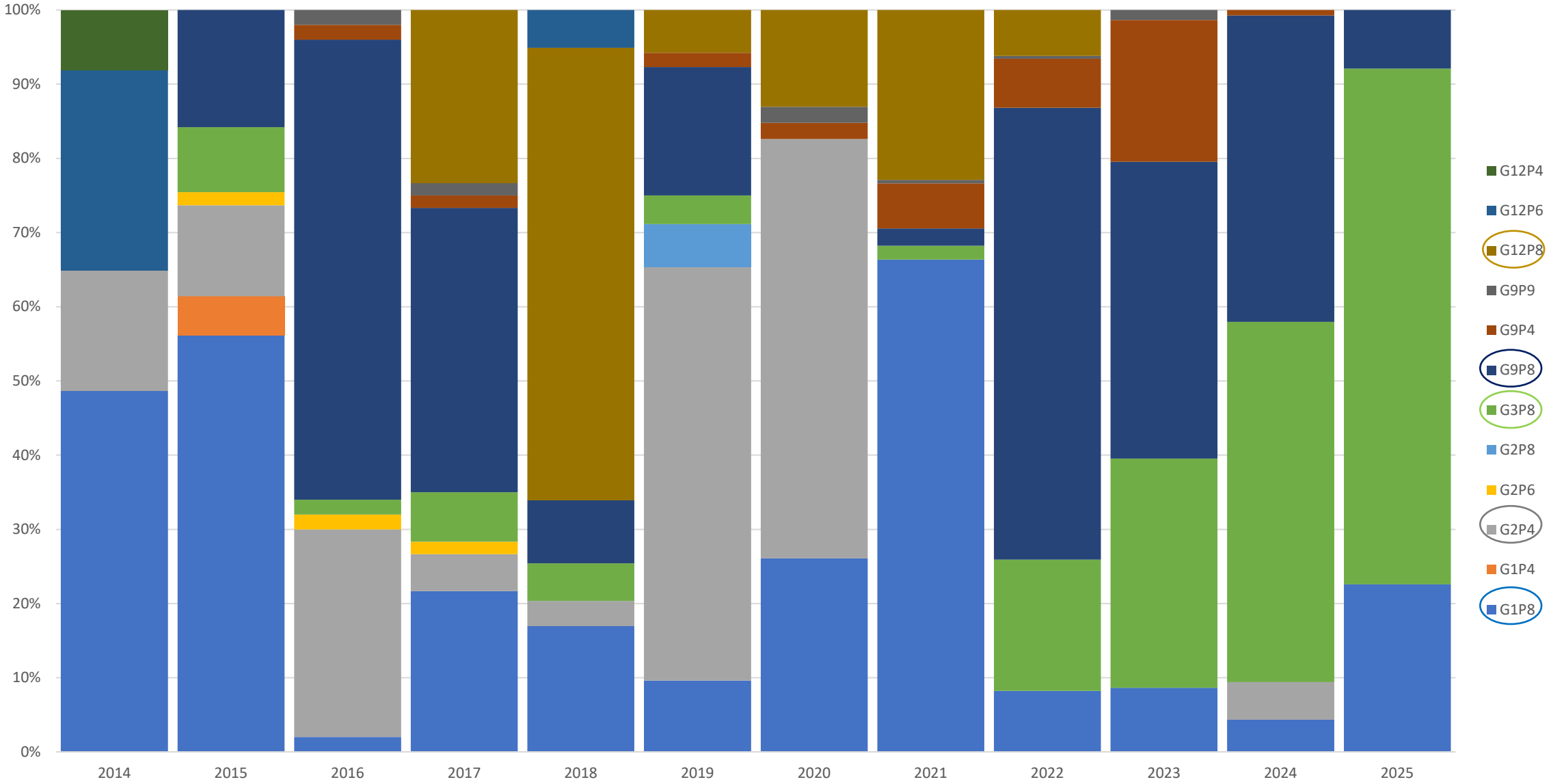

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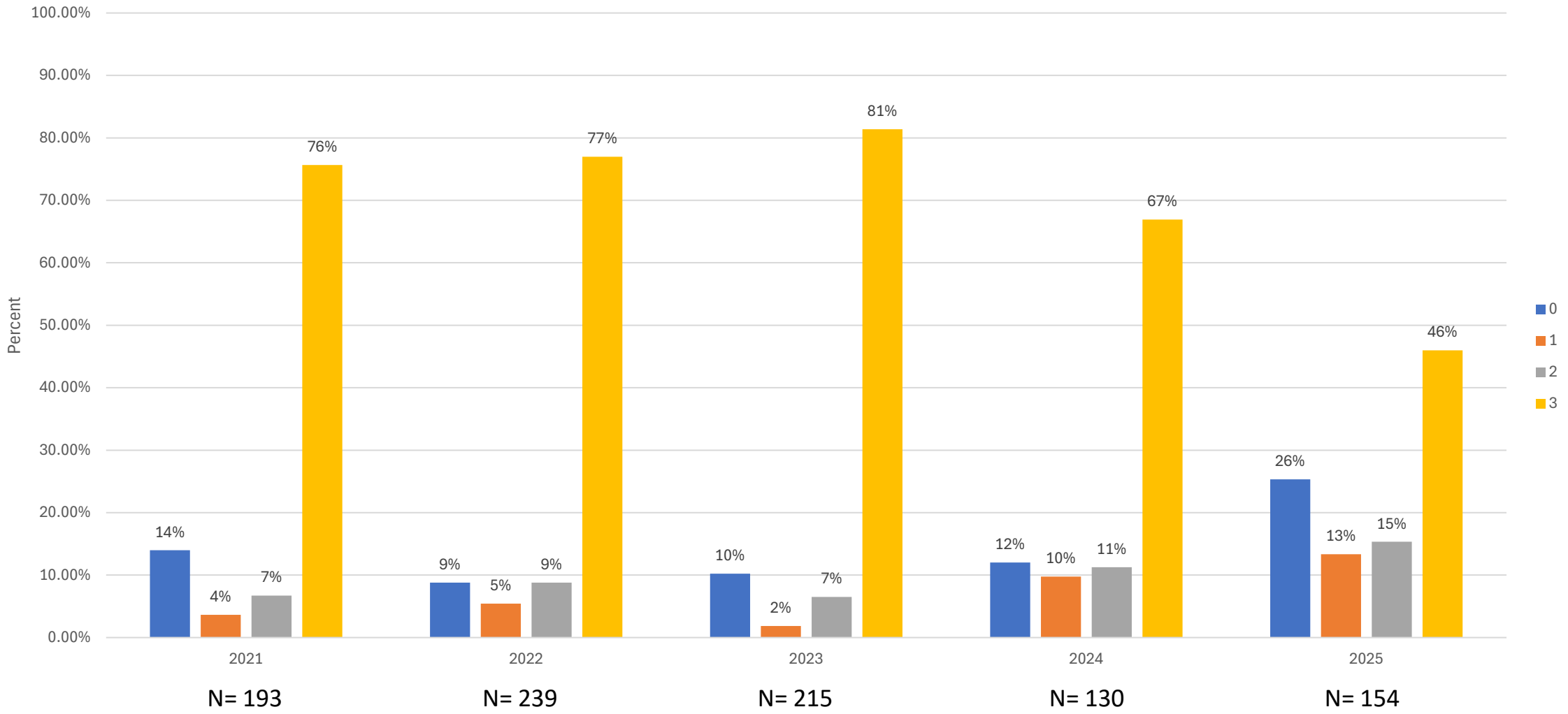
Percent of Rotavac Doses Received



N= 193 N= 239 N= 215 N= 130 N= 154

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Summary

- Implementation of RV vaccination reduced the number of RV cases by 68%
- Rotarix and Rotavac are equipotent in Rotavirus control
- RV seasonality decreases with vaccination
- Interruption of vaccination leads to rapid increase in RV disease incidence
- A shift from G1P[8] through G9P[8] and G2P[4] to G3P[8] can be observed