AIRA
AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

Discovery Session

Connecting the Data – IIS and Birth Records in Action

November 16, 2026 | 4:00 p.m. ET



Today's Presenters

- **Peri Sosensky, MPH,** Epidemiologist, Connecticut Department of Public Health Immunization Program
- **Alexa Riggs, MPH,** City Research Scientist, New York City Department of Health and Mental Hygiene
- **Amshe Ogun, MPH,** Epidemiologist, Tennessee Department of Health



Modernized and Visualized: Transforming Birth Hospital Immunization Reporting in Connecticut

Peri Sosensky, MPH
Epidemiologist, CT DPH

01 Background

Timeline of Historic to Current Reporting

Pre-2015

- Birthing hospital collaboration
- Manual on-time HBV birth dose data generation

2024

- Automated and expanded report



2025

- New reports sent to hospitals

2026

- Report adaptation and IQIP usage

On-Time Birth Dose Calculation



Considered eligible for HBV birth dose if birth weight is ≥2000 grams

Historic Reporting Process

Data Gathering

IIS and vital records data collection

Analysis

Manual merging of IIS and vital records

Reporting

Sent a MS Word table embedded table in an email

Hello IAPs,

Please do not forward the attachments - as they have *all* the birthing hospitals' Hep B birth dose rates.

IAPs should pull out *their own IAP area hospital(s)* and use this email language below for each hospital you co
Kaitlin.Roberts@ct.gov) with 2023 birth cohort and 5 yr trend data.

Hello _____,

The Department of Public Health Immunization Program completed analysis of the hepatitis B birth do

- The statewide rate was 86.9%.
- __*Insert Name of*_ Hospital's rate was ___%.

Here is your 5-year hepatitis B birth dose trend.

(insert with your hospital's rates from the 2nd attachment in this chart)

HOSPITAL			
Birth Cohort Year	Hep B Given	Total Births	Hep B Rate %
2019			
2020			
2021			
2022			
2023			

02 Methods



Goals of Report Modernization

Presentation

Add compelling visualizations to motivate improvement in:

1. On-time HBV vaccination
2. Data quality

Content

1. Expanded to include both HBV birth dose and RSV monoclonals
2. Data interpretation
3. Supporting documentation

Production

Automate report production to:

1. Increase efficiency
2. Become more sustainable

Modernization Steps

Data Source Modification

Vital records and IIS connection

Step 1

Expansion

Inclusion of RSV monoclonal

Step 2

Redesign

Both text and visualizations

Step 3

Automation

New, automated report process

SQL → R Markdown

Step 4

Companion Guide

Corresponding measures and methods

Step 5

03 Implementation

New Birth Hospital Report

2025 CT Birth Hospital Annual Immunization Report

Hospital A

This report was prepared by the CT DPH Immunization Program based on information reported to *CT WiZ* by 04/01/2025.

It shows the number of infants that were immunized for respiratory syncytial virus (RSV) at your facility during the 2024-2025 RSV season. It also shows the percentage of infants born at Hospital A in 2024 that received an on-time hepatitis B vaccine dose.

Respiratory Syncytial Virus Immunization

Children born during the RSV season (October - March) whose mother does not receive the RSV vaccine at least 14 days before delivery *can be at risk for severe RSV disease*. They can be protected if nirsevimab is administered within the first week of life, ideally during the birth hospitalization stay.

Between October 2024 and March 2025, Hospital A has **immunized 541 infants born at your facility against RSV**. *It is not known how many infants were protected as a result of their mothers being immunized while pregnant because infant and maternal records are not linked in CT WiZ.*

On-Time Hepatitis B Birth Dose Rates in 2024

To protect newborns from hepatitis B infection, the Centers for Disease Control and Prevention *recommends* that medically stable infants with a birth weight of at least 2,000 grams receive a first dose of hepatitis B vaccine *within 24 hours* of birth. In this report, a hepatitis B birth dose is considered on-time if it was administered by the end of the first full day of life (day 0 or 1).

Figure 1 compares birth and on-time immunization data for children born at Hospital A in 2024 to statewide CT data. **Figure 2** shows the percentage of children born at Hospital A with a birth weight of ≥2000 grams that were immunized on-time from 2020 to 2024 with CT data for comparison. **Figure 3** shows the day the hepatitis B vaccine was administered to infants at your facility.

The Immunization Action Coalition's *Hepatitis B Birth Dose Honor Roll* recognizes U.S. birthing institutions that have attained an on-time birth dose coverage rate of 90% or greater and have met specific additional criteria. We encourage all providers to strive for at least this 90% coverage rate and join the growing number of hospitals making a positive impact. You can learn more *here*.

Figure 1: Births and On-Time Hepatitis B Vaccine Administration – Hospital A and Statewide CT Births, 2024

	Hospital A	Connecticut
Number of births in 2024	2469	33509
Number of births ≥ 2000 grams	2422	32618
Number that received hepatitis B vaccine on time	1918	27208
Percent that received hepatitis B vaccine on time	79.2%	83.4%

Figure 2: On-Time Hepatitis B Vaccine Administration Trend – Hospital A and Statewide CT Births (≥2000 grams), 2020-2024

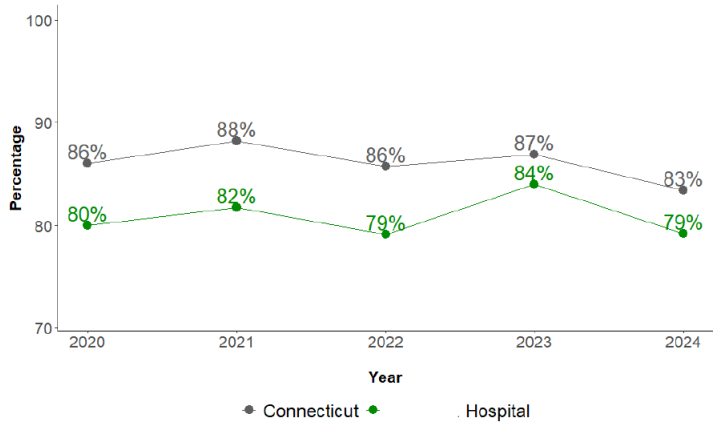
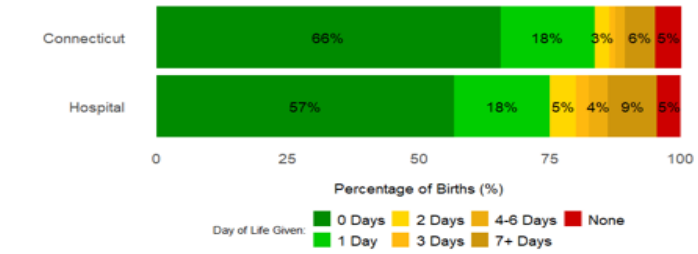


Figure 3: Day of Hepatitis B Vaccine Administration – A Hospital and Statewide CT Births (≥2000 grams), 2024



Concise one-page report with text, one table, and two figures

On-Time HBV Birth Dose

Figure 1: On-Time Hepatitis B Vaccine Administration – Hospital A and Statewide CT Births (≥2000 grams), 2024

	Hospital A	CT
Number of births in 2024	5686	33509
Number of births ≥ 2000 grams	5487	32618
Number that received hepatitis B vaccine on time	4115	27208
Percent that received hepatitis B vaccine on time	75%	83.4%

Figure 2: On-Time Hepatitis B Vaccine Administration Trend - Hospital A and Statewide CT Births (≥2000 grams), 2020-2024

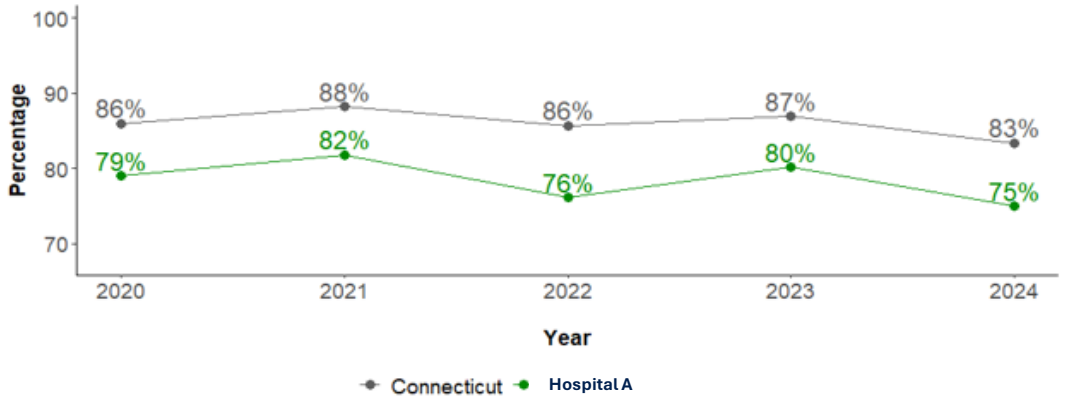
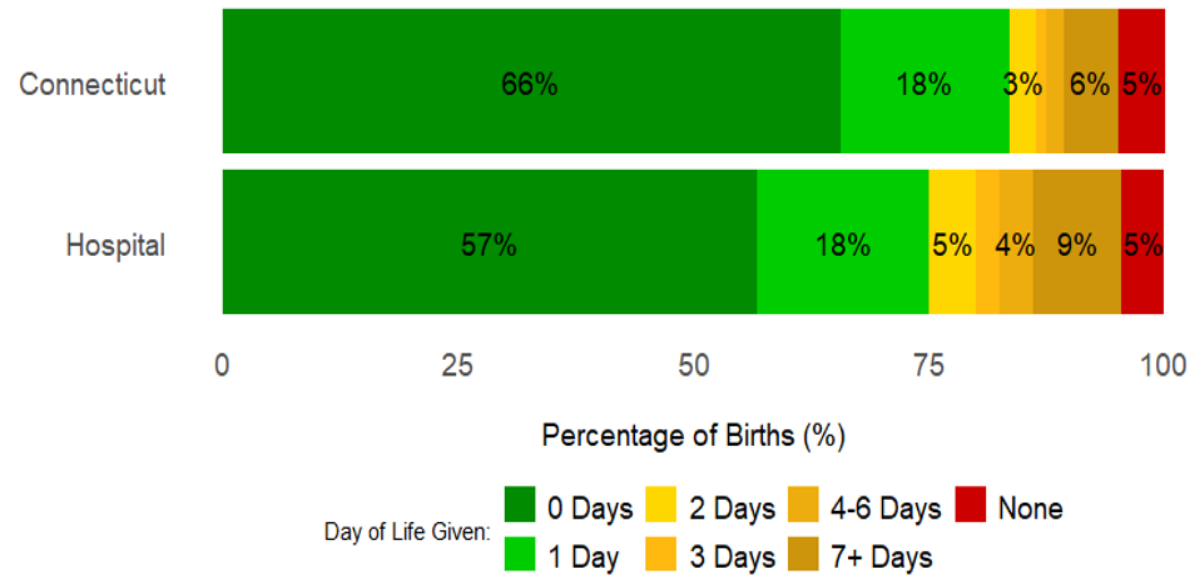


Figure 3: Day of Hepatitis B Vaccine Administration – Hospital and Statewide CT Births (≥2000 grams), 2024



RSV Monoclonal Immunization Content

Respiratory Syncytial Virus Immunization

Children born during the RSV season (October - March) whose mother does not receive the RSV vaccine at least 14 days before delivery *can be at risk for severe RSV disease*. They can be protected if nirsevimab is administered within the first week of life, ideally during the birth hospitalization stay.

Between October 2024 and March 2025, Hospital A has **immunized 1417 infants born at your facility against RSV**. *It is not known how many infants were protected as a result of their mothers being immunized while pregnant because infant and maternal records are not linked in CT WiZ.*

Modernized Report Rollout



01 **Develop** companion guide

02 **Train** staff that meet annually with birth hospitals on how to interpret and use new report

03 **Integrate** new report into existing annual birth hospital visits

04 **Embed** the report into other quality improvement programs in hospitals

05 **Survey** field workers about use of the new report with birth hospitals

04 Outcomes



Modernized Goals and Outcomes

Presentation

- Visually Appealing
- Brief
- Concise

Content

- Flexible
- Reproducible

Production

- Sustainable
- Efficient

Hospital Survey Feedback

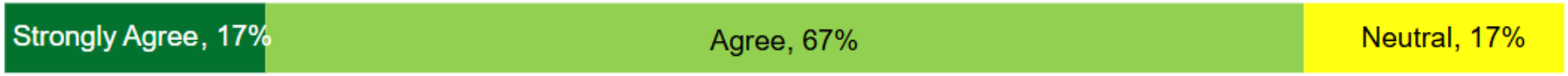
My hospital(s) liked the report.



My hospital(s) needed little assistance to understand their report data.

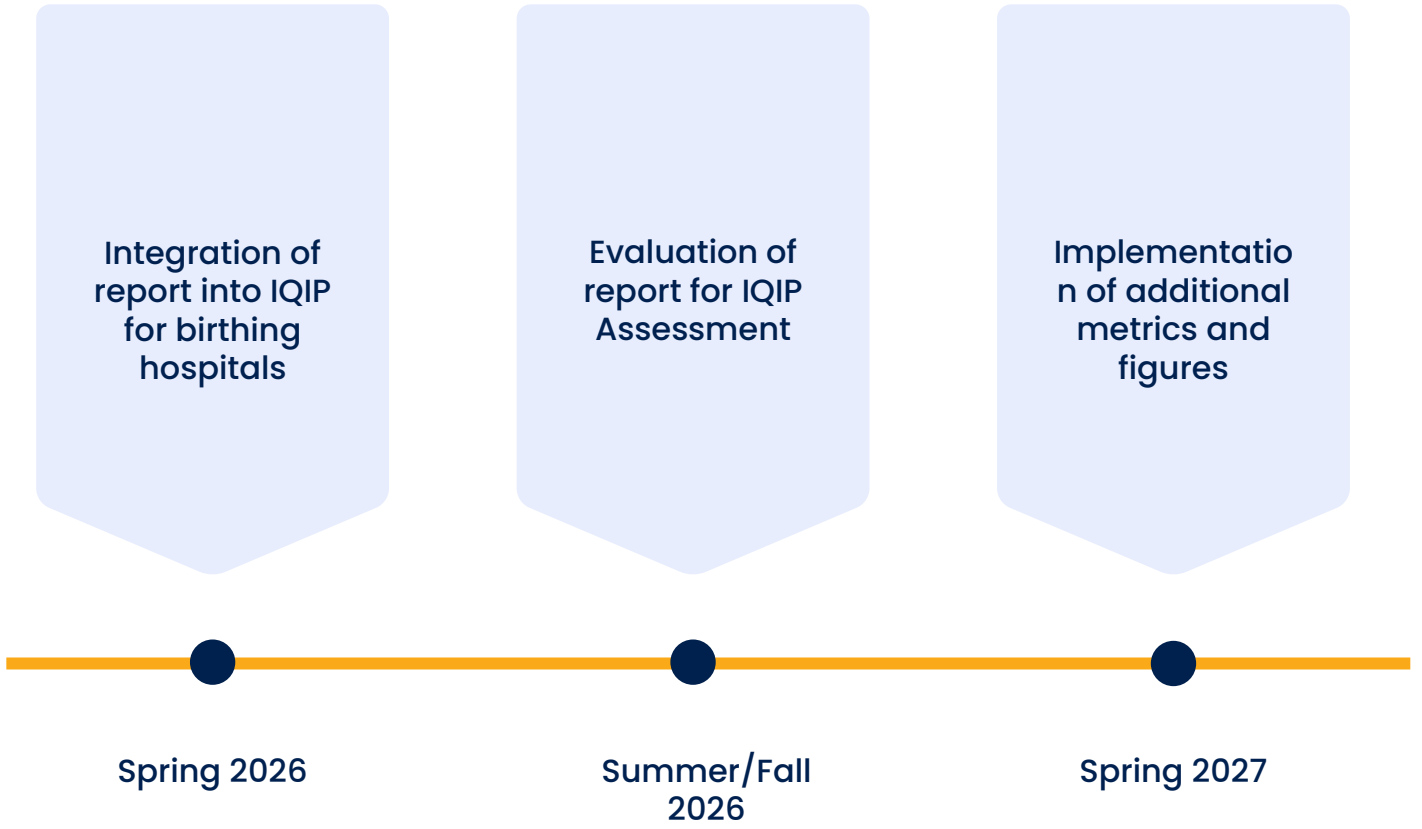


My hospital(s) appreciated the inclusion of RSV data.



6 of 10 IAP staff completed the survey (60% response rate)

Progress Since AIRA



Contact Information

Thank you for your time and attention

Questions?

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Acknowledgements:

Connecticut Immunization Program
Connecticut Immunization Action Plan Staff
Partnering Birthing Hospitals

Infant RSV Immunization and Social Vulnerability in New York City

Alexa Riggs, MPH

City Research Scientist

New York City Department of Health and Mental Hygiene

Discovery Session: Connecting the Data – IIS and Birth Records in Action

November 16th, 2026

NYC Health

Citywide Immunization Registry

- New York City's Immunization Information System (IIS) was implemented in 1997.
- Mandatory reporting of immunizations for children 0-18 years.
  - Reporting for adults 19 years and older requires consent.
- Birth certificates are loaded into CIR from the Bureau of Vital Statistics twice a week to capture newborn population.
- As of March 2026, ~15.4 million patient records in the CIR and >188 million immunizations.

NYC Health

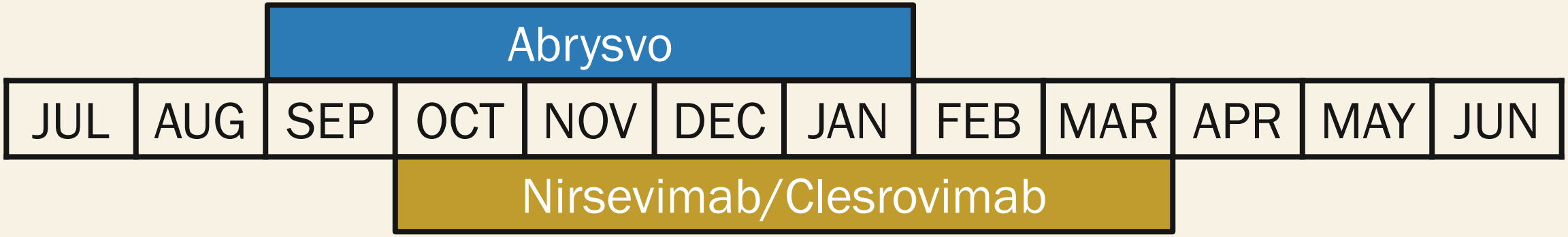
Respiratory Syncytial Virus

- Respiratory syncytial virus (RSV) is a common respiratory virus.
- RSV is a major cause of morbidity and mortality among children aged <5 years[1]:
    - 100 to 300 deaths
    - Nearly 520,000 emergency department visits

NYC Health

[1] Centers for Disease Control and Prevention. National Respiratory and Enteric Virus Surveillance System (NREVSS): Respiratory Syncytial Virus (RSV) Surveillance. https://www.cdc.gov/surveillance/nrevss/rsv/index.html. Accessed 6 Sep 2017.

RSV Infant Immunization



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Comparison of Neighborhood-level Variables

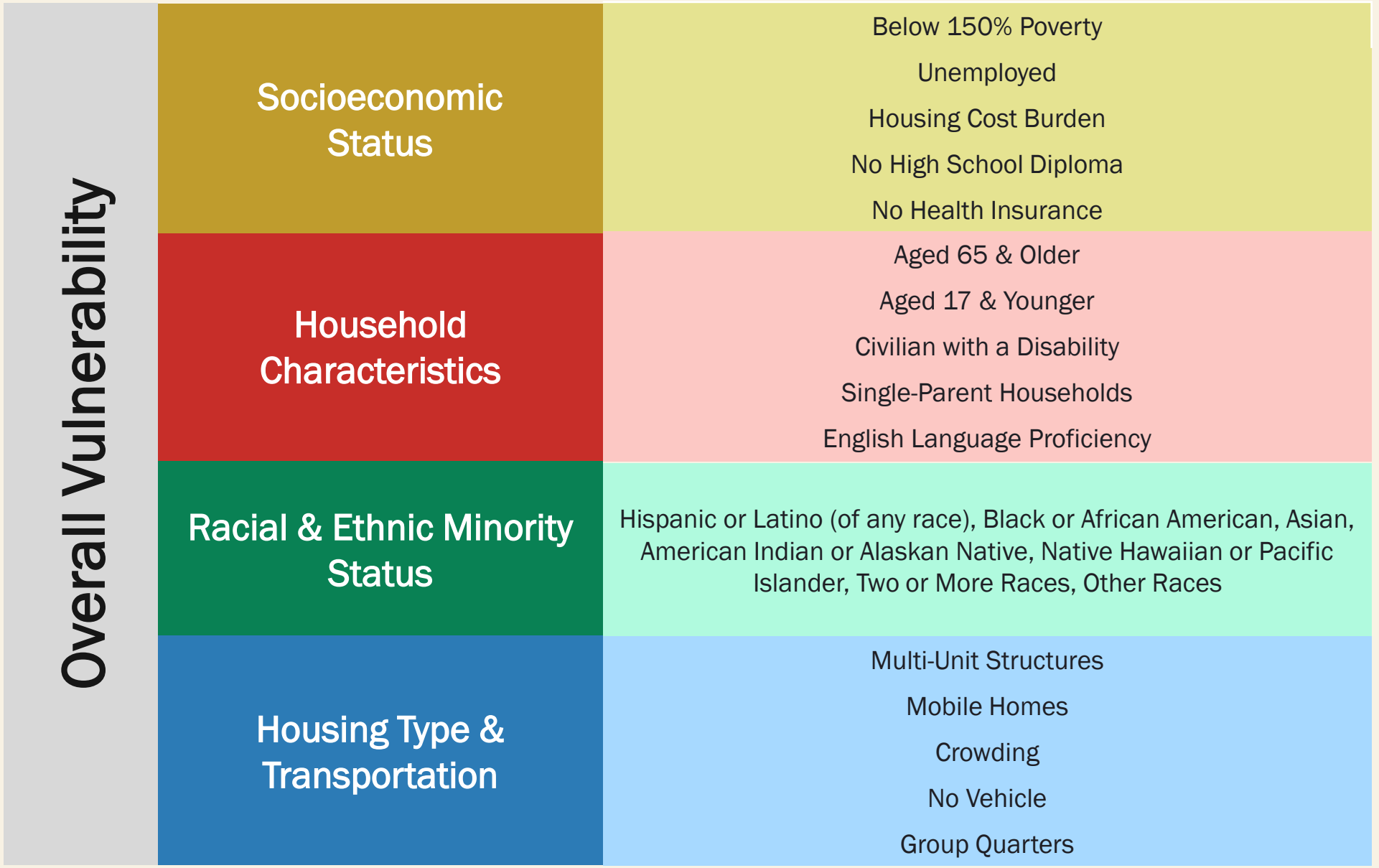
	Neighborhood Poverty-level	Social Vulnerability Index (SVI)
Geographic Unit	• Census tracts • Zip Code Tabulation Areas	• Census tracts • Counties • Zip Code Tabulation Areas
Measures	• Based on household income and family size, the amount of people within a geography residing below the Federal Poverty Level	• 16 variables of vulnerability
Specificity	• U.S.	• U.S. • 50 states • Tribal tracts • Puerto Rico
Timeliness	• Released annually	• Released every two years
Source	• American Community Survey[2]	• Centers for Disease Control and Prevention[3]

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[2] U.S. Census Bureau. *Poverty in States and Metropolitan Areas: 2024*. By Craig Benson, ACSBR-026, Sept. 2025.

[3] Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index 2022] Database New York. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html Accessed on March 19, 2026.

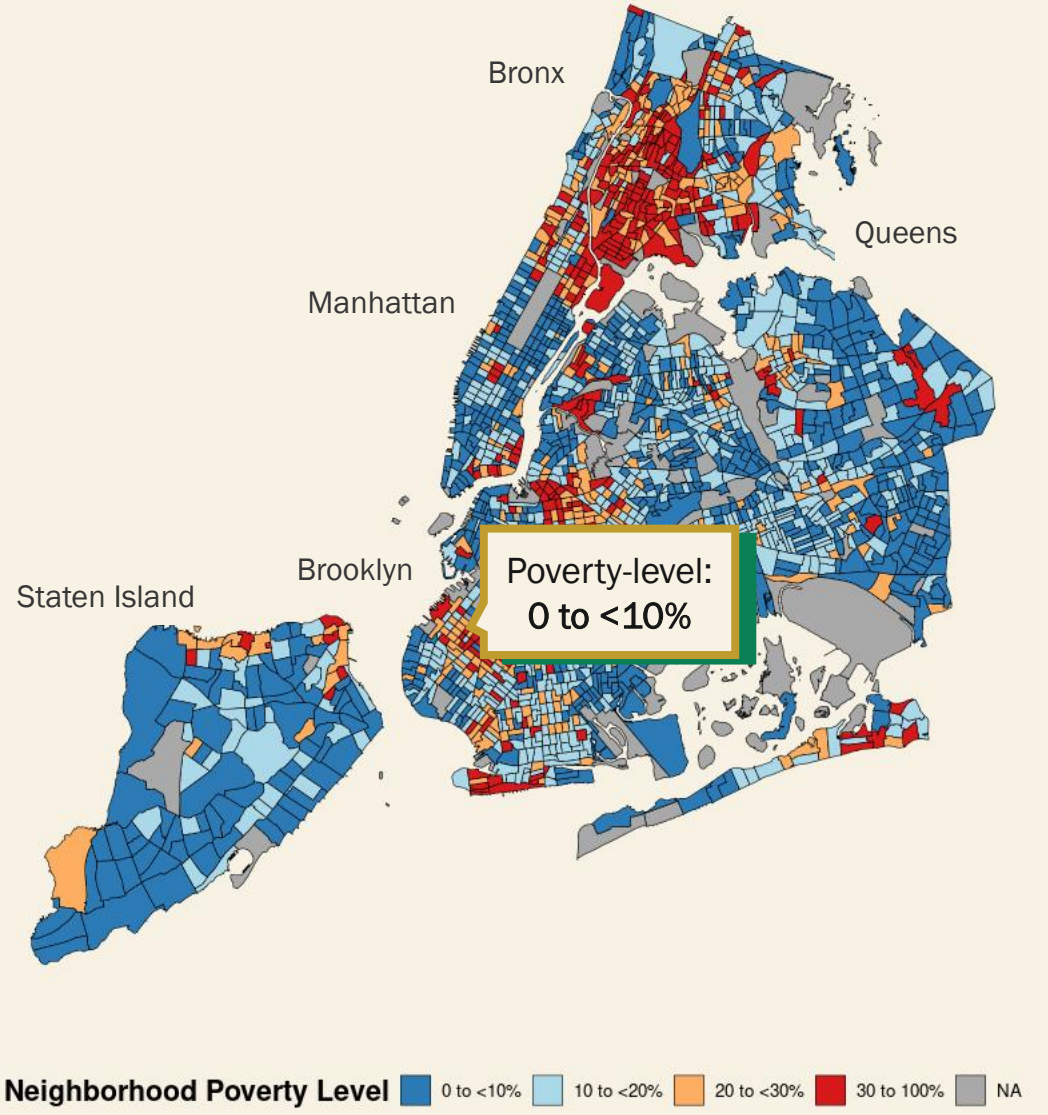
Social Vulnerability Index Themes



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[3] Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index 2022] Database New York. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html Accessed on March 19, 2026.

NYC Census Tracts by Neighborhood Poverty-Level



Source: NYC Open Data (2020 Census Tracts)

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Neighborhood Vulnerability and RSV

- **RSV Hospitalization**
  - Higher among US adults in neighborhoods with **high neighborhood poverty.**[4]
  - Higher among children under five and older adults in neighborhoods with **high SVI .**[5]
- **RSV vaccination**
  - Lower among older adults in neighborhoods with **high SVI.**[6]

[4] Holmen J, Reingold A, Bye E, Kim L, Anderson EJ, Bennett NM, Chai S, Kirley PD, Muse A, Talbot H, Monroe M. 1717. Relationship between Neighborhood Census-tract Level Poverty and Respiratory Syncytial Virus (RSV)-associated Hospitalizations in US adults, 2015-2017. InOpen Forum Infectious Diseases 2020 Oct 1 (Vol. 7, No. Supplement_1, pp. S842-S843). US: Oxford University Press.

[5] Thomas CM, Raman R, Schaffner W, Markus TM, Ndi D, Fill MM, Dunn JR, Talbot HK. Respiratory syncytial virus hospitalizations associated with social vulnerability by census tract: an opportunity for intervention?. InOpen Forum Infectious Diseases 2024 May (Vol. 11, No. 5, p. ofae184). US: Oxford University Press.

[6] Surie D, Yuengling KA, Safdar B, Ginde AA, Peltan ID, Brown SM, Gaglani M, Ghamande S, Gottlieb RL, Columbus C, Mohr NM. Patient-and community-level characteristics associated with respiratory syncytial virus vaccination. JAMA network open. 2025 Apr 1;8(4):e252841.

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Objective

- To estimate the association between neighborhood vulnerability using neighborhood poverty and SVI and RSV immunization among NYC infants.

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Cohort

- Infants with a NYC vital record with a geocoded NYC address born October through March of the past three seasons 2023-24, 2024-25 and 2025-26.

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Exposure: Neighborhood Vulnerability

- Neighborhood poverty-level among census tracts released in 2024.
  - Four levels of federal poverty-level:

    0 to <10%, 10 to <20%, 20 to < 30%, 30 to 100%
- Overall social vulnerability index 0-1 percentile rank among census tracts released in 2022 for New York state.
  - SVI was categorized into four levels:

    Low, Medium-Low, Medium-High, High

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Outcome: RSV Immunization

- RSV immunization among infants by 8 months and March 31st of a given season.
  - **Nirsevimab or Clesrovimab**
    - Administered to infants during administration season.
  - **Abrysvo**
    - Administered to linked parents of infants, in the cohort, during administration season ≥ 14 to 60 days (32 weeks gestation with a 4-day grace period) before infant's DOB.
    - Linked parents to infants based on deterministic matching of combination of names, DOB, home address, email address, and/or phone number(s).

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Covariates

- Infant sociodemographic characteristics included, sex assigned at birth, race/ethnicity, and a measure for if an infant received publicly funded vaccine (by 8 months).

Analysis

- A descriptive analysis to characterize differences in RSV coverage by demographics and neighborhood vulnerability.
- Logistic regression is used to estimate the odds of RSV immunization.

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Cohort Demographic Characteristics

Characteristic	2023-24 N=43,568	2024-25 N= 39,833	2025-26 N=40,298	Total N=123,699
Sex				
Female	21,322 (49%)	19,519 (49%)	19,971 (50%)	60,812 (49%)
Male	22,246 (51%)	20,314 (51%)	20,327 (50%)	62,887 (51%)
Race and Ethnicity				
Asian, non-Hispanic	6,506 (15%)	6,224 (16%)	6,209 (16%)	18,939 (15%)
Black, non-Hispanic	7,413 (17%)	6,516 (16%)	6,123 (15%)	20,052 (16%)
Hispanic	13,777 (32%)	12,490 (32%)	12,187 (30%)	38,454 (31%)
Other*	1,299 (3.0%)	1,319 (3.3%)	1,594 (4.0%)	4,212 (3.4%)
White, non-Hispanic	14,573 (34%)	13,284 (34%)	14,185 (35%)	42,042 (34%)
Eligible to Receive Publicly Funded Vaccine				
Yes	26,020 (67%)	24,882 (70%)	20,938 (67%)	71,840 (68%)

** Includes American Indian, Native Hawaiian/Pacific Islanders, Two or more races and Unknown race or ethnicity*

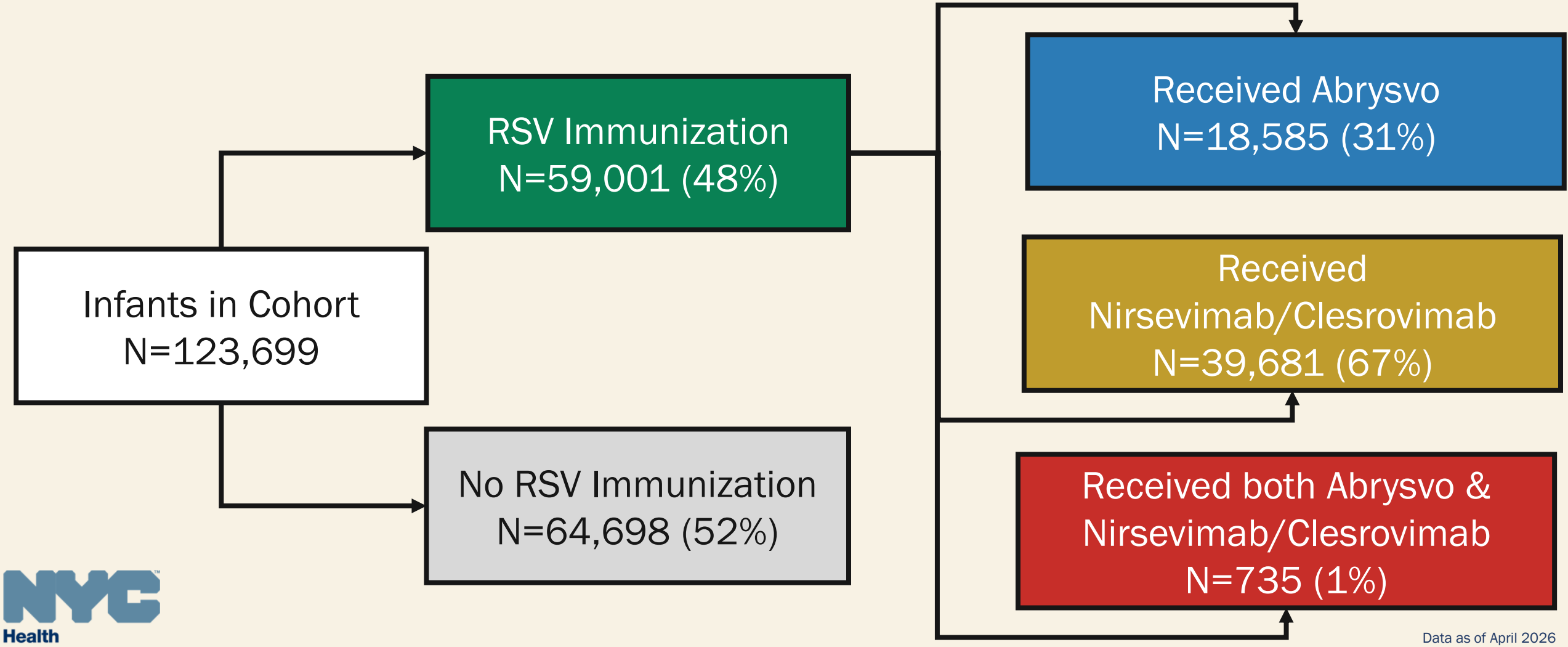
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Cohort Neighborhood Characteristics

Characteristic	2023-24 N=43,568	2024-25 N= 39,833	2025-26 N=40,298	Total N=123,699
Neighborhood Poverty-level				
0 to <10%	12,080 (28%)	11,246 (29%)	11,703 (29%)	35,029 (29%)
10 to <20%	14,244 (33%)	13,045 (33%)	13,151 (33%)	40,440 (33%)
20 to <30%	7,990 (19%)	7,222 (18%)	7,169 (18%)	22,381 (18%)
30 to 100%	8,747 (20%)	7,927 (20%)	7,852 (20%)	24,526 (20%)
Unknown	507	393	423	1,323
Social Vulnerability Index				
Low	2,925 (7.5%)	2,815 (7.9%)	2,895 (8.1%)	8,635 (7.8%)
Low-Medium	5,152 (13%)	4,860 (14%)	5,107 (14%)	15,119 (14%)
Medium-High	10,818 (28%)	9,705 (27%)	10,032 (28%)	30,555 (28%)
High	19,955 (51%)	18,193 (51%)	17,878 (50%)	56,026 (51%)
Unknown	4,209	3,863	3,189	13,364

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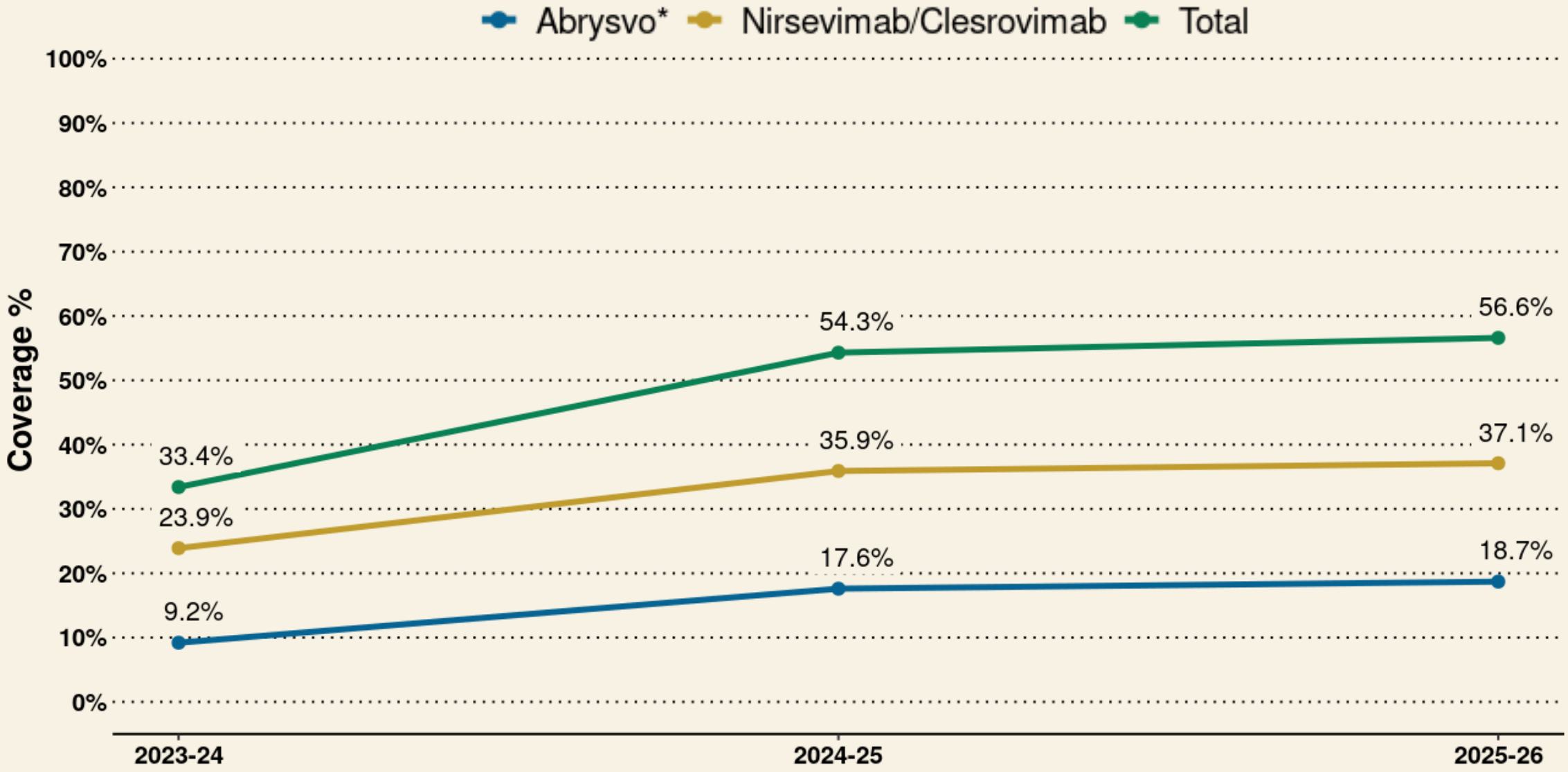
RSV Immunization Coverage



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Data as of April 2026

New York City RSV Infant Coverage



*Data may be incomplete

Data as of April 2026;
NYC DOHMH Citywide Immunization Registry (numerators);
NYC DOHMH Citywide Immunization Registry Vital Record (denominators)

Demographic Characteristics by RSV Coverage

Characteristic	Received RSV Immunization N = 59,001	No RSV Immunization N = 64,698
Sex		
Female	29,241 (50%)	31,571 (49%)
Male	29,760 (50%)	33,127 (51%)
Race and Ethnicity		
Asian, non-Hispanic	10,162 (17%)	8,777 (14%)
Black, non-Hispanic	8,668 (15%)	11,384 (18%)
Hispanic	20,431 (35%)	18,023 (28%)
Other*	1,695 (2.9%)	2,517 (3.9%)
White, non-Hispanic	18,045 (31%)	23,997 (37%)
Eligible for Publicly Funded Vaccine		
No	20,716 (37%)	12,892 (26%)
Yes	35,512 (63%)	36,541 (74%)

** Includes American Indian, Native Hawaiian/Pacific Islanders, Two or more races and Unknown race or ethnicity*
Missing and unknown counts are excluded for detail

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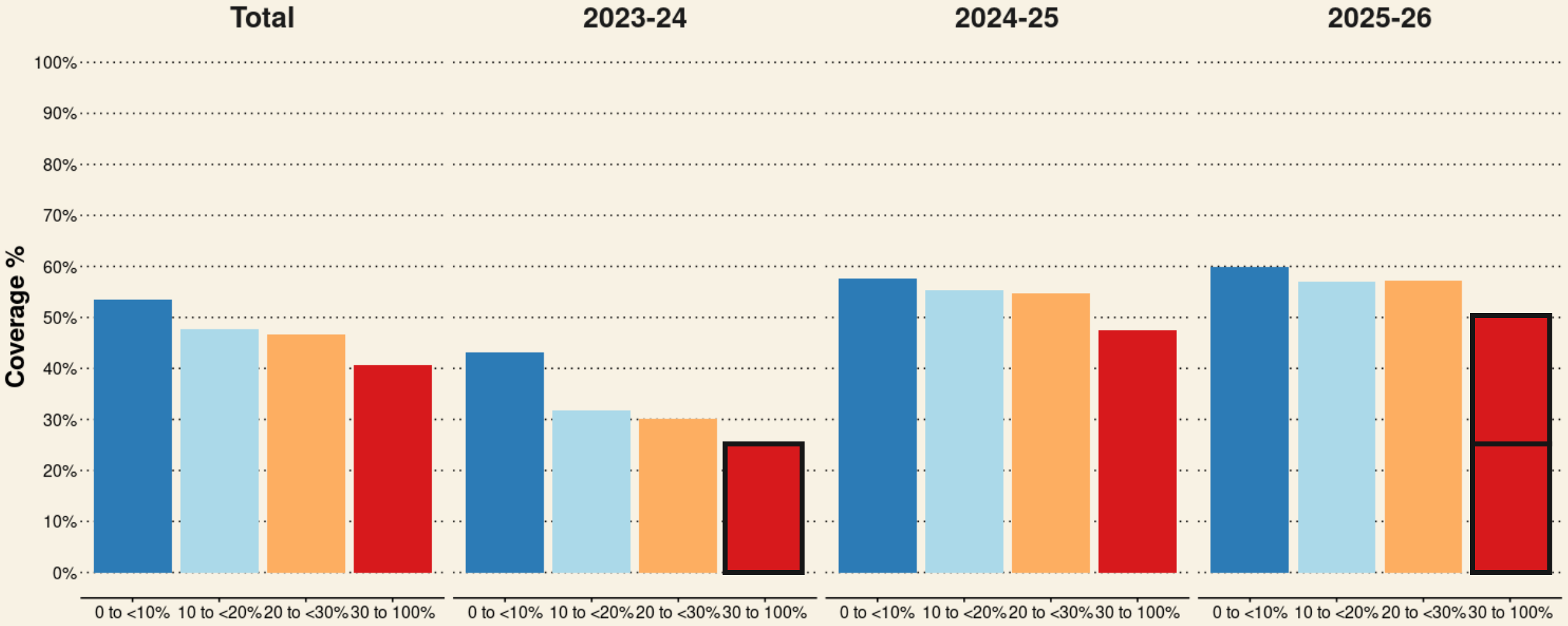
Neighborhood Characteristics by RSV Coverage

	Received RSV Immunization N = 59,001	No RSV Immunization N = 64,698
Neighborhood Poverty-level		
0 to <10%	18,718 (32%)	16,311 (25%)
10 to <20%	19,250 (33%)	21,190 (33%)
20 to <30%	10,457 (18%)	11,924 (19%)
30 to 100%	9,960 (17%)	14,566 (23%)
Social Vulnerability Index		
Low	5,136 (9.9%)	3,499 (6.0%)
Low-Medium	8,128 (16%)	6,991 (12%)
Medium-High	12,993 (25%)	17,562 (30%)
High	25,878 (50%)	30,148 (52%)

Missing and unknown counts are excluded for detail

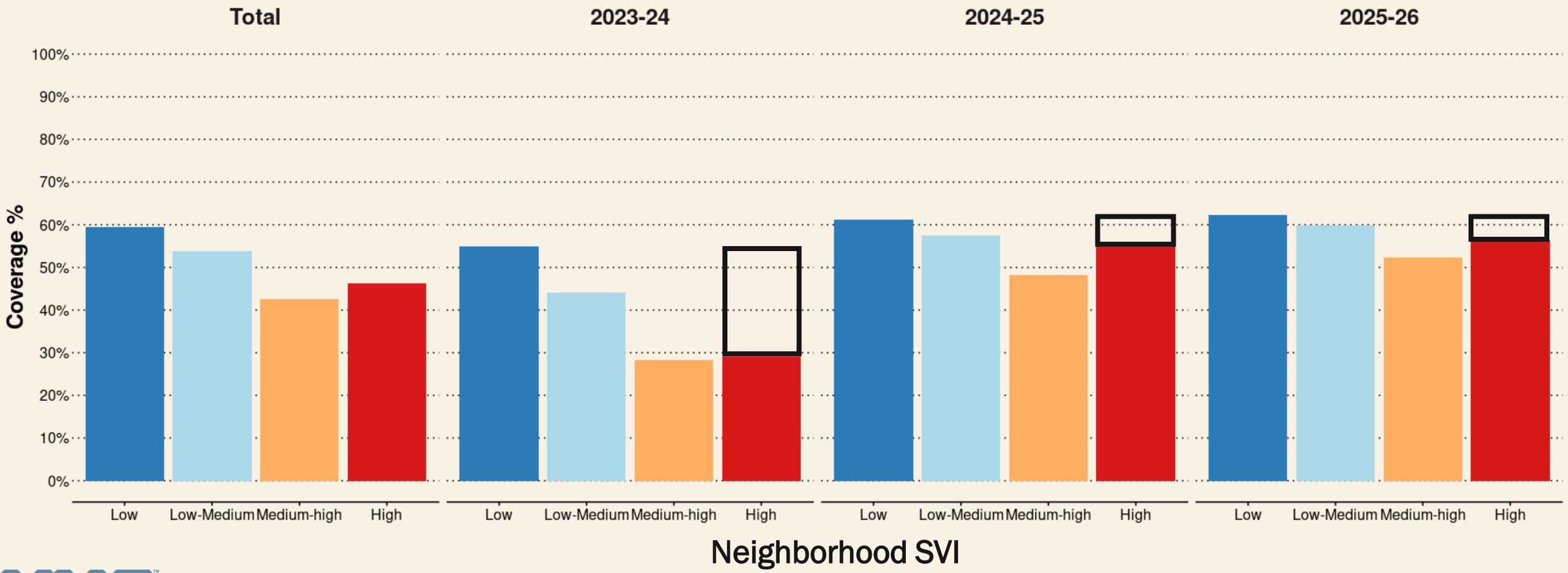
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RSV Coverage by Neighborhood Poverty-level



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RSV Coverage by SVI



Health

Adjusted Odds of RSV Immunization by Neighborhood Poverty-level

	RSV protection aOR* (95% CI)	p-value
Neighborhood Poverty-level		
0 to <10%	**1.13 (1.08, 1.17)**	**<0.001**
10 to <20%	0.97 (0.94, 1.01)	.12
20 to <30%	1.02 (.98, 1.07)	0.2
30 to 100%	—	

**Adjusted for individual-level variables: sex, race and ethnicity, eligible to receive publicly funded vaccine*

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Adjusted Odds of RSV Immunization by SVI

	RSV protection aOR* (95% CI)	p-value
Social Vulnerability Index		
Low	1.37 (1.29, 1.44)	<0.001
Low-Medium	1.19 (1.14, 1.24)	<0.001
Medium-High	0.94 (0.91, 0.97)	<0.001
High	—	

**Adjusted for individual-level variables: sex, race and ethnicity, eligible to receive publicly funded vaccine*

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Limitations

- RSV coverage is likely underestimated to voluntary adult vaccine reporting to the CIR.
- RSV coverage estimates rely on linking infants to parent records in CIR which is unequal across racial groups.
- Race and ethnicity data may not capture the diversity of infant's identities, as it often relies on mother's race.

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Conclusions

- Overall RSV disparities in coverage among multiple measures of neighborhood vulnerability have reduced over time.
- The findings highlight disparities among vulnerable communities and underscore the need for focused interventions that identify within-community variations.

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Future Directions

- To continue to monitor RSV coverage over time by neighborhood vulnerability measures and reduction in disparities.
- To gain more insights into the SVI themes associations with RSV immunization.

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THANK YOU!!

Acknowledgements:

Conner Jackson, Alexandra Ternier, Iris Cheng,
Megan Tougher, Bernadette Weeks

Contact Information:

Alexa Riggs

ariggs@health.nyc.gov

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Leveraging RSV Coverage Estimates to Identify Opportunities for Earlier Infant Immunization

Amshe Ogun, Epidemiologist

Methodology

Data Source

Tennessee Immunization Information System (TennIIS)

- Vital Records Feed into TennIIS

RSV Seasons

Season 1
- Oct 1, 2023 - Mar 31, 2024

Season 2
- Sep 1, 2024 - Mar 31, 2025

Season 3
- Oct 1, 2025 - April 30, 2026

Denominator

Eligible Live Births
- April 1 - end of RSV Season
- Infants < 8 months old

Numerator

Protected Infants
- Eligible live births who received RSV MAb during RSV Season and
- Women <50 years old who received Abrysvo during RSV Season

Deduplication

- Matched and deduplicated deduplicated maternal vaccination
- Included unmatched maternal vaccination records in the numerator

TN Department of Health

Infant RSV Protection Coverage Rate

	2023-2024 RSV Season*	2024-2025 RSV Season**	2025-2026 RSV Season***
Maternal Doses	3.5%	8.6%	8.1%
Infant Doses	12.4%	29.7%	30.2%
Total	**15.9%**	**38.3%**	**38.3%**

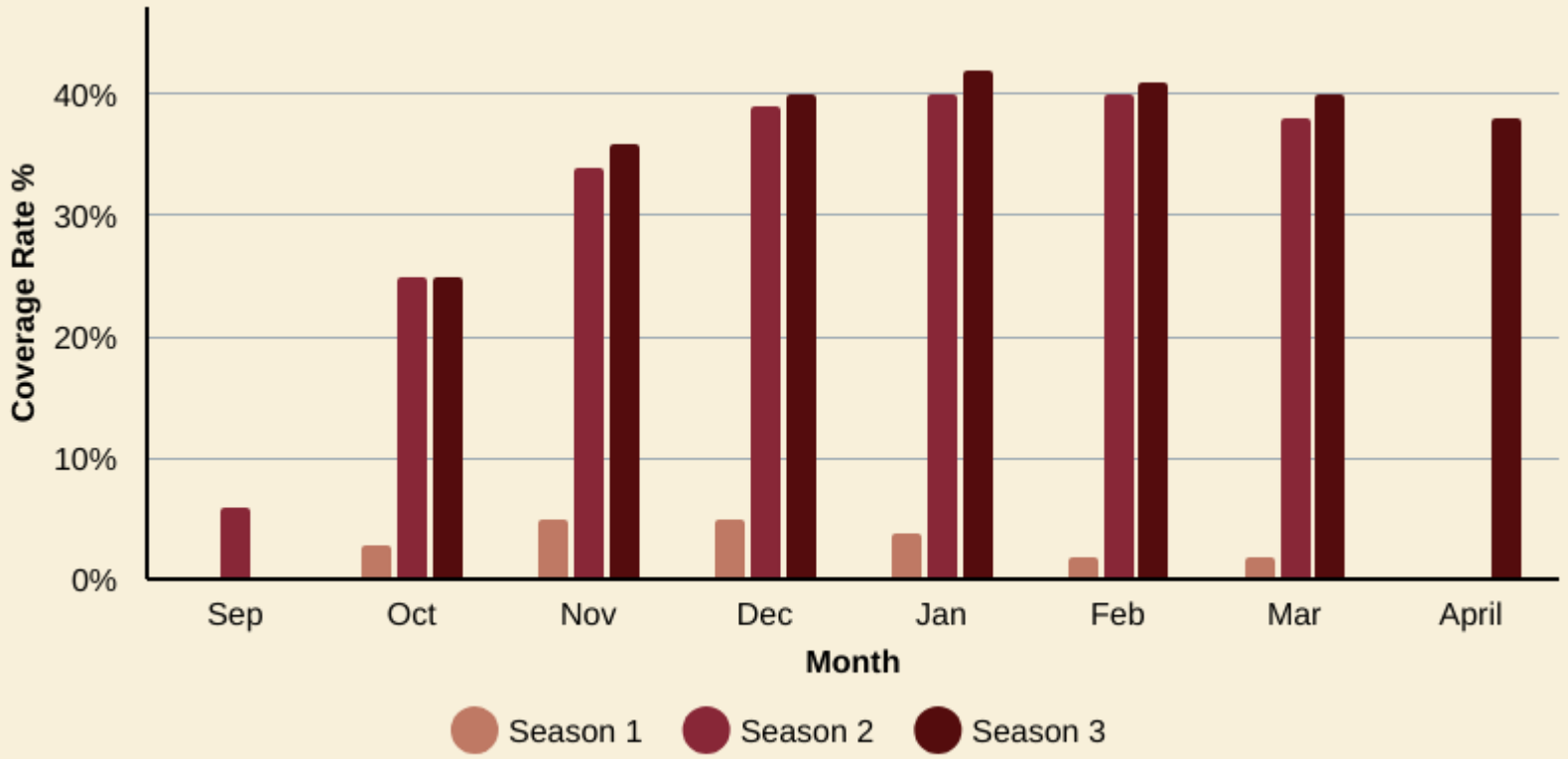
Protected infant coverage doubled statewide between Season 1 and Season 2 and stayed the same between Season 2 and Season 3

*Season 1: October 1, 2023- March 31, 2024

**Season 2: September 1, 2024- March 31, 2025

***Season 3: October 1, 2025- April 30, 2026

Infant RSV Protection Coverage Rate by Month



Infant RSV immunization uptake has strengthened over time, progressing from initial implementation in Season 1 to higher coverage during peak months in Season 3.

Age at RSV Immunization for Infants Born in Season

	2023-2024 RSV Season*	2024-2025 RSV Season**	2025-2026 RSV Season***
Infant Age (Days)	RSV Immunization % (no.)	RSV Immunization % (no.)	RSV Immunization % (no.)
0-2	4% (249)	8% (1,075)	13% (1,437)
3-7	30% (1,709)	32% (4,165)	39% (4,443)
8+	66% (3,778)	60% (7,778)	49% (5,583)

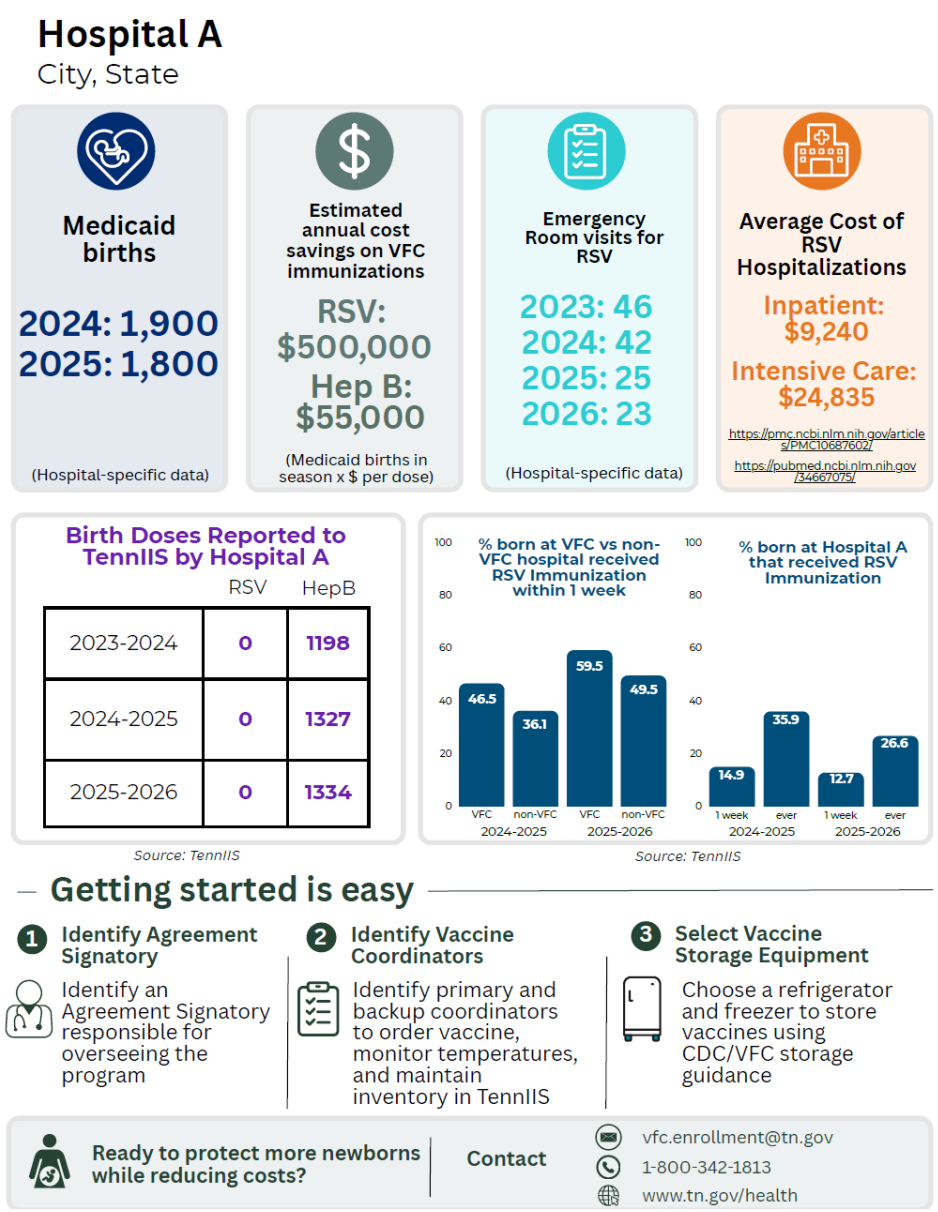
Among infants born during the RSV season, the proportion receiving immunization within the first week of life **increased** between seasons, suggesting that provider education/outreach efforts are working.

Infant RSV Protection

Immunization	Nirsevimab	Clesrovimab	RSV preF
Manufacturer	AstraZeneca/Sanofi	Merck	Pfizer
Trade Name	Beyfortus® (nirsevimab-alip) 50 mg 100 mg Injection	ENFLONSIA™ (clesrovimab-cfor) 105 mg Injection	ABRYSVO™ Respiratory Syncytial Virus Vaccine
Indication(s)	Infants in first RSV season & high-risk children in second season	Infants in first RSV season	**Pregnant Mothers 32-36 weeks GA,** high risk 18-59 year olds & Older Adults > 60 yrs
Commercial Cost	$557/dose	TBD	$307/dose
VFC?	Yes	Yes	Yes

Provider Outreach Efforts

Outreach Initiatives to Increase VFC Provider Enrollment



TN Department of Health

Provider Outreach Efforts

- Bi-Weekly Provider Education and Training Webinars

- Provider Expo to Promote Provider submission into TennIIS and Resource Sharing



Questions?

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Thank you to our presenters, and thanks to all of you for joining us!

Please complete a brief evaluation survey

The next Discovery Session
will be on December 21, 2026