Immunization Coverage in NYS: Impact of Programmatic Activities and Policies on 4:3:1:3:3:1:4 Rates

Dina Hoefer, PhD
New York State Immunization Information System (NYSIIS)
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Background

Background

- Immunization is one of the most successful and safest public health strategies for preventing disease
- In New York State (NYS), high immunization levels are achieved by the time children reach school age and are supported by school entry laws
- The immunization rates of very young children, 19-35 months of age, are still below the Healthy People 2020 goal of 80 percent

Background

- High levels of vaccine coverage require implementation and coordination of a wide range of public policy, health system, and community-based interventions
- Immunization Information Systems (IIS) provide aggregate data on vaccinations for use in assessments of coverage and program operations and in guiding public health action to improve vaccination rates

Background

- The New York State Immunization Information System (NYSIIS) is an important tool for tracking immunization coverage rates in NYS
- To date, rates calculated from NYSIIS data have been substantially lower than rates calculated from annual National Immunization Survey (NIS) data

Challenges that Impact NYSIIS Immunization Rates

- Compliance
- Incomplete/inaccurate reporting; especially histories
- Under and un-vaccinated children
- Data Quality

Intervention

Beginning in early 2013, the NYSDOH Bureau of Immunization initiated various program activities and changes in policy that have both directly and indirectly impacted the percentage of children aged 19 to 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella and pneumococcal conjugate vaccine (4:3:1:3:3:1:4 series) as recorded in NYSIIS.

Immunization Action Plans

- Implementation of a new five-year IAP with NYS Local Health Departments (LHDs) in 2013
- New performance-based reimbursement structure that includes an assessment of immunization rates among 19 -35 month old children
- Figures compared annually to determine if progress is being met

Ordering of Public Vaccine

- Vaccine Ordering Module released in NYSIIS November 2013
- Initial training and outreach completed Dec ‘13 – Jan ‘14
- All VFC Providers required to place orders in NYSIIS by April 1, 2014
- Weekly messaging on new requirement

NYS School Regulations

- Public Health Law (PHL) § 2164 – Amendments to Subpart 66-1 School Immunization Requirements
- No change to the required vaccines
- Revised the number of required doses and intervals between doses to be consistent with the ACIP schedules
- Made NYSIIS/CIR an official certificate of immunization
- Recommend schools use NYSIIS/CIR to determine validity of spacing between doses of vaccine

Methods

Data

- NYSIIS data from January 1, 2013 through March 2015 was utilized for these analyses
- 4:3:1:3:3:1:4 series rates were calculated monthly by NYS geographic region and county
- Rates were compared to NIS data

Policy dates

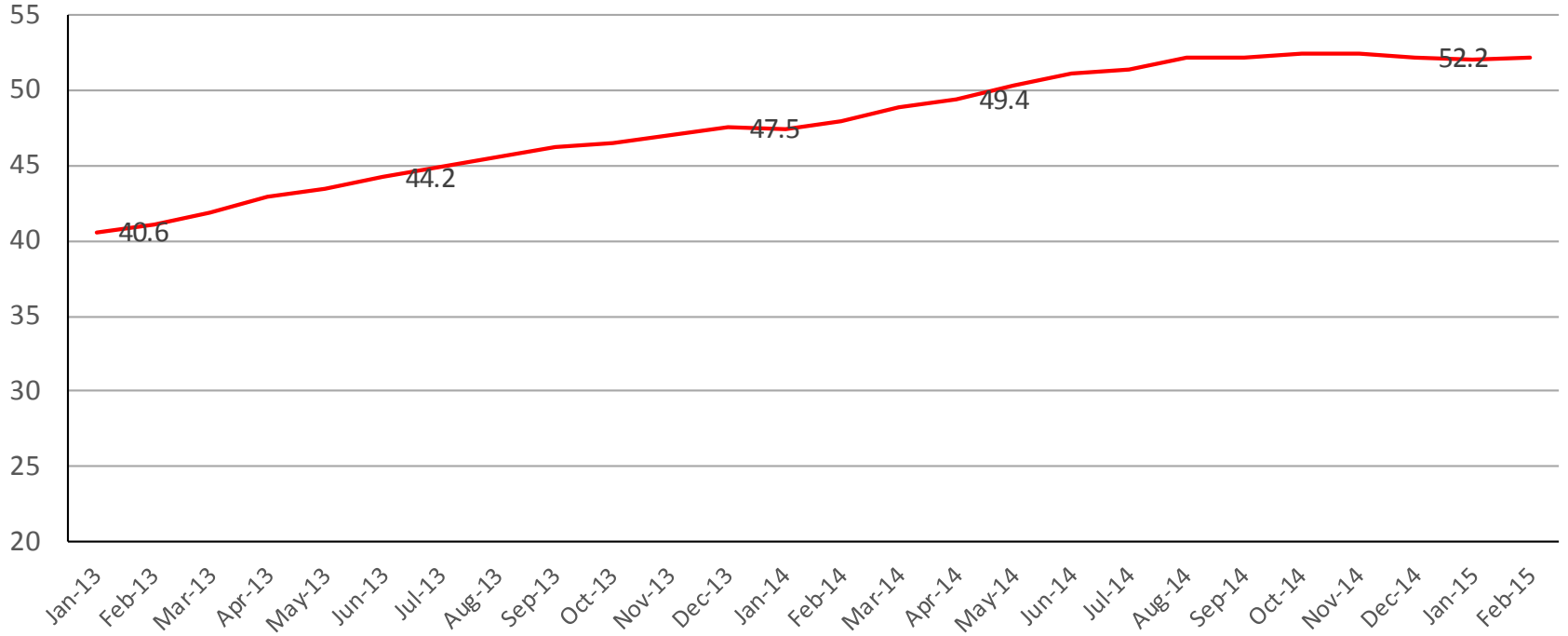
- Changes to LHD IAP requirements and sharing of 4:3:1:3:3:1:4 data
  - 6/1/2013
- Mandatory ordering of publically funded vaccine in NYSIIS
  - 4/1/2014
- Changes to NYS school entry regulations
  - 7/1/2014

Results

Data

- Between January 2013 and February 2015 4:3:1:3:3:1:4 series rates improved statewide from 40.6% to 52.1%.
- The 2013 NIS 4:3:1:3:3:1:4 series estimate for NYS was 74.3%.

Statewide Improvements Over Time



- Clients without first name & birth_load_ind='N' in NYS were excluded
- Noted rates correspond to previously noted policy dates

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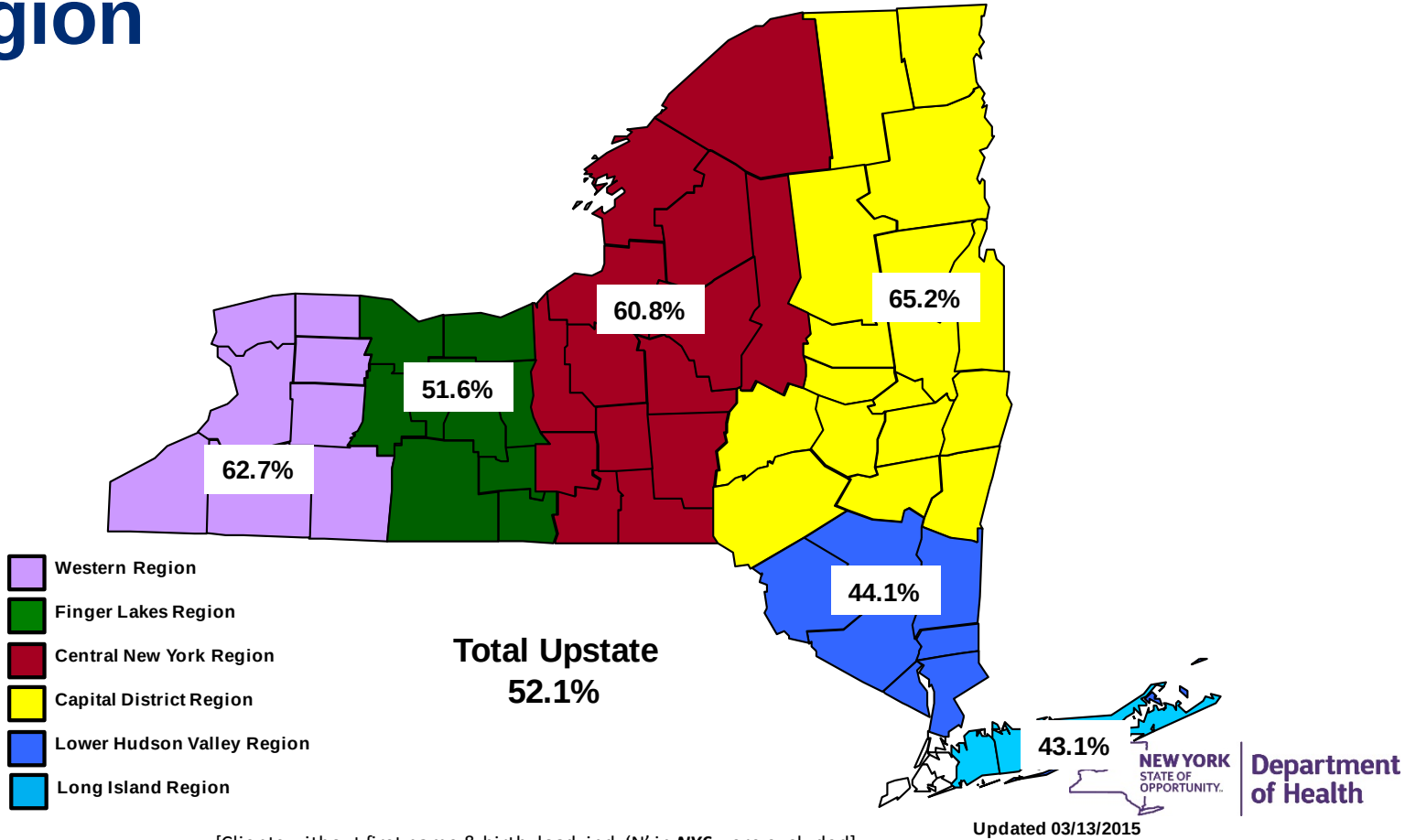
Data: Improvement by Policy Dates

Time Period	Overall Improvement	Average per Month
January 2013 – June 2013	3.6 % pts	0.72 pts
June 2013 – April 2014	5.2 % pts	0.52 pts
April 2014 – July 2014	2.0 % pts	0.67 pts
July 2014 – present	0.7 % pts	0.1 pts

By Region



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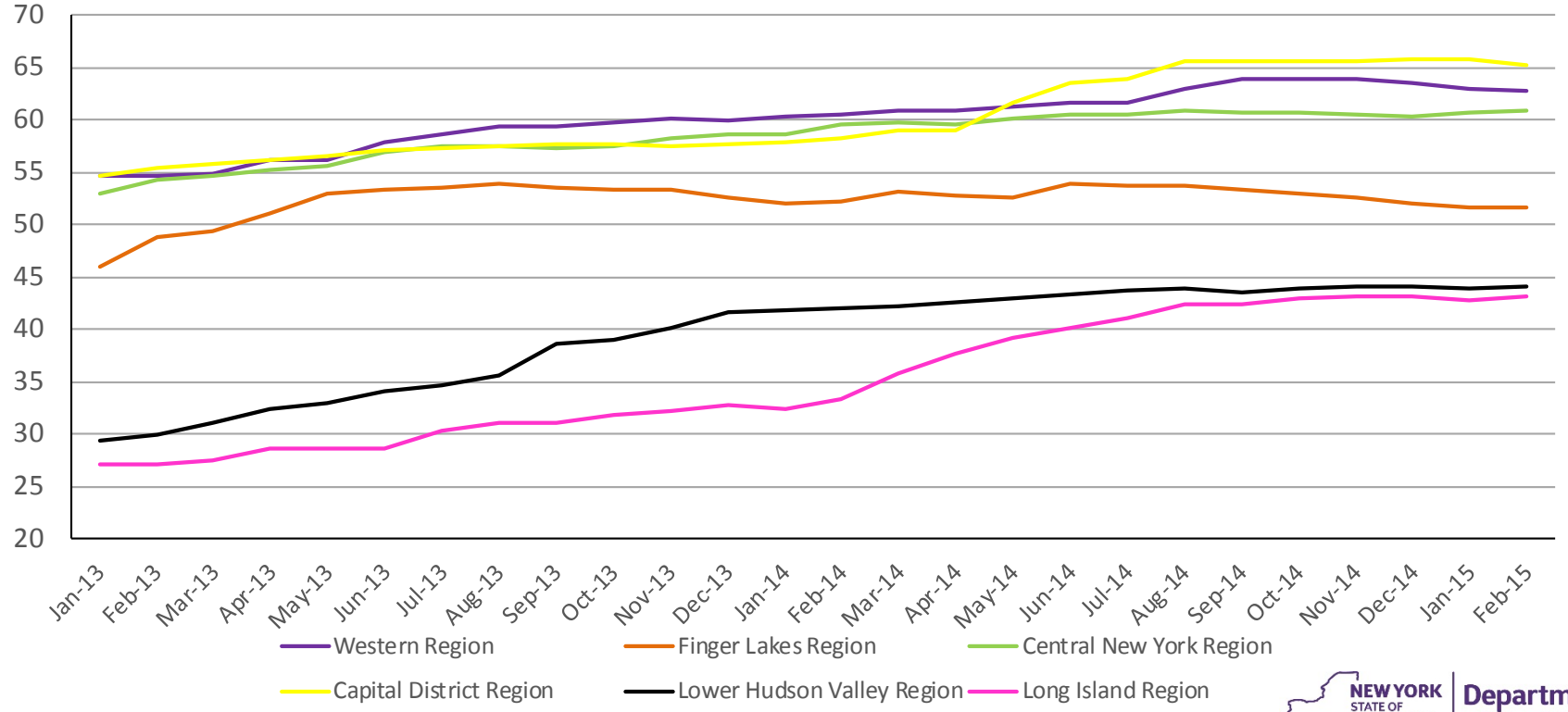
By Region Over Time



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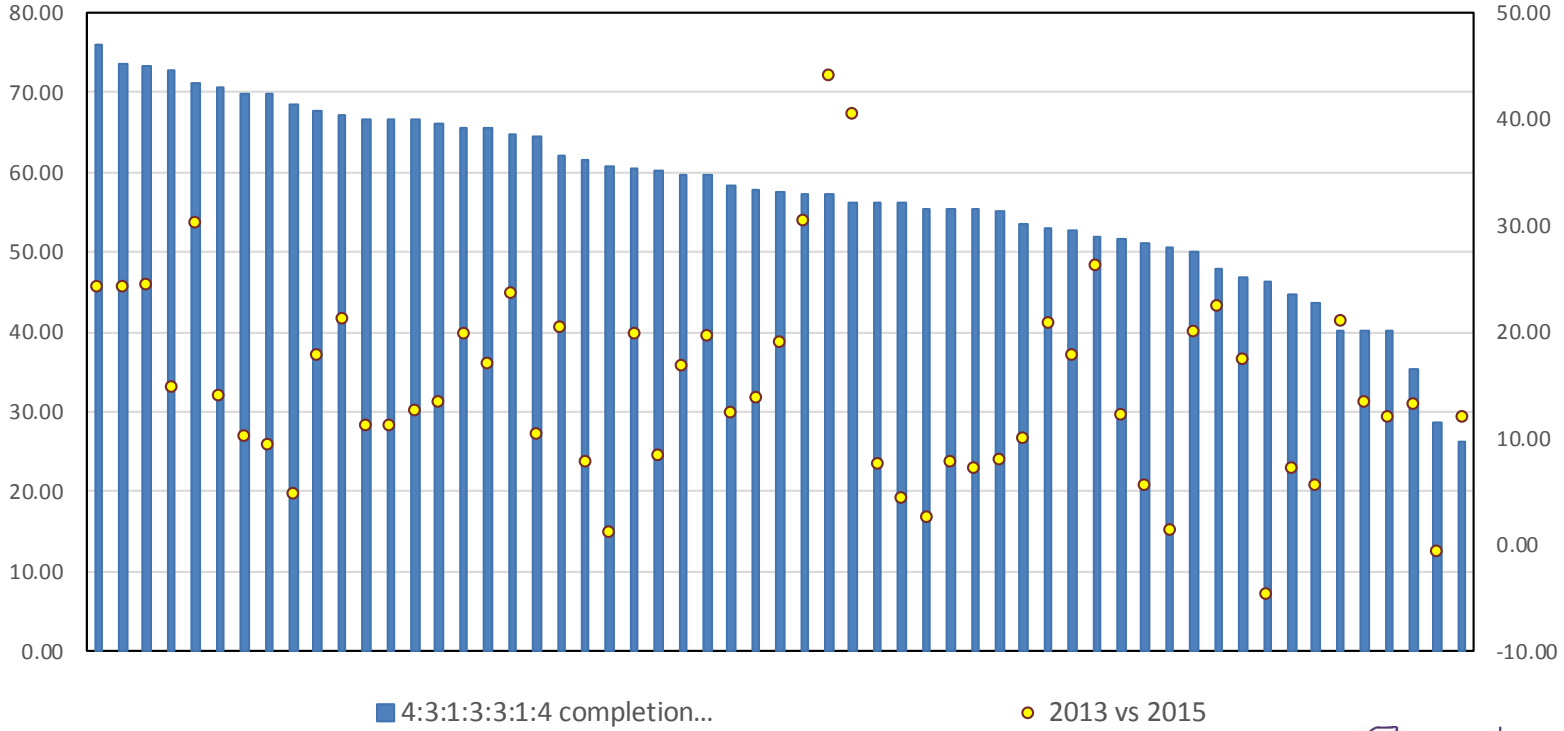
Data

- Improvements ranged from a low of 5.7 percentage points in the Finger Lakes Region to a high of 15.9 percentage points in the Long Island Region
- Further variation at county level

Rates and Percentage Change Across 57 NYS Counties



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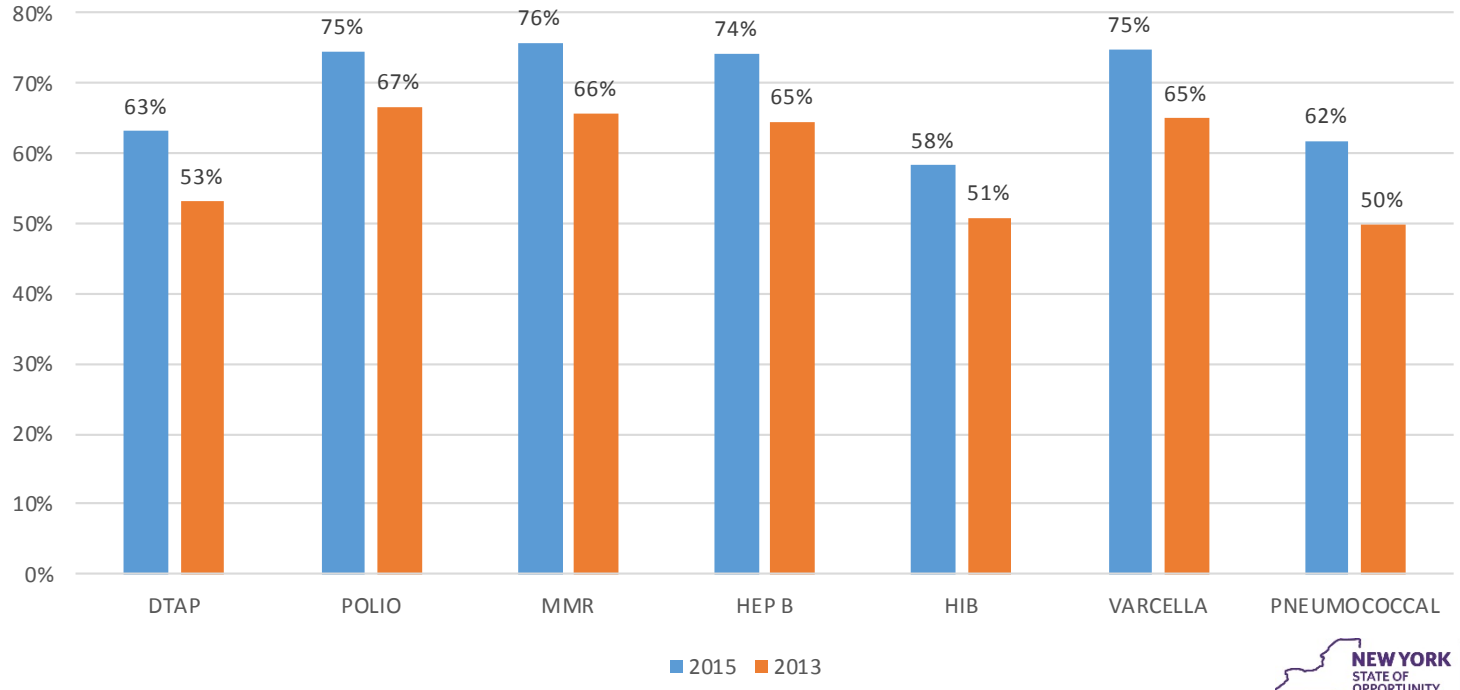
Impact of Individual Vaccine Series on Benchmark



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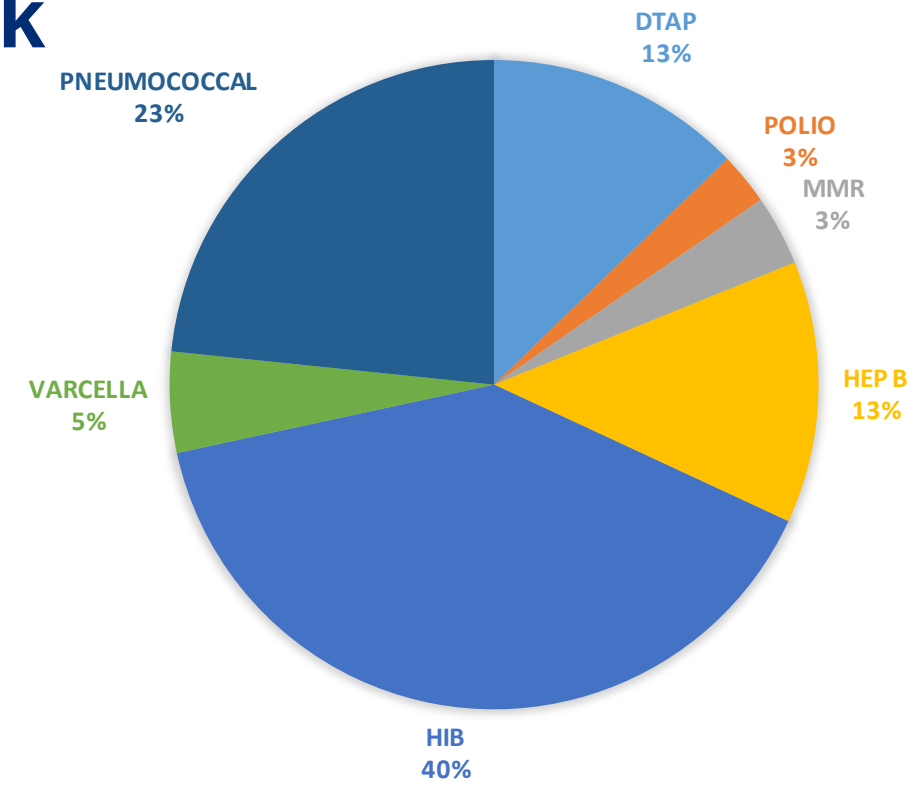

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Conclusions

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- Immunization coverage rates derived from IIS data are important for monitoring adherence to ACIP vaccination recommendations and the impact of programmatic activities and policy changes
- Despite significant improvements, 4:3:1:3:3:1:4 series rate calculated from NYSIIS data significantly lag behind NIS estimates

Conclusions

- Largest improvements noted in areas that had poorest rates to start
- Most improvement seen in early 2013
- Targeting coverage of individual vaccines may improve overall benchmark rates

Improvement Strategies

- Build and Promote New Functionality in NYSIIS
- Working closely with the VFC Program
- Compliance Activities
- Promote Meaningful Use
- New Grant Initiatives
- School Nurses