Progress of research agenda to inform potential policy reconsideration in 2018 for PCV13 use among adults

Advisory Committee on Immunization Practices

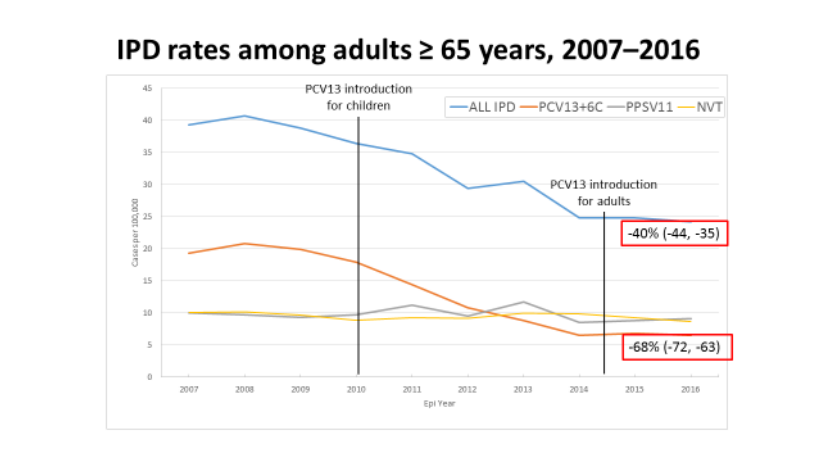
October 26, 2017

Key questions to be answered before 2018 review

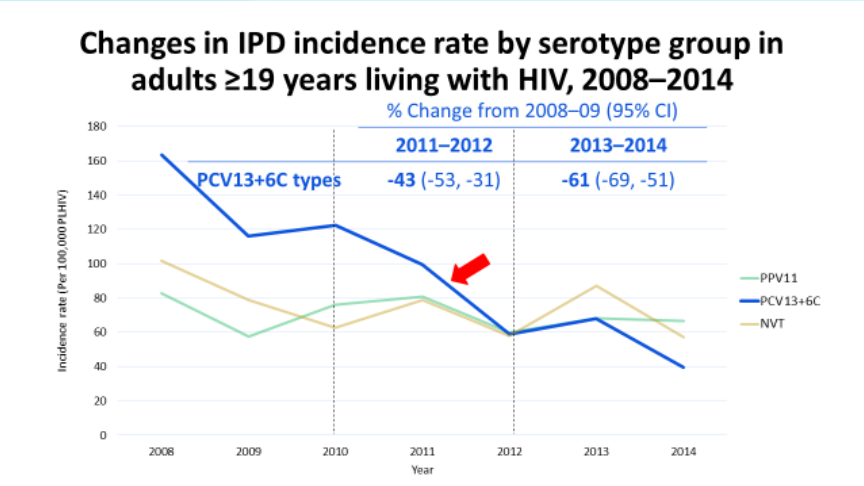
- **Is PCV13 use among adults ≥65 years old preventing disease?**
- **To what extent are the observed benefits driven by adults PCV13 use (direct effects) vs. pediatric PCV13 use (indirect effects)?**
- **What benefits would we expect from continued PCV13 use among adults?**

Impact on IPD observed to date

- **Changes in PCV13-type IPD burden among adults ≥65 years old**
  - PCV13-type IPD rates declined through 2014 due to indirect PCV13 effects
  - No additional declines in annual rates observed in 2015-2016
  - PCV13-types account for 22% of IPD in 2016 compared to 43% pre-PCV13

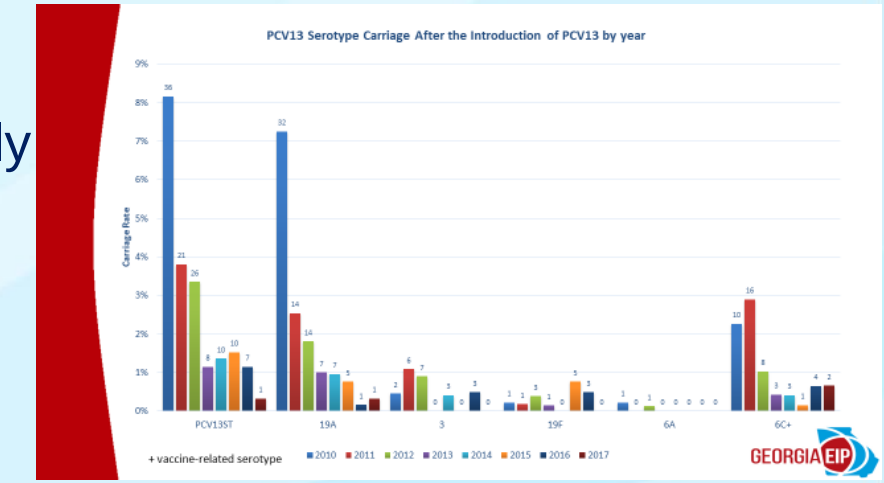


- **Changes in IPD among adults <65 years old with and without indications for PCV13 use**
  - PCV13-type IPD burden continues to decline among adults with and without current indications for PCV13 use
  - Similar reductions among those with chronic medical conditions, current indications for PPSV23-only use



Impact on nasopharyngeal colonization

- **Changes among children ≤5 years old**
  - Significant reduction in PCV13-type carriage rates, mostly due to 19A and 6C
  - No change in overall pneumococcal carriage rates
  - PCV13-types remaining in 2015-16: 19A, 19F, and 3



- **Carriage among adults ≥65 years old**
  - Very low overall and PCV13-type carriage rates
  - Difficult to attribute to direct vs indirect PCV13 effects given low vaccine type carriage rates
  - PCV13 types carried (19F, 19A, 3)

Carriage by Vaccination Status

	Vaccinated n= 1361 (%)	Non-Vaccinated n=1478 (%)
Pneumococcal carriage*	24 (1.8%)	23 (1.6%)
VT-Pneumococcal carriage†	3 (0.2%)	2 (0.1%)

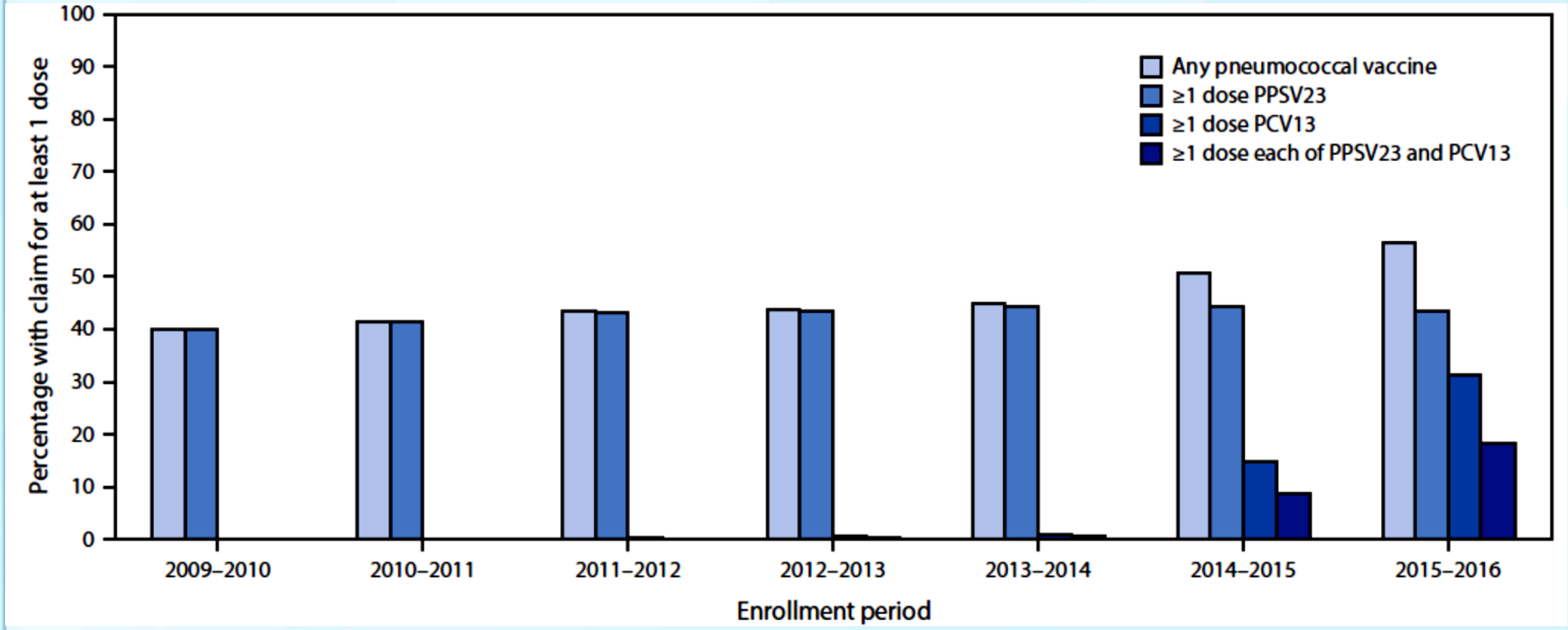
* 8 excluded due to unknown vaccination status
† 2 excluded due to unknown vaccination status

Monitoring vaccine uptake of PCV13 and PPSV23 in the target population of adults ≥65 years old

- **PCV13 and PPSV23 coverage assessment since 2014 recommendations**
  - CMS data for PCV13 and PPSV23 claims to estimate coverage among Medicare part B beneficiaries
  - Analysis of vaccine sales and IMS claims to estimate PCV13 coverage[1,2]

[1] *QuintilesIMS, Anonymized Patient-Level Data (APLD), Oct 2016 (includes diagnostic and prescription utilization claims for PCV13)*
[2] *Pfizer, Inc. internal sales data for PCV13, Oct 2016*

Percentage of Medicare beneficiaries with claims submitted for PCV13 and PPSV23, adults ≥65 years old, CMS Claims Data 2009-2016



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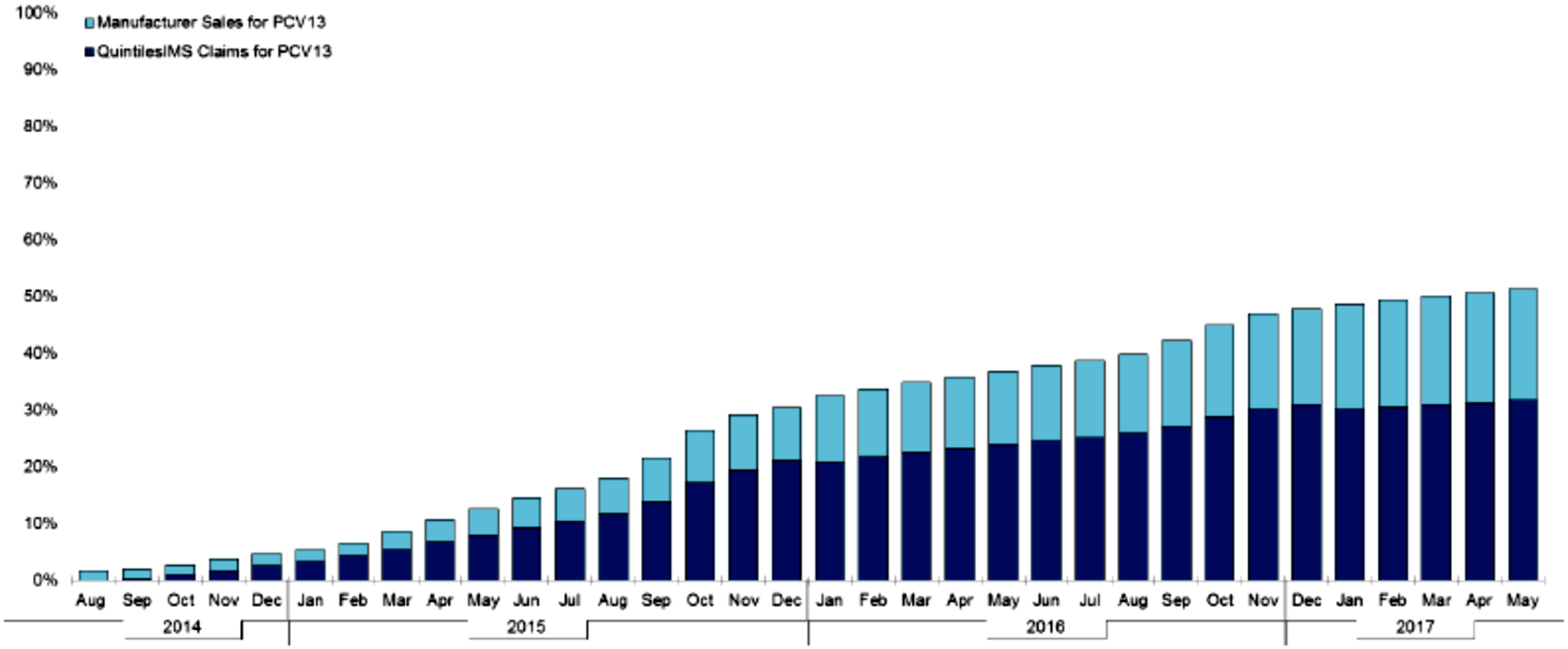
Estimated PCV13 Adult Cumulative Uptake, Adults ≥65 years old, IMS Claims Data and Manufacturer Sales, Aug 2014–May 2017



Slide courtesy of Pfizer

Updates during the upcoming ACIP meetings

- **Vaccine effectiveness study among adults ≥65 years old against VT IPD; two case-control evaluations**
  - Population-based non-IPD controls
  - Medicare part B beneficiaries

- **PCV13 impact on community acquired pneumonia**
  - All cause CAP (administrative data, ICD codes)
  - Pneumococcal pneumonia (pneumococcal UAT+)
  - Vaccine type pneumococcal pneumonia (serotype-specific UAD)

- **Model estimating public health impact and cost-effectiveness of different policy options**
  - No PCV for adults ≥65 years old
  - Expanding indications for adults <65 years old