



# Performance on immunization quality measures using claims, medical record and immunization registry data

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# Acknowledgements

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<sup>1</sup> *National Committee for Quality Assurance*

<sup>2</sup> *Scientific Technologies Corporation, Inc.*

<sup>3</sup> *Centers for Disease Control & Prevention*

# Healthcare Effectiveness Data and Information Set - HEDIS®

Set of measures designed to compare health plan performance on important dimensions of care

- 80+ measures over 5 domains
- 90% of all U.S. health plans report HEDIS
- In 2013, HEDIS covered over 171 million people from 814 HMOs and 353 PPOs

# Adolescent Immunization Quality Measures

- Two HEDIS measures assess proportion of adolescents age 13 years who had documented
  - Tetanus, diphtheria, acellular pertussis (Tdap/Td), Meningococcal vaccines
  - Human Papillomavirus (HPV) vaccine – females only
- Commercial and Medicaid plans
- Reporting options
  - Administrative (claims)
  - Administrative with medical record review

# Registry Data

- Adolescents now receive immunizations from many places
  - Primary care providers
  - Pharmacies
  - School-based clinics
- Registry data can help identify vaccines not documented in claims or medical records

# How Registry Data Qualify in HEDIS

- Organizations may use other sources to collect data about their members and about delivery of health services to their members: *supplemental data*
- Standard supplemental data
  - Electronic files that come from providers who rendered the service
  - Production of these files follows clear policies and procedures
  - Standard file layouts remain stable from year to year
- Immunization data in state or county registries may vary from state to state but are consistent for all records in each state's registry

# Study Objectives

Overall: Assess health plan performance on adolescent immunization quality measures with focus on HPV vaccine receipt in males

- Examine adolescent immunization rates at the state level using Immunization Information System (IIS) registry data
- Understand health plan barriers to using registry data and how to enhance use

# State Registry Methods

- IIS registries from 7 states
- Denominator - compared three definitions
  1. *All Adolescents*: listed in registry and turned 13 years in 2013
  2. *Active Residents*: listed in registry, turned 13 years in 2013, and had record of any 2 vaccines in lifetime
  3. *Census*: estimation of number of 13 year-olds in state in 2013 based on U.S. Census results\*
- Numerator - documentation of all recommended vaccines by the 13<sup>th</sup> birthday (Tdap/Td, Meningococcal and HPV)

\*Source: *Annual Estimates of the Resident Population by Single Year of Age and Sex for the U.S., States and Puerto Rico Commonwealth: April 1, 2010 to July 1, 2014*

# State Registries

	State A	State B	State C	State D	State E	State F	State G
Health & Human Services Region	Atlanta Region	Denver Region	Seattle Region	San Fran. Region	Phila. Region	Seattle Region	Dallas Region

# Health Plan Methods

- 4 plans\* calculated rates from 3 data source combinations
  - Claims data for all adolescents in denominator
  - Claims and medical record data for a random systematic sample of 138 females and 138 males
  - Claims, medical record and registry data for the random sample of adolescents
- Interviewed plans about barriers and facilitators to improving vaccine rates

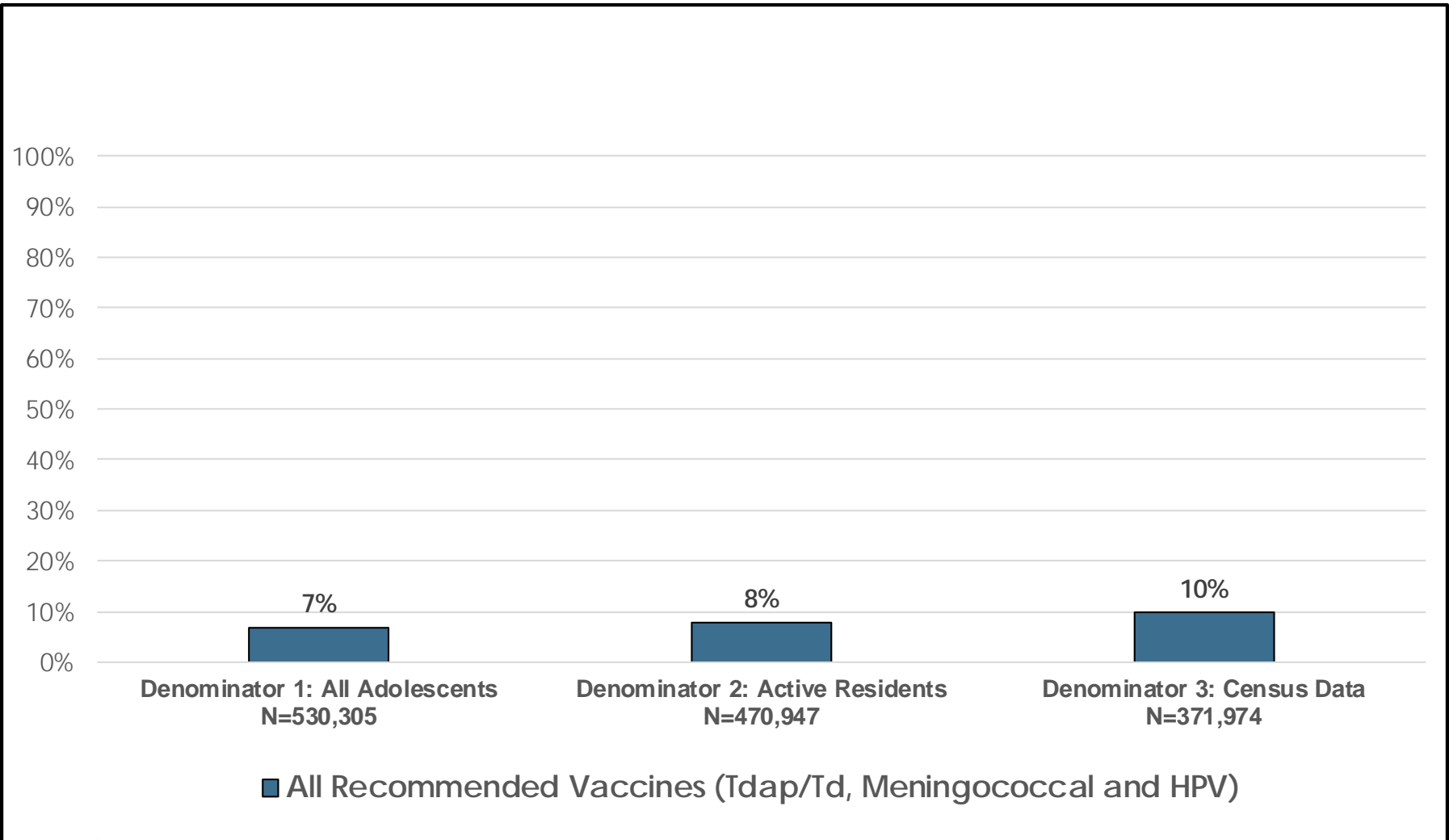
# Health Plan Methods

- Denominator - adolescents enrolled in plan who turned 13 years in 2013
- Numerator - documentation of all recommended vaccines by the 13<sup>th</sup> birthday (Tdap/Td, Meningococcal and HPV)

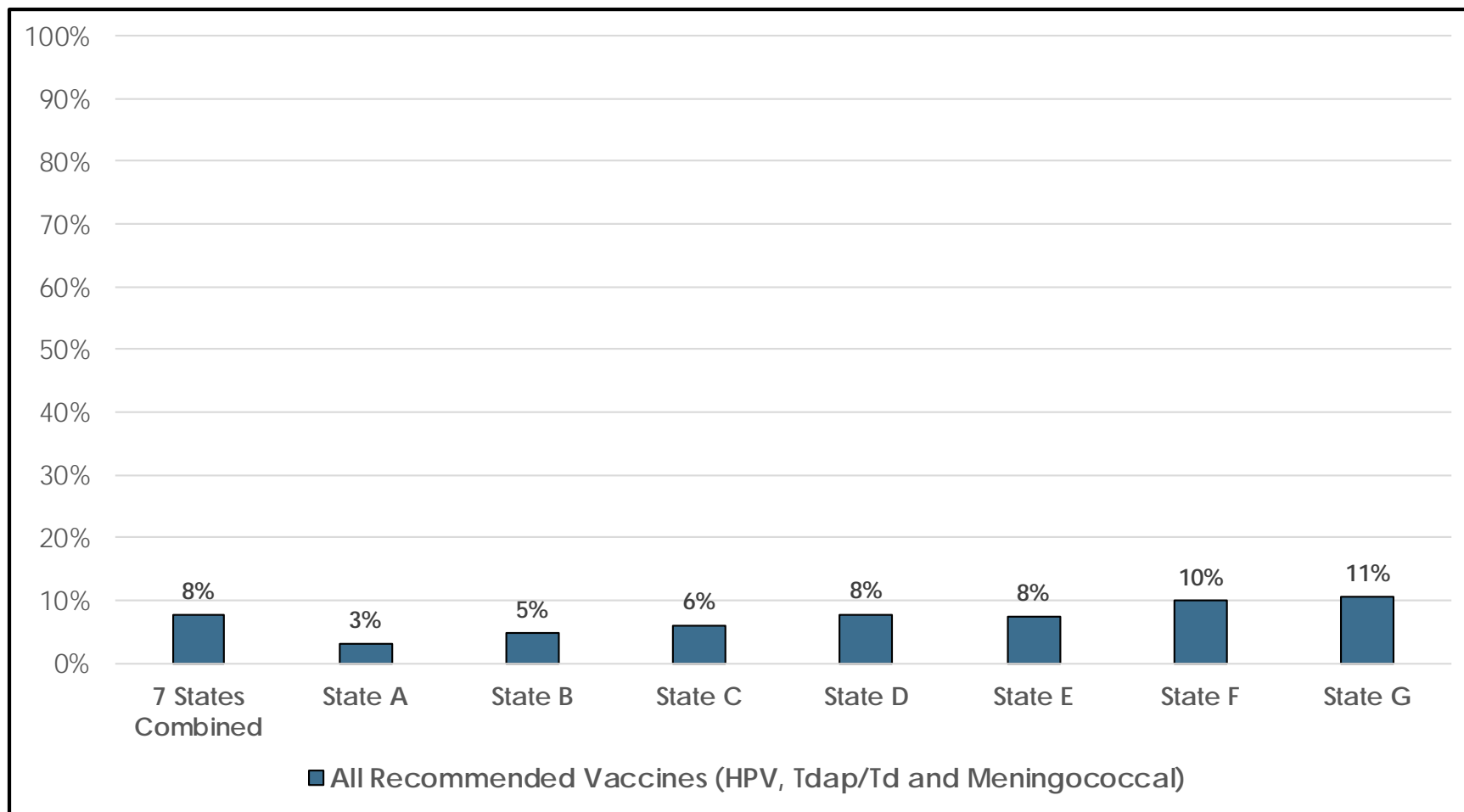
# Health Plan Test Sites

	Plan A	Plan B	Plan C	Plan D
Type of Plan	Medicaid HMO	Medicaid HMO	Medicaid HMO	Commercial HMO
Health & Human Services Region	Denver Region	Atlanta Region	Seattle Region	Seattle Region
Total Plan Membership Size	53,200	68,090	42,889	366,789

# Proportion of Adolescents Who Had Documentation of Vaccines by 13th Birthday in 7 State Registries, by Denominator Definition (2013)

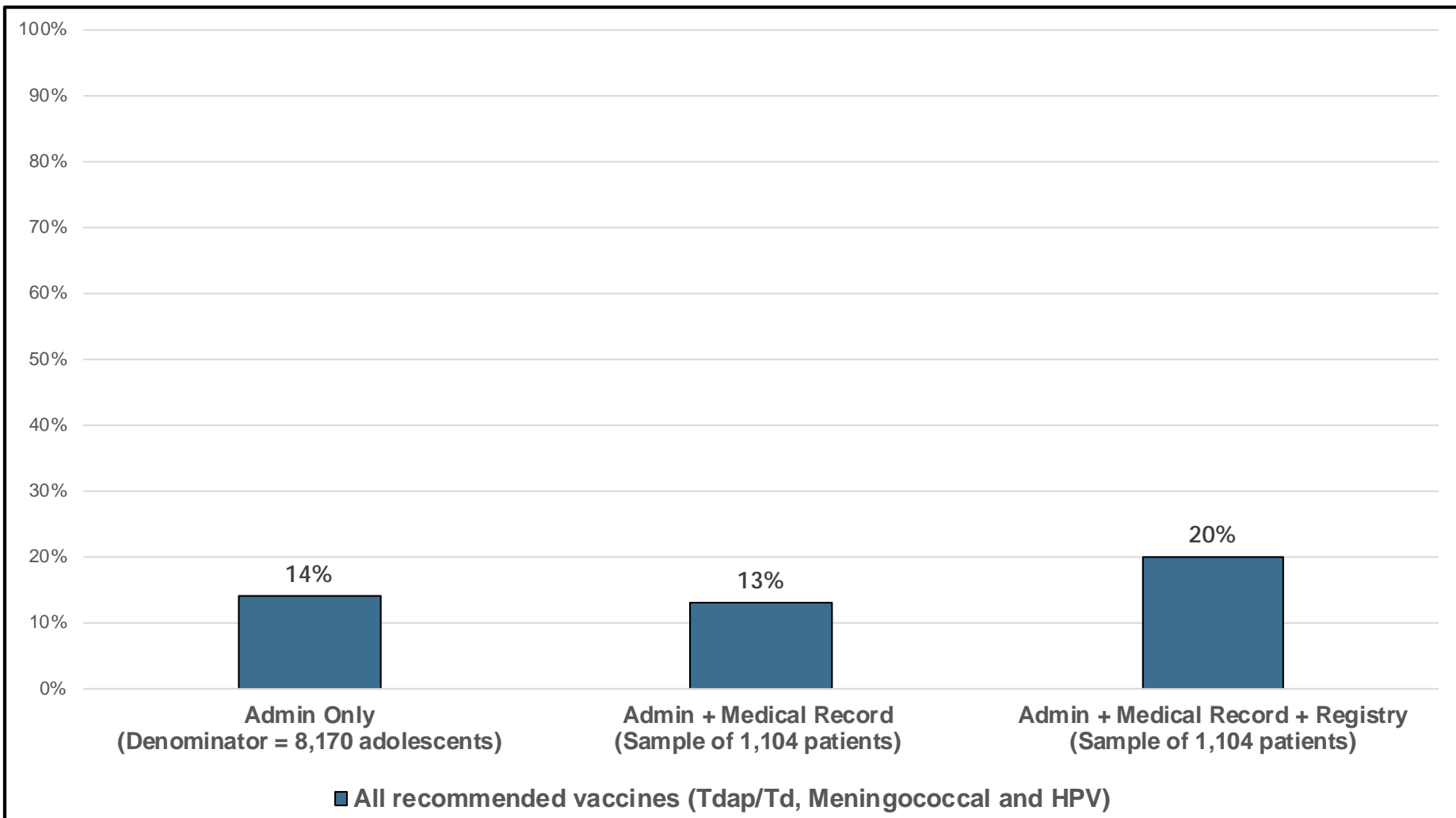


# Proportion of Adolescents Who Had Documentation of Vaccines by 13th Birthday, By State Registry (2013)



*Rates based on "Active Resident" Denominator*

# Proportion of Adolescents Who Had Documentation of Vaccines by 13th Birthday in 4 Health Plans, by Data Source (2013)



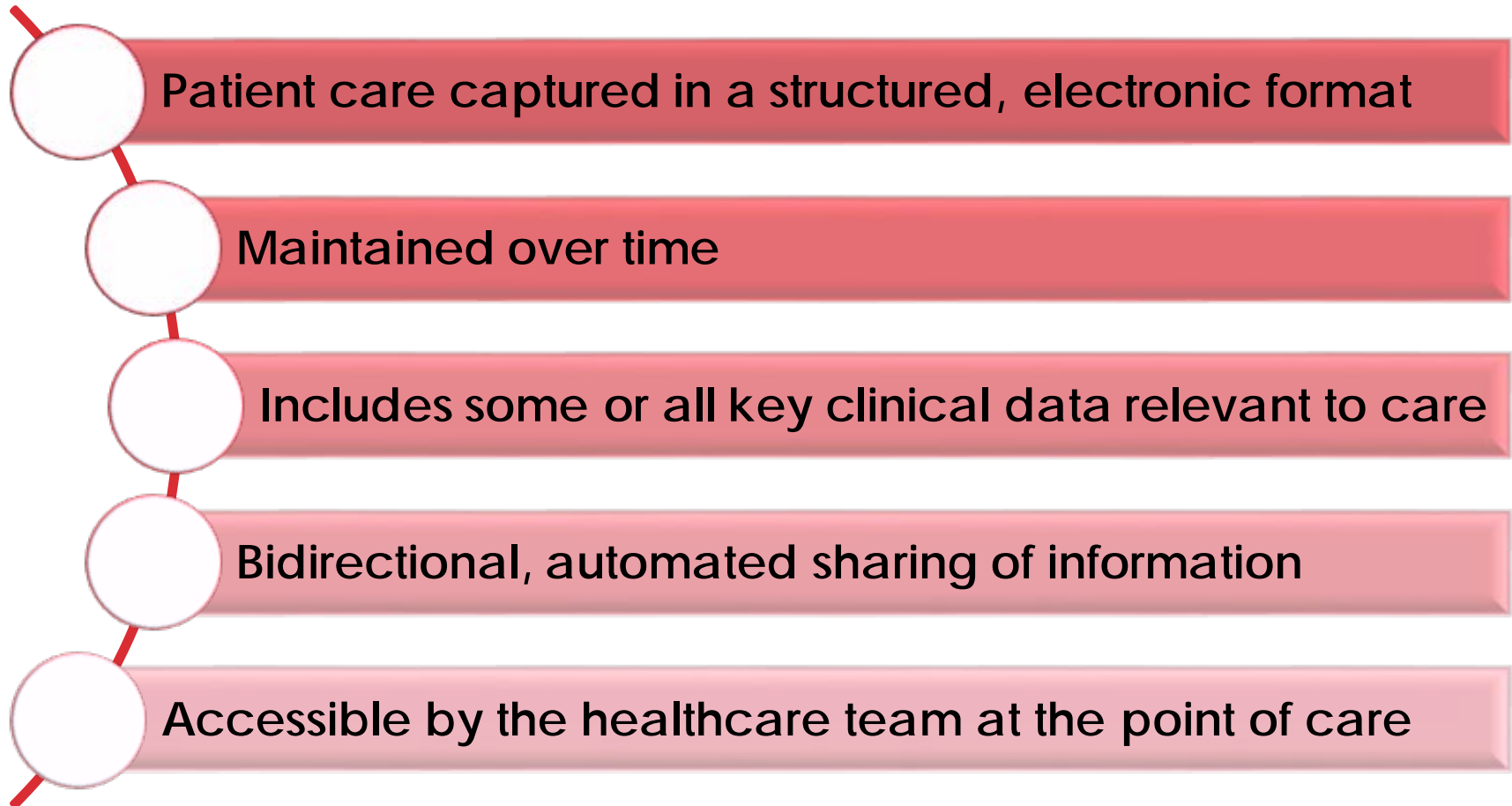
# Health Plans Interview Findings

- *Accessibility.* 1 plan noted they are prohibited from using its state registry because data are only accessible at the provider level
- *Cost.* 1 plan pulls state registry data only once per year due to fees
- *Privacy concerns.* 1 plan noted its state registry has limited utility because many patients opt out of sharing registry data with other providers

# Conclusions

- Registry data can help to provide fuller picture on vaccine coverage rates
- Combining data from claims, medical records and registries is important for reporting performance rates on vaccine-related quality measures
- Efforts to incorporate electronic clinical data systems into quality measures can facilitate use of registries and other data beyond claims and medical records

# Electronic Clinical Data Systems for HEDIS



[www.ncqa.org/ECDS](http://www.ncqa.org/ECDS)