



Integrated Real-World Data (RWD) to Support Public Health Innovation

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Unparalleled data

From raw to healthcare-grade data, connections tell a story

1.2B+

Non-identified patient records

85% +

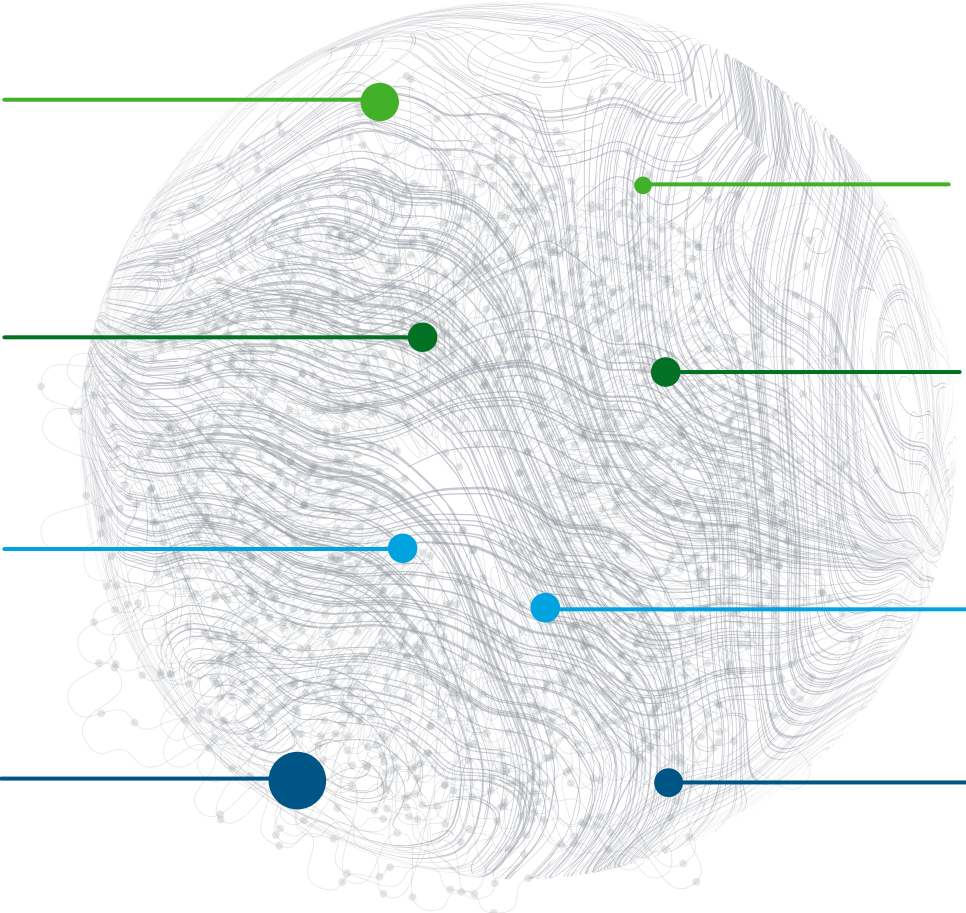
Global pharma sales tracked

4.9M

Potential investigators

56+

Petabytes of unique data



~1M

Data feeds

~23M

Healthcare professionals

400,000+

Sources of social media

150,000+

Data suppliers



Patients



Physicians



Hospitals



Researchers



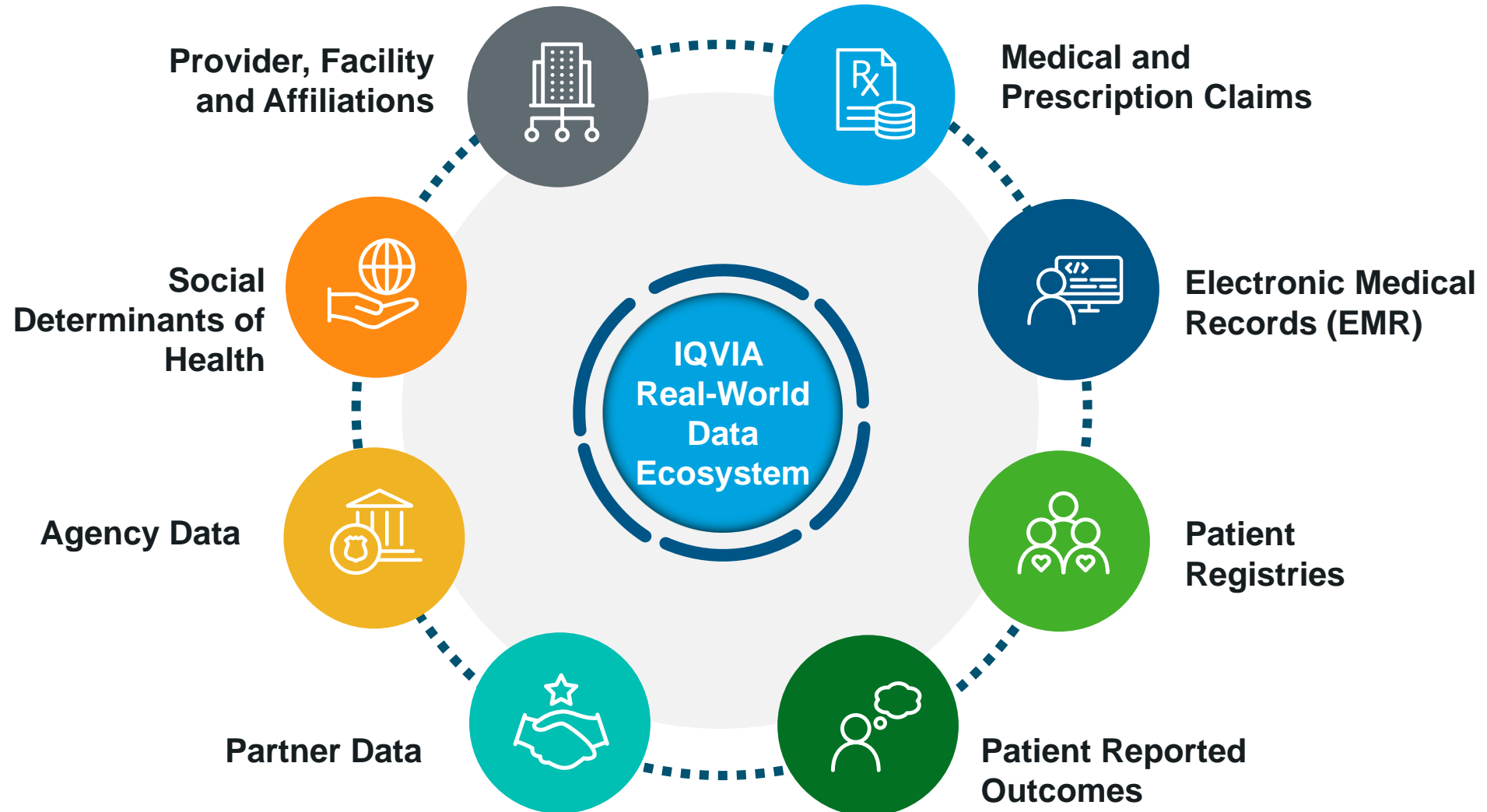
Pharma



Global and local

Linking Real World Data (RWD) to modernize and transform public health

Connected, source agnostic healthcare data



Integrated Real-World Data (RWD) & Research Solution

Integrated Solutions or Discrete (a la carte) Offerings



IQVIA Integrated RDW & Research Solution



**IQVIA and Client
Real World Patient
Data Assets**



**Data Tokenization
& Linking**



**HIPAA Expert
Determination and
De-identification**



**Data
Standardization
by applying a
Common Data
Model (OMOP)**

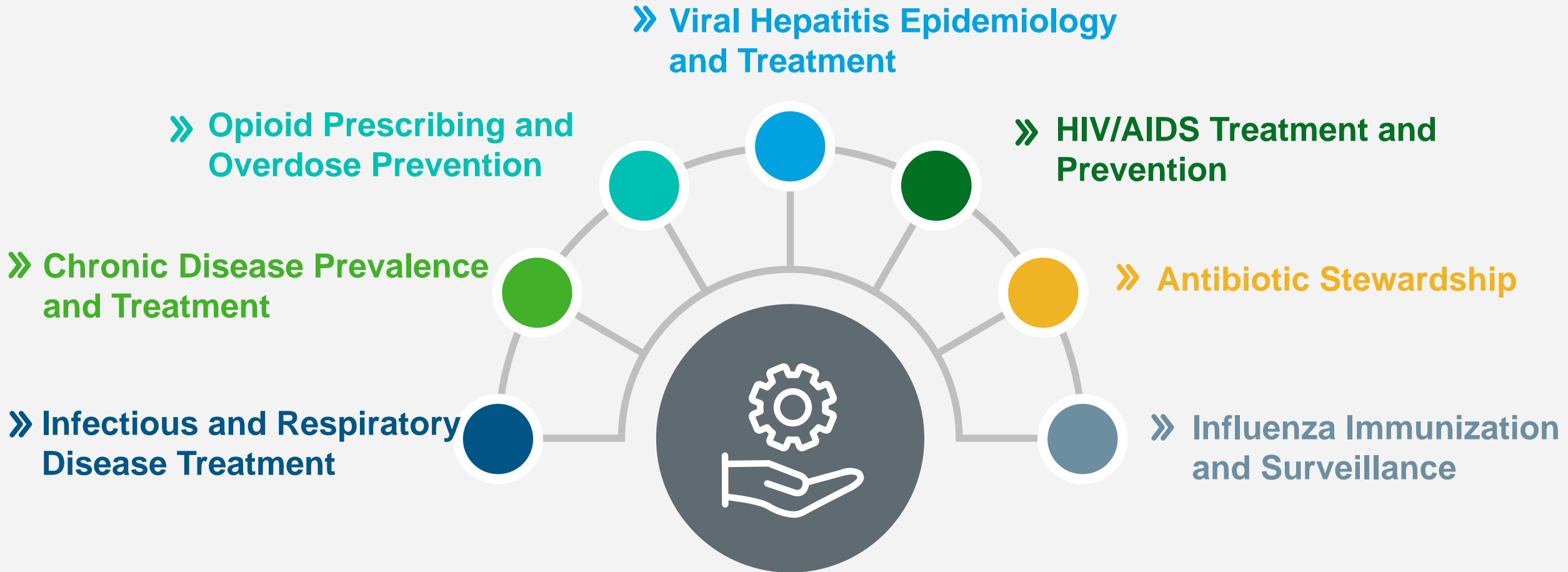


**Data Ingestion
and On-Premise
Installation of
Technology
Platforms**



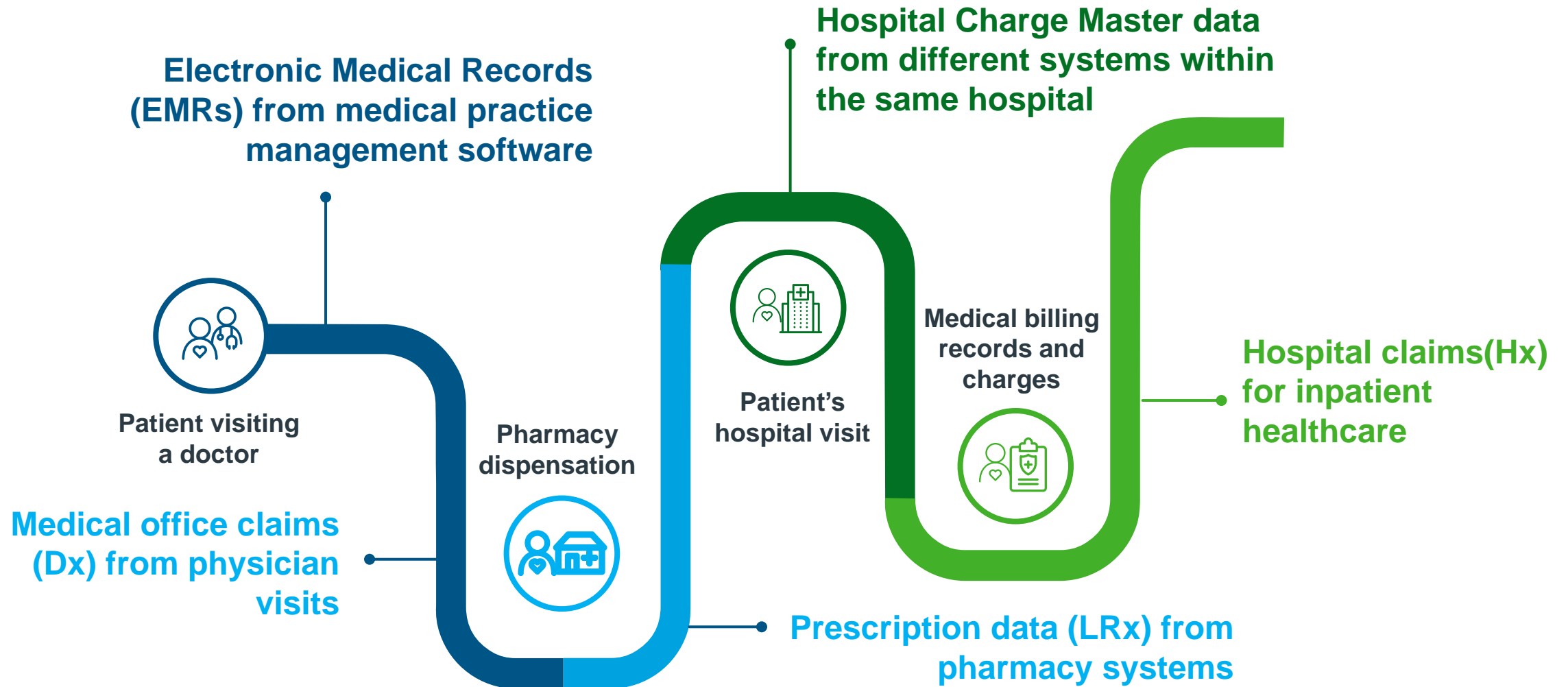
**Analytical Tools &
Platforms to
Leverage Data,
Obtain Insights and
Apply Findings**

Snapshot of IQVIA support at CDC



RWD provides actionable evidence for public health surveillance, research and intervention

Connected, up-to-date information on cohorts and populations



Disease and treatment agnostic clinical information routinely captured on large scale during health care delivery

Key data assets to transform public health

Longitudinal Prescriptions (LRx)

History from 2002

300M patients

94% of retail pharmacy transactions

Lag time ~7days

3.7B+ claims/year

Medical Claims (Dx)

History from 2000

250M patients

80% of AMA licensed physicians

Lag time ~28 days

1.5B+ claims/year

Hospital Claims (Hx)

History from 2010

60M patients

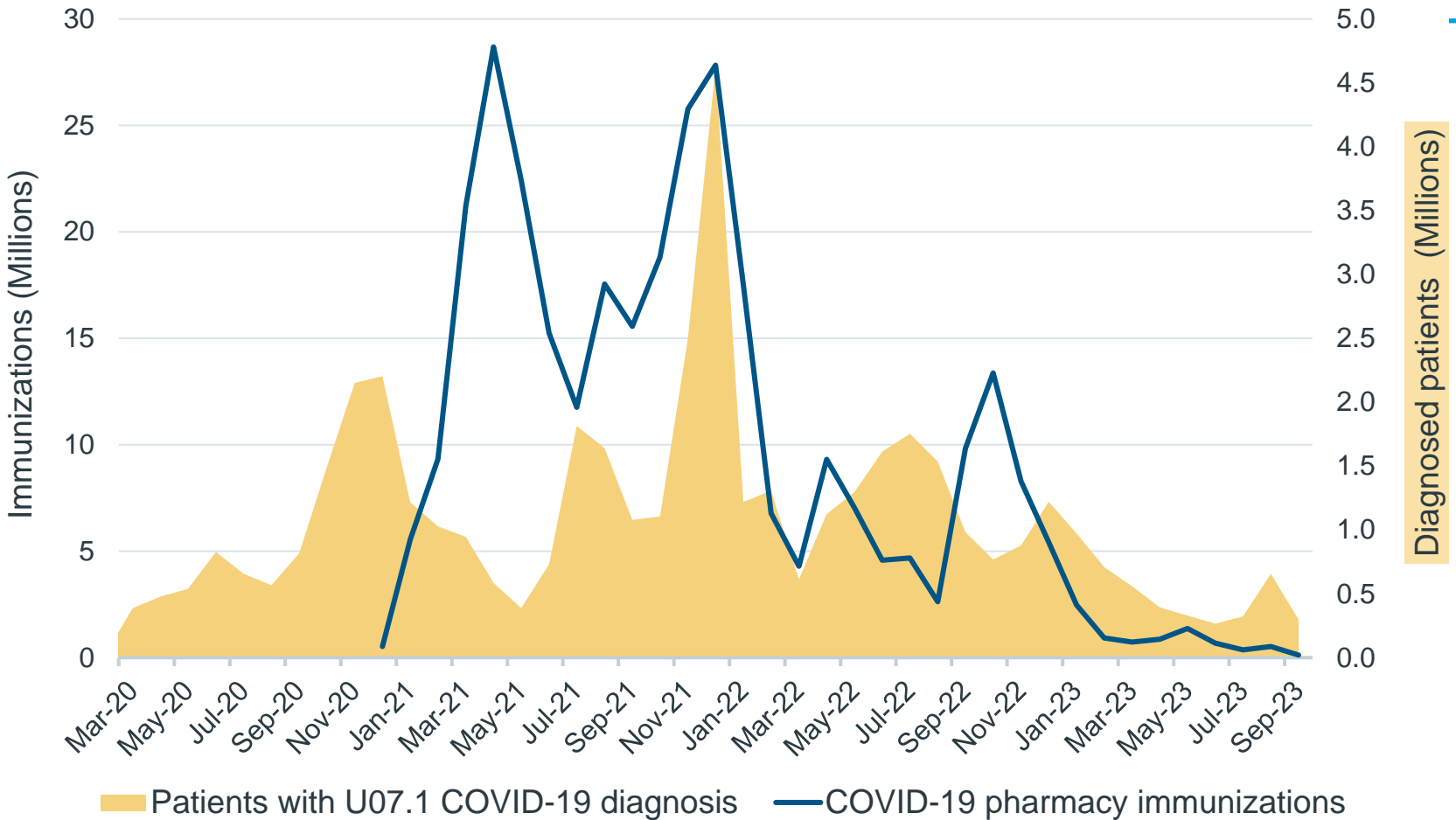
65K institutions and facilities annually

Lag time 30-60 days

270M claims/year

IQVIA data are instrumental for near-real-time surveillance efforts of emerging public health threats

COVID-19 diagnoses and pharmacy vaccinations in IQVIA RWD

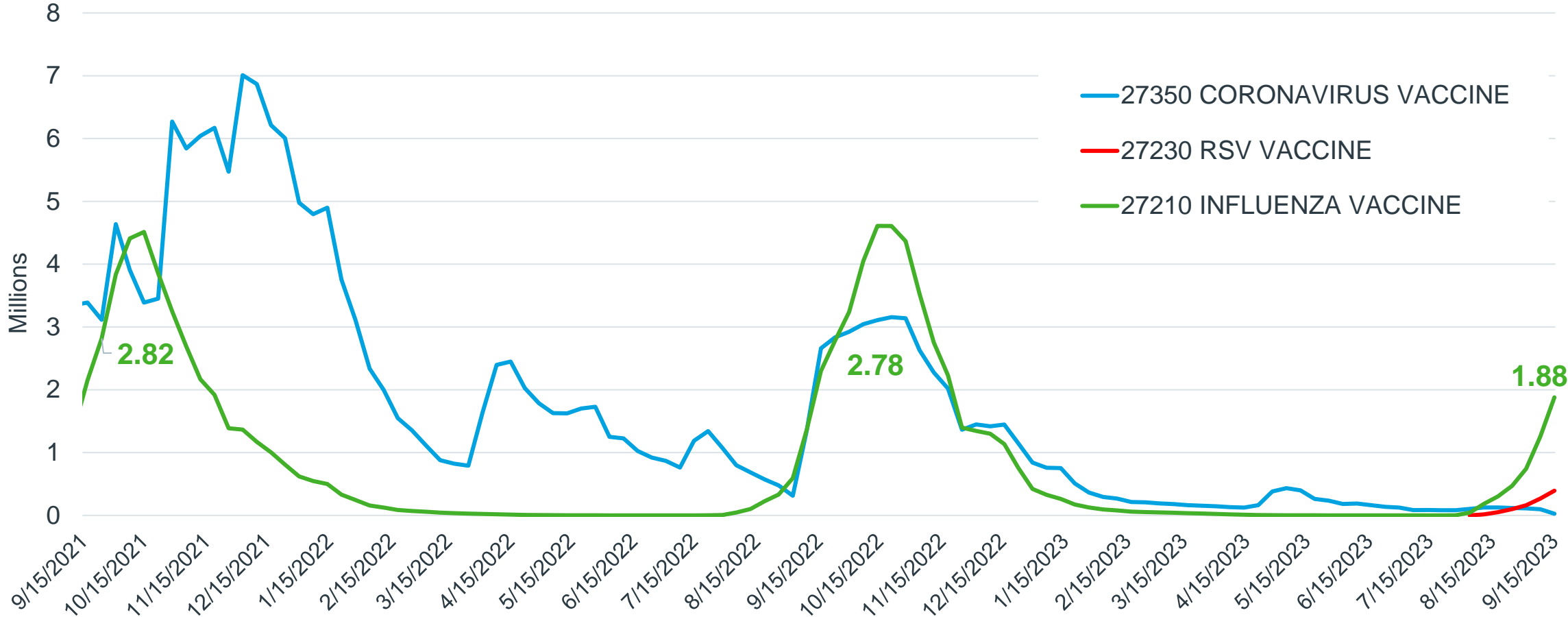


- Epidemic curve for COVID-19 cases consistent with CDC-reported cases
- Assess and monitor impact of immunization on the spread of disease

Sep 2023 shows partially accumulated diagnoses and immunizations

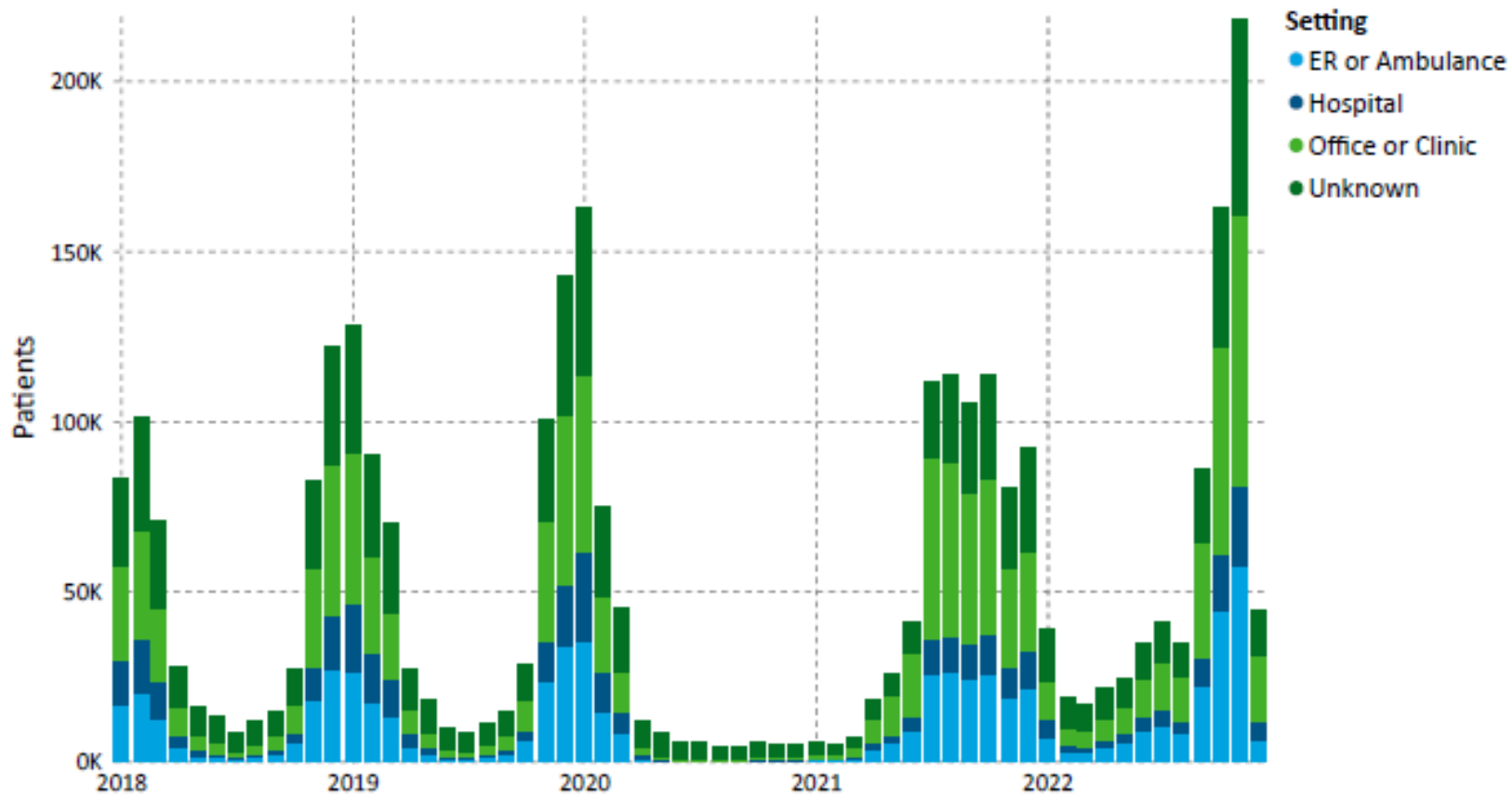
Current immunizations against respiratory illness

Weekly vaccine uptake for influenza, COVID-19 and RSV in IQVIA pharmacy data



IQVIA data are instrumental for near-real-time surveillance efforts of emerging public health threats

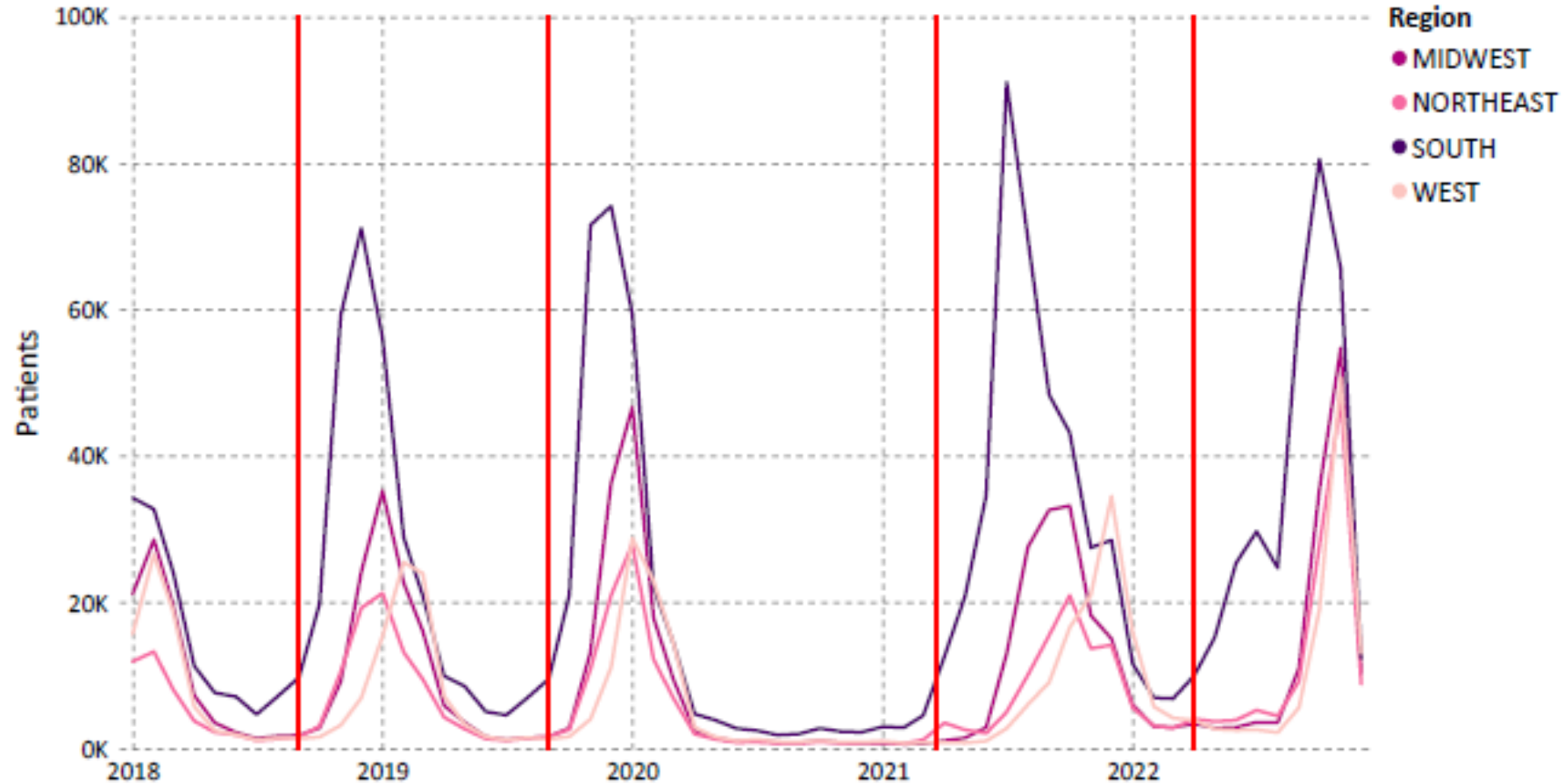
RSV seasonality shift in IQVIA medical (Dx) and hospital (Hx) claims



Timely data with a robust, stable sample size are vital in the surveillance of emerging burdens such as RSV to health systems

IQVIA data are instrumental for near-real-time surveillance efforts for emerging public health conditions

RSV seasonality in IQVIA medical and hospital claims (Dx & Hx)



Real-time capture of regional case trends can help to anticipate surges across the US health system

Fighting the opioid epidemic, preventing overdose and increasing access to treatment for opioid use disorder

Assessing patient needs, clinical guidelines, drug misuse and access to medications

Food & Drug Administration (FDA)

- Drug supply
- Drug utilization
- Adverse events
- Regulatory decision making
- Recommendations on quota setting

Drug Enforcement Administration (DEA)

- Drug supply
- Quota Setting for Manufacturers of controlled substances

Assistant Secretary for Planning & Evaluation (ASPE)

- Medication-assisted therapy (MAT) access and affordability
- Opioid effectiveness
- Monthly report to the White House

Centers for Disease Control & Prevention (CDC)

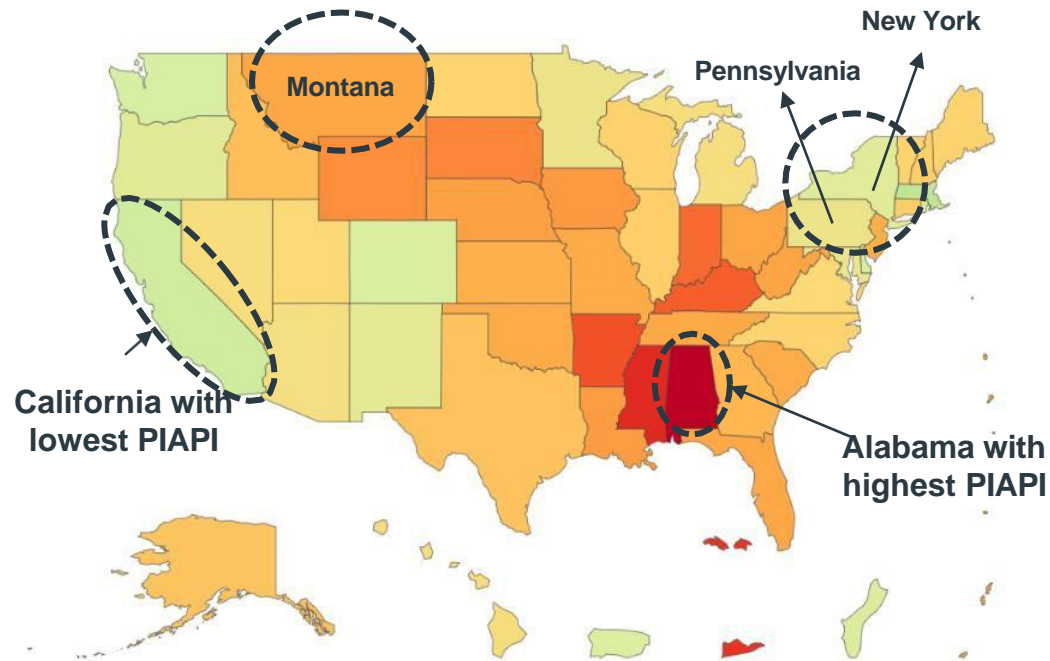
- Prescriber and patient trends for opioids, benzos, stimulants and MATs
- County-level variation
- Clinical guideline impact

National Institutes of Health (NIH)

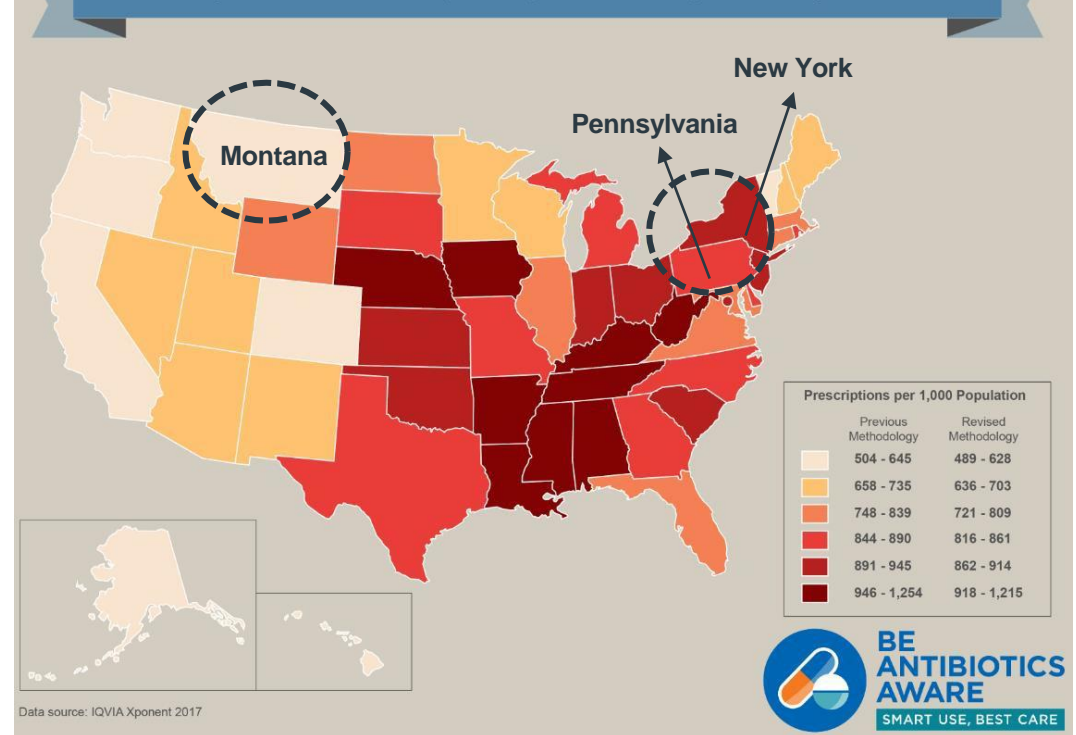
- Prescriber and prescription patterns for opioids and MATs
- Clinical guidelines adherence

High volume prescribing ≠ Inappropriate prescribing of antibiotics

Inappropriate prescribing by state



Community Antibiotic Prescriptions per 1,000 people

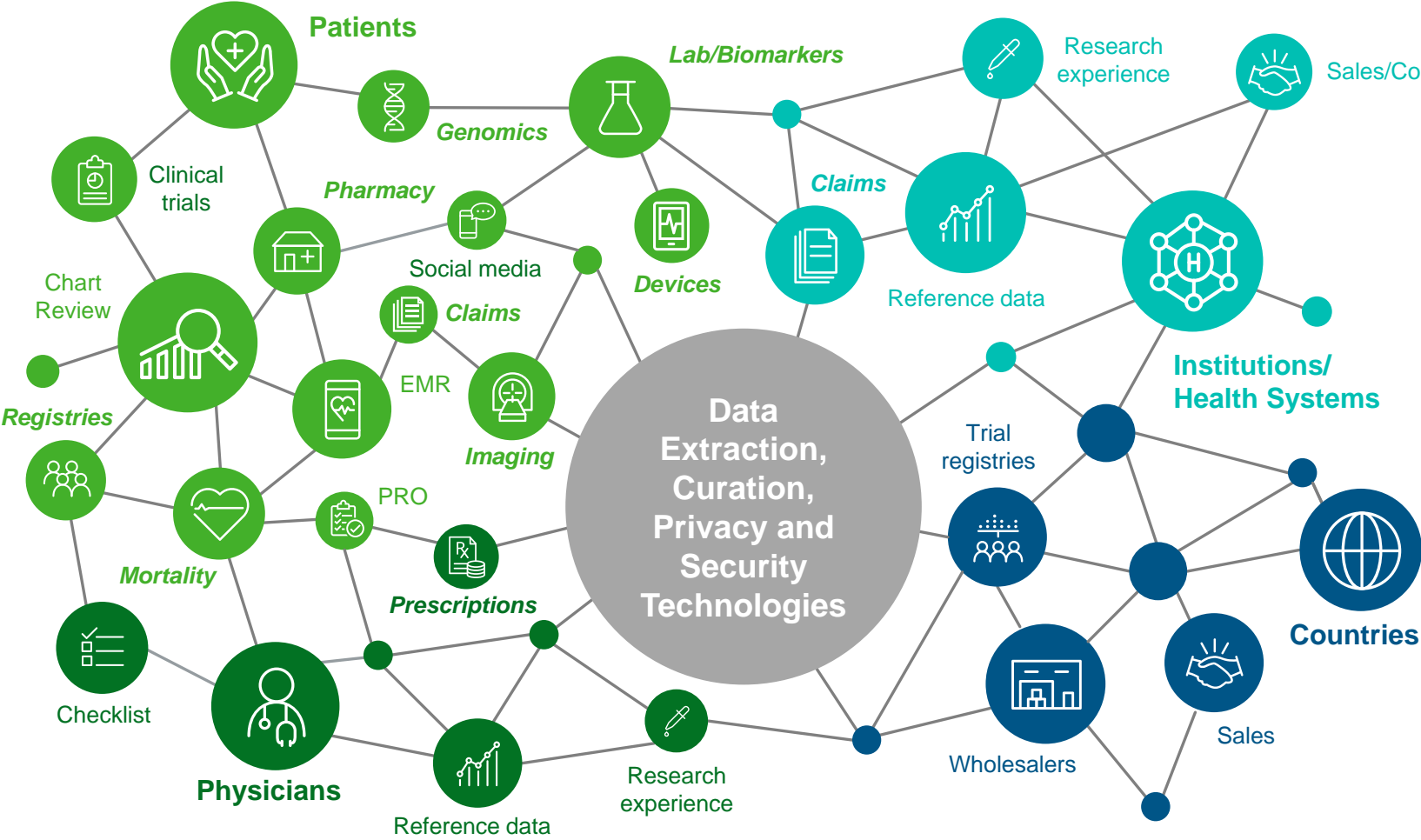


- New York and Pennsylvania have less inappropriate prescriptions in spite of high volume of antibiotic prescriptions
- Montana has higher inappropriate prescriptions but has low volume of total antibiotic prescriptions

PIAPI: Physician Inappropriate Antibiotic Prescription Index

Increased demand for data standardization

Real-world data is too diverse and has too many challenges

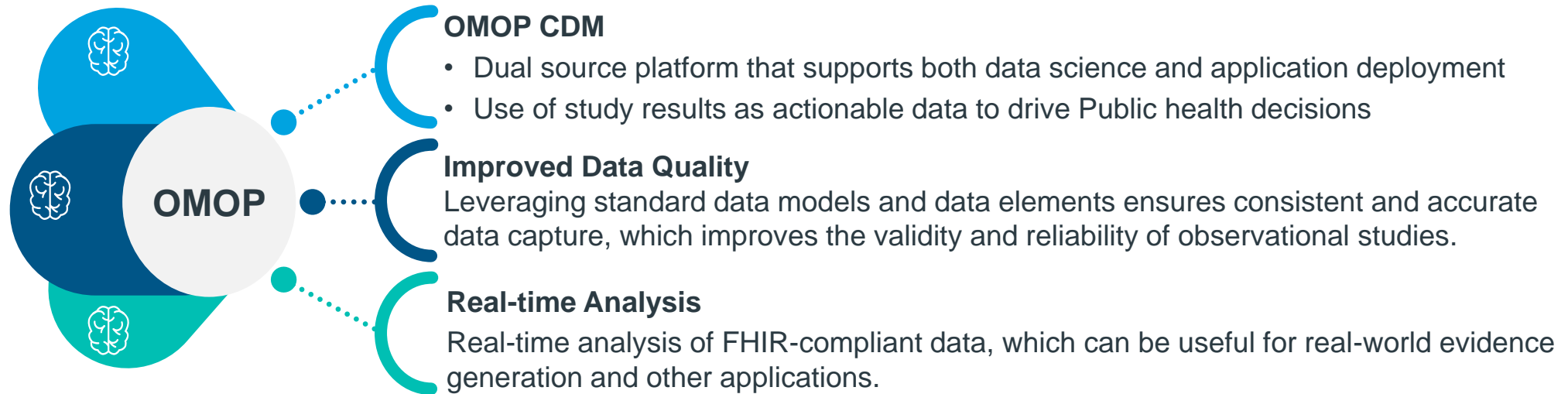


Key insights

- Cohort Identification
- Population Characteristics
- Prevalence & Incidence
- Patient risk profiles and morbidities
- Drugs and vaccine Safety & Efficacy
- Comparative Effectiveness

Integrated solutions for faster public health insights

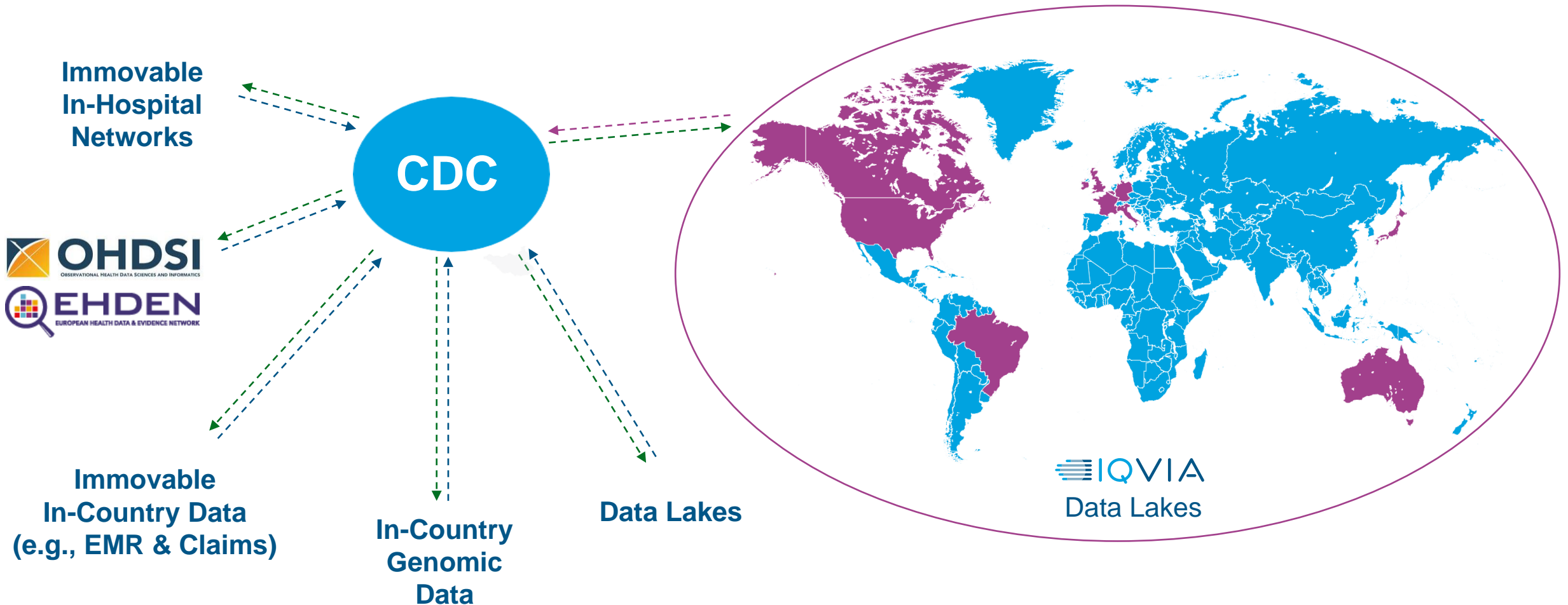
Data standards across systems and organization foster improved data quality and collaboration



- IQVIA uses the OMOP common data model to support the Biologics Effectiveness and Safety (BEST) initiatives for active device surveillance within a federated network
 - Early detection for vaccine safety
 - Rapid cycle analysis to validate drug safety signals
 - Surveillance of COVID19 vaccination in special populations

Federated data networks

Access and delivery of insights in a consistent and compliant manner, regardless of data location



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