

# 2D Barcode Pilot Lessons Learned & Early Findings

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# Outline

## **Lessons Learned**

- Vaccination Data
- User Experience

## **Analysis Methodology**

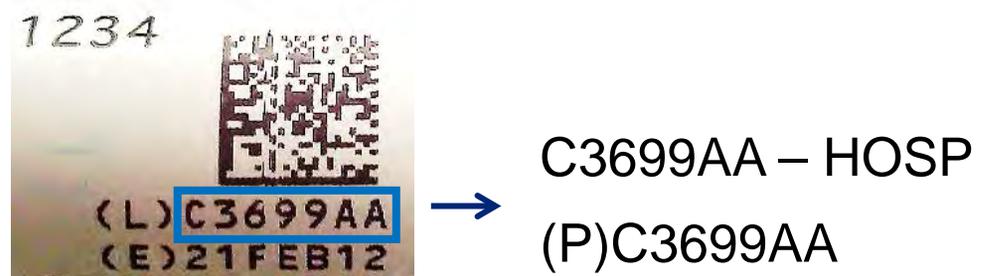
## **Early Pilot Findings**

- Vaccination Data Overview
- Pilot Supply Chain
- Metrics
- Next Steps

# Lessons Learned: Vaccination Data

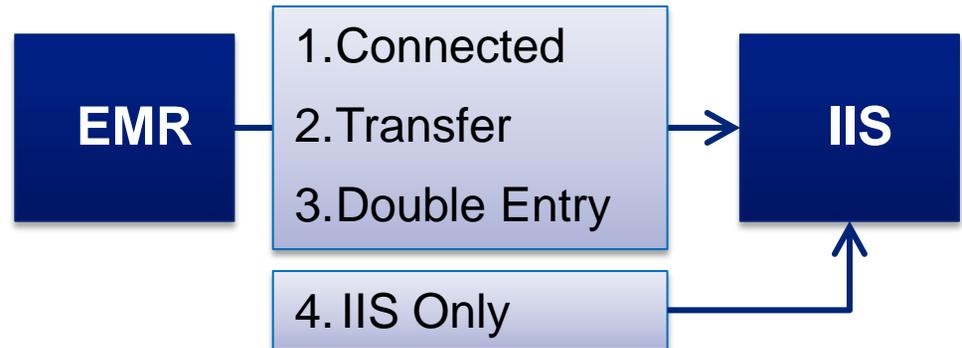
## 1. Data cleansing

- Intentionally added information
- Reduction in data quality



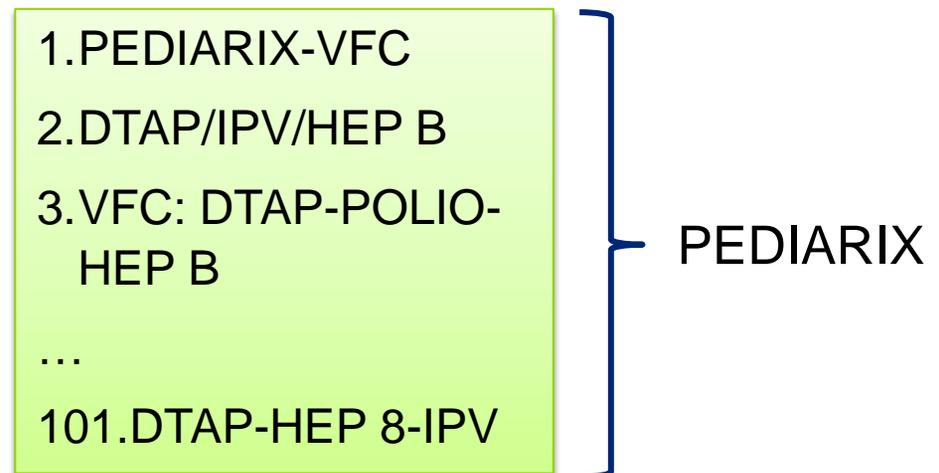
## 2. Consistency between EMR and IIS data

- Reporting requirements
- Non-identical datasets



## 3. Name standardization

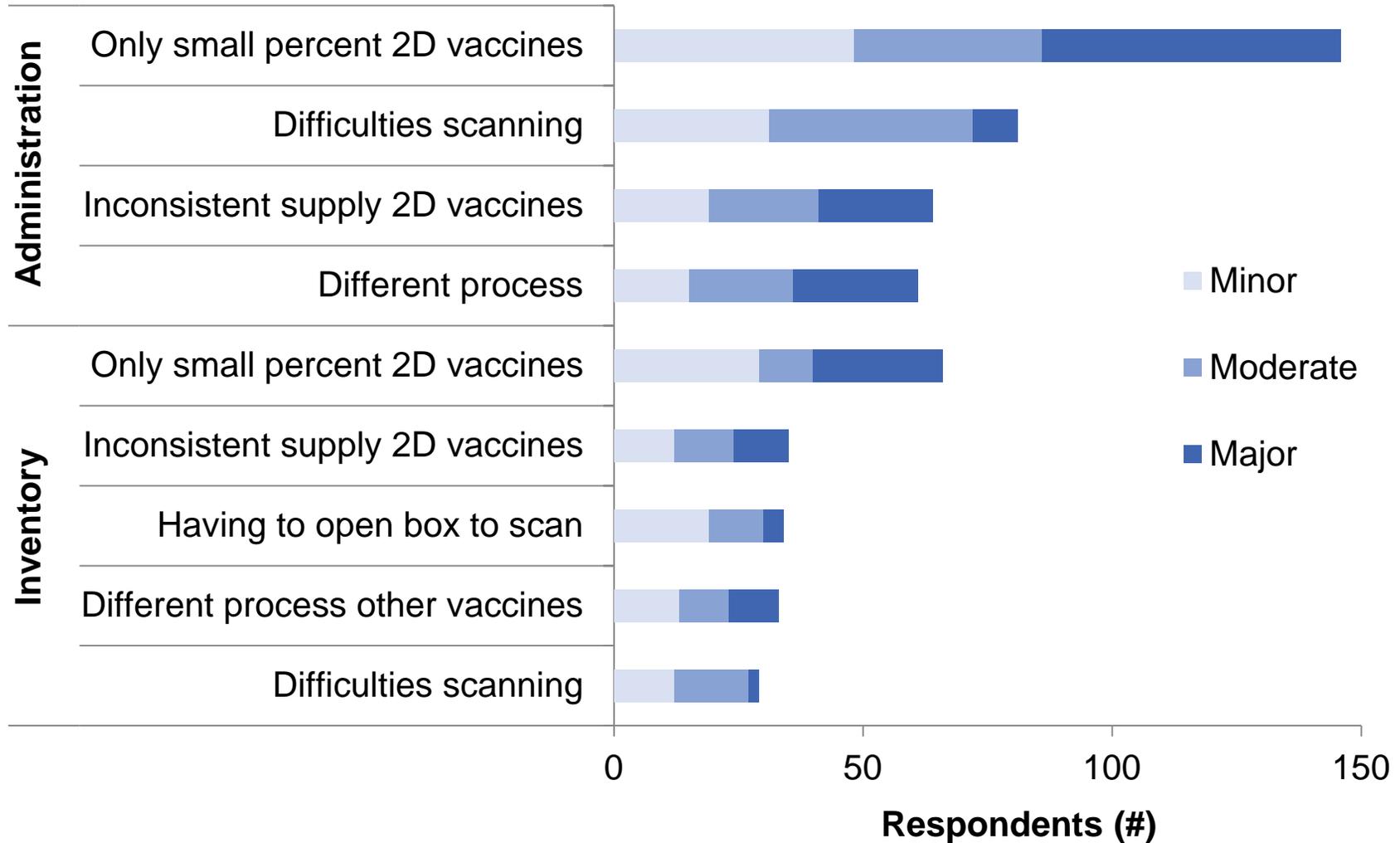
- As written at administration
- Any field with free-form entry



# Lessons Learned: User Experience

## 1. Common Challenges

- Within administration and inventory



Preliminary results

# Lessons Learned: User Experience (cont.)

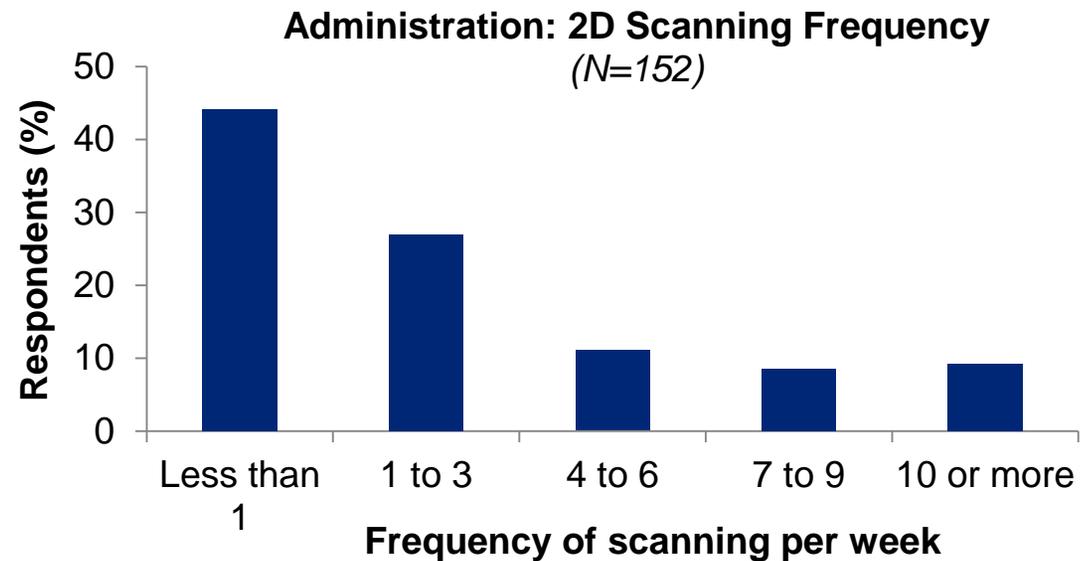
## 2. Incorporating Scanners with EMRs

- Configuration and capability
- Inventory versus Administration

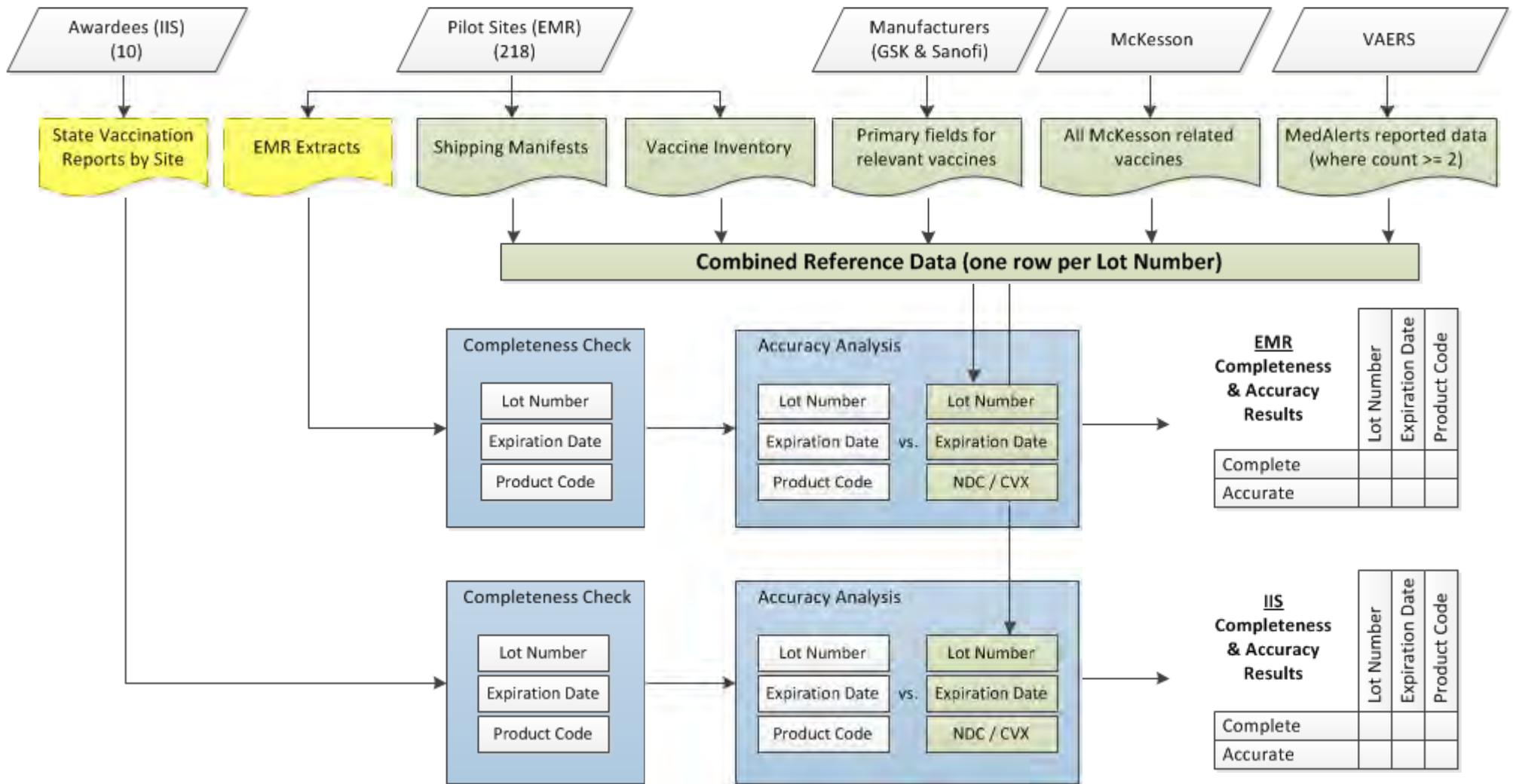


## 3. Pilot Supply Chain

- Infrequent 2D product
- Decreases likelihood to scan



# Analysis Methodology



**Legend**

**Objects**

- Source of Data
- Reference Data Files/Tables
- Analysis Data Files/Tables
- Data Element
- Reference Data Element

**Data Sources** provide the reference and analysis data necessary for evaluation.  
**Reference Data** are received from different sources and merged into one combined reference source.  
**Analysis Data** are received from sites and grantees.

# Early Pilot Findings: Vaccination Data Overview

## Data Volume

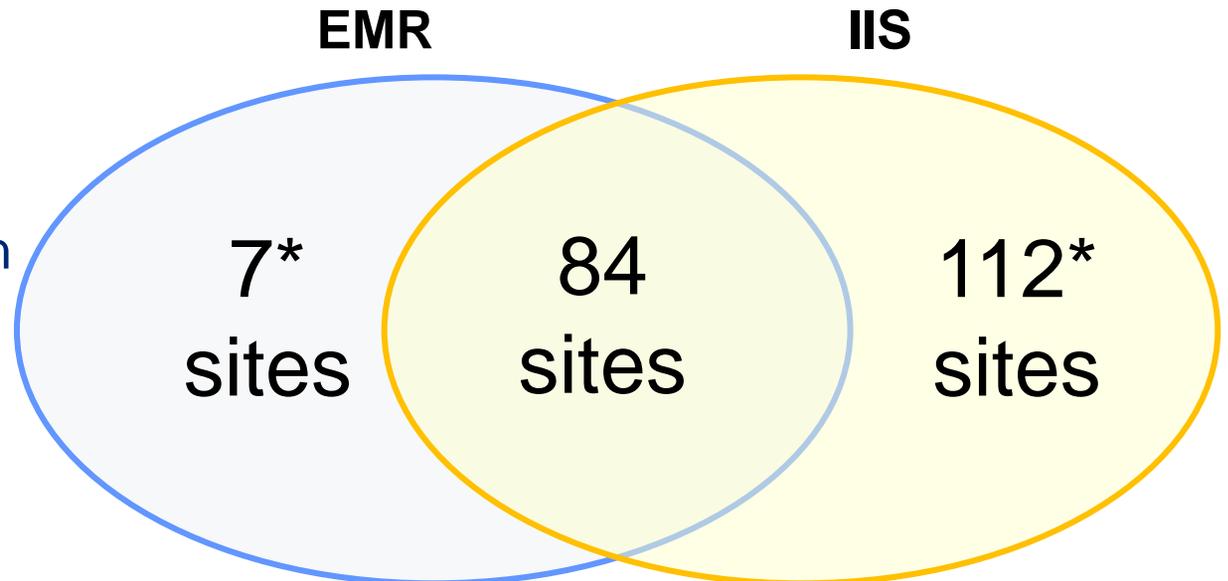
- Nearly one million records analyzed
- Robust estimates
- More 2D records per site in EMR

	EMR		IIS	
	Baseline	Learning	Baseline	Learning
<b>Records</b>	297,000	718,000	344,000	960,000
<b>2D Records</b>	146	32,000	58	26,000
<b>Providers</b>	160	118	204	204

*Note: Figures rounded. After exclusions: missing vaccination date, invalid vaccine type (e.g., PPD test), withdrawn site*

## Site distribution

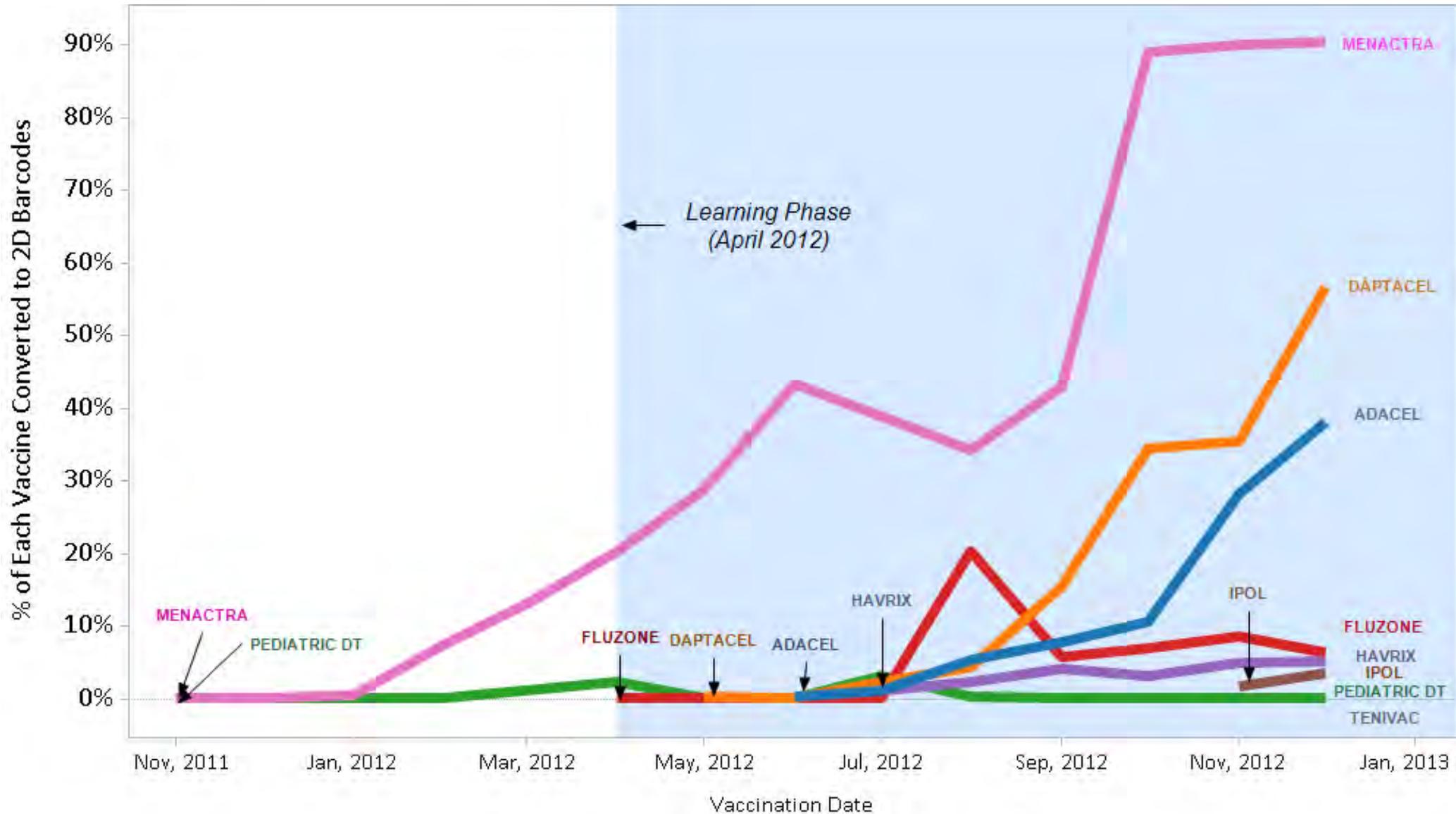
- Subset of sites provided all phases
- Before-and-after comparison
- Use for analyses



*\*Note: Numbers above represent count of sites with both Baseline and Learning data for either EMR or IIS. IIS data came from different sets of 204 sites in Baseline vs. Learning.*

# Early Pilot Findings: Pilot Supply Chain

- Percent of each vaccine that has converted to 2D barcodes in EMR data



Note: Data shown are from EMR vaccinations

Preliminary results

# Early Pilot Findings: Metrics

## Data elements

- Lot Number, Expiration Date, Product Code

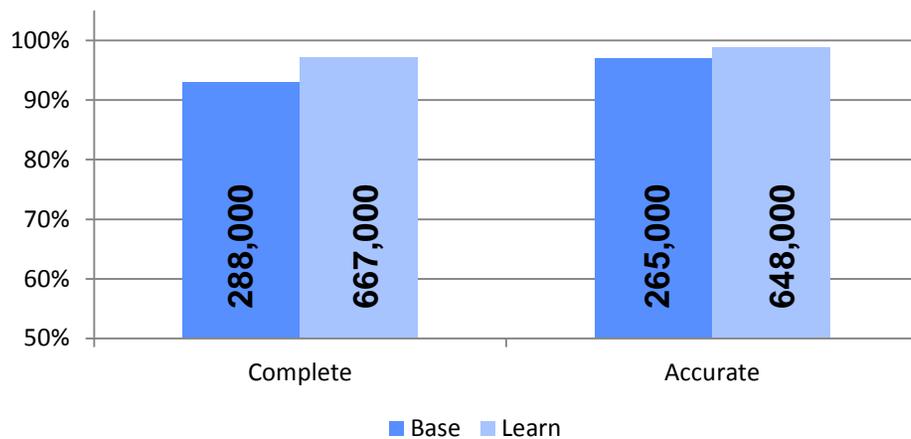
## Metrics

- Completeness and Accuracy

## Upward trend before looking at potential confounders

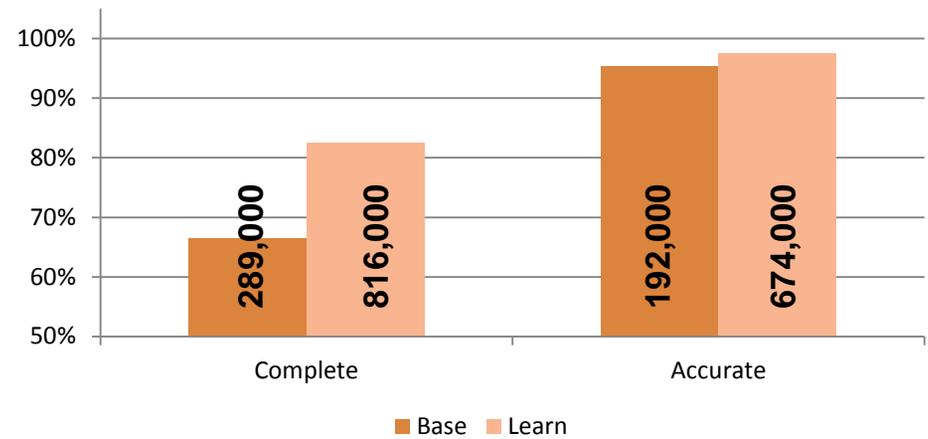
- Isolate effect of technology from other causes
- Impact of percentage increase on one million records

**EMR Lot Metrics**  
(where lot number is scanned)



Number of records  
written vertically

**IIS Lot Metrics**  
(where lot number is scanned)



Number of records  
written vertically

Preliminary results

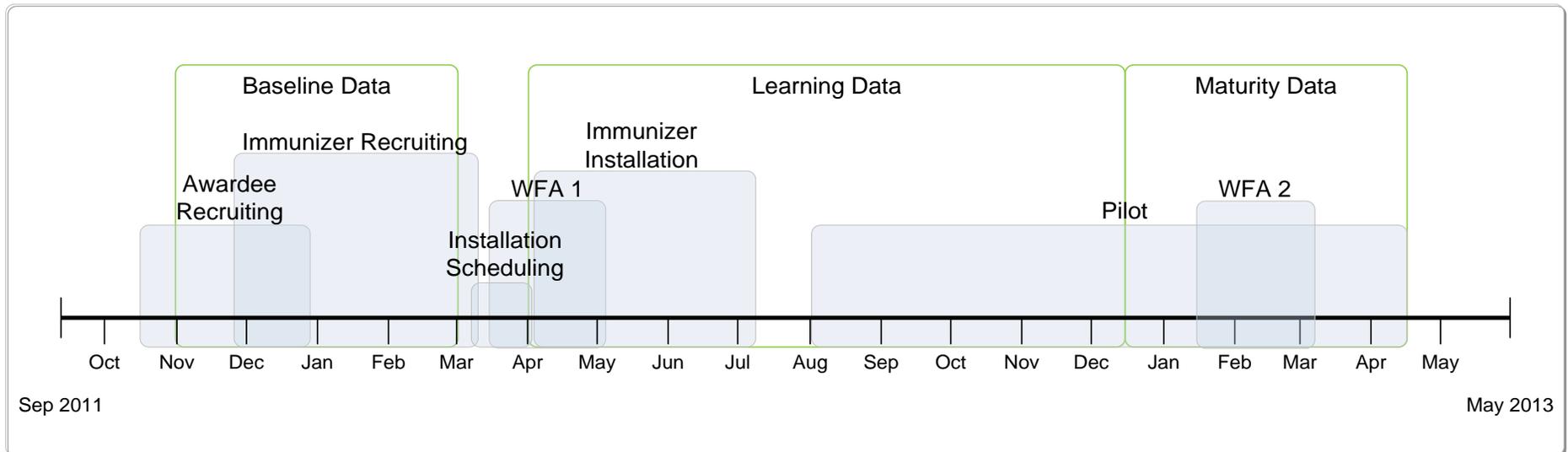
# Early Pilot Findings: Next Steps

## Maturity Data Collection

- All sites finish by end of April

## Analysis

- Calculate effect of technology after removing potential confounders (e.g., Site variation, observation bias, seasonality)
- Examine across demographic variables
- Statistical tests and adjustments (e.g., Bonferroni)



**Questions?**