Oregon's experience modernizing production of population-based rates

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Outline

(1) Background and context

(2) OIP's data modernization goals

(3) CDC DMI Overview

(4) Oregon's interpretation of DMI priorities with examples

Background

2019 2020

- Annual process
- Siloed approach to processing population-based rates (PBR)
  - Child, adolescent, adults
  - Different packages/programs to process and output data
- Data products:
  - Static tables
  - Preliminary Tableau dashboards released
    - Anticipated versioning, no data viz plan

Background

2019 2020

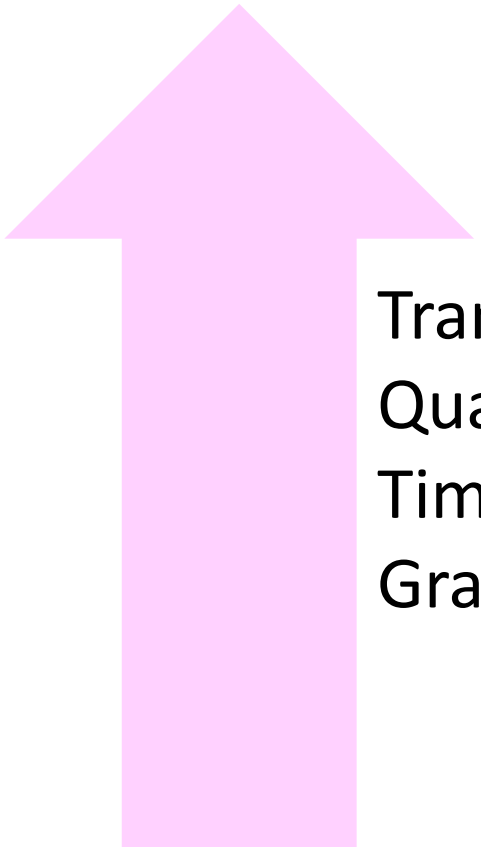
- Central COVID-19 SAS reporting database (daily data extracts)
- First viz released within days of vaccine in arms
  - Daily refresh
  - Data viz plan developed detailing phases/dashboards
- Bolus of personnel support
  - OIP staff pulled from regular duties to support COVID-specific work

Background

2019

2020+

- Heightened expectations of data sharing



Transparency
Quantity of products produced
Timeliness of data
Granularity of data released

OIP's Data Modernization Goals

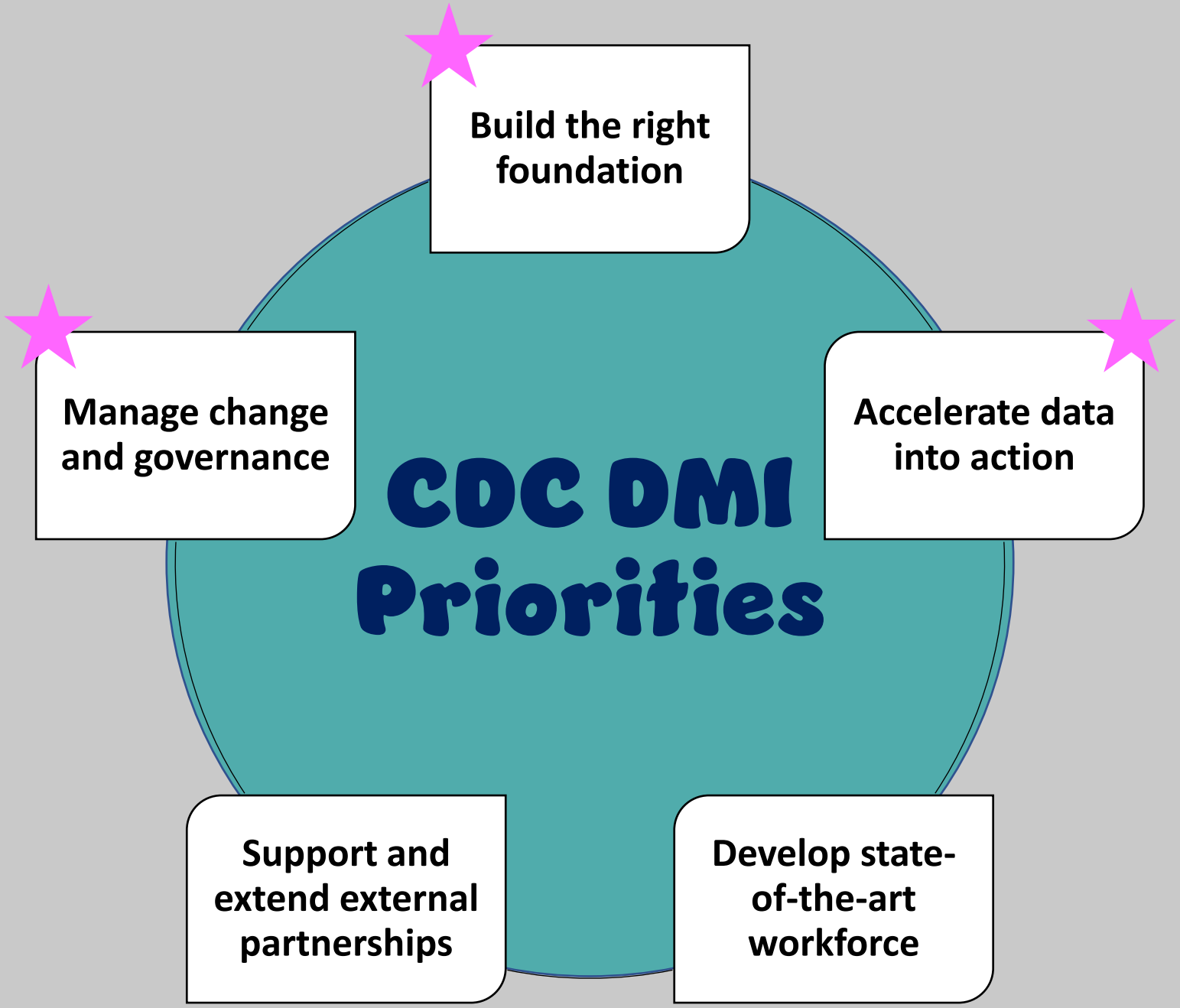
Reduce time burden

Increase transparency & access to PBR data

Ensure consistency & reliability

Increase cadence of reporting*

Improve data products



*"How our nation will move from siloed and brittle public health data systems to **connected**, **resilient**, **adaptable** and **sustainable 'response-ready'** systems that can help us solve problems before they happen and reduce the harm caused by the problems that do happen"*

Priority 1: Build the right foundation

CDC

- Scalable foundation
- Appropriate automated data sources
- Enable timely and complete data sharing
- Break down silos that keep critical data disconnected

OIP

- PBRs moved to modernization team
- Data processing via centralized SAS program
- Creation and maintenance of databases for populations of interest
- Protocols created for
  - County assignment and PO Box handling
  - CVX review and inclusion

- Time intensive process to validate code and output with previous methods
- Process changes require extensive approvals
- Breaking down silos within Surveillance & Quality Team

CVX Code Database Development

- Ex: DTaP-Tdap-TD for 2-year-olds and teens
- Allows for:
  - Review of what is already included in current databases
    - CVX codes included in definitions of up-to-date
  - Review of new CVX codes with each new data pull

CVX	DTaP-Tdap 2YO	DTaP-Tdap TEEN	DTaP-Tdap-TD TEEN
1	1	1	1
9			1
20	1	1	1
22	1	1	1
50	1	1	1
102	1	1	1
106	1	1	1
107	1	1	1
110	1	1	1
113	1		1
115	1	1	1
120	1	1	1
130	1	1	1
132	1	1	1
138			1
139	1		1

Priority 2: Accelerate data into action

CDC

- Advance use of analytics for efficient and effective decision-making
- Identify health inequities and promote equitable health outcomes

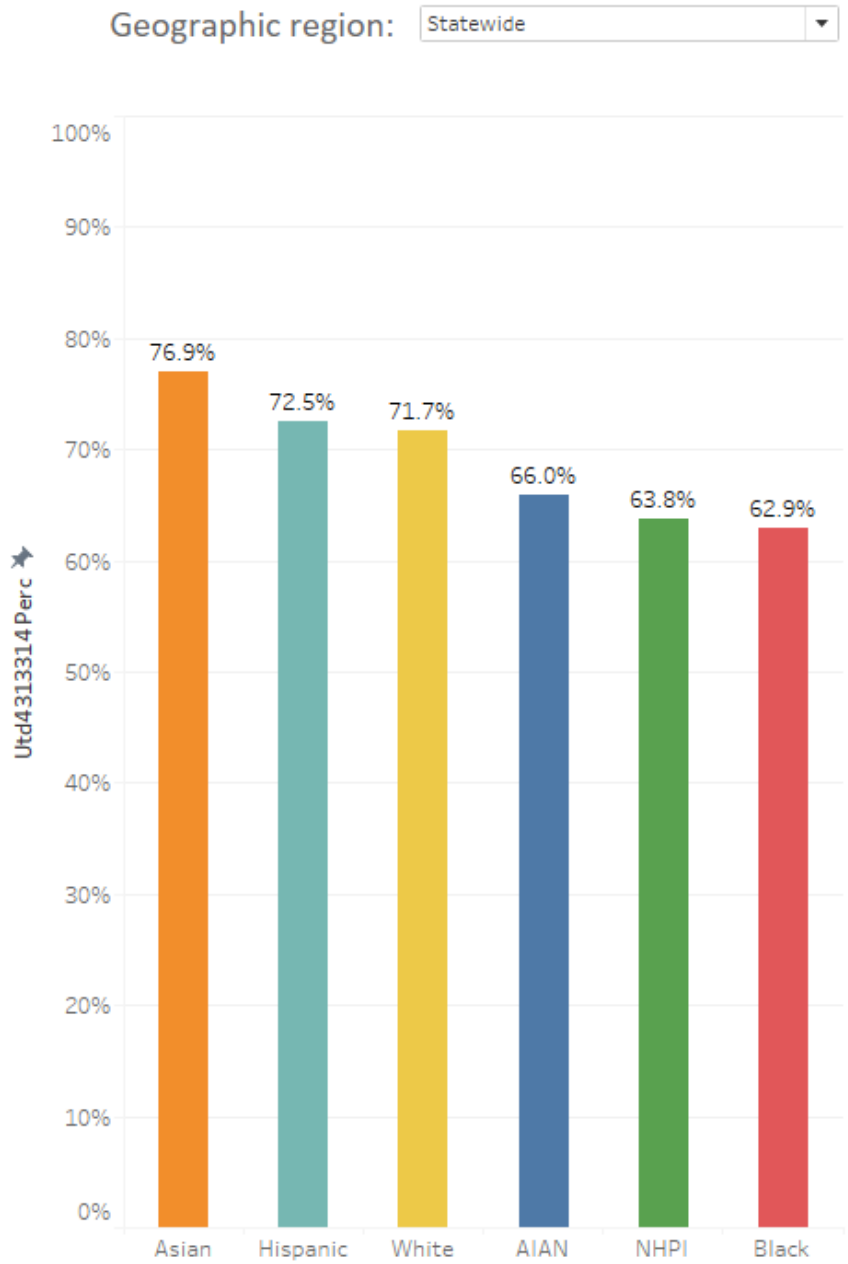
OIP

- More thoughtful data visualizations
  - Data viz plans with phased rollout
  - Elicit partner/public feedback
  - Exploration of new and modern chart/graphs/tables
- Update suppression threshold for population subgroups

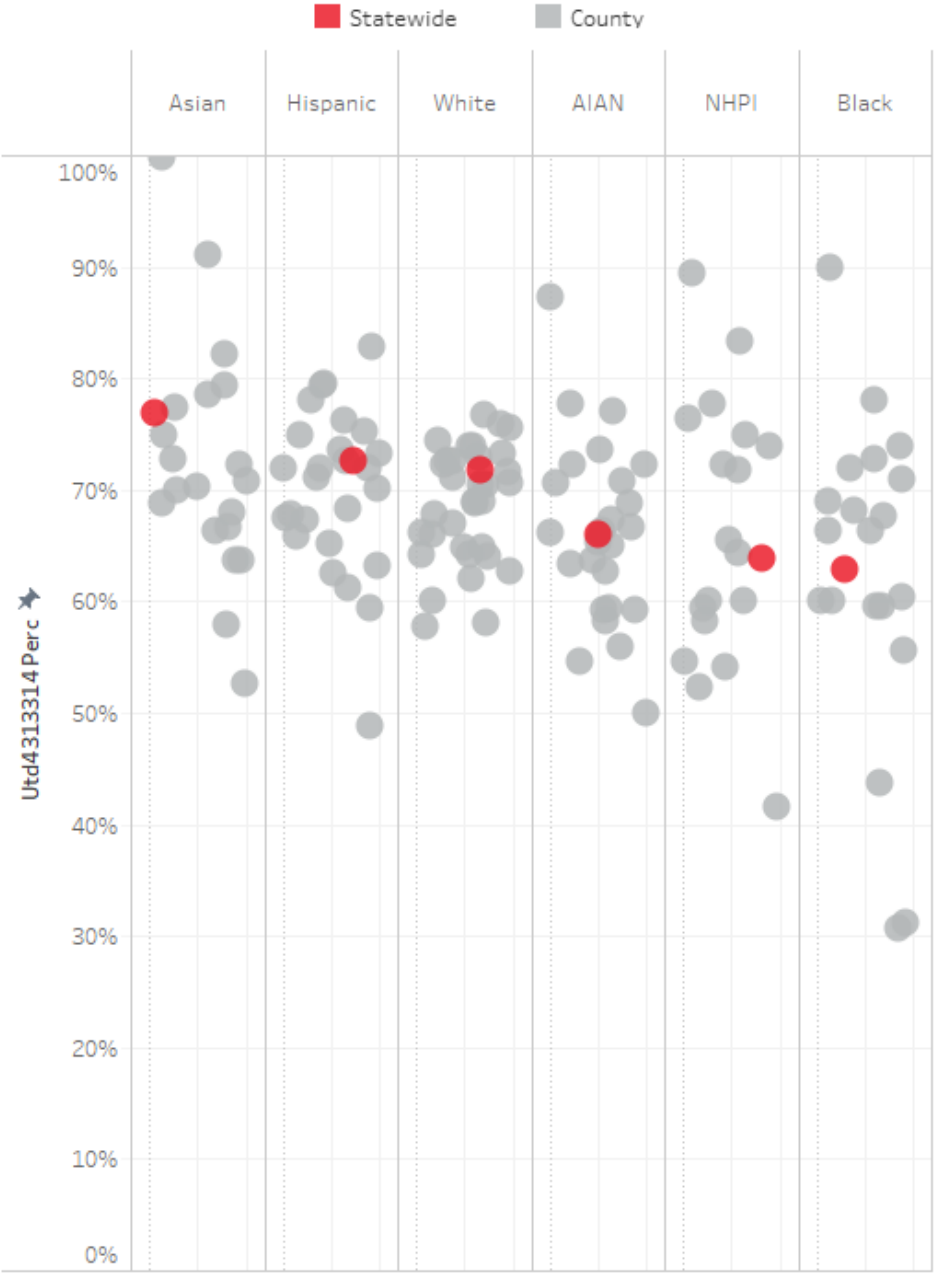
- Process changes require extensive approvals
- Partner feedback- Who to ask? What to do with conflicting suggestions?
- Planning and creating data visualization requires learning and time

Viz Revamp: Trial and error

Bar Graph

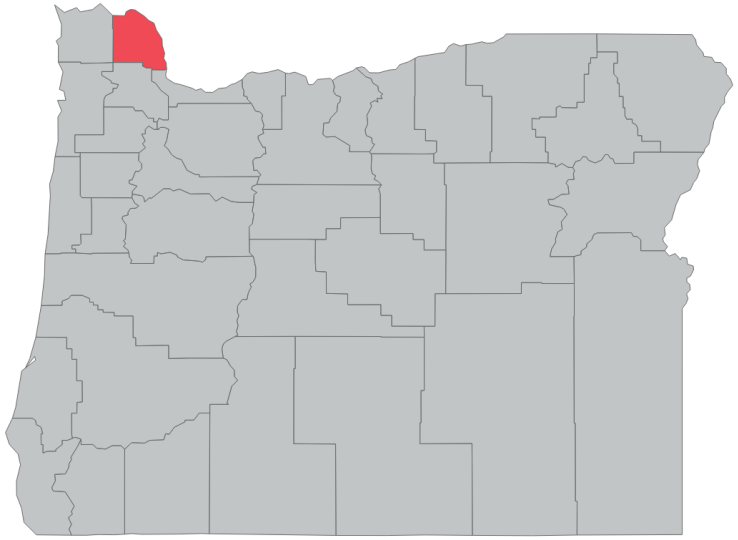


Jitter Plot



Suppression threshold impact

Columbia County



	2019	2020	2021	2022
Hispanic[c,e]	*	*	*	*
White[c,e]	63%	66%	64%	66%
African American[c,e]	*	*	*	*
Asian[c,e]	*	*	*	*
American Indian and Alaskan Native[c,e]	*	*	*	*
Hawaiian/Pacific Islander[c,e]	*	*	*	*

Hispanic[c,e]	79%[#]	77%[#]	58%[#]	63%[#]
White[c,e]	63%	66%	64%	66%
African American[c,e]	67%[#]	50%[#]	*	73%[#]
Asian[c,e]	71%[#]	54%[#]	60%[#]	72%[#]
American Indian and Alaskan Native[c,e]	57%[#]	61%[#]	48%[#]	61%[#]
Hawaiian/Pacific Islander[c,e]	*	*	*	45%[#]

Priority 5: Manage change and governance to support new ways of thinking

CDC

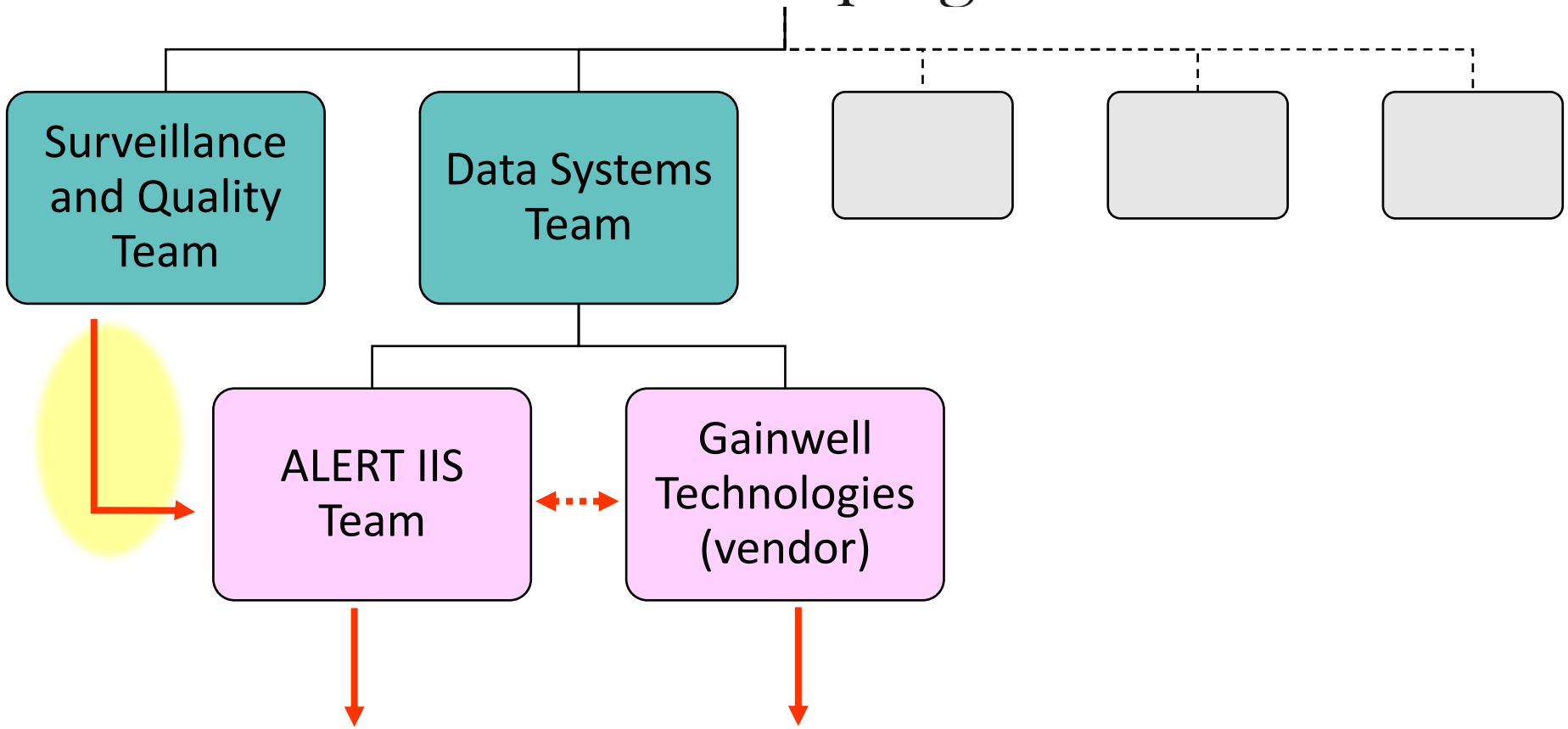
- Aid adoption of unified technology
- Become a culture of learning and collaboration
- Support new ideas, learn from failures, and encourage risk-taking

OIP

- Creation of a community of practice
- Buy-in and support from management
  - Coordination and collaboration Epi/Analyst and ALERT IIS teams

- Carving out time and the resources for learning
- Critical evaluation of current processes- difficulty embracing change
- Breaking down silos across OIP

oregon immunization program



ALERT Immunization Information System

OIP's Data Modernization Goals

Goals	Plan
Reduce time burden	• Transfer PBRs to modernization team • Central processing programs in SAS
Increase transparency & access to PBR data	• Maintain databases in central location for analysts/epis to access • Lower denominator threshold for suppression
Ensure consistency & reliability	• Uniform data pulls out of ALERT IIS • Documentation and Read Me's for scripts • Establish protocols for major processing steps common across PBRs
Increase cadence of reporting*	• Continue collaboration with ALERT IIS Team and future work with vendor for automated data extracts (move cadence to quarterly)
Improve data products	• Shift from static tables to interactive vizzes • Create data viz plans and phased roll-out for all data vizzes • More thoughtful visualizations that reflect feedback

**anticipated start date mid-late 2023*

Thank you! Questions?

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