

# Colorado Immunization Information System

## Program Overview



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CIIS Expansion Stakeholder Meeting

October 10, 2013



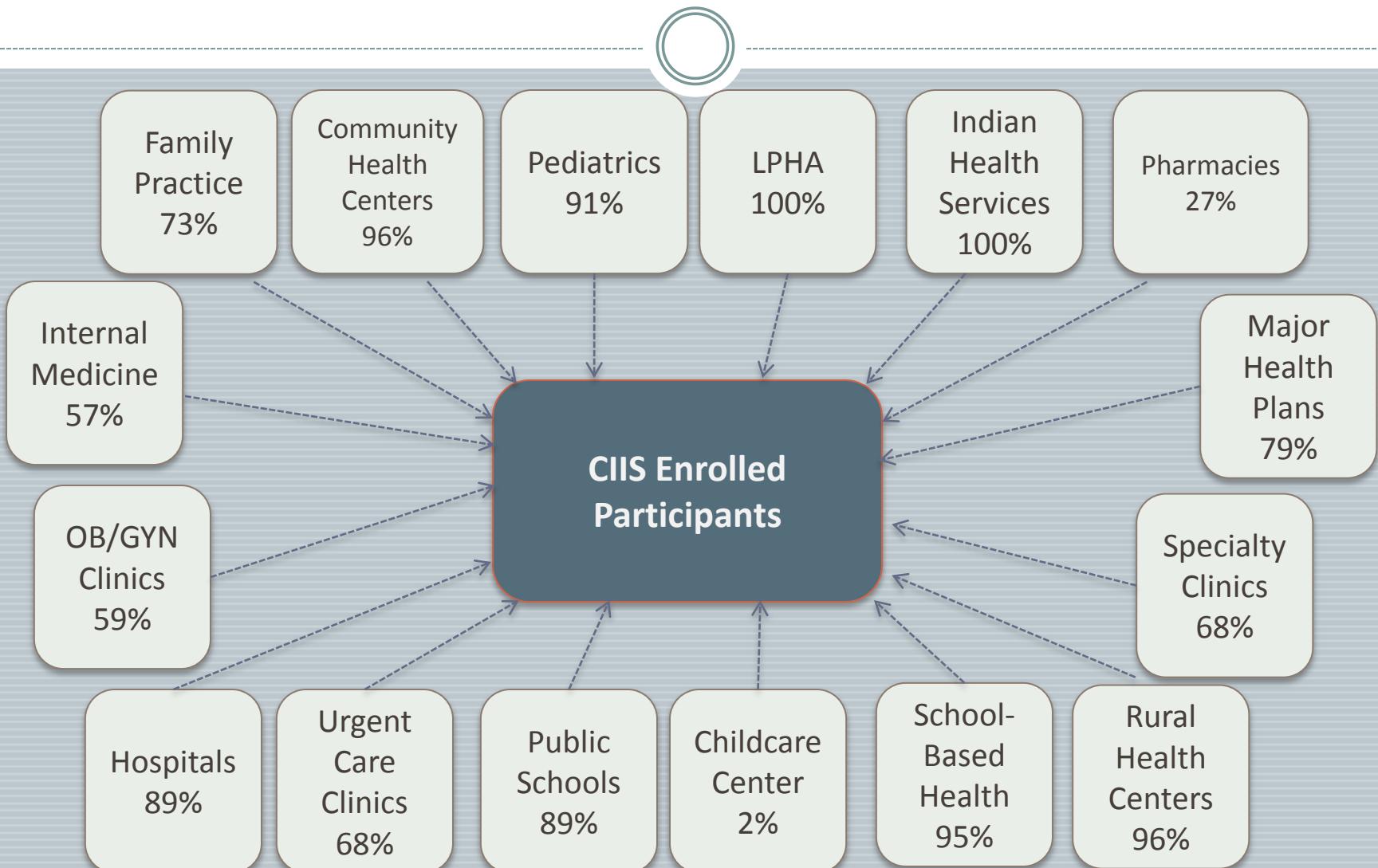
Colorado Department  
of Public Health  
and Environment

# Mission



- Establish and maintain a confidential, population-based, fully functional and sustainable immunization information system for the State of Colorado that tracks immunizations for Coloradans of all ages, assists healthcare providers with the appropriate immunization of their patients, helps prevent disease across Colorado, and reduces healthcare costs to individuals and the State

# Data Sources

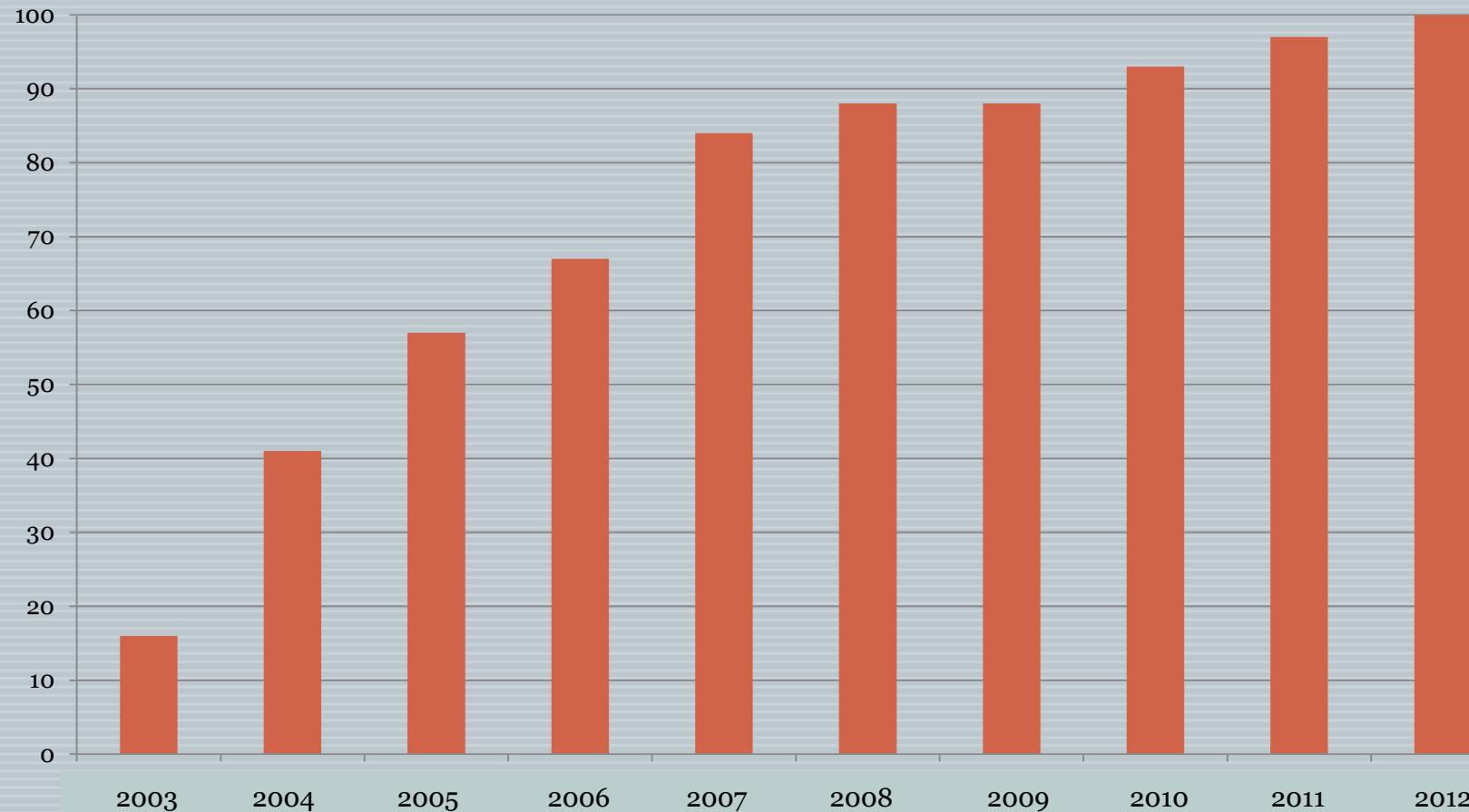


# By the Numbers



- Total Patients: 3,945,060
  - 0-18 year olds: 1,619,998
  - 19+ year olds: 2,325,062
- Total Vaccinations: 42,601,429
  - 0-18 year olds: 29,464,626
  - 19+ year olds: 13,136,803
- Total Opt-Outs: 1,275
- Active Online Users: 3,486

# Child Saturation 0 – 6 yrs w 2+ imms



# Current CIIS Functionality



- ❖ Generates official immunization records and administrative documentation
- ❖ Forecasts needed vaccinations based on ACIP-recommendations, vaccination history and age
- ❖ Generates immunization coverage at the provider level (providers and local public health) or zip code and county levels (local public health only)
- ❖ Generates data quality and patient management reports
- ❖ Generates specific reminders/recalls
- ❖ Manages and tracks inventory (vaccine, treatments, etc.)
- ❖ Offers dose-level accountability of publicly-purchased vaccine
- ❖ Provides separate functionality for schools, childcare centers and Head Start facilities
- ❖ Supports routine surveillance and case management activities
- ❖ Supports emergency preparedness exercises and outbreaks activities
- ❖ Provides customizable displays
- ❖ Interfaces with EHRs in HL7 and flat file

# CIIS Interoperability Efforts



|   |  |
|---|--|
| # of clinics sending HL7 batch files to CIIS:   | 219  |
| # of clinics real-time, bidirectional messaging with CIIS:  | 88   |
| # of clinics sending flat files to CIIS:  | 257  |
| # of clinics sending data to CIIS through the Colorado Regional Health Information Organization (CORHIO) interface: | 9*<br><br><i>*All under Pueblo Community Health Center umbrella.</i>   |
| EHRs currently in production:   | AthenaHealth, Aprima, CareTracker, ClearPractice, eClinicalWorks, e-MDs, EMC Corporation (VaxTrax), Epic, GE Centricity, Intergy, MEDITECH, NextGen, RPMS, SuccessEHS, SureScripts, Systoc |
| EHRs currently in pilot phase:  | AllScripts (Enterprise), Cerner, CPSI, Greenway, Sevocity/NueMD  |
| # of provider groups on CIIS waiting list for interface implementation:   | 450+   |

# CIIS – CORHIO

## Immunization Reporting Initiative



- Submission of immunization data to CIIS from multiple data sources via CORHIO
- Initiated in 2010
- Long-term vision = bidirectional, real-time messaging

# Pilot Success



- Pueblo Community Health Center went live in June 2013 with one-way HL7 batch file to CIIS
- To date, PCHC has sent 27,810 immunizations to CIIS through CORHIO interface

*“The CORHIO interface to CIIS has saved Pueblo Community Health Center time and led to greater efficiency. Overall, it was a pleasant experience.”*

--Chad Hess, RN, PA-C  
Pueblo Community Health Center



# CORHIO Sites in Progress

| Provider                       | Planning/<br>System Capability | Requirement<br>Validation | Implementation | Parallel<br>Validation | Support |
|--------------------------------|--------------------------------|---------------------------|----------------|------------------------|---------|
| Pueblo Community Health Center |                                |                           |                |                        | X       |
| Greenwood Pediatrics           |                                |                           |                | X                      |         |
| The Pediatric Center           |                                | X                         |                |                        |         |
| Hilltop Family Practice        |                                |                           | X              |                        |         |
| Long's Peak Family Practice    | X                              |                           |                |                        |         |
| Castle Valley                  |                                |                           |                | X                      |         |
| Dr. Hinman                     |                                |                           |                | X                      |         |
| Rocky Mtn. Youth Clinic        | X                              |                           |                |                        |         |
| Miramont Family Practice       |                                | X                         |                |                        |         |
| AgeWell Medical Associates     |                                | X                         |                |                        |         |
| Centura Health System          |                                | X                         |                |                        |         |
| Crown Pediatrics               | X                              |                           |                |                        |         |

# Coming Soon: Vaccine Ordering Module



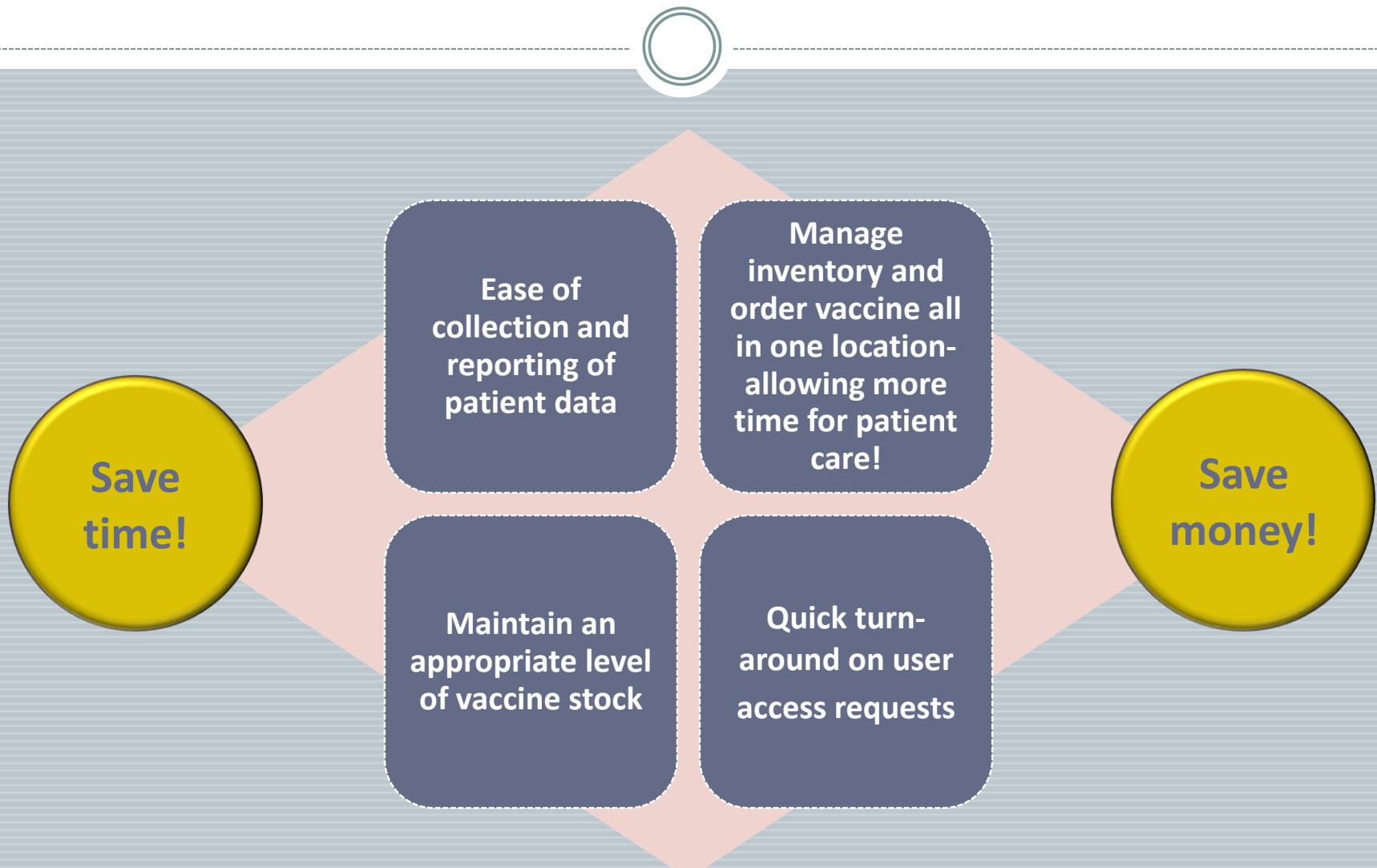
VOM replaces need for VFC providers to access VTrckS (CDC's online vaccine tracking system).

Allows VFC providers to:

- Manage their clinic's inventory
- Place online orders for VFC vaccines
- Create inventory reconciliations
- Monitor shipping information

**ALL WITHIN CIIS!**

# VOM Benefits

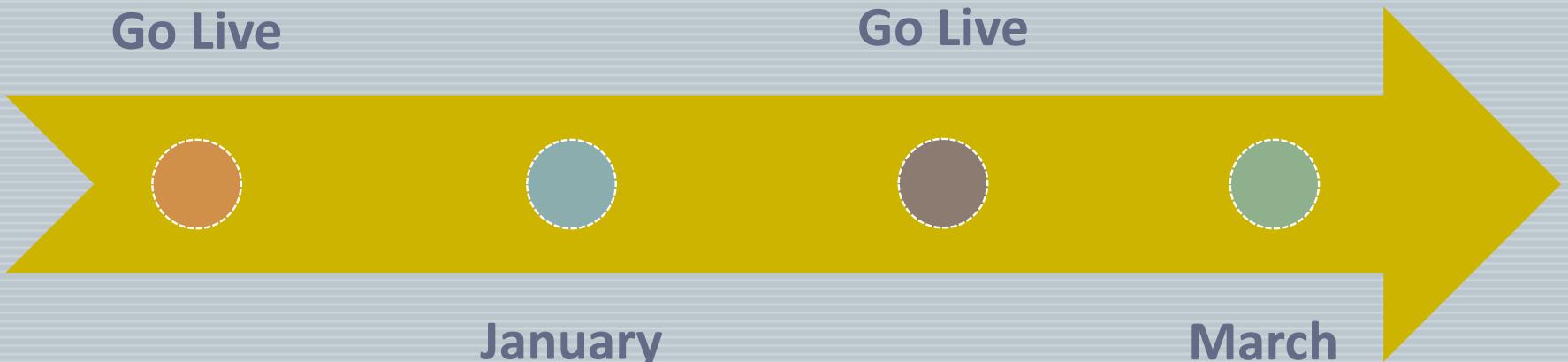


# VOM Rollout Timeline



December  
2013:  
Wave 1  
Go Live

February  
2014:  
Wave 3  
Go Live



January  
2014:  
Wave 2  
Go Live

March  
2014:  
Wave 4  
Go Live

# Interagency Projects



- **Newborn Screening Module Development**

- Read-only results for newborn hearing and metabolic screenings
- Permissions-based access to module
- Still in testing phase

- **Collaboration with WIC Program**

- Will receive demographic updates from WIC agencies for their clients
- Will assist WIC staff in immunization screening and referral practices
- Part of CDPHE's Winnable Battle for DTaP

- **Vital Statistics**

- Weekly death files (0-18 year olds)
- Daily birth files (CIIS currently receives these weekly)

# IT Efficiency Projects



- **iSIIIS Vision Software Implementation**
  - Will replace legacy contact management system
  - Includes automated HL7 testing tool for providers/EHR vendors
  - Will allow CIIS Program to replace many paper processes with online forms
  - Will include a web service to sync iSIIIS and CIIS
- **New HL7 Transport Project**
  - In-depth analysis of current HL7 messaging architecture and processes
  - 5-year plan for process improvement
  - Implementation of a new update and query interface that supports easier bi-directional messaging for Colorado providers

# Research Studies



- 2010-2011: A National Institutes of Health (NIH) funded randomized controlled comparative effectiveness trial that compared a centralized reminder/recall approach with a practice-based reminder/recall intervention in 14 Colorado counties for infants and toddlers.
- 2011-2014: A group randomized trial at the county level comparing *collaborative* centralized reminder/recall and practice-based reminder/recall for 19-35 month olds in 16 Colorado counties.
- 2013-2018: Affordable Care Organization/Public Health Collaborative Preventive Care Delivery to Priority Populations – this project will extend centralized reminder/recall to adolescents and adults within ACOs.

# Thank You!



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