Panel 2: Using prescription data to support the HIV care continuum

Using Prescription Data To Support The HIV Care Continuum

- Most antiretroviral (ARV) medications are prescribed as a 30-day supply
- Prescription data (e.g., refill data, claims, health system) can be used to identify persons who are not filling their medications monthly
- Tracking ARV prescription data can be a more real-time indicator of adherence and retention in care challenges
- Using real time prescription data to identify persons who fail to fill ARV prescriptions and to intervene could have a significant impact on adherence and potentially on retention in care

Bridging Gaps in HIV Care: A Michigan Pharmacy Re-Engagement Partnership

Panel 2: Using prescription data to support the HIV care continuum

Alina Whitener MS, CHES
Return to Care Unit, HIV Care Section
Division of HIV/STI Programs, Client, and Partner Services

MDHHS
Michigan Department of Health & Human Services
Bureau of HIV and STI Programs

Data to Care Rx (Link-Up Rx)

MDHHS Michigan Department of Health & Human Services | Bureau of HIV and STI Programs

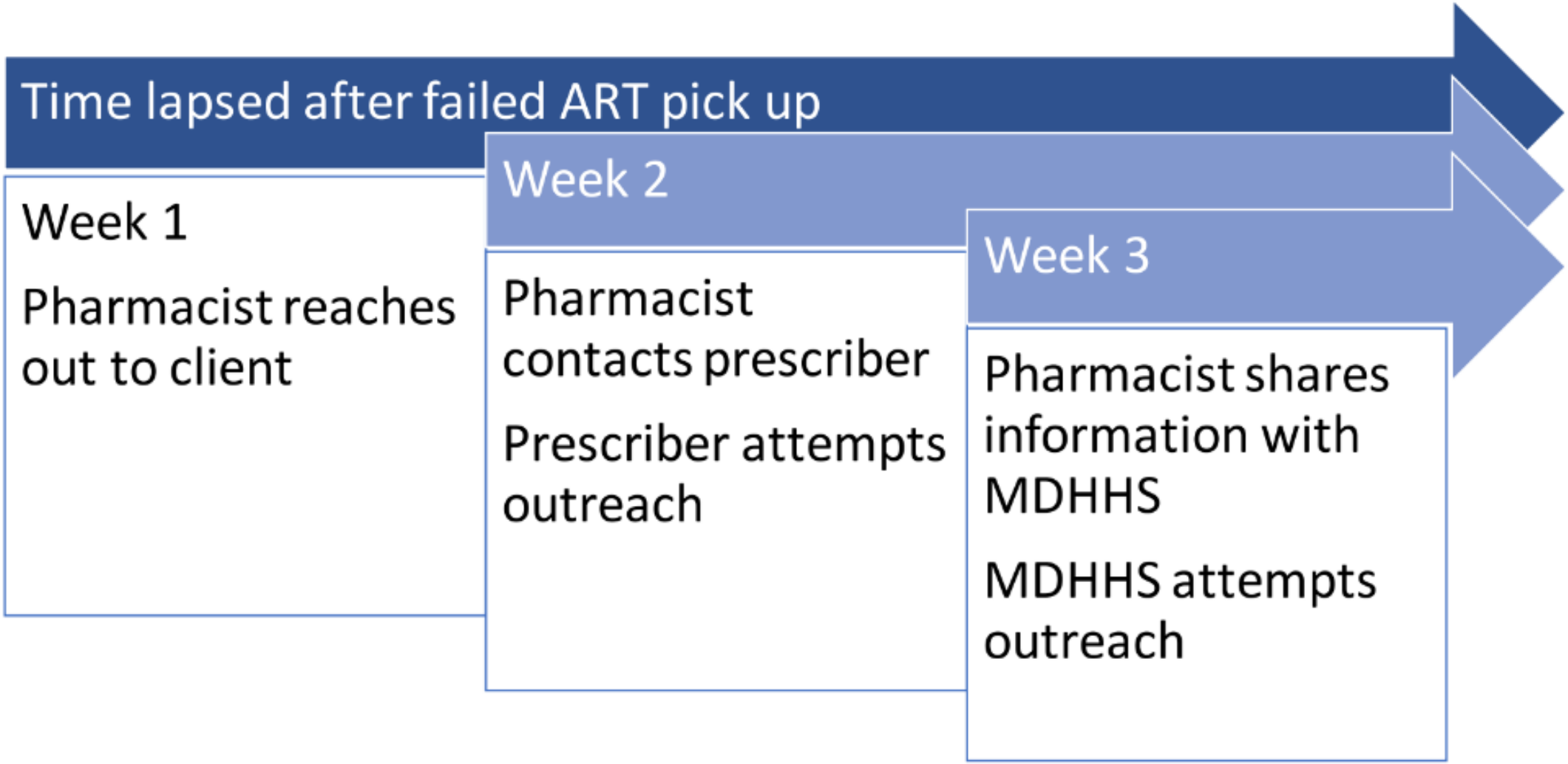
- Began as a pilot with the Detroit Health Department and MDHHS in 2018
- Expanded to a statewide program in 2022
- Two current pharmacy partners

Link-Up Rx Partners

- **Pharmacists** are considered **care providers** in Michigan
- Data sharing agreements are not required

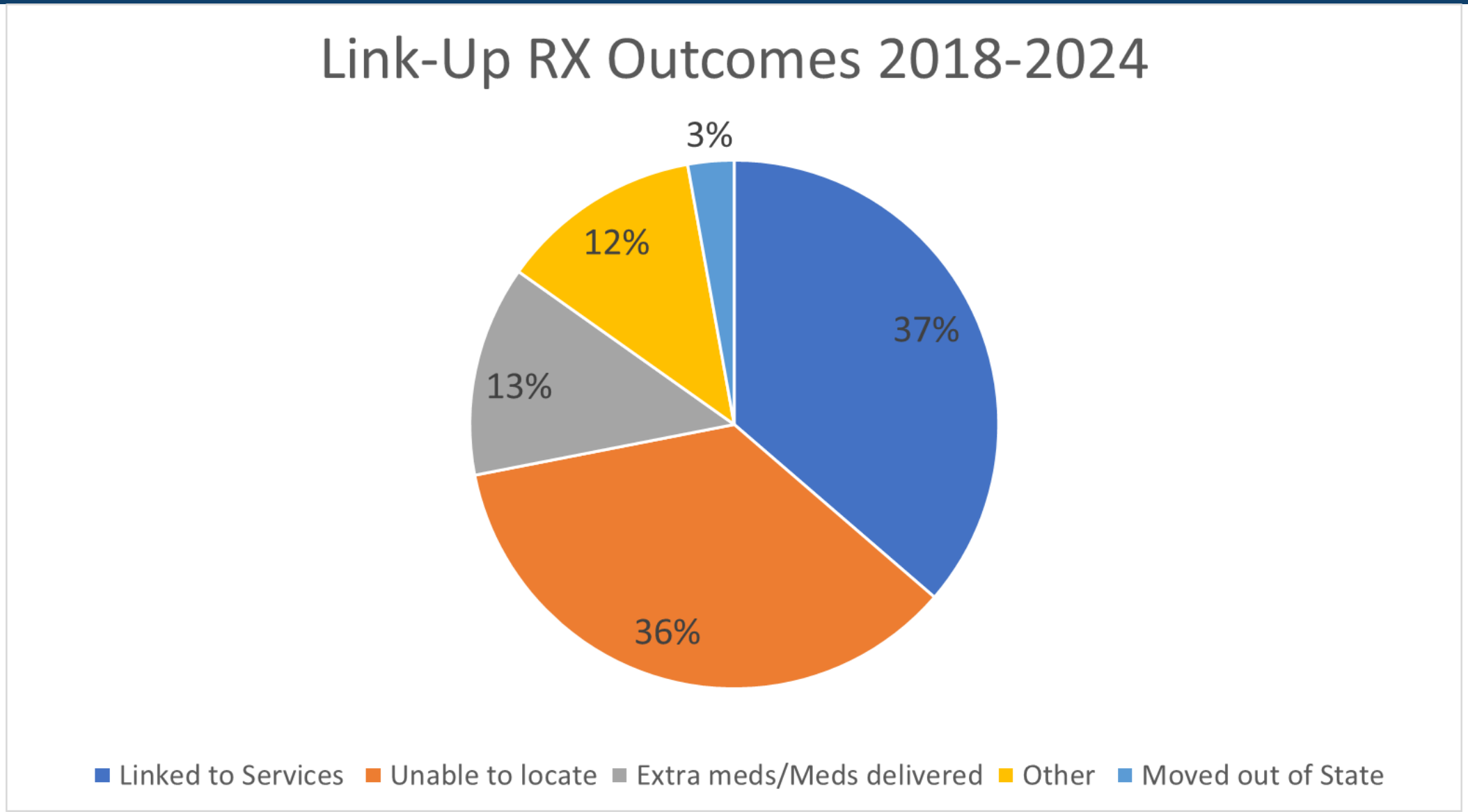
Link-Up Rx Process

MDHHS Michigan Department of Health & Human Services | Bureau of HIV and STI Programs

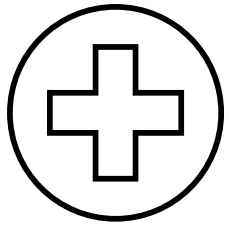


Link Up RX outcomes

MDHHS Michigan Department of Health & Human Services | Bureau of HIV and STI Programs



Traditional D2C vs D2CRX



Data to Care

From identification to initiation- **76 Days**

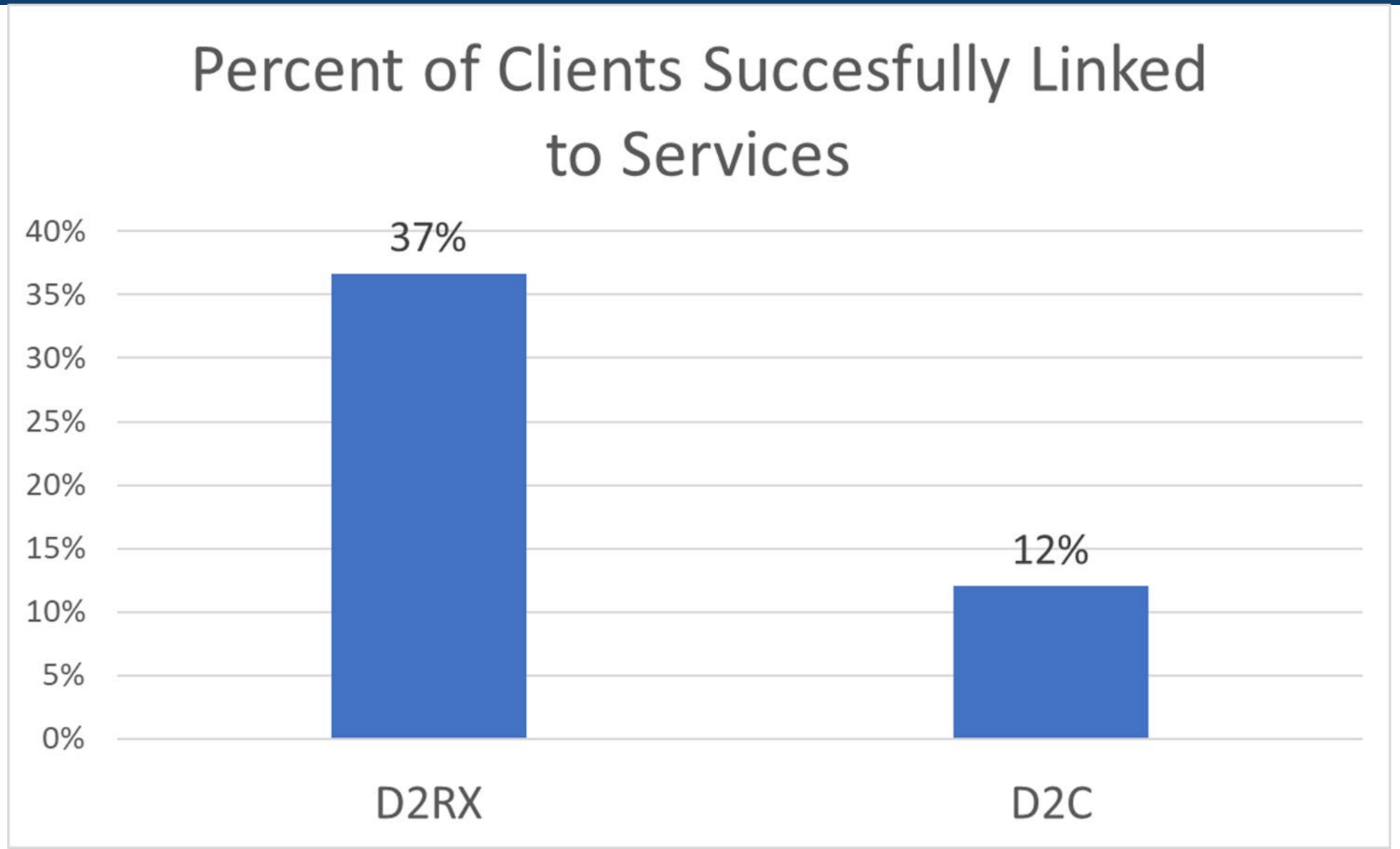
From initiation to linkage- 10.9 days

Data to Care RX

From identification to initiation- **4 Days**

From initiation to linkage- 8.9 days

Traditional D2C vs D2CRX- Linkages



Community Feedback

- Detroit Health Department
  - Community members express gratitude for outreach
  - Calling in discrete
  - Communication efforts with pharmacy partners
  - Successful referrals to the pharmacy
- Outstate
  - Link for updated contact information to and from the community and pharmacy
  - Gratitude for statewide resource guide for medical and supportive service referrals
  - Productive collaboration with pharmacy partners

Program Barriers

MDHHS Michigan Department of Health & Human Services | Bureau of HIV and STI Programs

- Pharmacy staff transitions
- Location limited to one area
- New partnership hesitation
- Maintaining list consistency
- Data sharing complexity issues
  - Not all groups have DCH accessibility
  - Not every jurisdiction has a secure data system to use

Next Steps

MDHHS
Michigan Department of Health & Human Services

To Strengthen Partnerships:

- Ensure Rx program understanding
- Encourage onboarding to sustain partnerships with pharmacies
- Discuss time commitment and provide clarity of role

To Optimize Rx Program:

- Rx one pager
- Expand Rx to additional counties in Michigan
- Partner with pharmacists via health systems
  - We have EMR access

Q&A

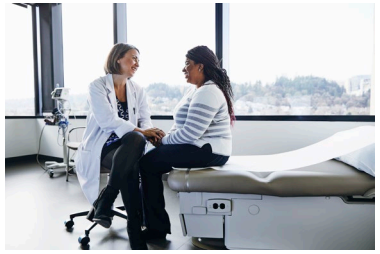
MDHHS
Michigan Department of Health & Human Services
Bureau of HIV and STI Programs

AdhereP4
Maryland Department of Health
Grant: PHPA-1108

Implementation and Evaluation of a Pharmacy-Based HIV Data-to-Care and Treatment Adherence Intervention

Outline

- Background
- Objectives
- Methods
- Implementation
- Results
- Next steps

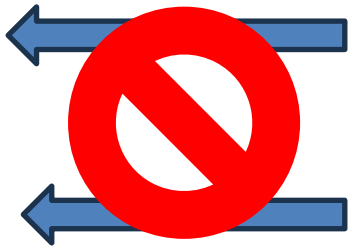


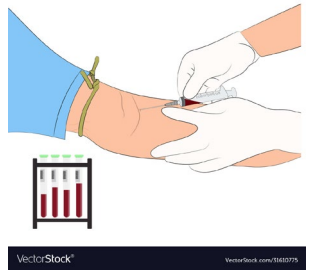
Self Report Adherence:

- ✓ How do you take your medications?
- ✓ How many doses have you missed?
- ✓ Any issues obtaining your medications?

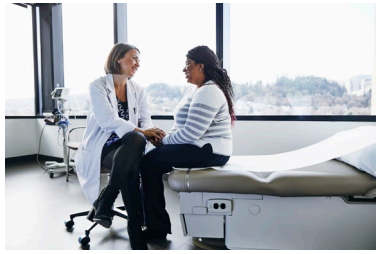
CONTROLLED

UNCONTROLLED





- ✓ Medication adherence counseling
- ✓ Barrier assessment
- ✓ Adherence intervention



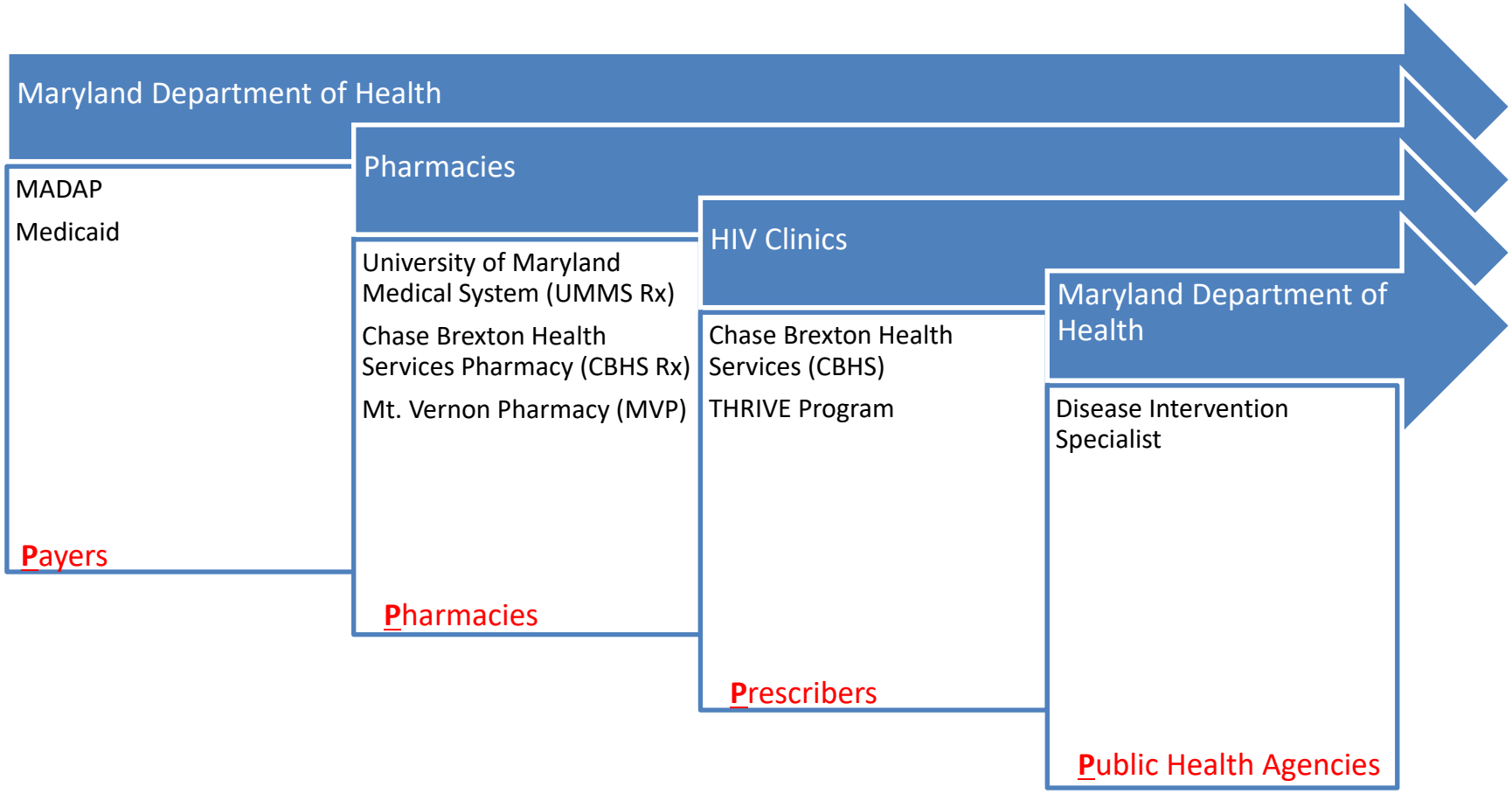
Objective Adherence Data

- ✓ Medication adherence counseling
- ✓ Barrier assessment
- ✓ Adherence intervention

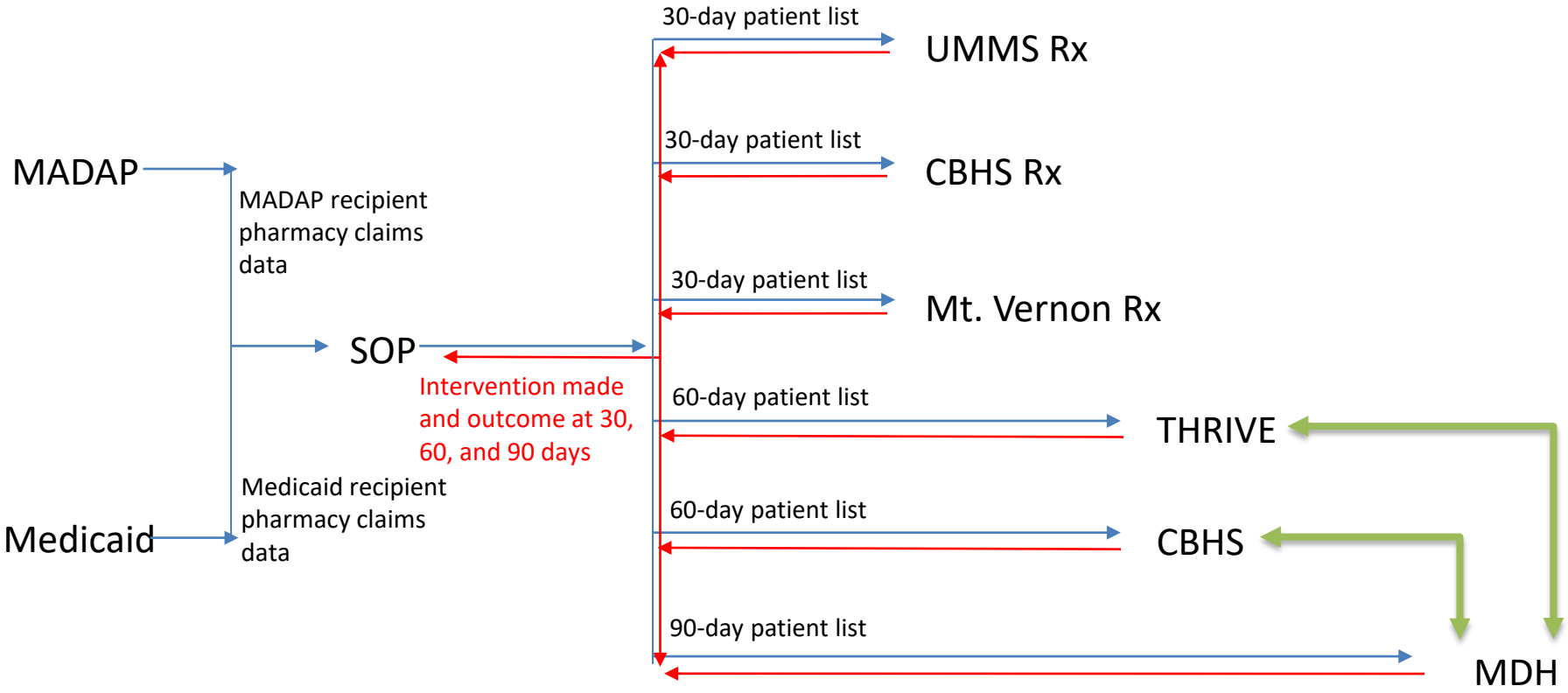
Objective

To evaluate the *effectiveness of an* ***ADHERE****nce support intervention* among people with HIV implemented through the *collaboration of* ***P****harmacies, **P**rescribers, **P**ayers, and **P**ublic health agencies* (AdhereP4)

AdhereP4 Partners

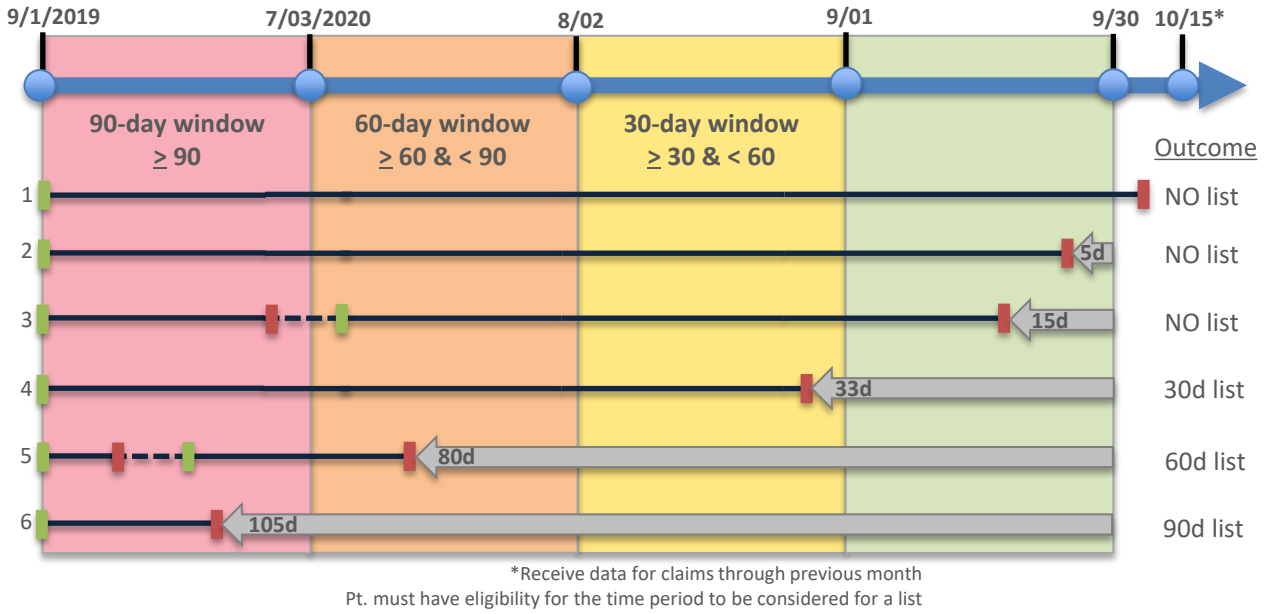


AdhereP4 Data Flowchart

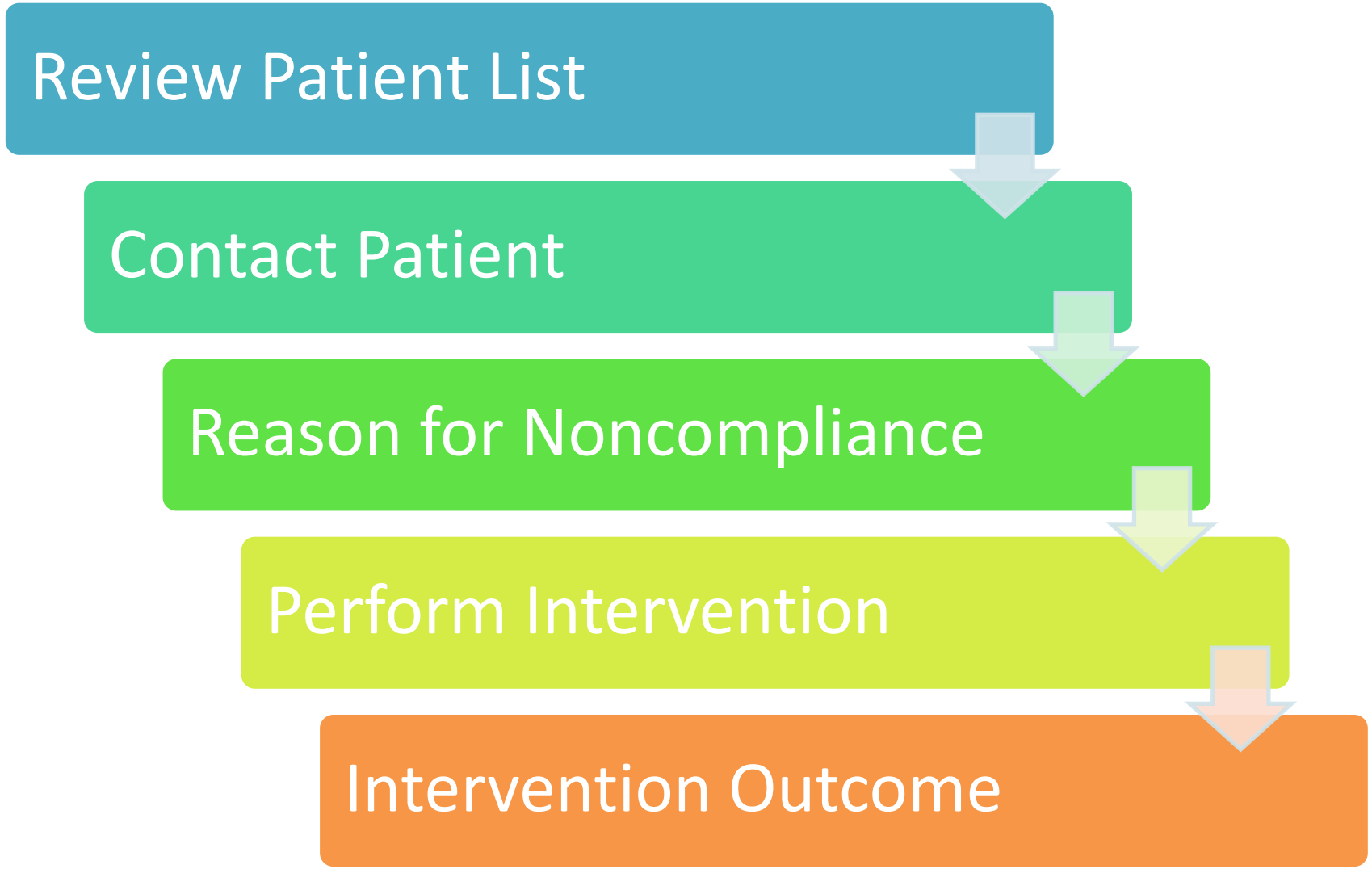


Line Lists (30/60/90 days)

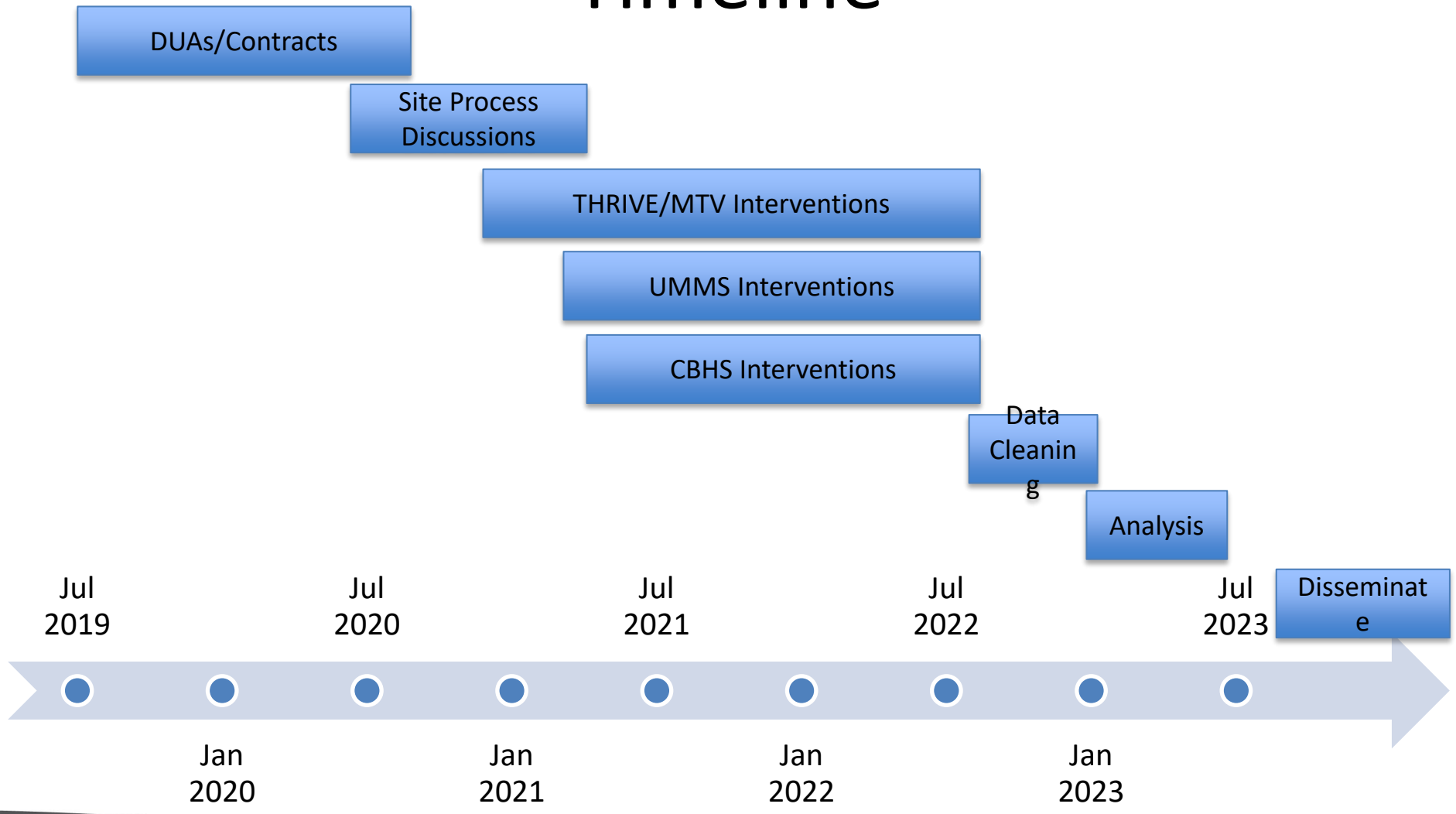
Purpose: Create line lists for patients who appear to be 30/60/90 days late in filling their specific Generic Code Number (GCN)



*Receive data for claims through previous month
Pt. must have eligibility for the time period to be considered for a list


Review Patient List
Contact Patient
Reason for Noncompliance
Perform Intervention
Intervention Outcome

Timeline


DUAs/Contracts
Site Process Discussions
THRIVE/MTV Interventions
UMMS Interventions
CBHS Interventions
Data Cleaning
Analysis
Disseminate
Jul 2019
Jul 2020
Jul 2021
Jul 2022
Jul 2023
Jan 2020
Jan 2021
Jan 2022
Jan 2023

Success Metrics

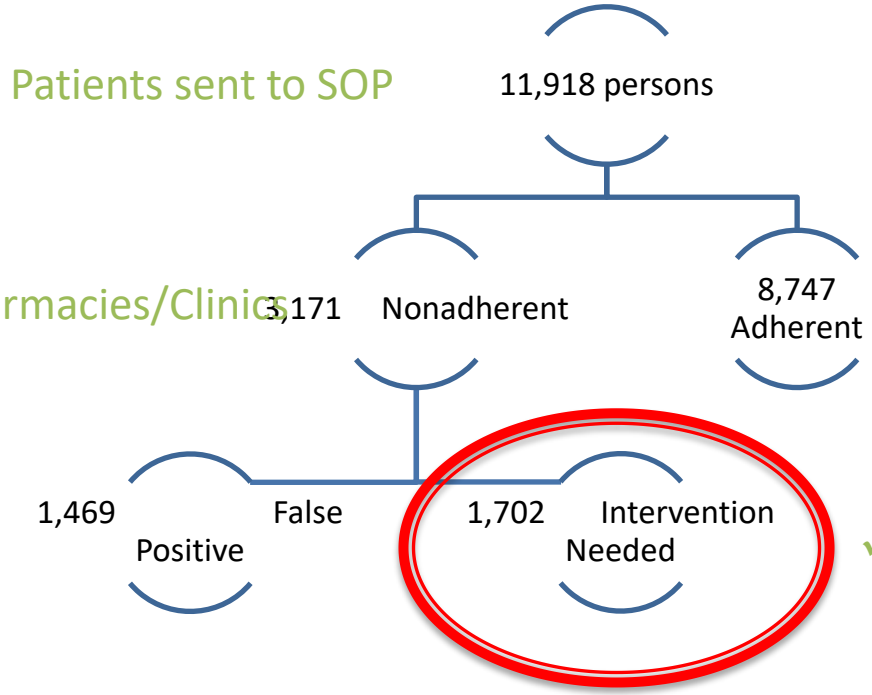
- HIV Viral Suppression (**P**rescribers)
- ARV Adherence (**P**harmacists/**P**ayers)
- Retention in Care (**P**rescribers)
- Re-linkage to Care (**P**ublic Health Agencies)

Eligibility

- Evaluated between January 2021 and August 2022

✓ MADAP/Medicaid Patients sent to SOP

✓ Patients sent to Pharmacies/Clinics



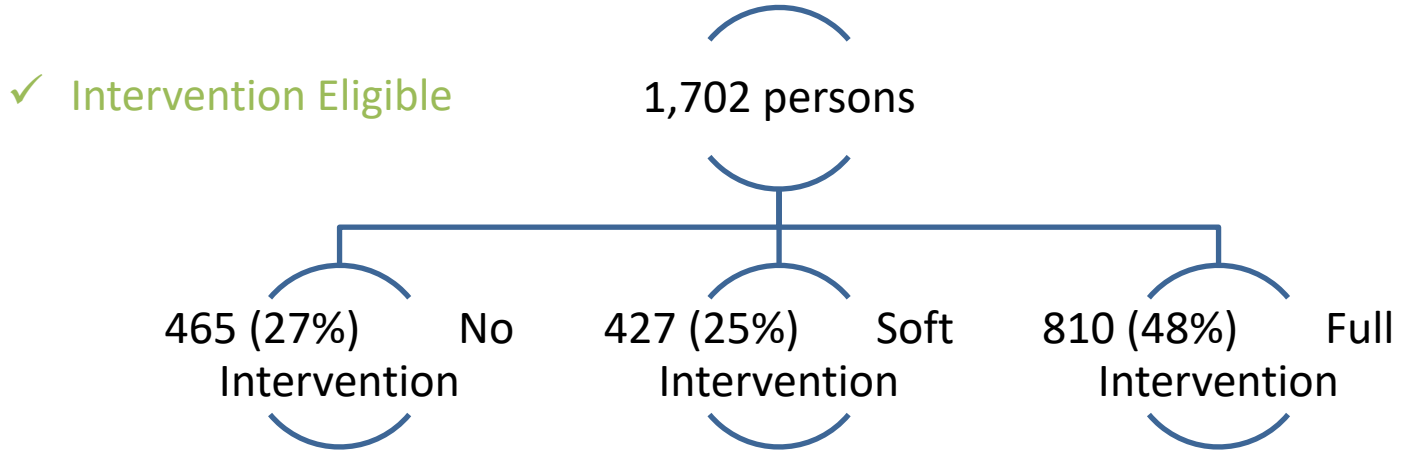
✓ Intervention Eligible

Baseline Characteristics

		Total Population n (%)
	Total	1,702 (100%)
Mean Age (SD, min, max) years		46.7 (13.6, 20, 85)
Sex	Female	562 (33%)
	Male	1,140 (67%)
Race	Black or African American	1,239 (73%)
	White	162 (10%)
	Hispanic	46 (3%)
	Other	255 (15%)
Location	Baltimore City	1042 (63%)
	Baltimore County	268 (16%)
HIV RNA <200 copies/mL	No	331 (19%)
	Yes	1103 (65%)
	Missing	268 (16%)
HIV RNA <LLOD	No	620 (36%)
	Yes	814 (48%)
	Missing	268 (16%)

Interventions

- Full Intervention: direct patient interaction
  - E.g. phone call, text message, telehealth, or an in-person visit
- Soft Intervention: indirect patient interaction
  - E.g. left a voicemail message
- No Intervention: no patient contact
  - E.g. Missing/incorrect contact information

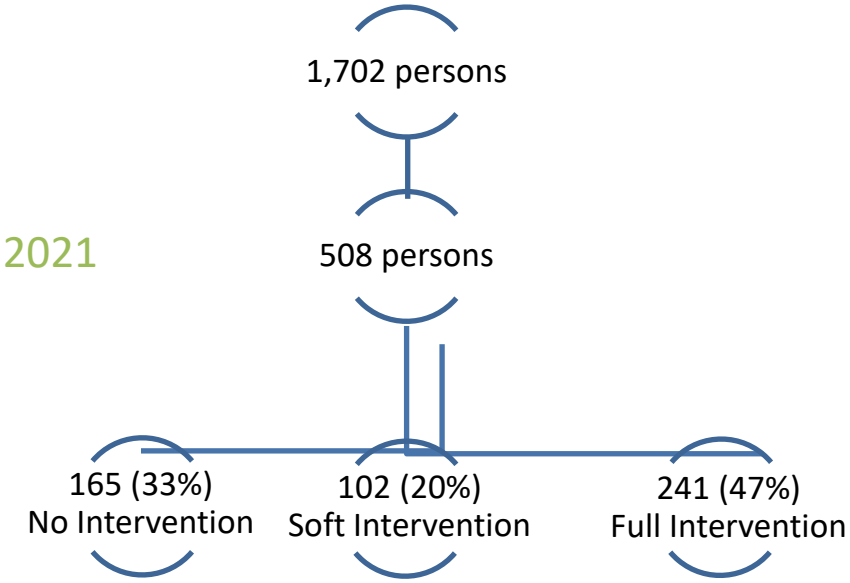


Success Metrics

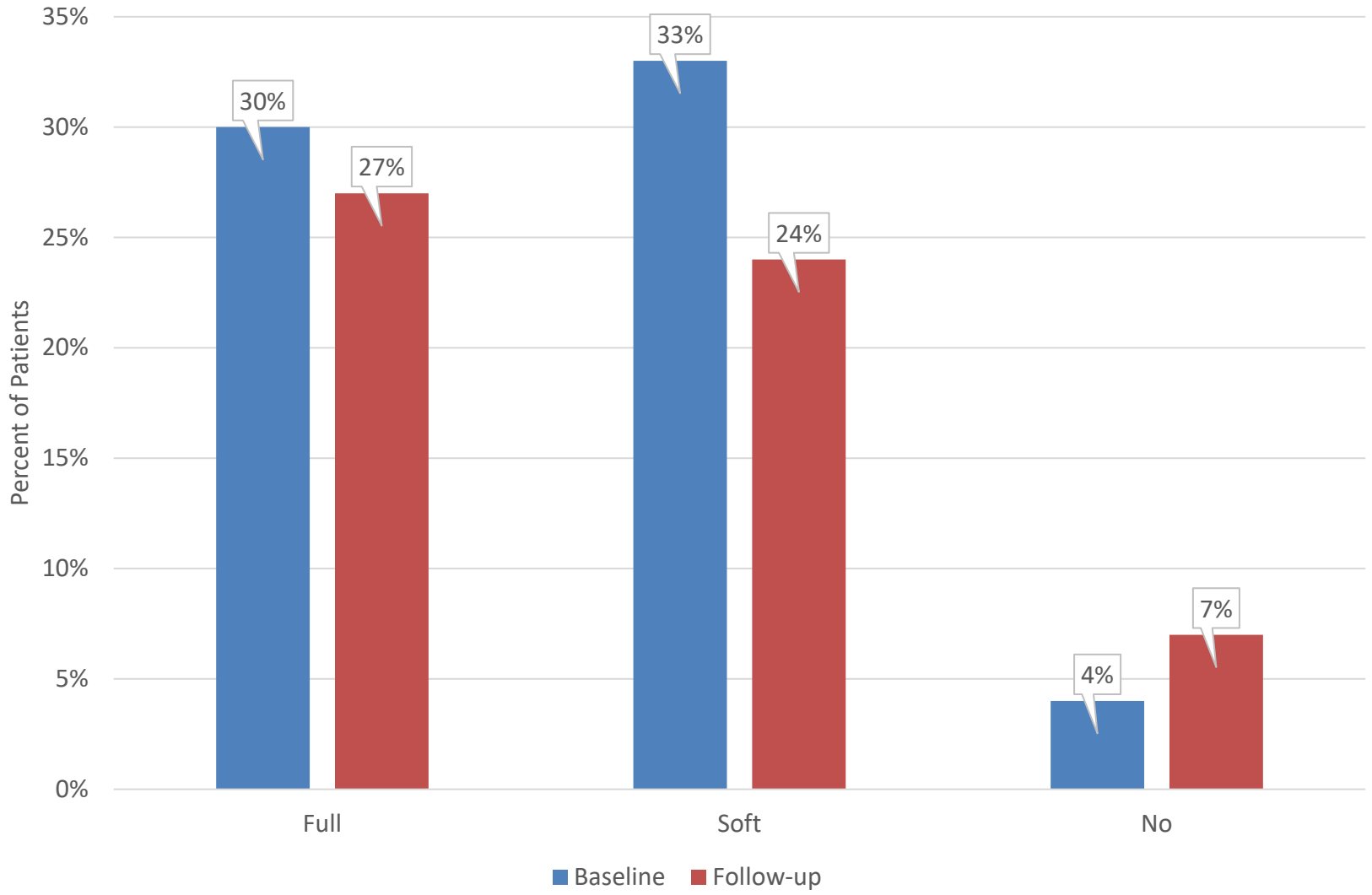
- HIV Viral Suppression (**P**rescribers)
  - HIV RNA < 200 copies/mL
- ARV Adherence (**P**harmacists/**P**ayers)
- Retention in Care (**P**rescribers)
- Re-linkage to Care (**P**ublic Health Agencies)

Eligibility: HIV RNA Suppression

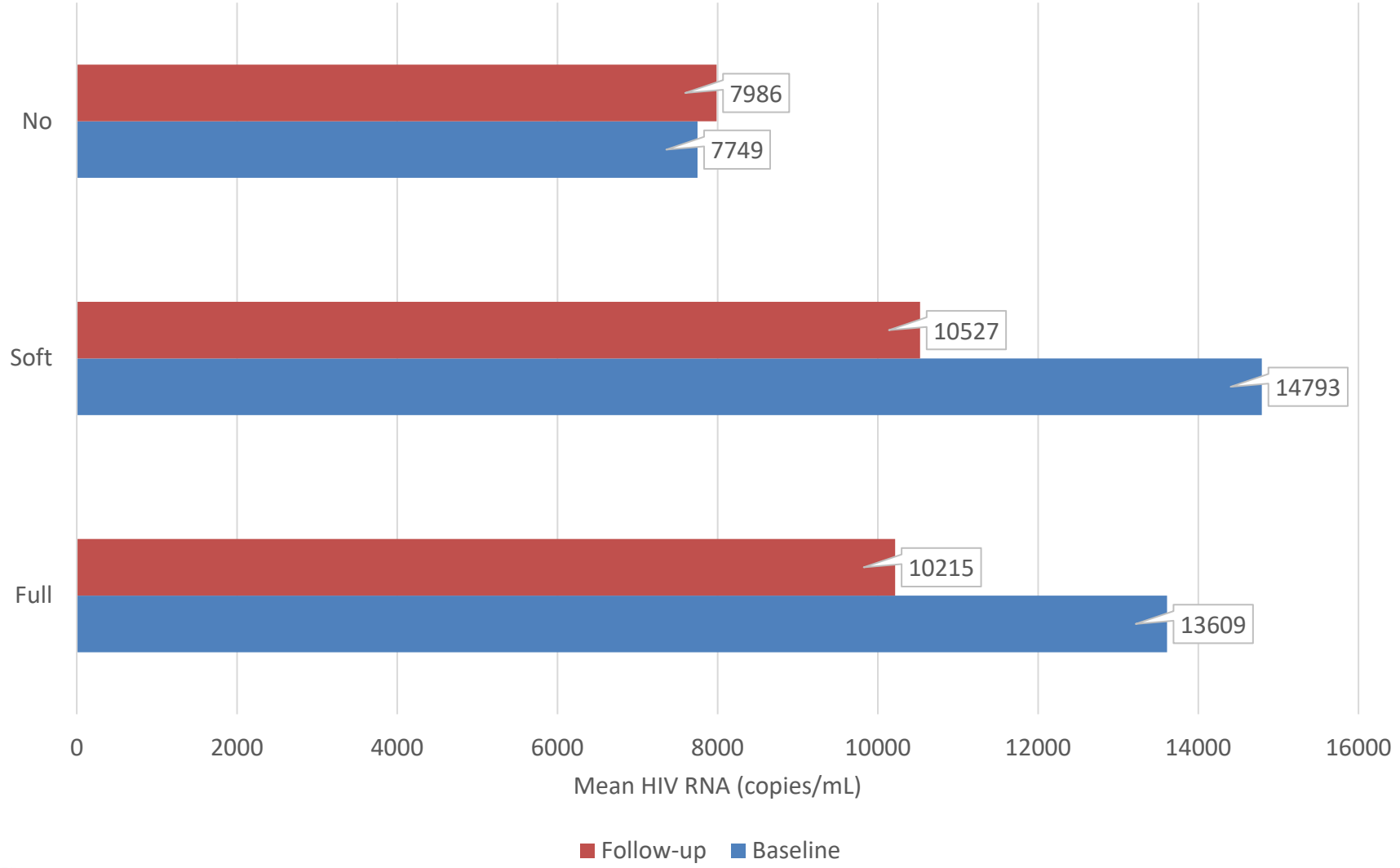
- ✓ Intervention Eligible
- ✓ Eligible between Nov 2020 and Dec 2021 and had HIV RNA results available



Percent of Patients with Viremia



HIV RNA copies/mL (Mean) by Intervention Group



HIV RNA Suppression Summary

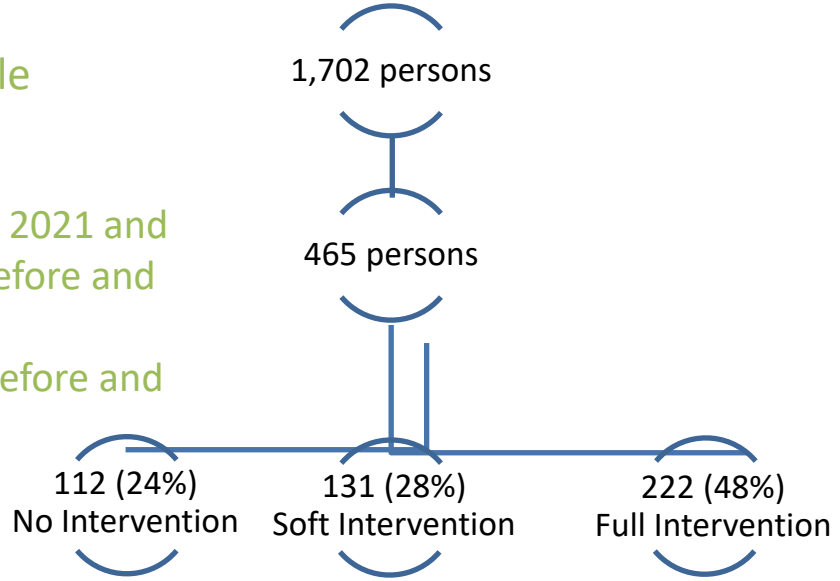
- After a full or soft intervention, less patients were viremic (HIV RNA >200 copies/mL) as opposed to an increase in the number of viremic patients seen among those who did not obtain an intervention.

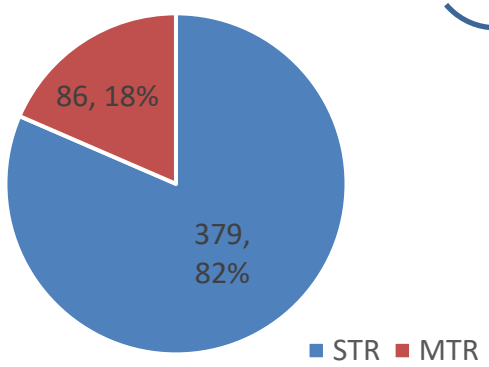
Success Metrics

- HIV Viral Suppression (**P**rescribers)
- ARV Adherence (**P**harmacists/**P**ayers)
  - Proportion of days covered (PDC)
    - Adherent = PDC ≥ 80%
    - Nonadherent = PDC < 80%
- Retention in Care (**P**rescribers)
- Re-linkage to Care (**P**ublic Health Agencies)

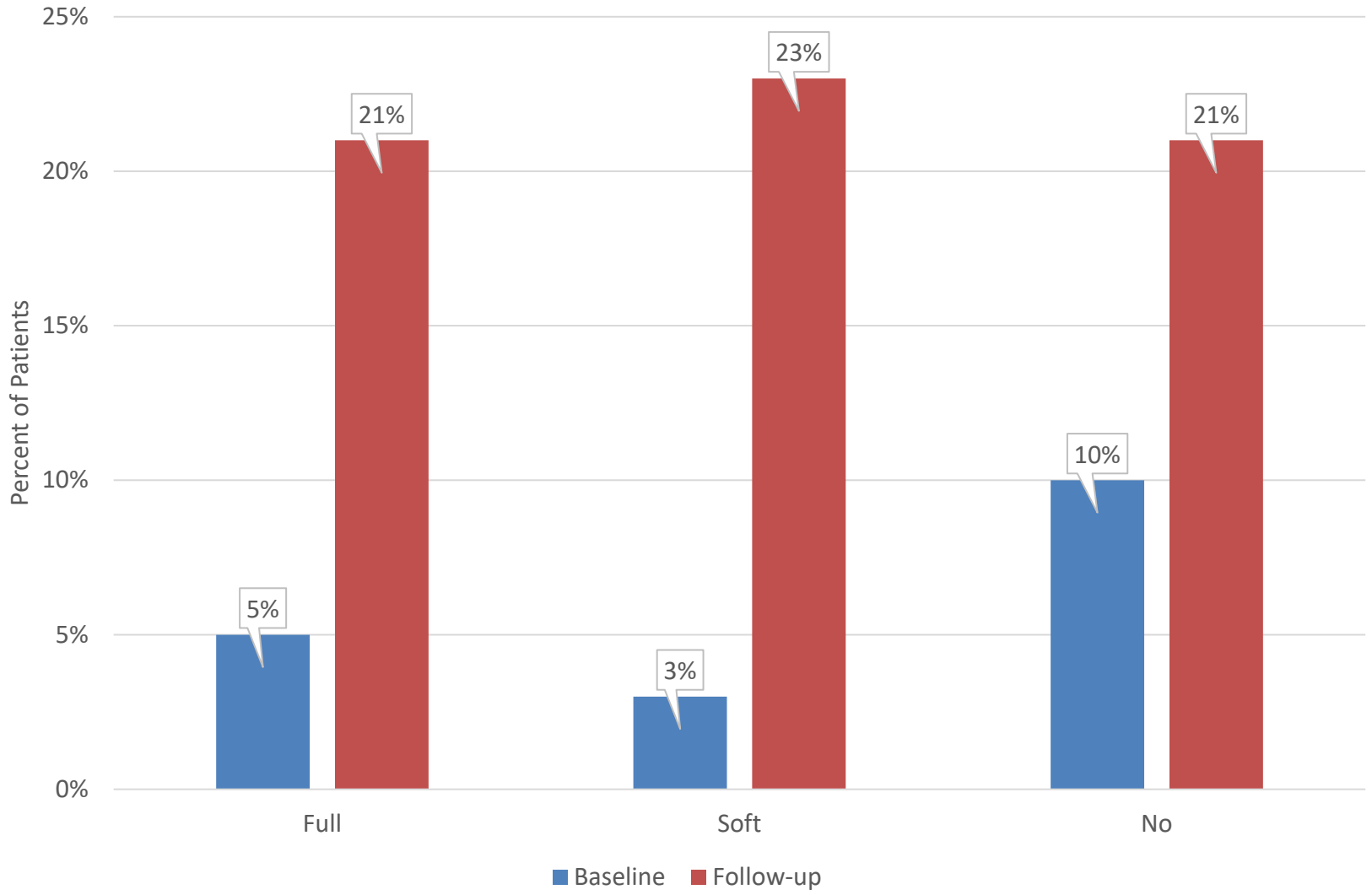
Eligibility: ARV Adherence

- ✓ Intervention Eligible
- ✓ Eligible between Nov 2020 and Jun 2021 and
  - ✓ Single-tablet regimen (STR) before and after intervention or
  - ✓ Multi-tablet regimen (MTR) before and after intervention.

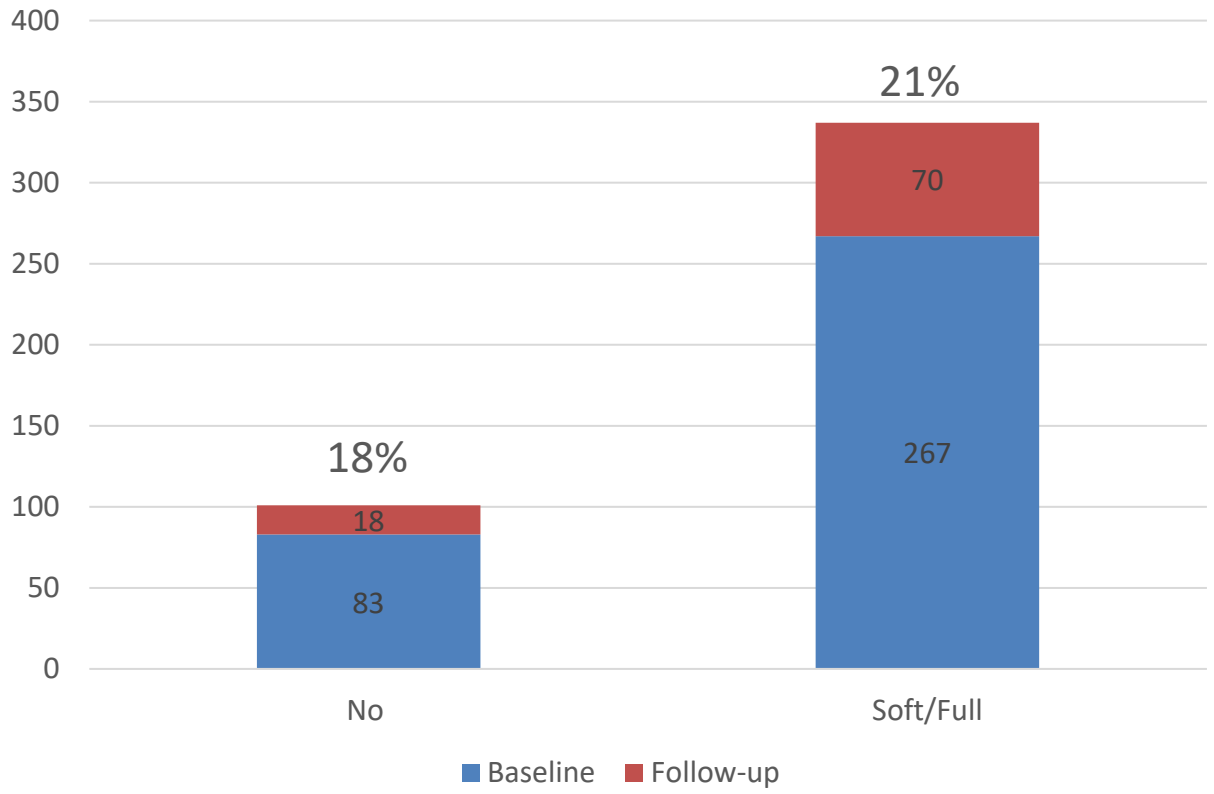




Percent of Patients Adherent to ART



Number (%) of patients who became adherent in follow-up



HIV Adherence Summary

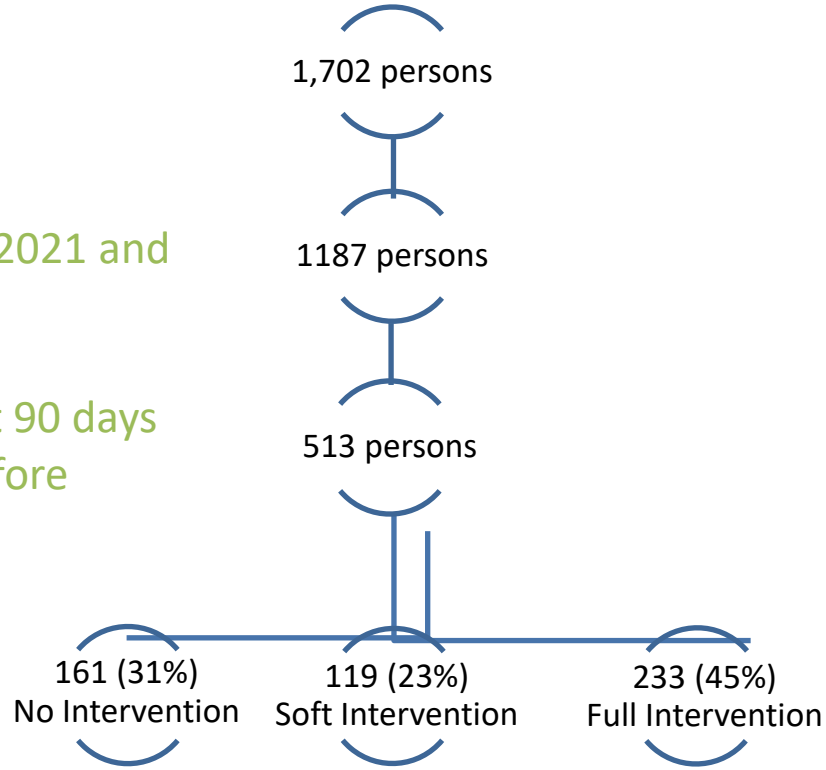
- HIV adherence improved in the population evaluated however similar adherence improvement was seen regardless of intervention.

Success Metrics

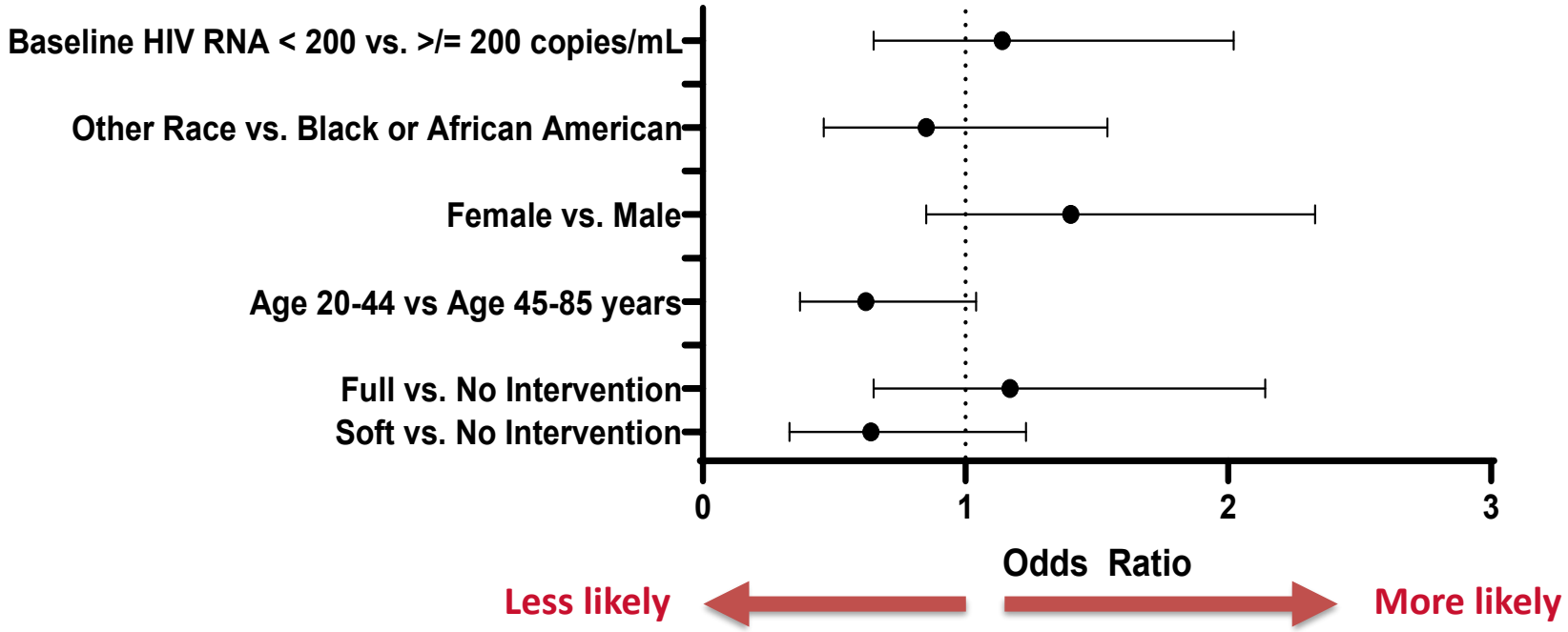
- HIV Viral Suppression (Prescribers)
- ARV Adherence (Pharmacists/Payers)
  - Proportion of days covered (PDC)
- Retention in Care (Prescribers)
  - 2 patient care visits occurring at least 90 days apart over a continuous 365-day period post-index date
    - in individuals who also had 2 patient care visits occurring at least 90 days apart over a 365-day period prior to the index date
- Re-linkage to Care (Public Health Agencies)

Eligibility: Retention in Care

- ✓ Intervention Eligible
- ✓ Eligible between Nov 2020 and Dec 2021 and
- ✓ had 2 patient care visits at least 90 days apart over a 365-day period before intervention eligibility



Odds Ratio for Retention in Care



*None were statistically significant

Retention in Care Summary

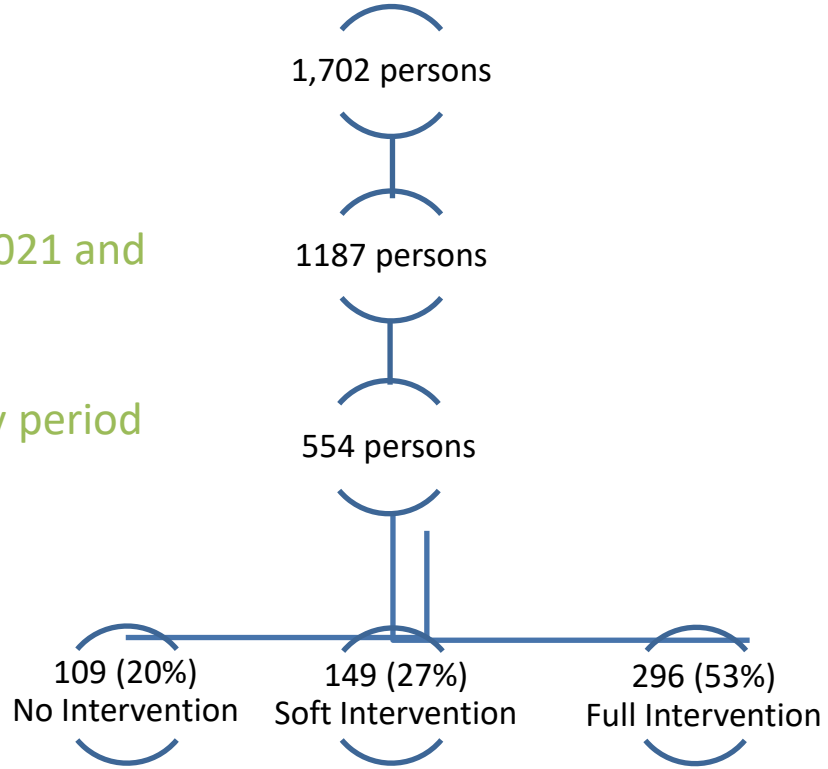
- There were no statistically significant differences in the odds of retention between intervention groups.
- When the full and soft intervention groups were combined, there was no difference in the odds of retention between those who received an intervention (full or soft) and those who did not (OR=0.95; 95% CI: 0.55 – 1.65).
- Odds of retention were not different based on age, race, gender, and baseline HIV RNA levels.

Success Metrics

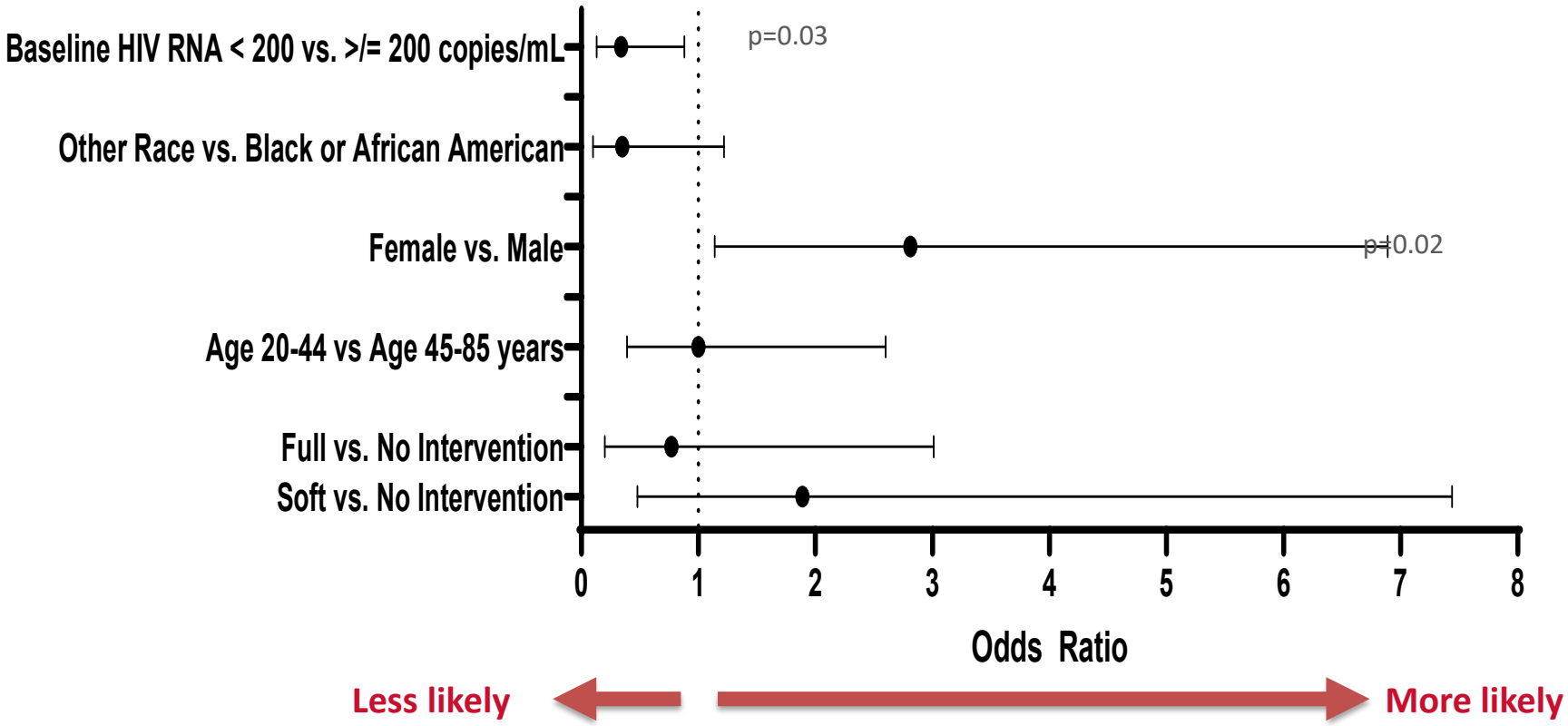
- HIV Viral Suppression (**P**rescribers)
- ARV Adherence (**P**harmacists/**P**ayers)
  - Proportion of days covered (PDC)
- Retention in Care (**P**rescribers)
- Re-linkage to Care (**P**ublic Health Agencies)
  - A medical visit occurring within the 365-day period after the index date
    - in patients who had no medical visits in the 365-day period prior to the index date

Eligibility: Relinkage to Care

- ✓ Intervention Eligible
- ✓ Eligible between Nov 2020 and Dec 2021 and
- ✓ Had no medical visit in over a 365-day period before intervention eligibility



Odds Ratio for Relinkage to Care



Acknowledgements

- Eberechukwu Onukwugha, MS, PhD
- Tsung-Ying Lee, BPharm, MClinPharm
- Abree Johnson, MS, MBA

- Chase Brexton Health Services
- THRIVE Program, UMMC MTC
- Mt. Vernon Pharmacy
- University of Maryland Medical System Pharmacy
- Maryland Department of Health
  - Maryland AIDS Drug Assistance Program
  - Maryland Medicaid
  - UMB Hilltop

Successes!

- Collaborations were built with:
  - Prescribers, Pharmacies, Payers, Public Health Agencies
- Proactive and targeted adherence interventions were implemented
- Successful Data Sharing Agreements were developed
- Communication was improved across healthcare systems
- Prevented Possible Virologic Failure

Challenges

- Developing Data Use Agreements
- Data Sharing using secure file transfer protocols (sFTP)
- Collaborator Education
  - Intervention
  - Documentation
- Time
- False Positives
- Competing Priorities
- Dare I Say...Pandemic!

AdhereP4
Maryland Department of Health
Grant: PHPA-1108

Implementation and Evaluation of a Pharmacy-Based HIV Data-to-Care and Treatment Adherence Intervention

Barriers to D2C Rx: Insights from the AIMS Study

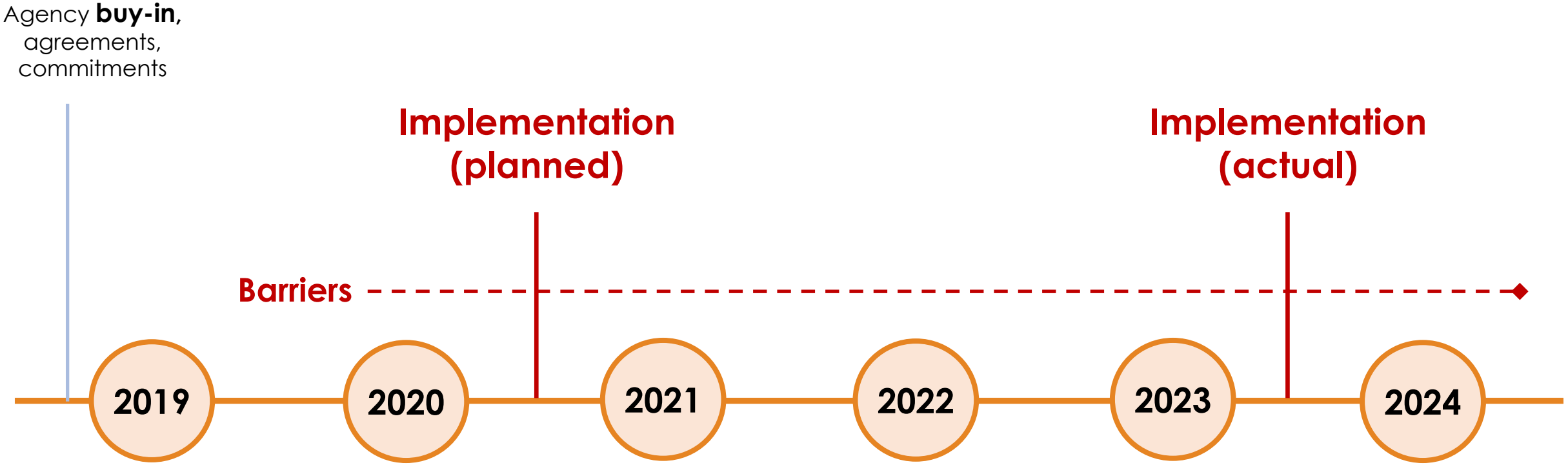
April D. Kimmel, PhD
Virginia Commonwealth University

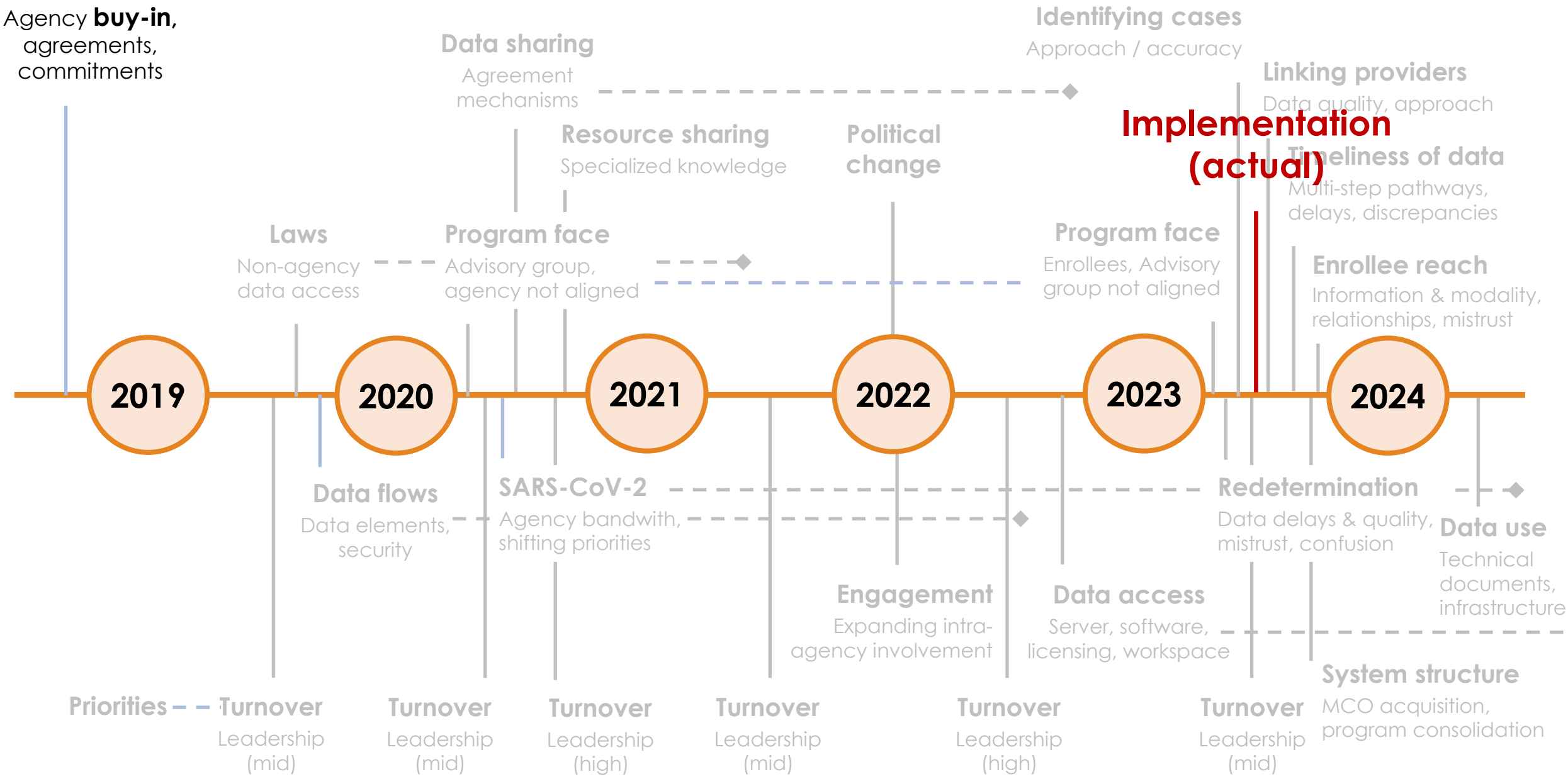
funding

This work was supported by the Centers for Disease Control and National Institute of Mental Health (U01 PS005192)

Antiretroviral **I**mprovement of **M**edicaid enrollee**S**

- Cluster-randomized, statewide trial of support for Virginia Medicaid members, and their providers, with ART prescriptions >30–90 days late
- Multi-agency, -institutional collaborative research partnership
- Real-time administrative and prescription claims (Virginia Medicaid) and HIV surveillance data (Virginia Department of Health)


Agency **buy-in**, agreements, commitments
Implementation (planned)
Implementation (actual)
Barriers
2019
2020
2021
2022
2023
2024


Agency **buy-in**, agreements, commitments
Data sharing
Agreement mechanisms
Identifying cases
Approach / accuracy
Linking providers
Data quality, approach
Implementation (actual)
Resource sharing
Specialized knowledge
Political change
Timeliness of data
Multi-step pathways, delays, discrepancies
Laws
Non-agency data access
Program face
Advisory group, agency not aligned
Program face
Enrollees, Advisory group not aligned
Enrollee reach
Information & modality, relationships, mistrust
2019
2020
2021
2022
2023
2024
Data flows
Data elements, security
SARS-CoV-2
Agency bandwith, shifting priorities
Redetermination
Data delays & quality, mistrust, confusion
Data use
Technical documents, infrastructure
Engagement
Expanding intra-agency involvement
Data access
Server, software, licensing, workspace
System structure
MCO acquisition, program consolidation
Priorities
Turnover
Leadership (mid)
Turnover
Leadership (mid)
Turnover
Leadership (high)
Turnover
Leadership (mid)
Turnover
Leadership (high)
Turnover
Leadership (mid)

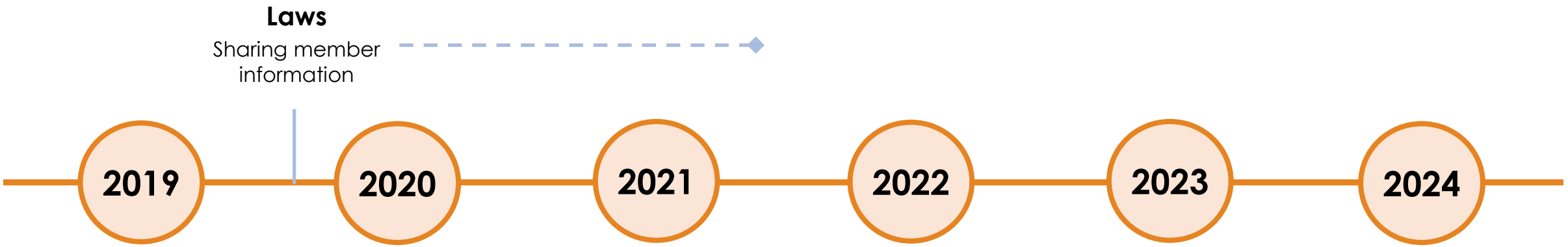
barrier domains

- Legality, leadership and priorities
- Data governance
- Data access, usability and support
- Reach and relationships
- Unexpected events

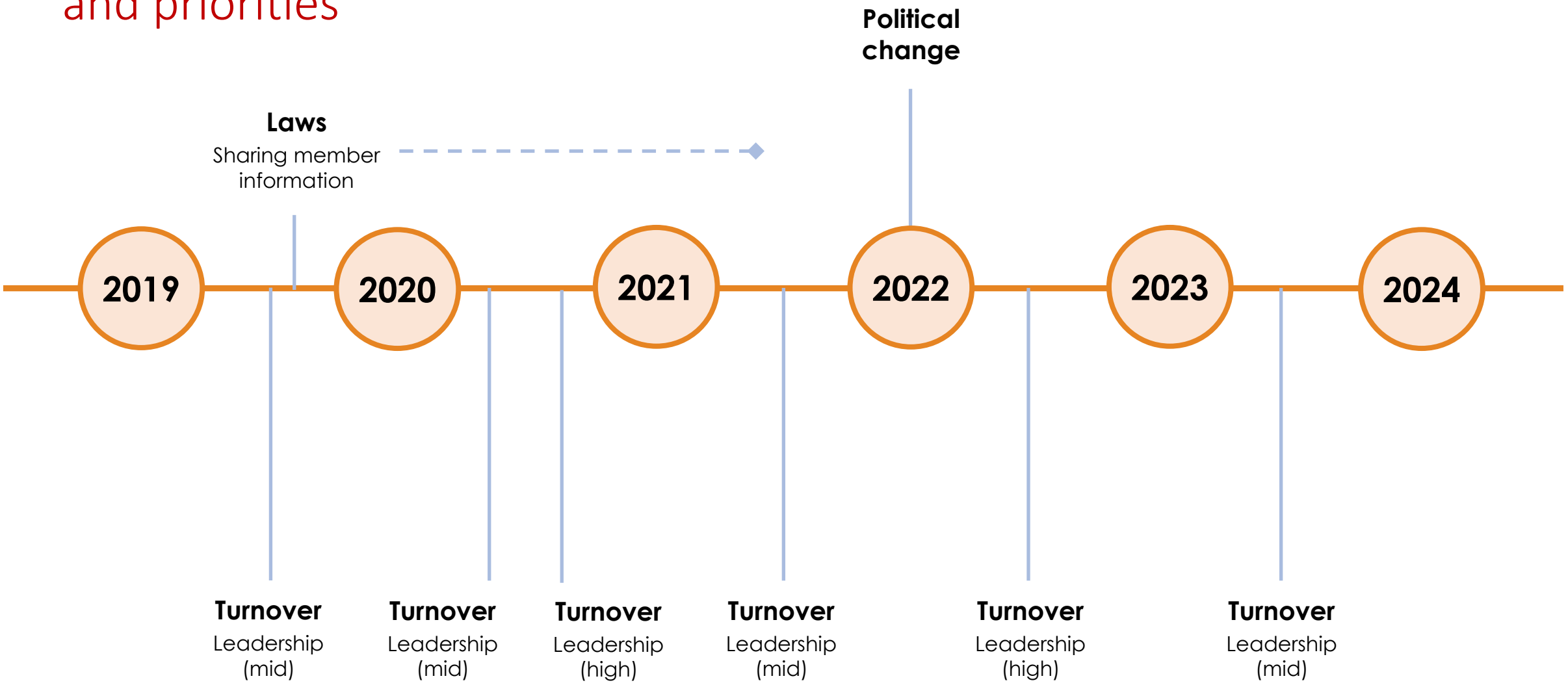
barrier domains

- Legality, leadership and priorities
  - State laws and regulations impacting cross-agency sharing and release (e.g., to a 3rd party) of member personal information
  - Program champion(s) and agency leadership buy-in
  - Competing priorities and leadership/staff turnover

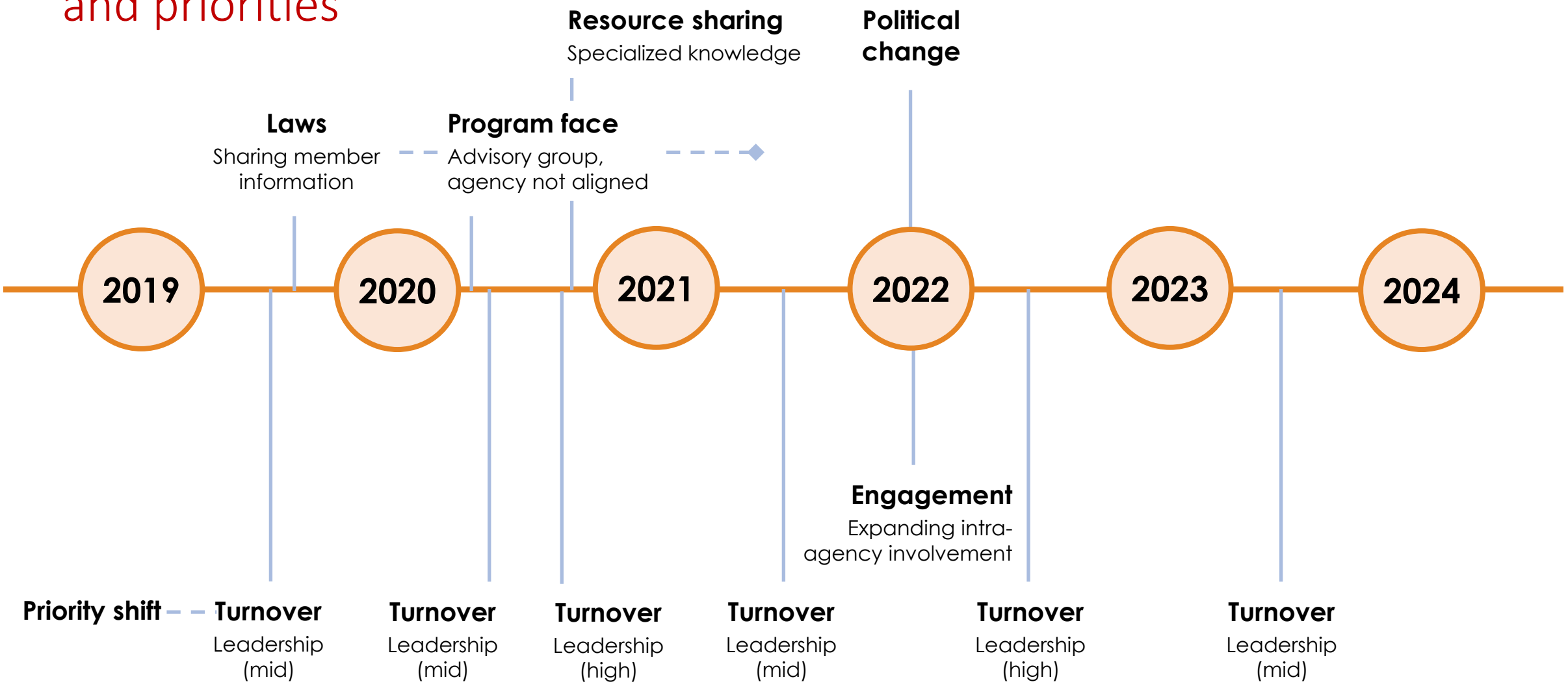
legality, leadership and priorities



legality, leadership and priorities



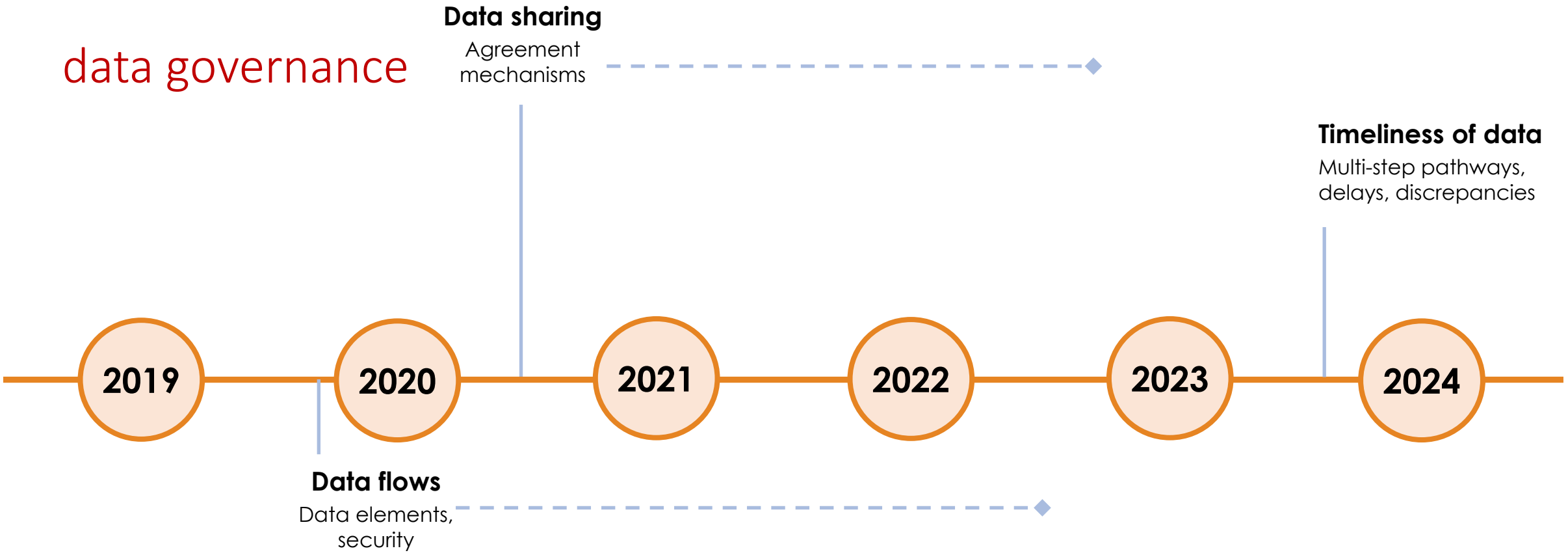
legality, leadership and priorities



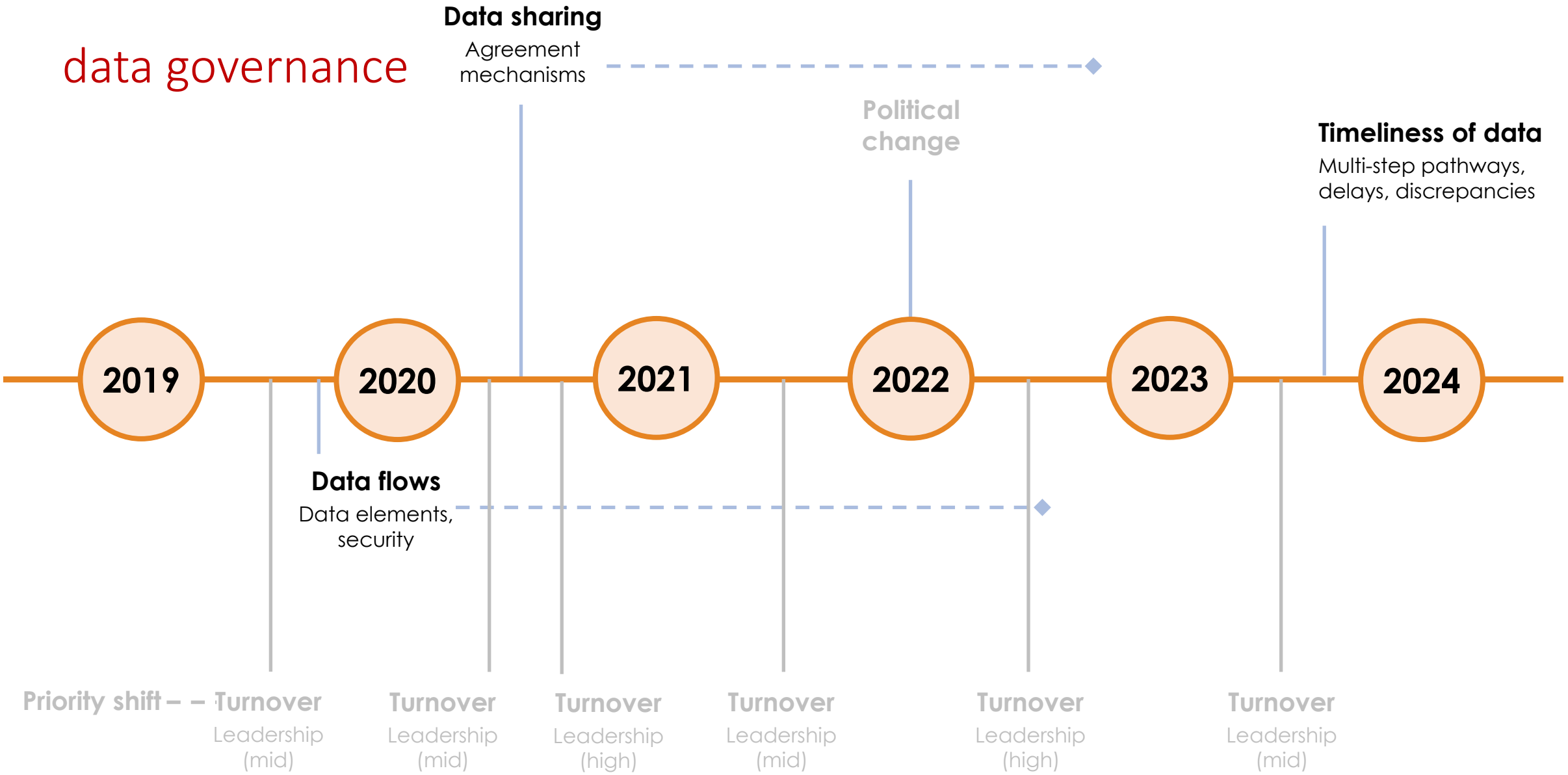
barrier domains

- Legality, leadership and priorities
- Data governance
  - Processes for data sharing, maintaining data confidentiality and security
  - Contractual obligations regarding data provision to agency

data governance



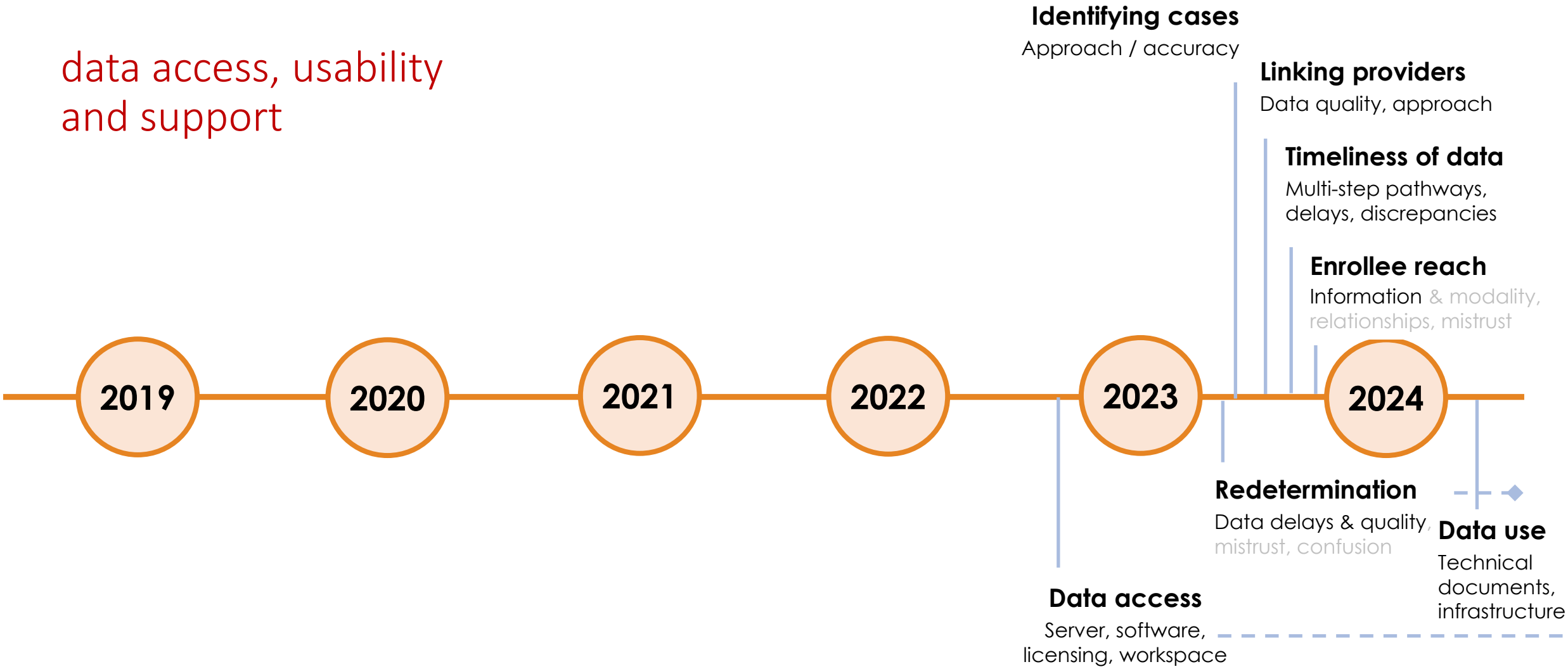
data governance



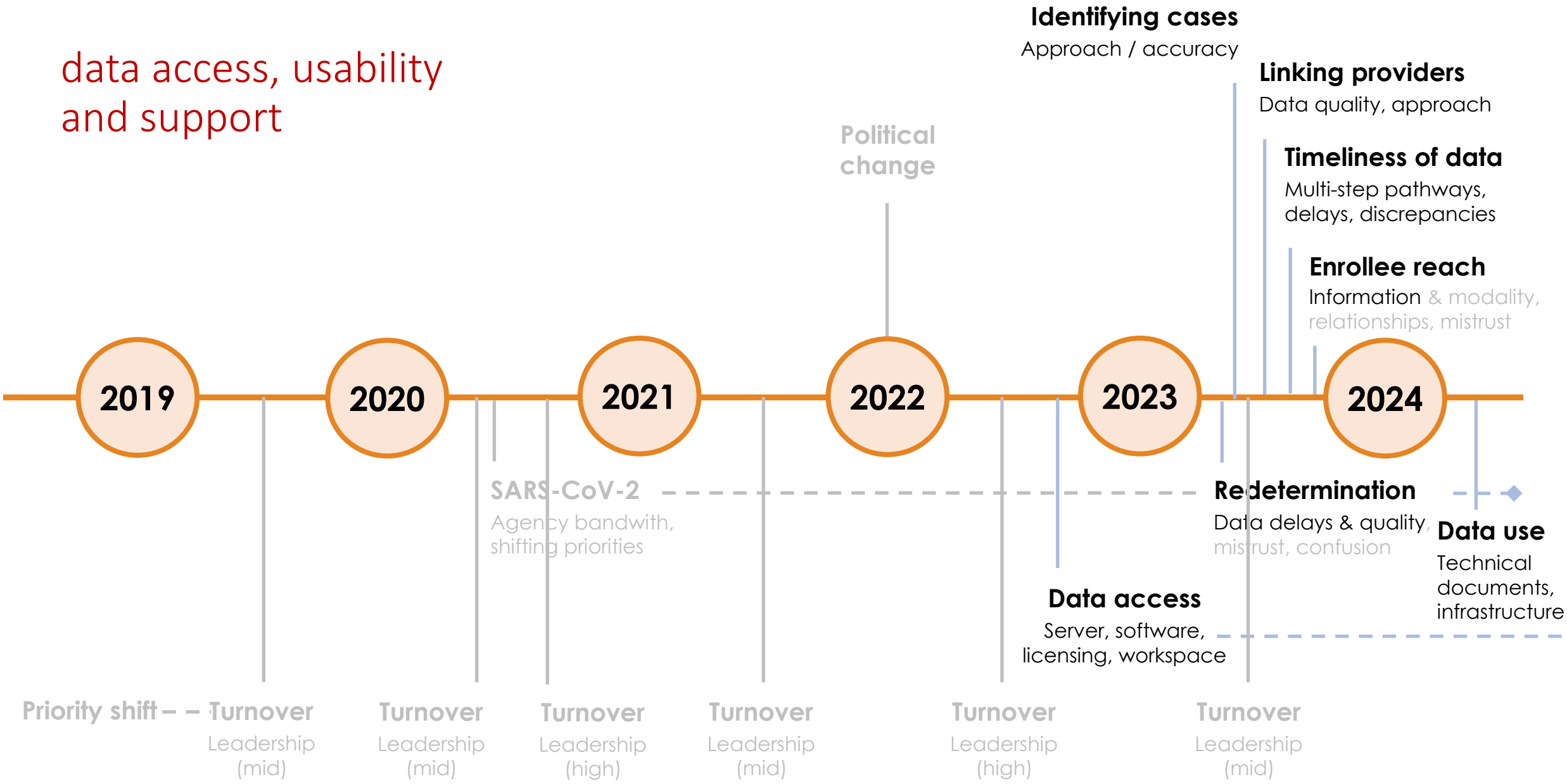
barrier domains

- Legality, leadership and priorities
- Data governance
- Data access, usability and support
  - Technologies and management systems used to work with data
  - Data usability, including data quality and completeness
  - Technical documentation and infrastructure to support analysis

data access, usability and support



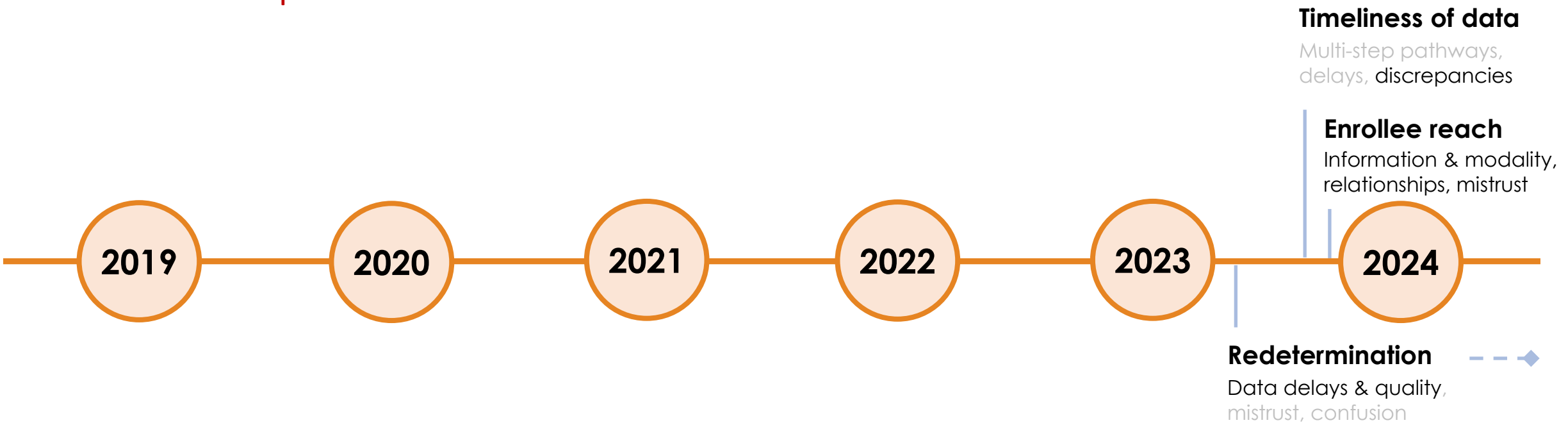
data access, usability and support



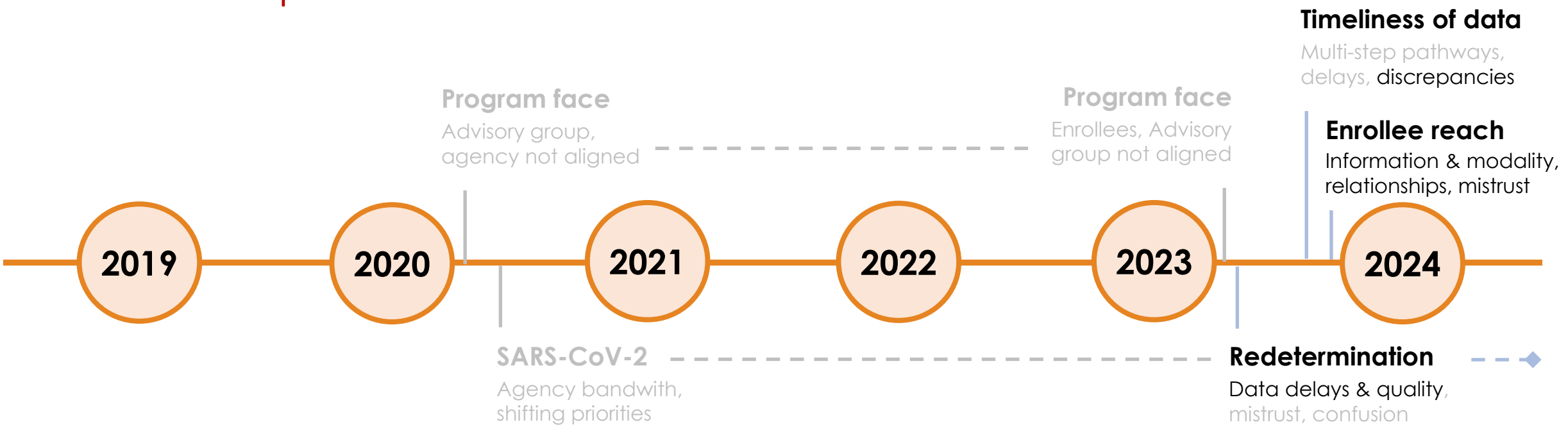
barrier domains

- Legality, leadership and priorities
- Data governance
- Data access, usability and support
- Reach and relationships
  - Effectively contacting and engaging with members, particularly via a known and/or trusted source

reach and relationships



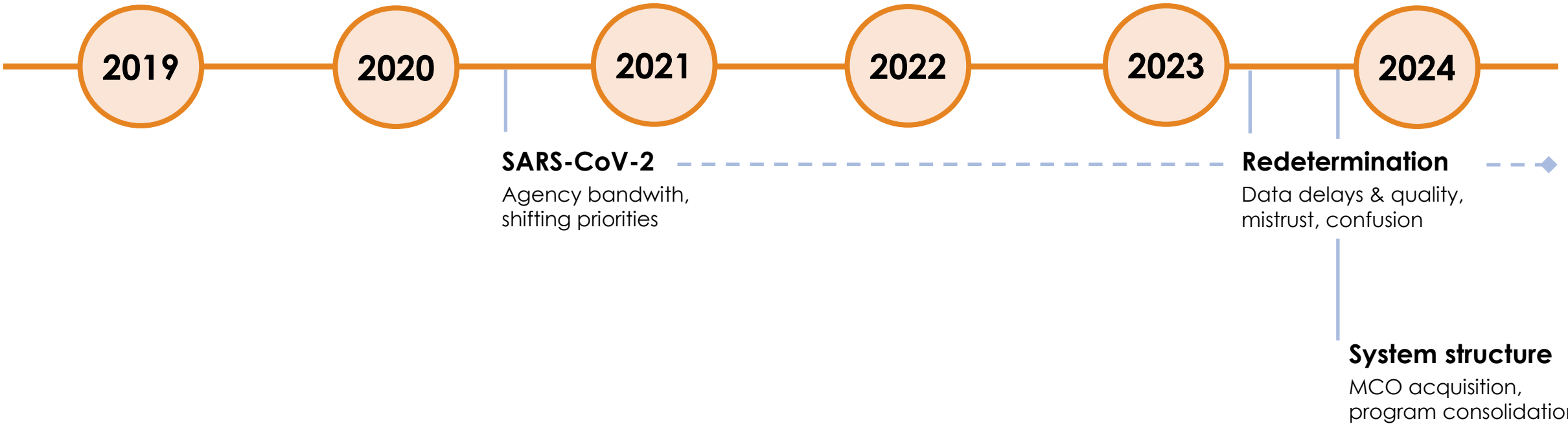
reach and relationships



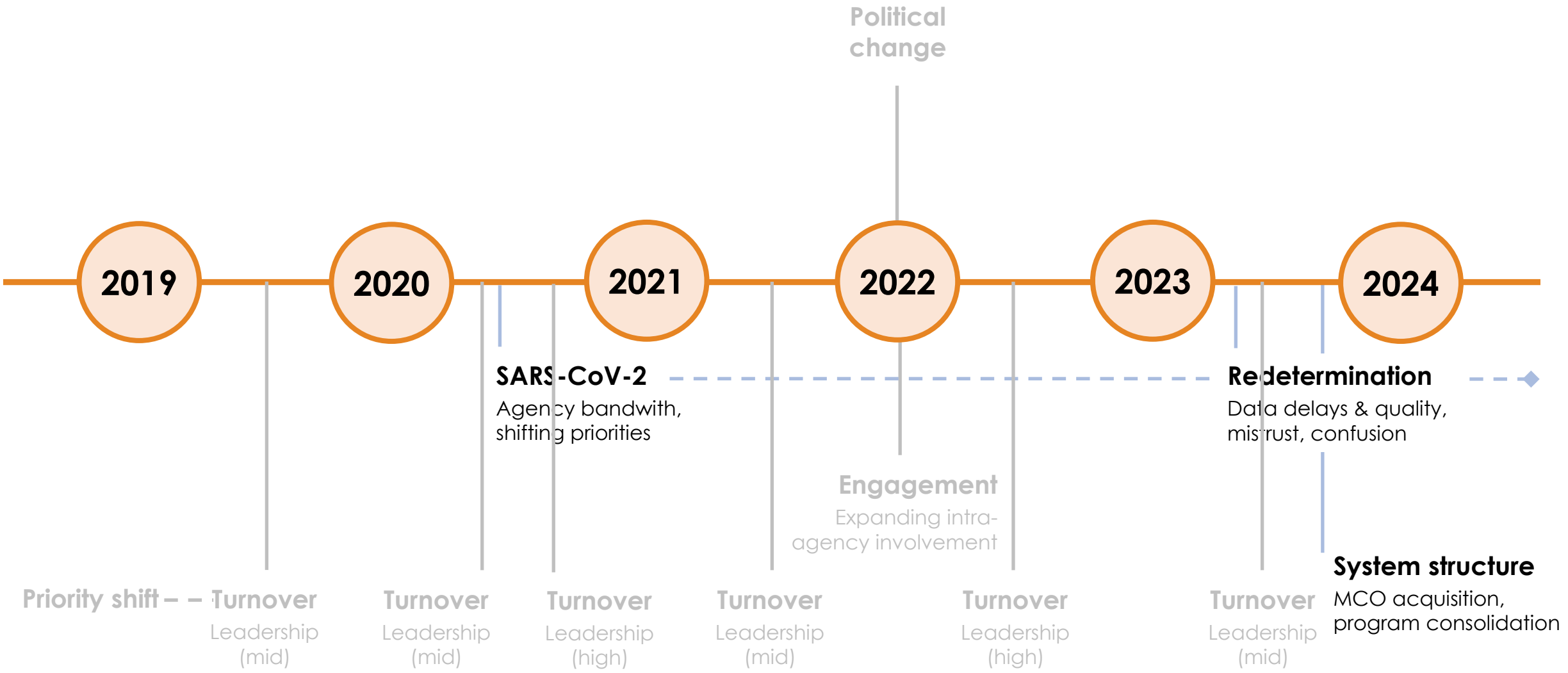
barrier domains

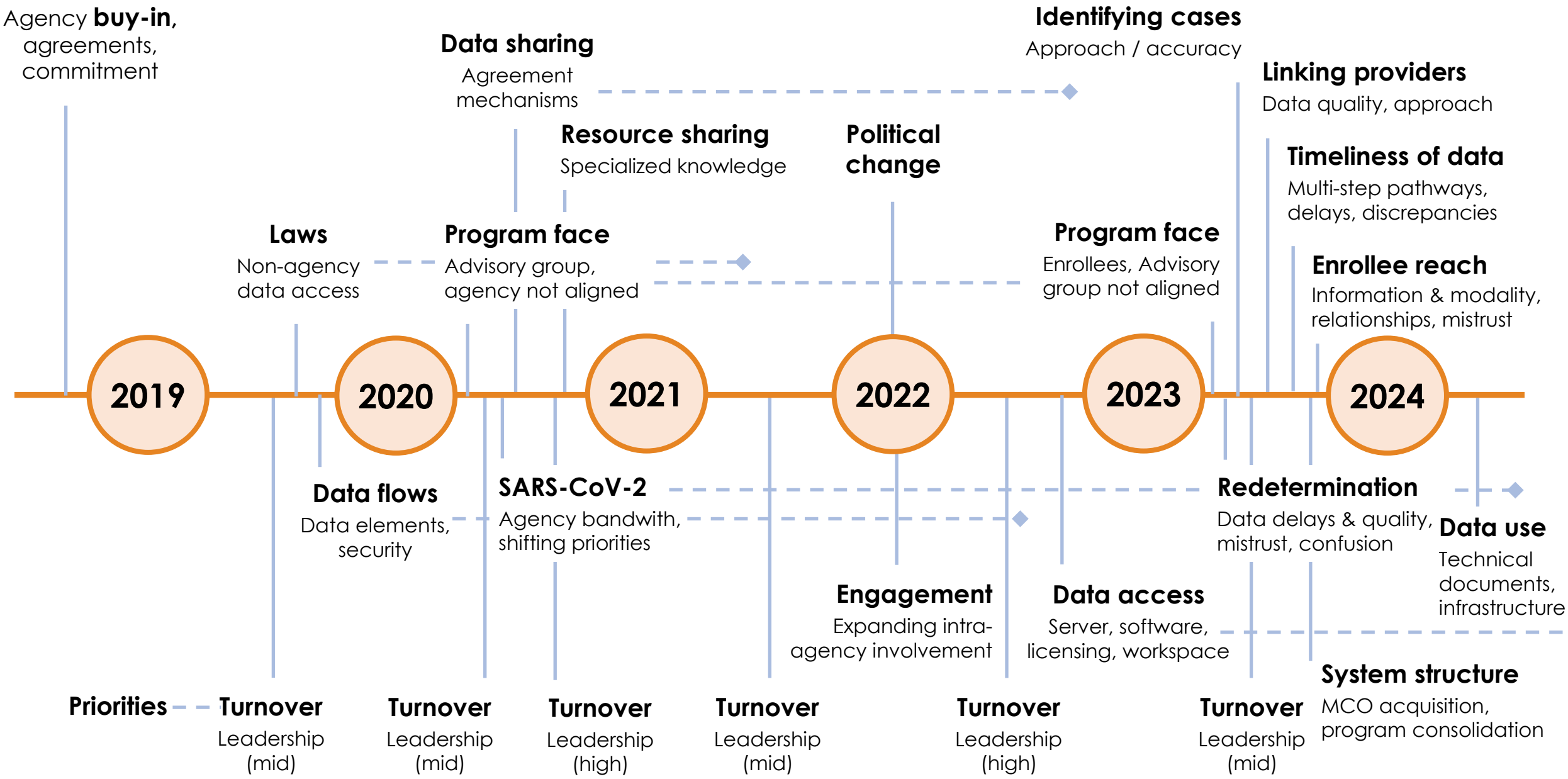
- Legality, leadership and priorities
- Data governance
- Data access, usability and support
- Reach and relationships
- Unexpected events
  - Unanticipated, but impactful, incidents that occur outside the immediate boundaries of the program

unexpected events



unexpected events




Agency **buy-in**, agreements, commitment
Data sharing
Agreement mechanisms
Identifying cases
Approach / accuracy
Linking providers
Data quality, approach
Resource sharing
Specialized knowledge
Political change
Timeliness of data
Multi-step pathways, delays, discrepancies
Laws
Non-agency data access
Program face
Advisory group, agency not aligned
Program face
Enrollees, Advisory group not aligned
Enrollee reach
Information & modality, relationships, mistrust
2019
2020
2021
2022
2023
2024
Data flows
Data elements, security
SARS-CoV-2
Agency bandwith, shifting priorities
Redetermination
Data delays & quality, mistrust, confusion
Data use
Technical documents, infrastructure
Engagement
Expanding intra-agency involvement
Data access
Server, software, licensing, workspace
System structure
MCO acquisition, program consolidation
Priorities
Turnover
Leadership (mid)
Turnover
Leadership (mid)
Turnover
Leadership (high)
Turnover
Leadership (mid)
Turnover
Leadership (high)
Turnover
Leadership (mid)

key insights

- Multiple barrier domains intersect at different levels and over time
- Just 1 barrier can substantially delay timelines, derail implementation
- Legal and regulatory issues, turnover and governance can eclipse data access and program implementation
- Nuanced knowledge of data pathways vital to identifying population
- Strong data expertise and underlying infrastructure essential
- Reaching, engaging participants not a one-size-fits-all approach

recommendations for claims-based D2C Rx

- Identify D2C Rx champions early and be flexible if champion turnover
- Understand agency incentives for D2C Rx and use as opportunity to bolster relationships, promote communication and elevate, when possible, D2C Rx among competing priorities
- Engage a intra-agency, multidisciplinary team with administrative and regulatory law, data governance and access, and population expertise
- Build in adequate time for nuanced understanding of data, pathways
- Differentiated D2C Rx approach based on known, trusted relationships

acknowledgements

Virginia Commonwealth University	Virginia Department of Health
Rose Bono, MPH Bassam Dahman, PhD Delton Harris, MSW Jessica Kiernan, MS Caressa Palmer, MPH Zhongzhe Pan, PhD Elliot Popoff, MPH April D. Kimmel, PhD (principal investigator)	Chelsea Canan, PhD Lauren Maxwell, MPH Tinika McIntosh, MPH Rachel Stallings, MPH
Virginia Medicaid	**University of Virginia**
Chethan Bachireddy, MD, MSc Neil McCray, PhD, MPP Andrew Mitchell, ScD John Morgan, MD Jennifer Palazzolo, PhD Lauryn Walker, PhD	Karen Ingersoll, PhD Ava Lena Walden, MHS
	Sentara
	Rebecca Dillingham, MD, MPH
	Centers for Disease Control and Prevention
	Kathy Byrd, MD, MPH
	National Institute of Mental Health
	Michael Stirratt, PhD

Thank you!

adkimmel@vcu.edu