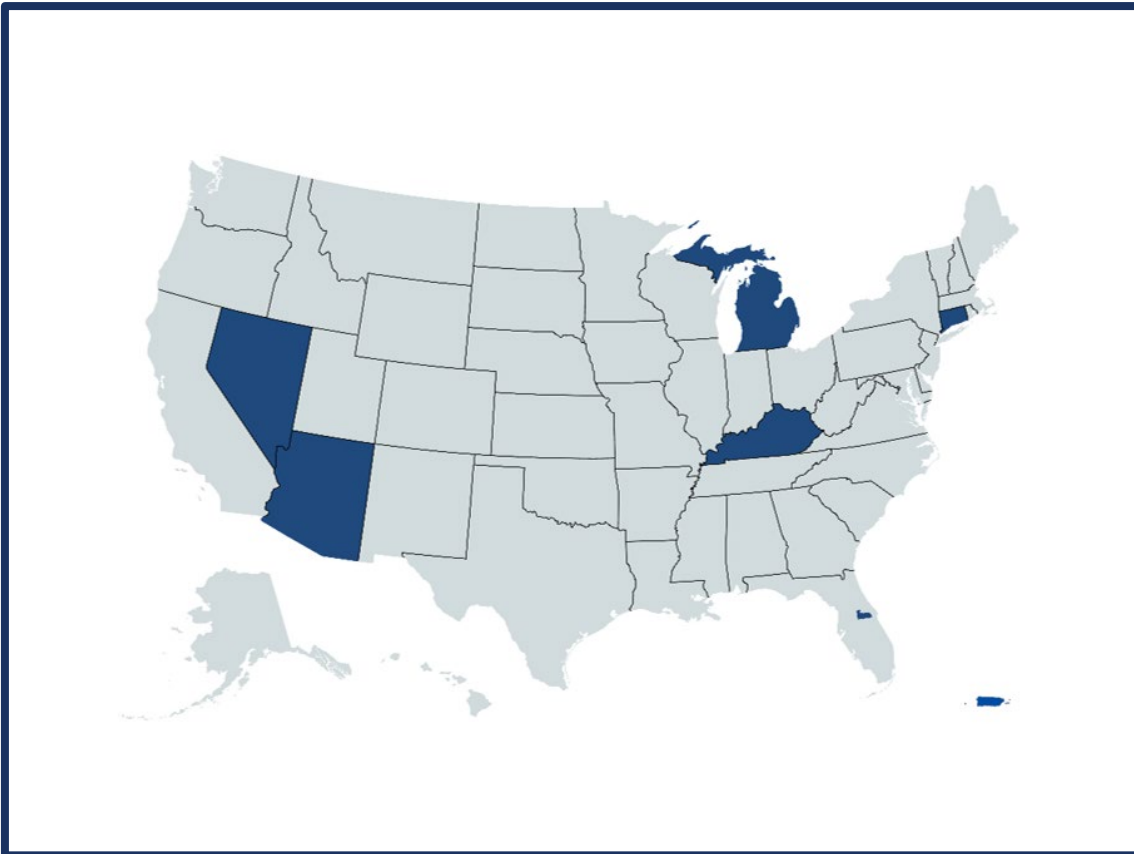


SEPTEMBER 26, 2023

**LEVERAGING A DATA TO
CARE (D2C) APPROACH TO
CURE HEPATITIS C VIRUS
(HCV) AMONG PEOPLE
WITH HIV**

Jurisdiction Perspectives

PROJECT OVERVIEW



- Two-year HRSA HAB initiative that was extended for a third year under a no cost extension
- Yale University School of Medicine served as the Technical Assistance Provider (TAP)
- 7 participating jurisdictions

TWO MAIN PROJECT COMPONENTS

HCV Clearance Cascades
for Co-Infected
Individuals



Outreach and Linkage to
Care



PRESENTATION OUTLINE

- Project activities and data overview: Yale University School of Medicine
- Jurisdiction perspectives: Arizona Department of Health Services
- Lessons learned and recommendations: Debbie Isenberg
- Question/answers

POLL QUESTION

- What best describes where you work?
 - RWHAP funded clinic
 - RWHAP Part A or B recipient
 - State or local HIV surveillance program
 - State or local HCV surveillance program
 - Other (Chat in your response)

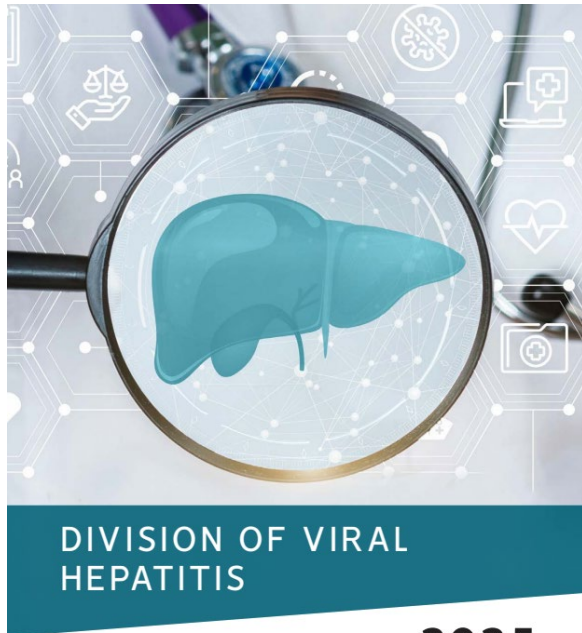
Innovative HCV Care Strategies for HIV/HCV Co-infection

Yale SCHOOL OF MEDICINE

Technical Assistance Provider

M. Villanueva, MD

HCV Viral Clearance Goal >80%



2025
STRATEGIC PLAN



The Viral Hepatitis National Strategic Plan: A Roadmap to Elimination (2021-2025) outlines 5 goals for the next 5 years.

	Prevent new viral hepatitis infections
	Improve viral hepatitis-related health outcomes of people with viral hepatitis
	Reduce viral hepatitis-related disparities and health inequities
	Improve viral hepatitis surveillance and data usage
	Achieve integrated, coordinated efforts that address the viral hepatitis epidemics among partners and stakeholders

HepVu.org SOURCE: U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) HepVu

Jurisdictional Viral Clearance Cascade



Importance of Jurisdictional HCV Clearance Cascade

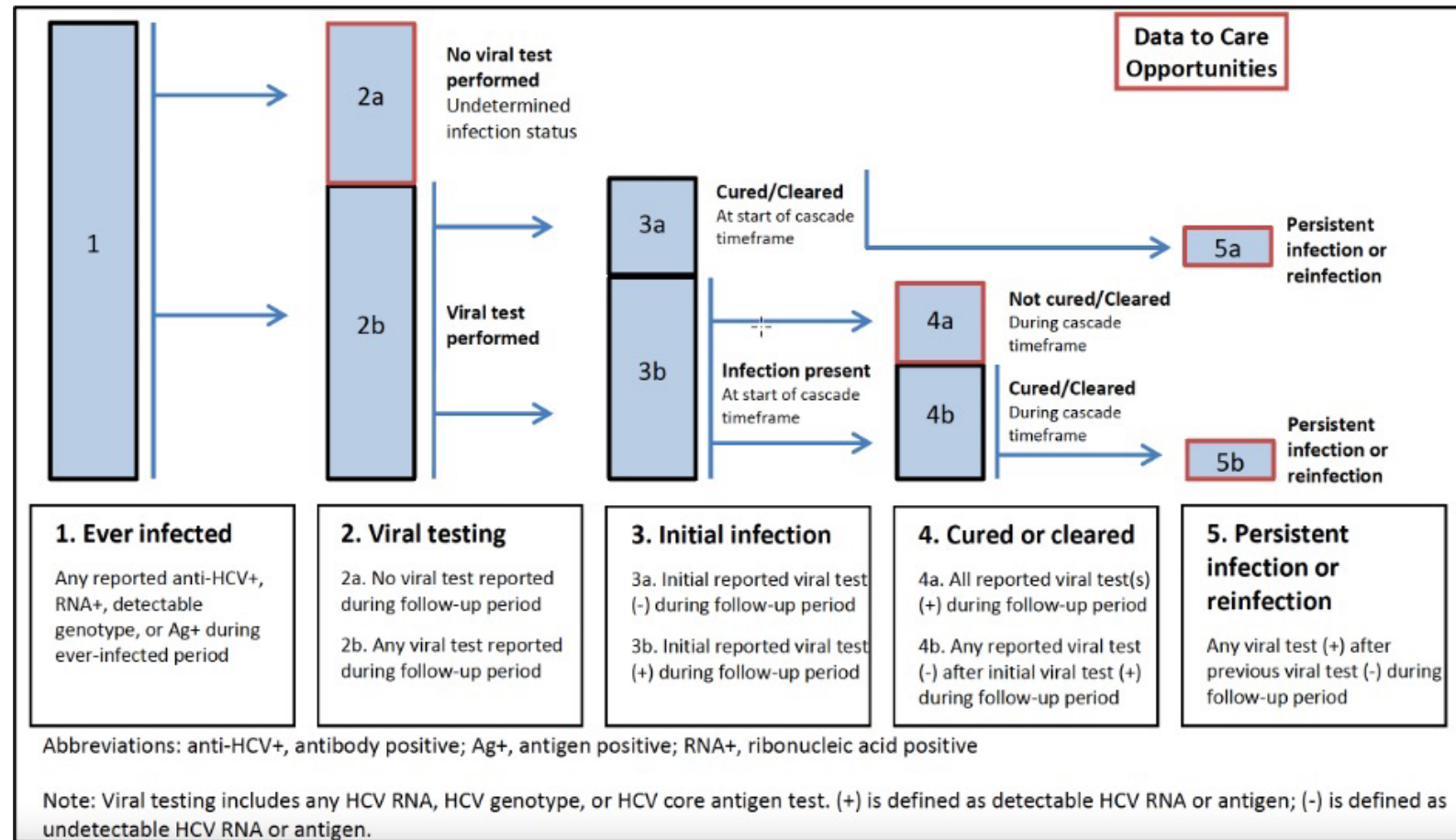
- Clearance cascade is a TOOL to help jurisdictions visualize diagnosis and treatment milestones
- Identify gaps in care
- Monitor micro-elimination efforts
- Key step in 2025 National Hepatitis Strategy

HCV clearance cascade is critical for monitoring progress and Identifying opportunities for intervention to achieve national elimination goals

- Public Health ReportsOnlineFirst, May 4, 2023

Development of a Standardized, Laboratory Result–Based Hepatitis C Virus Clearance Cascade for Public Health Jurisdictions

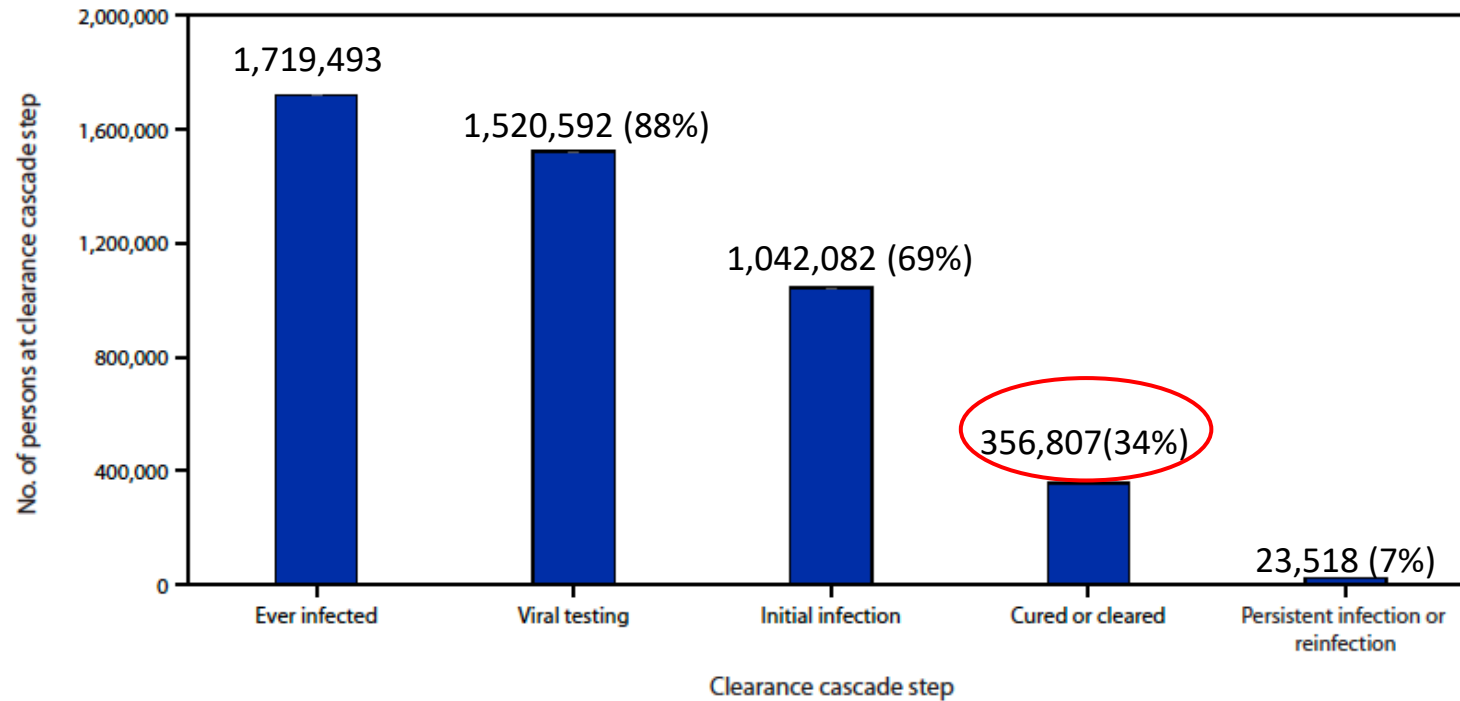
Martha P. Montgomery, MD, MHS, Lindsey Sizemore, MPH, Heather Win gate, MPH, et al.



Hepatitis C Virus Clearance Cascade — United States, 2013–2022

Carolyn Wester, MD¹; Ademola Osinubi, MS¹; Harvey W. Kaufman, MD²; Hasan Symum, PhD³; William A. Meyer III, PhD²; Xiaohua Huang, MS²; William W. Thompson, PhD¹

FIGURE 1. Hepatitis C virus clearance cascade using national commercial laboratory data — United States, 2013–2022



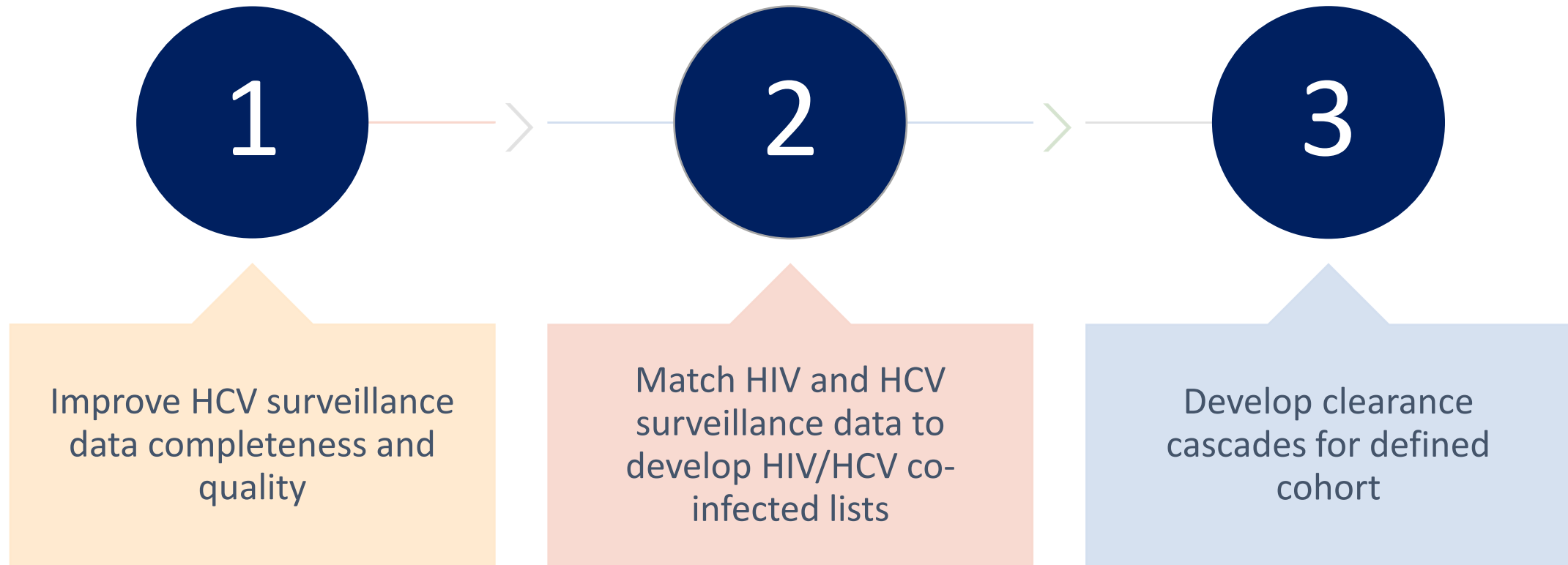
Cured/cleared rate 34% overall, but lower among persons

- Aged 20-39 years (16%)
- Other (self-pay) (22.7%)

Subset of persons with HCV infection-commercial lab data

Source: Quest Diagnostics (January 1, 2013–December 31, 2022).

Jurisdictional Clearance Cascades for HIV/HCV Co-infected Persons Using Surveillance Data: Core Steps



Creating the HCV Clearance Cascade: Key Steps

- Define base period (cohort) and follow-up period
- Assign individuals' dispositions based on HCV surveillance labs
- Select demographic characteristics to inform subpopulation analysis
- Populate Excel template (see tool)
- Review and analyze cascade
- Implement action steps (D2C)



Baseline Demographics for HIV/HCV Cohort as of 12/31/2019

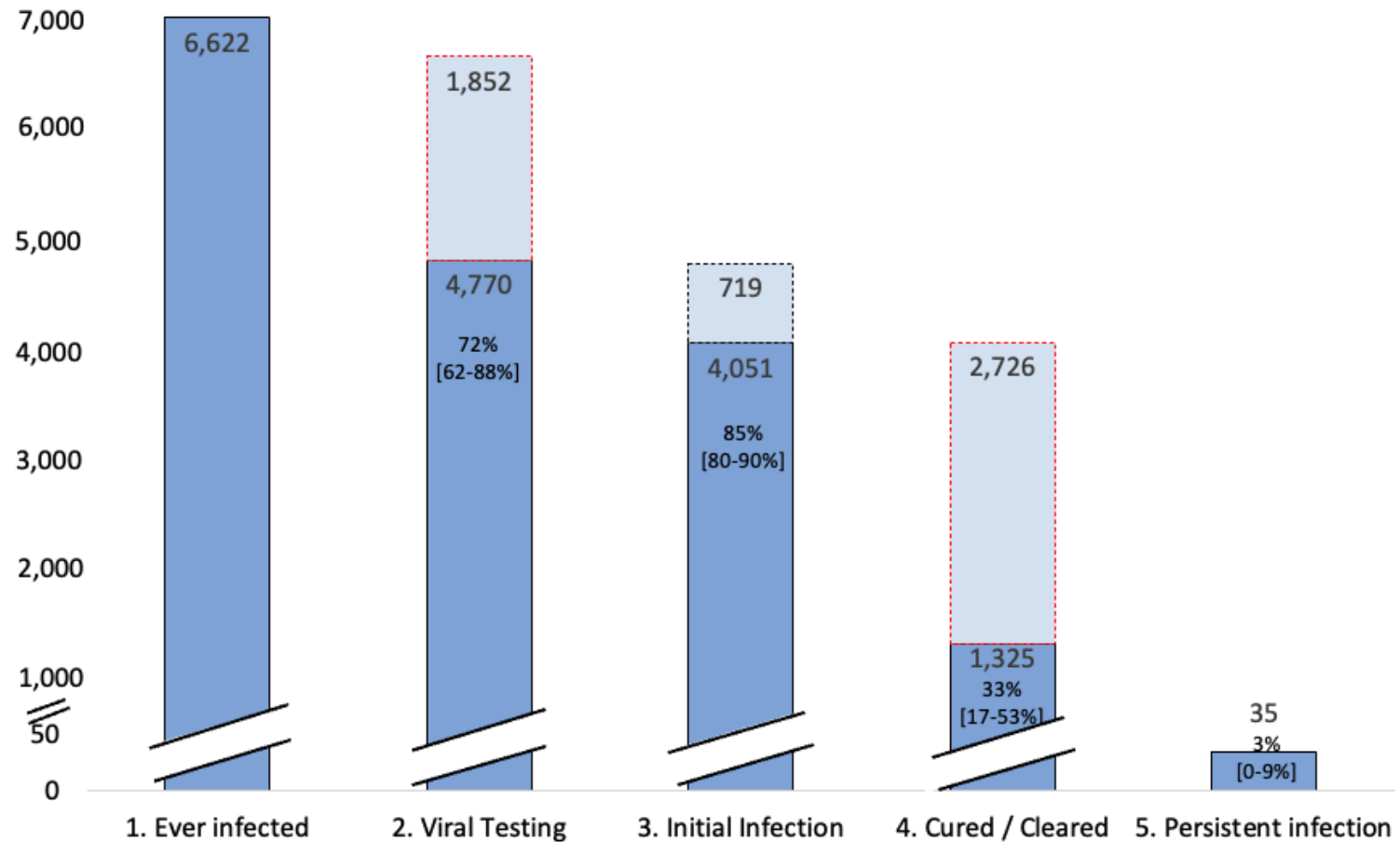
Demographic variable	HIV (N=84,955)		HCV (N=519,957)		Coinfected (N=7,827)	
	N	%	N	%	N	%
Race						
White / Caucasian	42,816	66.8%	155,845	72.0%	3,942	60.8%
Black or African American	27,253	42.5%	45,434	21.0%	2,217	34.2%
Asian	1,163	1.8%	1,921	0.9%	61	0.9%
Native Hawaiian or Pacific Islander	121	0.2%	143	0.1%	5	0.1%
American Indian / Alaska Native	959	1.5%	4,453	2.1%	96	1.5%
Other	1,778	2.8%	8,645	4.0%	166	2.6%
Unknown / Missing	10,865	12.8%	303,516	58.4%	1,345	17.2%
Ethnicity						
Hispanic / Latino					4	36.7%
Non-Hispanic					0	63.3%
Unknown / Missing						0.7%
Current Age Status						
Age (all combined)						
Age (all combined)						
Age (all combined)						
(quartile 1)						
Age (all combined)						
(quartile 3)						
Age (totals by)						
<18 (as possible)						0.1%
18-25						1.0%
26-35						8.1%
36-45					7	14.5%
46-55					9	27.6%
56-65					9	36.9%
66-75	6,466	7.6%	50,380	10.0%	871	11.1%
over 75 years	1,167	1.4%	14,608	2.9%	63	0.8%
Unknown / Missing	127	0.1%	16,781	3.2%	0	0.0%
Sex at Birth						
Male	66,439	78.2%	226,259	62.0%	5,889	75.2%
Female	18,515	21.8%	138,872	38.0%	1,946	24.9%
Unknown/Missing	1	0.001%	2,946	0.6%	1	0.01%

- 6.1 times as many HCV as HIV
- 9.2% co-infection rate for HIV compared to HIV
- More missing data for HCV compared to HIV
- HIV: higher percentage persons of color
- HCV: higher percentage white

Demographic variable	HIV (N=84,955)		HCV (N=519,957)		Coinfected (N=7,827)	
	N	%	N	%	N	%
HIV Transmission Type						
Male-male sexual contact	43,446	55.7%			1,883	25.1%
Injection drug use	8,545	11.0%			3,291	43.9%
Male-male sexual contact and injection drug use	3,904	5.0%			821	11.0%
Heterosexual contact (male-female)	19,875	25.5%			1,343	17.9%
Other	2,185	2.8%			151	2.0%
Unknown / Missing	6,990	8.2%			347	4.4%
HIV Suppression (months)						
Viral Load						%
Viral Load						%
Unknown						%
Time since Genotype						
<=6 mos						%
>6 - 12 mos						%
>12 - 18 mos						%
>18 mos						%
Unknown						%
Time since (Ab or PCR)						
<1 year						%
1 - <2 years						%
2 - <5 years						%
>= 5 years						%
Unknown / Missing			92,303	17.8%	291	3.7%
Time since most recent HCV (Ab or PCR) test						
<1 year			84,959	20.4%	2,632	34.6%
1 - <2 years			43,593	10.5%	1,211	15.9%
2 - <5 years			82,573	19.9%	1,980	26.0%
>= 5 years			204,213	49.2%	1,789	23.5%
Unknown / Missing			90,116	17.3%	224	0.3%

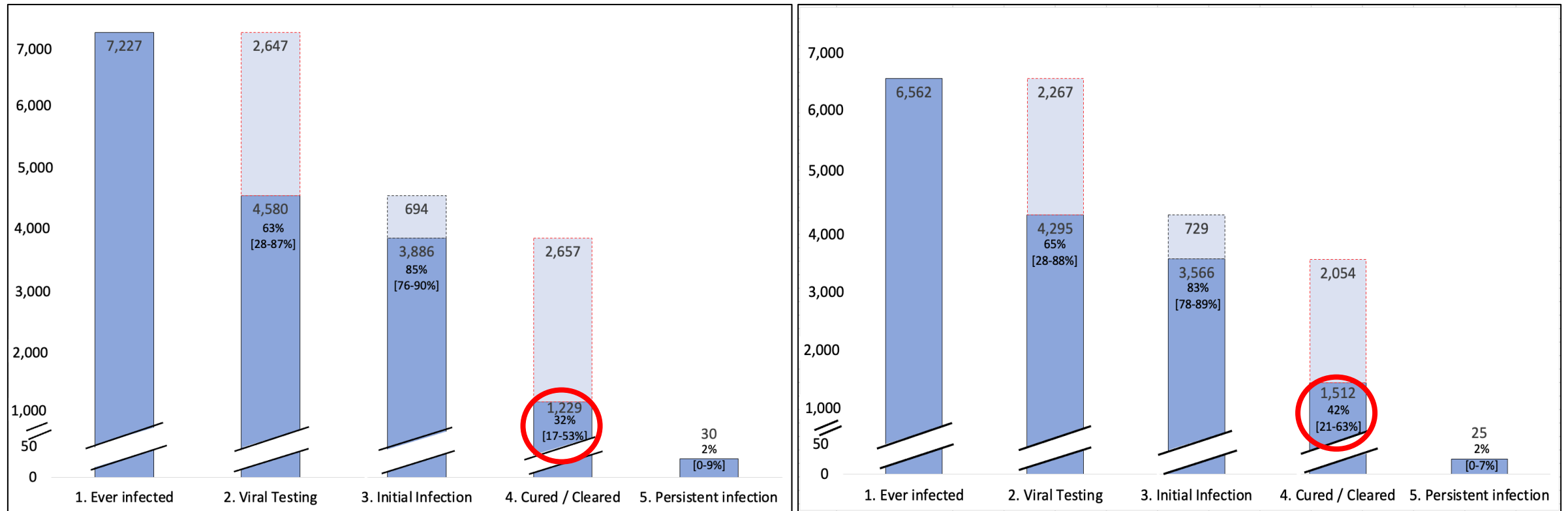
- ### HIV vs HIV/HCV Groups
- HIV Transmission:
 - HIV: predominantly MSM
 - HIV/HCV: IDU
 - Majority (>86%) had Undetectable HIV VL
 - Majority (>60%) had HIV lab tests in the past 6 months (i.e., engaged in HIV care)
 - Most recent HCV lab tests (<1 year ago) are available for HIV/HCV co-infected vs HCV mono-infected (34.6% vs 20.4%)

HCV Aggregate Viral Clearance Cascade for HIV/HCV Co-infected Persons from Six Jurisdictions using Surveillance Data (Status as of 12/31/2019)



Cohort defined as persons with HIV/HCV co-infection as of 12/31/2019 based on HIV and HCV surveillance data (AZ, CT, FL (Orange County), KY, MI, NV)

Laboratory-Based HCV Viral Clearance Cascades for Persons with HIV/HCV Coinfection: Longitudinal Comparison for 6 Jurisdictions



*Cascades include data for the following jurisdictions: AZ, CT, FLOC, MI, NV, & PR; based on surveillance data except for PR which used CAREWare data

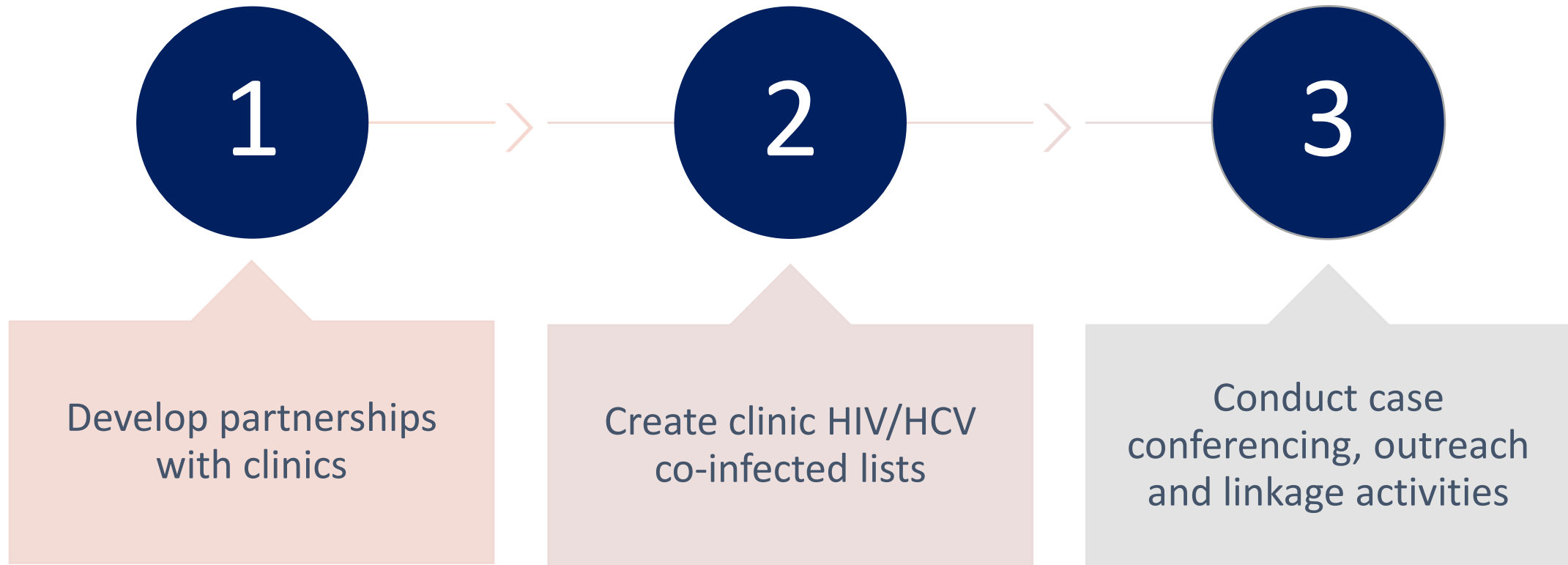
Gap Analysis of Outcomes: Connecticut

Table 3. Relationship between birth year, sex, race and ethnicity, HIV transmission category, and most recent HIV viral load and initial HCV viral testing status or cured or cleared of HCV infection status among people with HIV and HCV coinfection, Connecticut, based on laboratory tests from January 1, 2016, through August 3, 2020

Variable	People, no. (%)		OR (95% CI)
	Cured or cleared (n = 336)	Not cured or cleared (n = 529)	
Birth year			
Before 1966	222 (66.1)	351 (66.4)	0.99 (0.74-1.32)
1966 and later	114 (33.9)	178 (33.6)	1 [Reference]
Sex			
Female	97 (28.9)	155 (29.3)	1 [Reference]
Male	239 (71.1)	374 (70.7)	1.02 (0.76-1.38)
Race and ethnicity^{a,b}			
Non-Hispanic Black	108 (32.4)	208 (39.8)	0.81 (0.56-1.18)
Hispanic	151 (45.3)	199 (38.0)	1.19 (0.83-1.71)
Non-Hispanic White	74 (22.2)	116 (22.2)	1 [Reference]
HIV transmission category			
Heterosexual	35 (10.4)	55 (10.4)	1.04 (0.66-1.63)
MSM	21 (6.3)	38 (7.2)	0.90 (0.52-1.57)
MSM and PWID ^d	16 (4.8)	20 (3.8)	1.30 (0.66-2.56)
Other/unknown	19 (5.7)	17 (3.2)	1.82 (0.93-3.57)
PWID	245 (72.9)	399 (75.4)	1 [Reference]
Most recent HIV viral load level, copies/mL			
Detectable (≥ 200)	26 (7.7)	78 (14.7)	1 [Reference]
Undetectable (< 200)	310 (92.3)	451 (85.3)	2.06 (1.29-3.29) ^f

Clinic Cascade of Care – Outreach and Linkage

Outreach and Linkage: Key Steps to Approach to Data to Care



Review of Case Conference Methodology & Tool

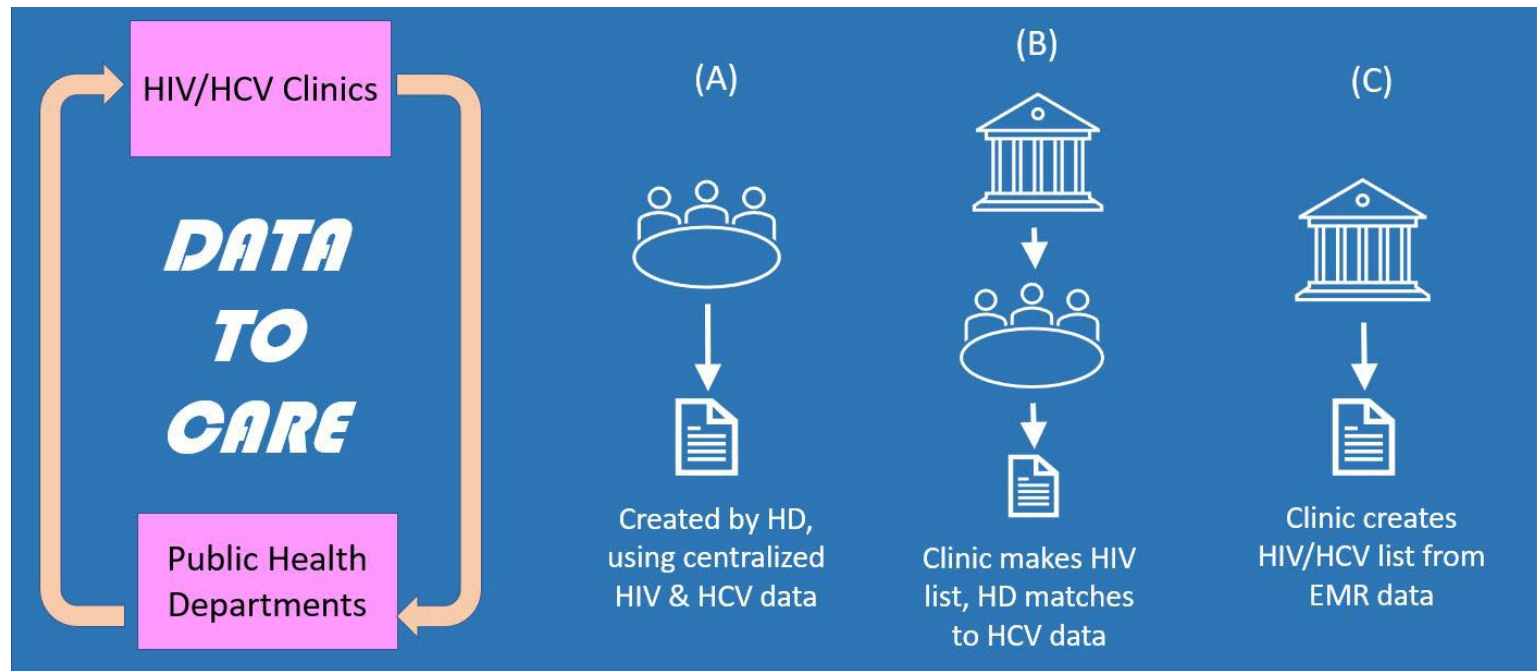
- Case Conferencing Data Tool
 - Demographics (for ID matching), Treatment Status, Barriers to Care
- Data Tool automatically generates cascades
 - More granular than CDC viral clearance cascades
- Yellow fields are minimum needed for cascade creation

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Date of Completion		9/2/2022						Age									
2	[serial #s starting with 1]	Match ID Number	eHARS Number	HCV DataID	First name	Last name	DOB	Birth Year	Age	Sex at Birth (select)	Gender (select)	Race (select)	Ethnicity (select)	Street address	City	Zip Code	Phone number	HIV Dx date
3																		
4																		
5																		
6																		
7																		
8																		
9																		
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	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
15																
16	Patient Outcome Category (current) (select)	Date of outcome (or date of assignment, if outcome date unknown)	Date of SVR (if applicable)	Needs Review? (self-populated)	Needs Case confintervention? Why? (select)											
17																
18																
19																
20																
21																
22																
23																
24																
25																



Case Case Conference Methodology



Create HIV/HCV
Co-infected List:
Different Models

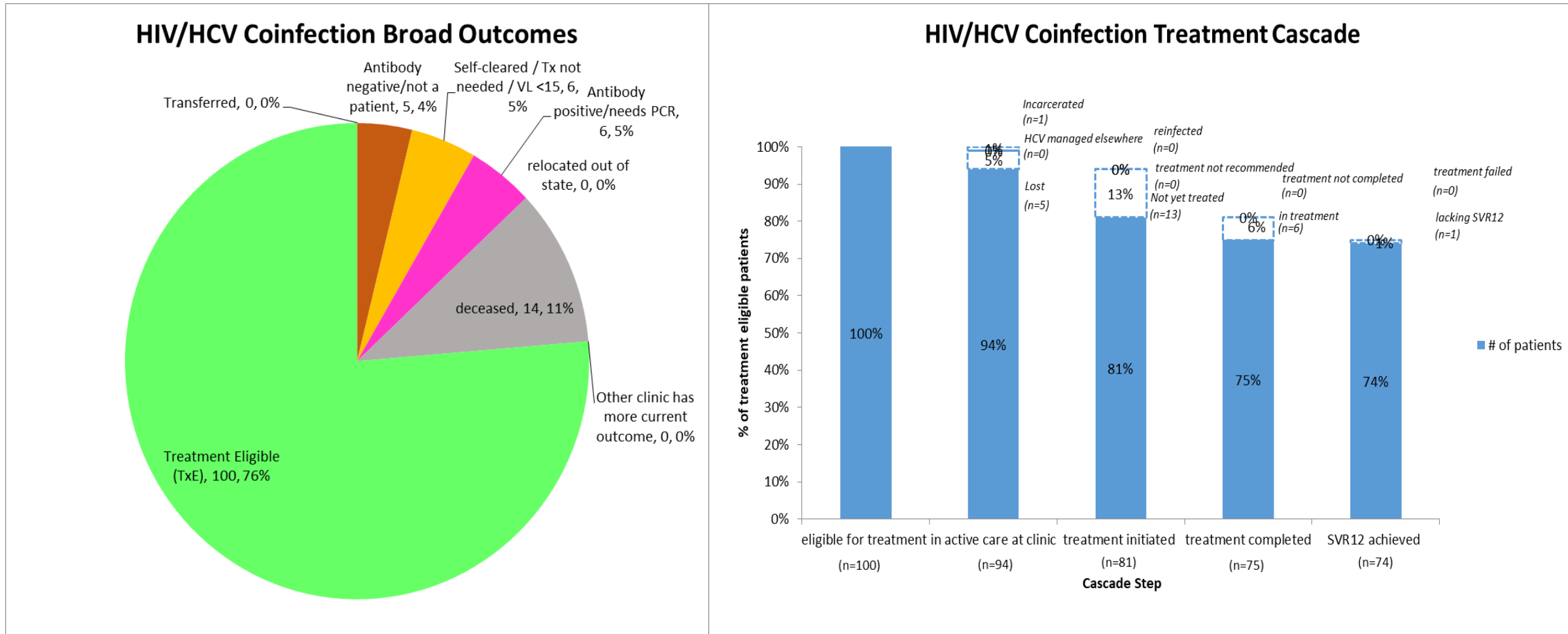
Health Department Champion Meets with Clinic Champion

Review HCV Treatment Status

Create Clinic-Specific HCV Care Cascade

Assess Barriers and implement Linkage Plan

Example of Clinic-Based Care Cascade Using Case Conferencing Tool





**Eliminating ~~Hepatitis C~~
~~Virus~~ within the Ryan
White HIV/AIDS Program:
Data to Care Approaches**

Arlis Jenkins, MPH
Alena Pittman, MsC



Overview



01 Background

02 Implementation

03 Lessons Learned

Background



Arizona Department of Health Services

The HIV and Hepatitis C Programs are responsible for the surveillance and prevention throughout the State of Arizona. Including:

- Collection and analysis of epidemiological data.
- Case investigations & patient navigation.
- Co-facilitation of community advisory groups such as SWAG and Hep Free AZ.

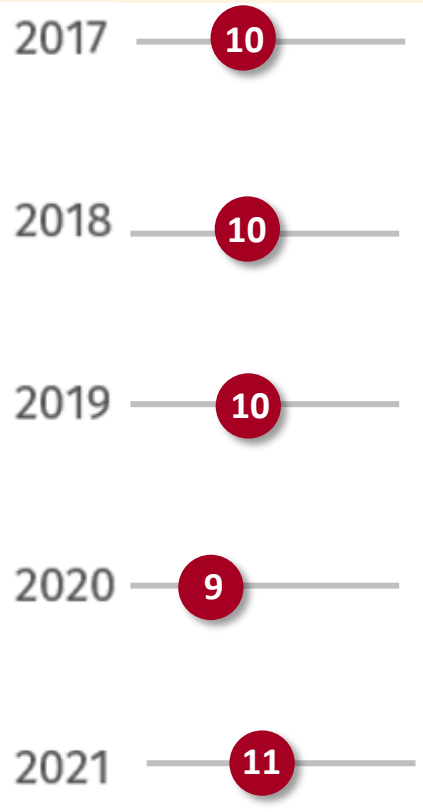


*Health and
Wellness for all
Arizonans.*

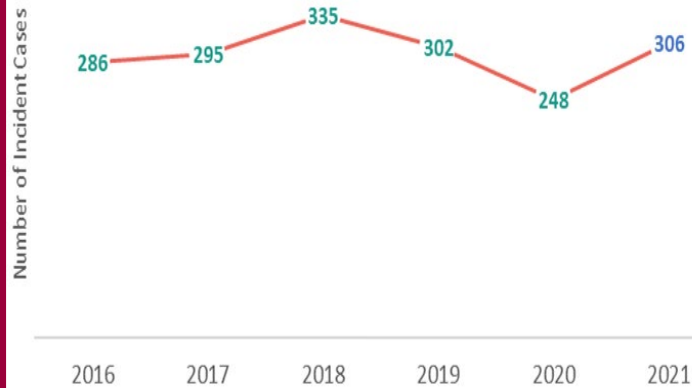


By the Numbers:

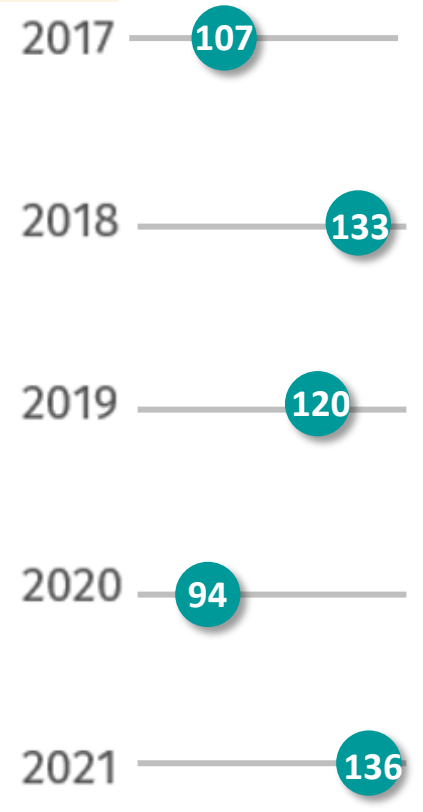
HIV



Comprising approximately 33% of new HIV diagnoses annually, MSM of color remain a priority population.



HCV



From 2017-2021:



Young Adults comprise a growing representation among new HCV reports received through Electronic Laboratory Reports.

Implementation



Creating Cascades



Data Extraction

HIV: eHARs, CAREWare

HCV Surveillance:

Electronic Laboratory Reporting (ELR)

Lists were created with eHARS, ELR data.



Data Matching

Software: MatchPro, SAS, Excel

MatchPro was used to combine the datasets.

SAS was used to finalize the list.



Data Cleaning

Once created, standardized variables were created using ELR LOINC and SNOMED codes.

Negative HCV labs were applied.



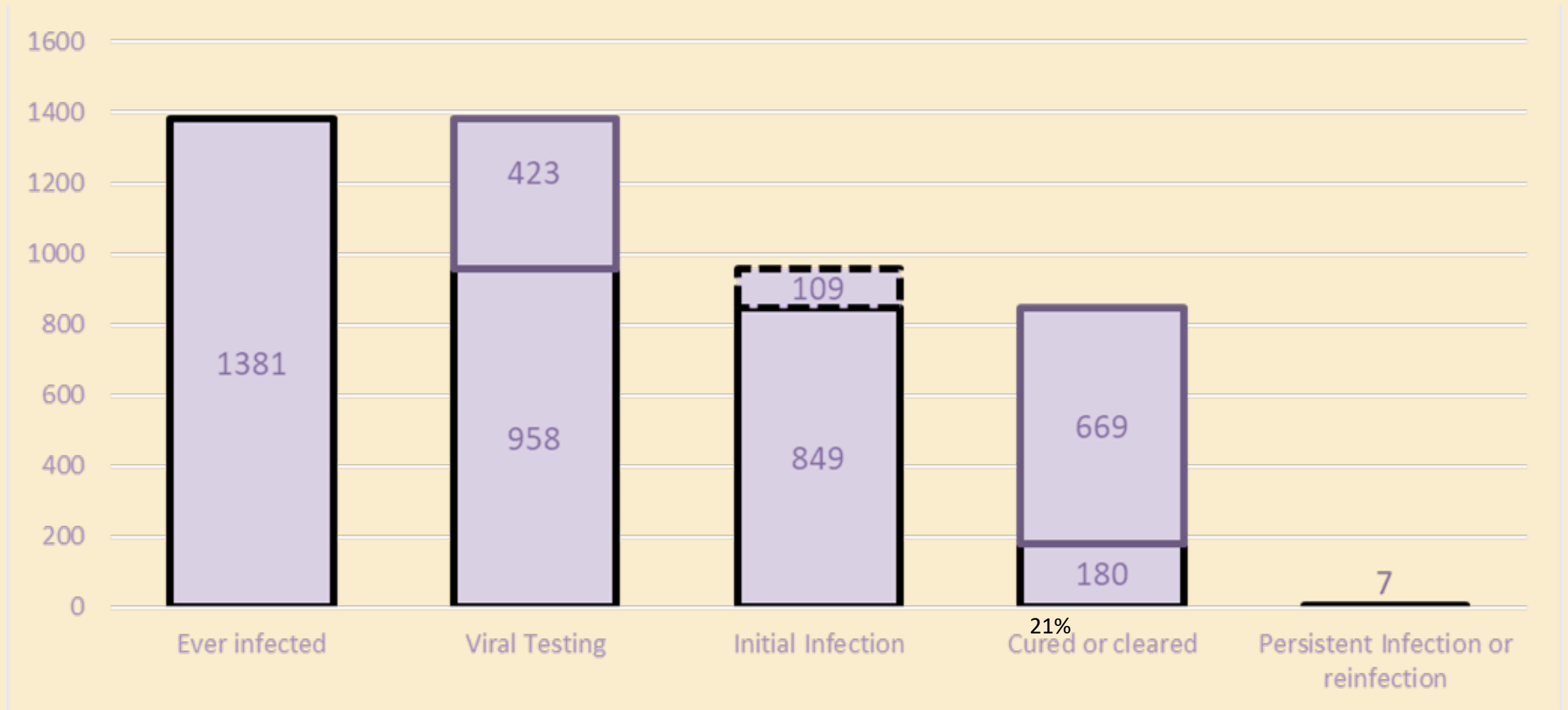
Cascade Creation

Cascades were created via the template provided.

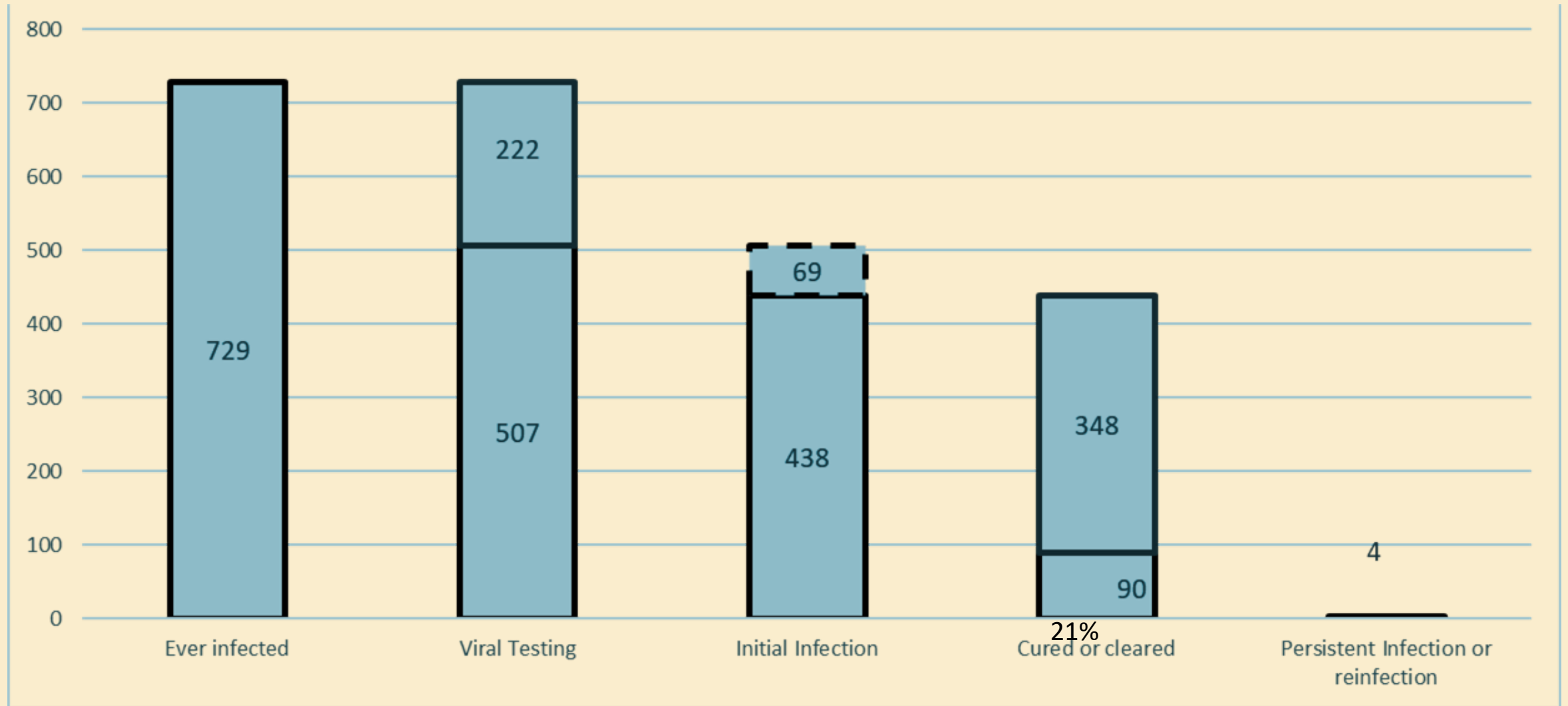
The finalized list was then submitted by the health department champion.

Care Cascades

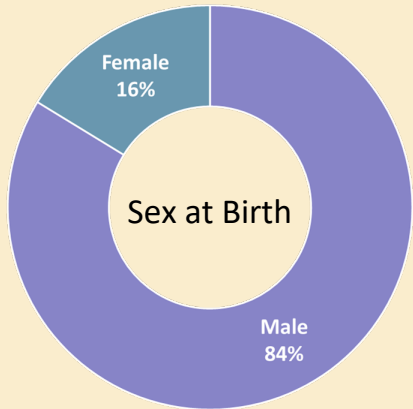
Statewide HIV/HCV Care Cascade



Statewide Ryan White Care Cascade

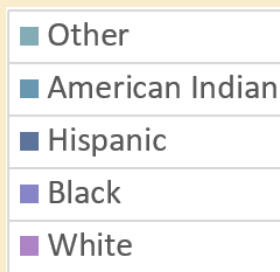


Demographics for All Patients

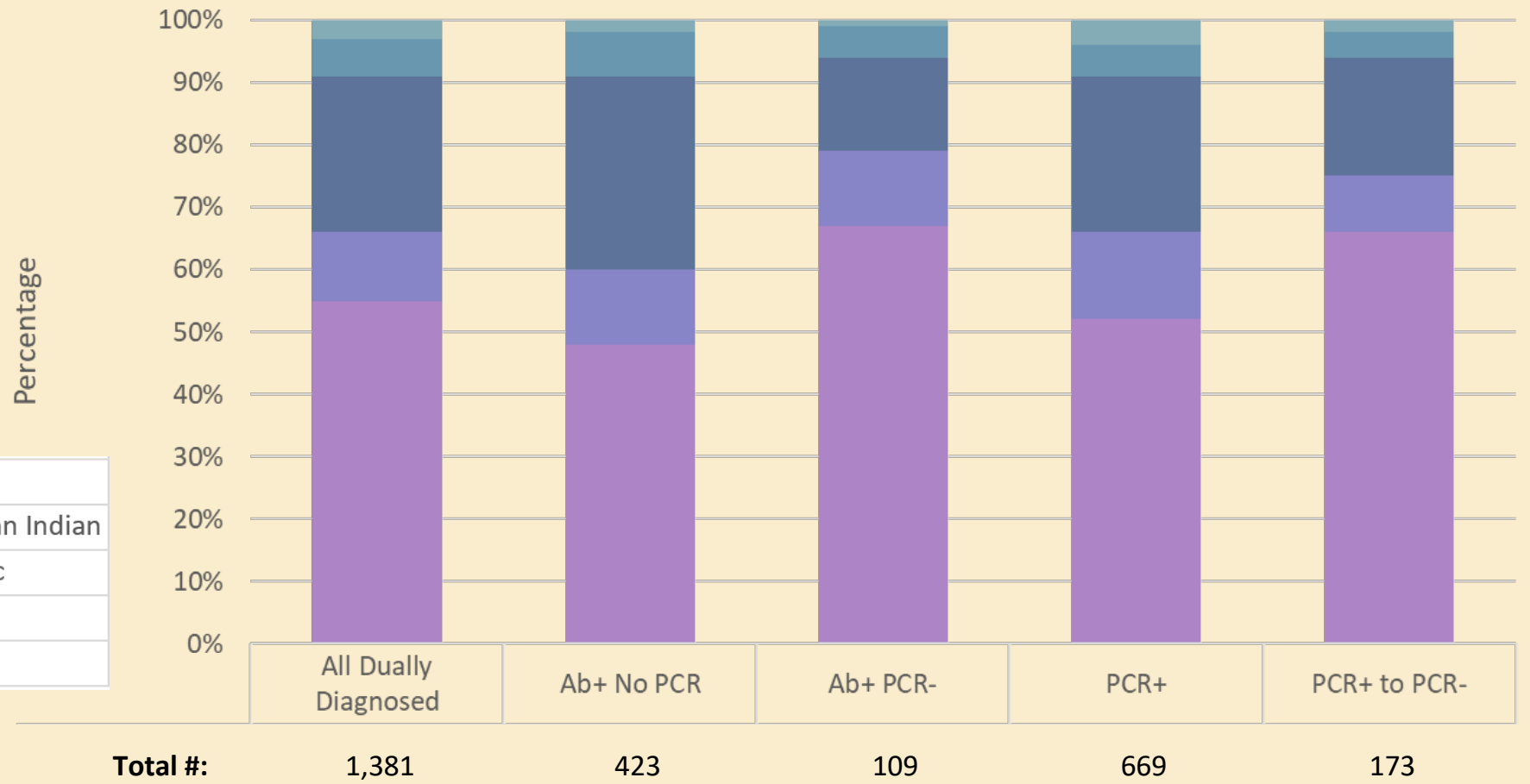


Average Age:

43

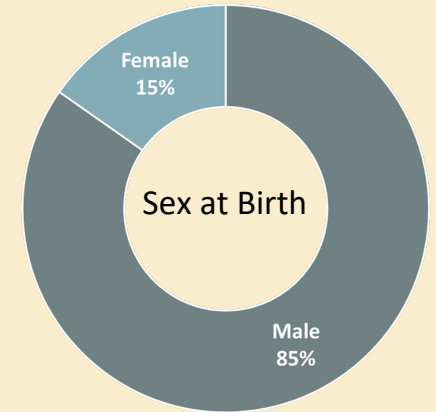
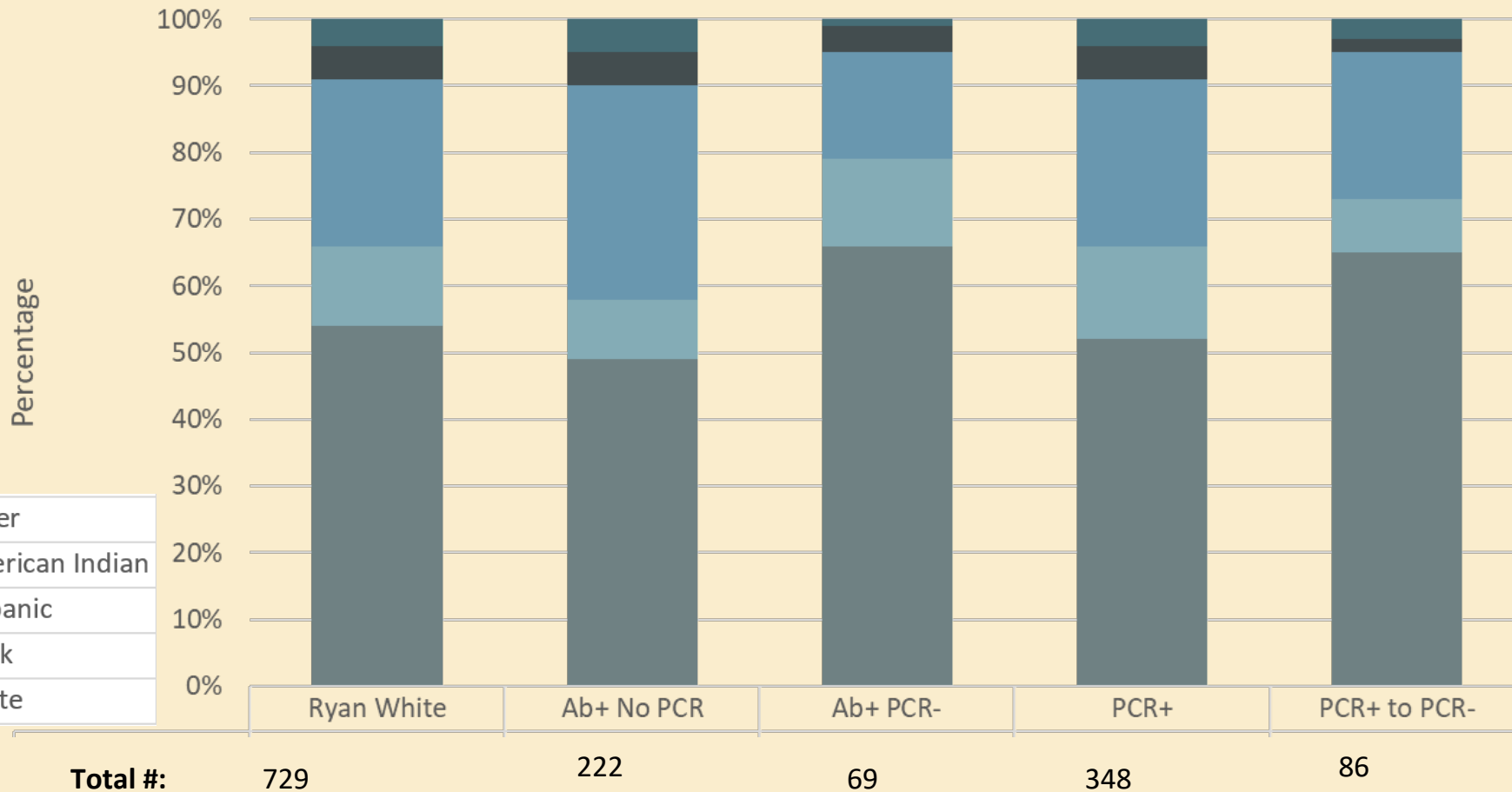


All Dually Diagnosed Individuals by Race/Ethnicity



Demographics for All RW Patients

All Ryan White Dually Diagnosed Individuals by Race/Ethnicity



Average Age:
43

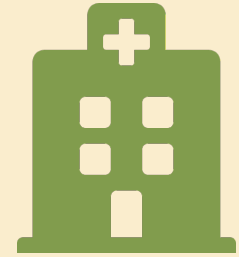
Clinic Collaborations

Selecting Clinics



ADHS

Arizona Department of Health Services, Healthcare Champion, Phoenix, AZ



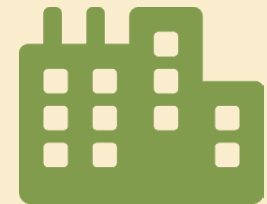
El Rio

Southern Arizona & largest FQHC by volume



North Country

Northern Arizona & specializes in rural medicine



Valleywise

Central Arizona & largest FQHC HIV clinic

Lessons Learned





Successes

- **Unified CAREWare and recurring reporting**
- **Creation of Care Cascades for dually diagnosed individuals**
- **Improved cross-program relationships**
- **Established clinic relationships**
- **Improved understanding of patient barriers**
- **Better comprehension of how to sustain these efforts in the future for the state as a whole**

Challenges

- **Lack of negative hepatitis C reporting**
- **CareWare validation and reconciliation with eHARS**
- **Coordination among all involved within the project and across data systems**
- **Capacity and resources**
- **Competing responsibilities**



Advice for Jurisdictions

- **Determine communication preferences and availability prior to starting work.**
 - **Example: *How many hours can be allocated to this care cascade per week?***
- **Have a clear understanding of the available data systems including the strengths and challenges of each.**
 - **Example: *The more data systems involved the harder it becomes and more room for error.***
- **Familiarize yourself with the care cascade model in advance and prioritize data points that will help improve patient outcomes.**
- **Maintain and work to strengthen working relationships between all involved parties.**



Thank You!



Contact:

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Alena Pittman: alena.pittman@azdhs.gov



IMPLEMENTATION SUGGESTIONS AND LESSONS LEARNED

SEPTEMBER 26, 2023



CREATING THE JURISDICTION AND RWHAP HCV CLEARANCE CASCADES

KEY STEPS IN CREATING CLEARANCE CASCADES

Prepping and
Cleaning Data

Matching Data

Populating the
HCV Clearance
Cascade
Templates

Calculating the
HCV Clearance
Cascades

HCV SURVEILLANCE DATA QUALITY AND LAB REPORTING

- Review current HCV reporting requirements to understand how data may impact clearance cascade results
- Leverage HIV surveillance data to improve HCV surveillance data quality
- Unpackage labs as needed
- Ensure person working with data understands HCV
- Enhance lab reporting to include negative PCRs and standalone PCRs

PROGRAM INTEGRATION AND ONGOING COLLABORATION

- Leverage existing integration and collaboration to decrease barriers
- Engage staff from all programs at the beginning of the project and hold regular meetings
- Review organizational P&P to determine requirements for sharing data; engage legal/privacy team if needed
- Crosstrain/share staff with experience with both surveillance datasets to facilitate process

MATCHING HISTORY AND APPROACH

- Ensure you have the resources needed if first time matching
- Plan for review process across datasets
- Maintain field(s) in your matched data that enables you to reference the original list(s) created
- Identify impact on match based on available RWHAP data scope and inclusion criteria

STAFFING AND RESOURCES

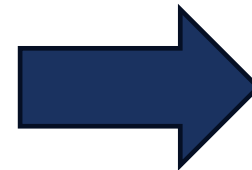
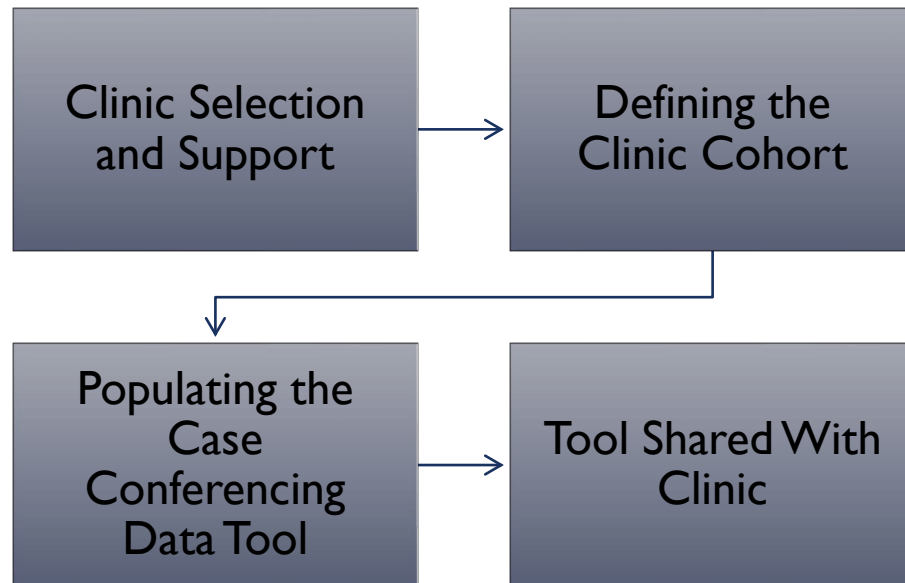
- Plan for more resource investment initially if new to matching or collaboration
- Align approach to D2C with existing resources to increase sustainability
- Designate an HCV champion to keep the project moving forward
- Develop documentation/formal protocols and policies for D2C activities



CLINIC-BASED OUTREACH AND LINKAGE TO CARE



KEY STEPS IN HCV D2C OUTREACH AND LINKAGE



PUBLIC HEALTH STATUTE AND DATA SHARING

- Identify any data sharing issues early in the project; don't wait until you're ready to work with clinics
- Engage legal/privacy staff early in the project
- Review RWHAP client consent to determine any data sharing barriers
- Include activities like D2C in RWHAP contracts/ agreements with clinics

SELECTING AND PREPARING CLINICS

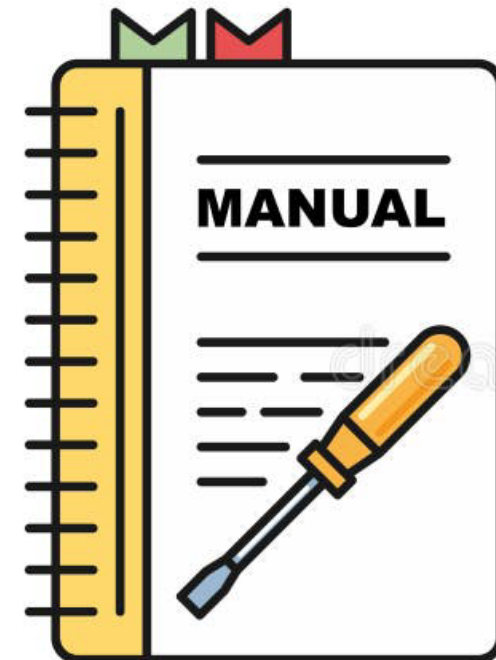
- Use RWHAP jurisdiction staff to engage clinics for participation
- Clearly outline project expectations at time of clinic recruitment
- Identify clinics with D2C experience and existing HCV treatment capacity
- Choose health department clinics if data sharing barriers anticipated
- Fund clinics if at all possible
- Identify a lead/champion at the clinic (and a lead at the jurisdiction with whom they will work)
- Determine if IRB or other approval needed

USING RWHAP DATA SYSTEMS TO CREATE CLINIC LISTS OF PWH

- Limit data to most recent time period feasible
- Ensure that people on list are active RWHAP clients at the clinic
- Ask clinic to identify additional clients who weren't on list
- Take clinic structure into consideration when creating list
 - Ensure that clients are receiving OAHS at clinic, not solely support services

IMPLEMENTATION SUPPORT RESOURCES

- TargetHIV page with project information and resources: <https://targethiv.org/spns/hiv-hcv-dtc>
 - Recorded webinars
 - Implementation Manual with steps and lessons learned to support replication
 - Videos and companion guide
 - Clearance cascade and case conferencing tools



POLL QUESTION

- Which of the following best describes how HCV Data to Care for people with HIV fits into your current activities?
 - We're already doing this so we're all set!
 - We're not doing this but plan to add this to our current activities
 - We can't do this now but maybe in the future (please chat in any barriers)
 - I'm not sure



QUESTIONS?

CONTACTS

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- Arizona Department of Health Services
 - Arlis Jenkins: arlis.jenkins@azdhs.gov
 - Alena Pittman: alena.pittman@azdhs.gov
- Mission: Ellie Coombs, ecoombs@mission-ag.com