

# Data Sharing to End Homelessness – Challenges and Solutions

*Corporation for Supportive Housing + American Public Human Services Association*



# Presenters



## **KIM KEATON**

Director of Data and Analytics

*Corporation for Supportive Housing (CSH)*



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Director, Policy & Research

*American Public Human Services Association (APHSA)*



## **JESSIE METCALF**

Homelessness Initiatives Lead, U.S. State and Local Government

*Amazon Web Services (AWS)*

# Panelists



## MARLA SUTHERLAND

*Housing First Services Director at Homeward Alliance*

*City of Fort Collins*



## ERIN DALTON

Deputy Director, Department of Human Services

*Allegheny County, Pennsylvania*



# Agenda



1. Objectives
2. Trends in Homeless Data and Sharing
3. Community Examples
  1. City of Fort Collins
  2. Allegheny County, PA
4. Panel Discussion
5. Questions and Answers



# Learning Objectives



1. Learn about homeless services data and how integration can help achieve better outcomes in ending homelessness
2. Learn key strategies and use cases from communities that have successfully shared data
3. Generate a sense of excitement about using homeless data to improve the cornerstone of stability of people's lives – housing stability

# Survey Reminder

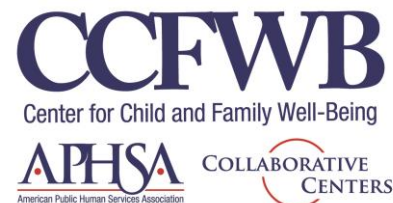
*We will distribute a brief survey to attendees after today's webinar to get your feedback on the information and resources you need to scale up data sharing between homelessness and human services systems.*





# Trends in Homeless Data and Sharing

# 2019 APHSA Policy & Practice Priorities



Family First Implementation  
Child Abuse Prevention & Treatment Act  
CCWIS Data Systems & AFCARS Reporting  
Population Health Strategies in Child Welfare  
Child Care Development Fund Implementation



Temporary Assistance for Needy Families (TANF)  
Reauthorization  
Farm Bill Implementation  
TANF/WIOA Coordination  
Work Requirements

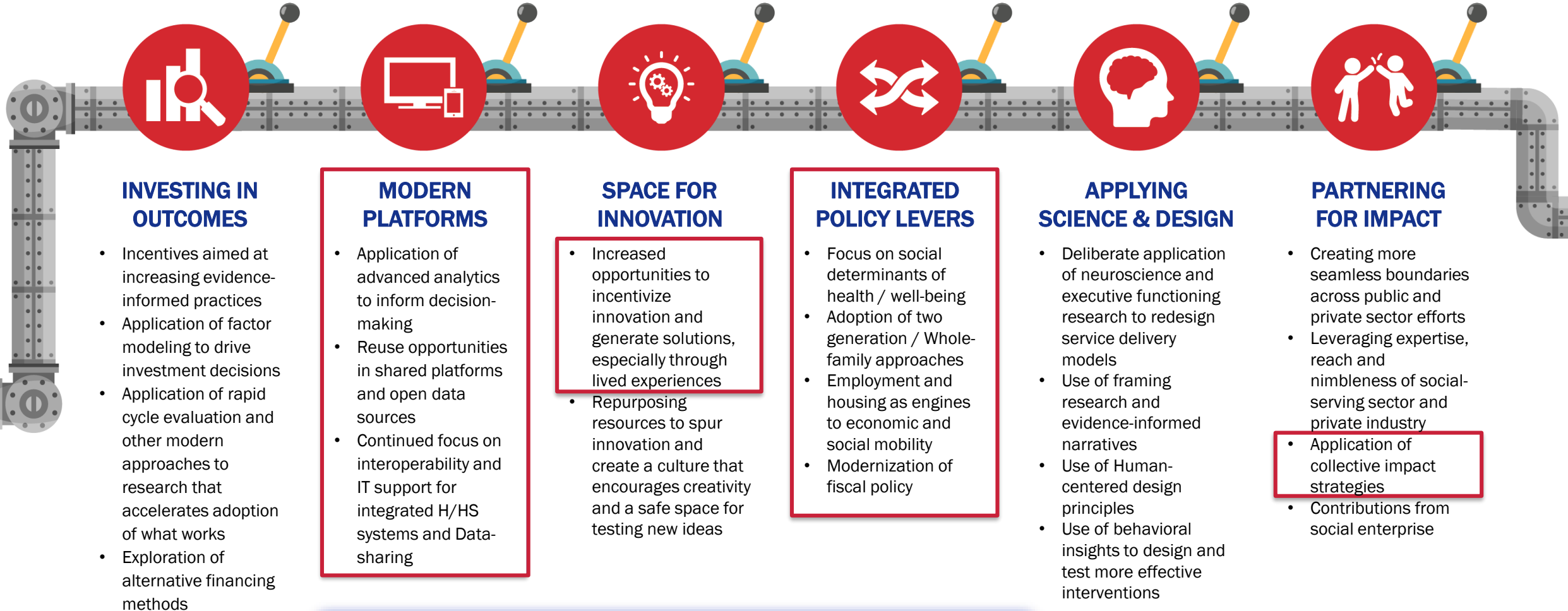


Social Determinants of Health  
Substance Use Disorder and Behavioral Health  
Data Optimization and Interoperability  
Culture of Analytics  
Evidence-based Policymaking





# Six Key Levers



## INVESTING IN OUTCOMES

- Incentives aimed at increasing evidence-informed practices
- Application of factor modeling to drive investment decisions
- Application of rapid cycle evaluation and other modern approaches to research that accelerates adoption of what works
- Exploration of alternative financing methods

## MODERN PLATFORMS

- Application of advanced analytics to inform decision-making
- Reuse opportunities in shared platforms and open data sources
- Continued focus on interoperability and IT support for integrated H/HS systems and Data-sharing

## SPACE FOR INNOVATION

- Increased opportunities to incentivize innovation and generate solutions, especially through lived experiences
- Repurposing resources to spur innovation and create a culture that encourages creativity and a safe space for testing new ideas

## INTEGRATED POLICY LEVERS

- Focus on social determinants of health / well-being
- Adoption of two generation / Whole-family approaches
- Employment and housing as engines to economic and social mobility
- Modernization of fiscal policy

## APPLYING SCIENCE & DESIGN

- Deliberate application of neuroscience and executive functioning research to redesign service delivery models
- Use of framing research and evidence-informed narratives
- Use of Human-centered design principles
- Use of behavioral insights to design and test more effective interventions

## PARTNERING FOR IMPACT

- Creating more seamless boundaries across public and private sector efforts
- Leveraging expertise, reach and nimbleness of social-serving sector and private industry
- Application of collective impact strategies
- Contributions from social enterprise

Each lever must be pulled through a race equity lens

# ADVANCING HOUSING SOLUTIONS THAT



Improve lives of vulnerable people



Maximize public resources



Build strong, healthy communities

# Homeless Services Data: What is it? What's in it?

- Homeless Management Information Systems – HMIS
- Each Continuum of Care funded by HUD is comprised of homeless service provider through out a region
  - County
  - City
  - Multi-county/Balance of State
  - State
- Each CoC must have a HMIS system and designated lead

## Demographics

- Client ID
- Race/Gender
- Vet Status
- Prior residence (street, jail, etc)

## Program Services and Dates

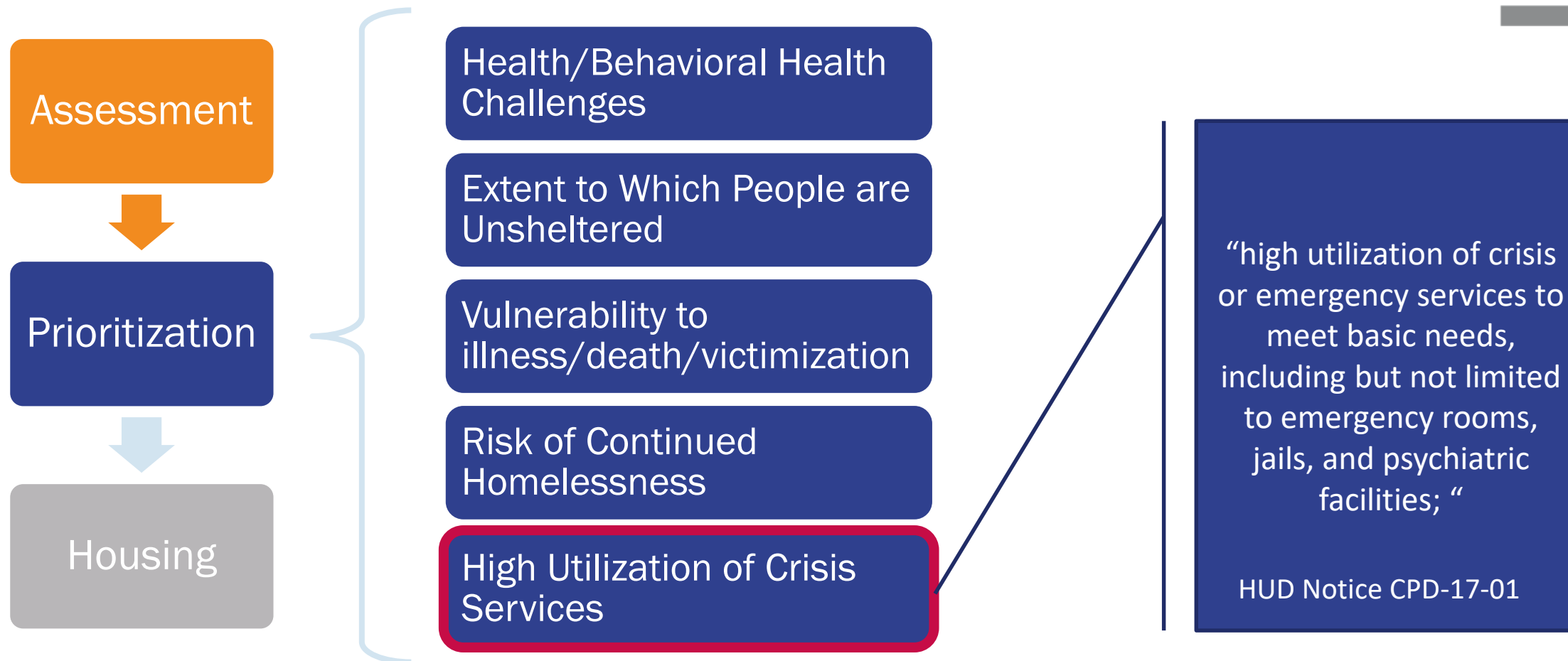
- Emergency Shelter
- Transitional/Rapid Rehousing
- Permanent Supportive Housing
- Outreach contacts
- Other such as drop in, food pantry

## Outcomes

- Exit dates
- Exit reasons
- Exit destinations (jail, homelessness, hospital etc.)

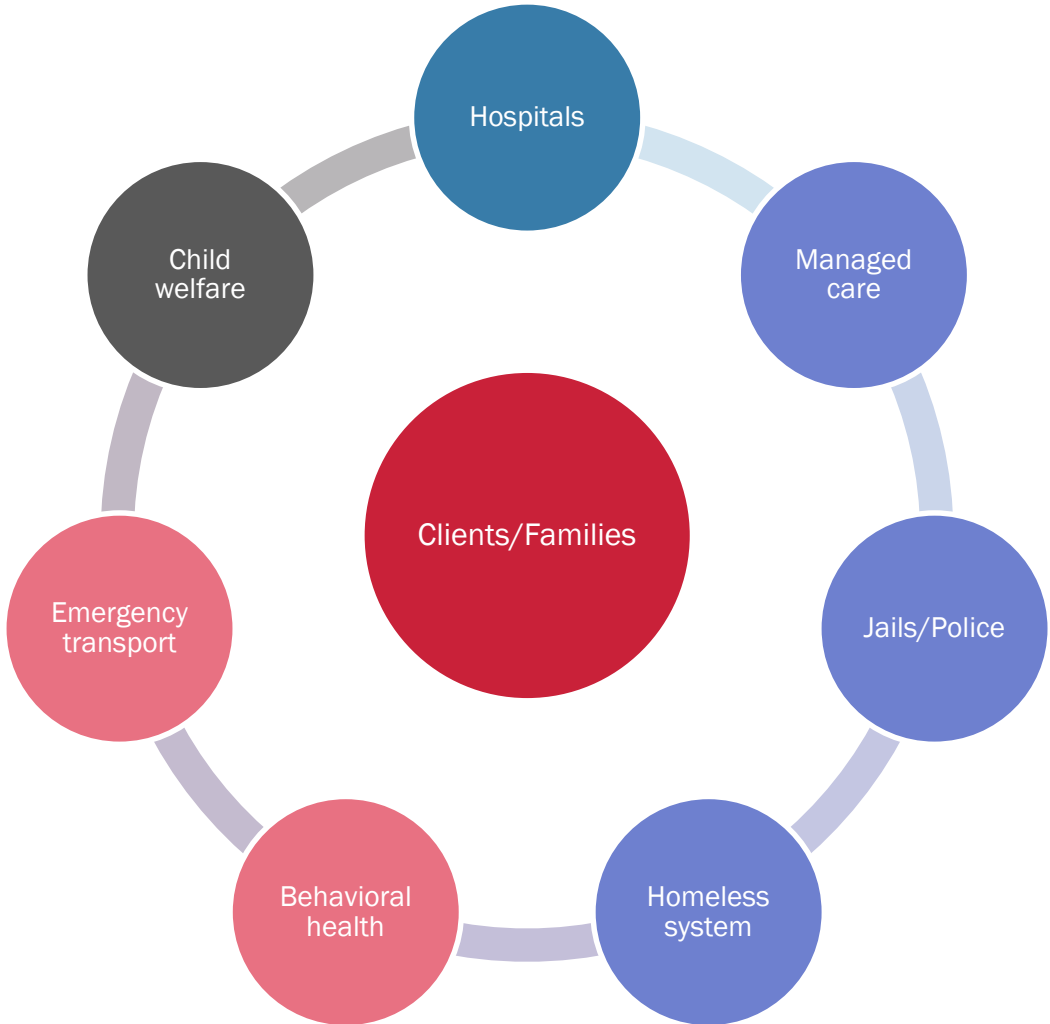
CoC's partner agencies across the region all enter into HMIS for various projects and programs.

# Motivation: HUD Guidance for Coordinated Entry



# The Opportunity Across Human Services

Data is the secret sauce that can bring these partners together!





# HMIS Data Matching and Exchange Types

## One time matches

- Good first step if data is very siloed
- Useful for examining system overlap
- Helps determine target population for a small pilot program
- Best to plan for repeated matching beyond one time exploratory match

## Repeated data matching

- Provides a set up for potential scaling up of intervention
- Acclimates unfamiliar systems to one another
- Practice makes perfect! Opportunity to work through technical, privacy-related, and logistical issues

## System integration

- Data permanently flows from one system to another in back end technical arrangement (API, bridge)
- People/families can be identified on a rolling basis as people “grow into” eligibility depending on eligibility factors
- Provides opportunity to use data for other use cases, care coordination, further systems change

## Real time multi-system data exchange

- Can be local, county, statewide, or other geographic framework
- High-cost clients are more likely to be served in multiple delivery systems
- More costly, time-consuming, and requires/assumes technological infrastructure
- Requires significant leadership

Lower tech

Medium tech

High tech



**Community Example**  
***Opening Doors through Data***

**Marla Sutherland**  
**Homeward Alliance's Housing First Services**  
**Director**  
**970-541-9719**  
**[marla@homewardalliance.org](mailto:marla@homewardalliance.org)**

## Homeward2020

Collaborative, strategic think-tank guiding implementation of Fort Collins' 10-Year Plan to Make Homelessness Rare, Short-Lived and Non-Recurring by setting priorities, developing alignment and action plans, and suggesting policy

## Homeward Alliance

Operates a continuum of programs and initiatives, ranging from critical survival gear, to employment services, to homelessness prevention

## Actionable Data

- Point In Time count
- Murphy Center = *the hub of services for people who face homelessness or housing instability— one location in which 20 organizations offer more than 40 services to nearly 3,000 people each year*

## Collaboration

- Eliminate silos
- Participation in CoC and Coordinated Assessment and Housing Placement System (CAHPS)
- Build upon existing infrastructure

## Housing First Services

- Offer intensive case management for housing navigation and housing retention
- Leverage existing services (non-duplication) to fill in systemic gaps

# HFI: Interactive Data Dashboard

## Population Dashboard

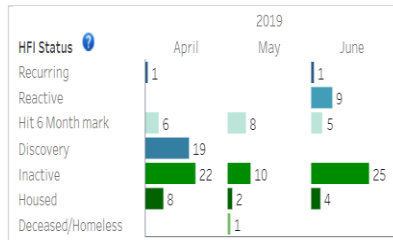
<http://www.homeward2020.org/population-dashboard/>

### Housing First Initiative: Addressing Long-Term Homelessness in Fort Collins

Housing First Initiative (HFI) seeks to produce actionable and accessible community-level data on the issue of homelessness. With that data, we can better identify and implement solutions for people experiencing homelessness. HFI collects and reports data on persons experiencing homelessness in Fort Collins for six months or longer, pilots housing first solutions through local partnerships, and provides intensive case management to transition participants from homelessness to housing. \*This dashboard does not provide data on all persons experiencing homelessness, but focuses on individuals experiencing chronic and long-term homelessness.

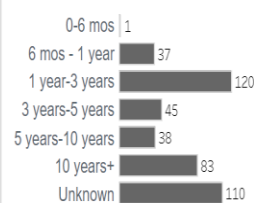
Current # of persons experiencing homelessness 6 months or longer in Fort Collins: 434

#### Recent Monthly Entries and Exits

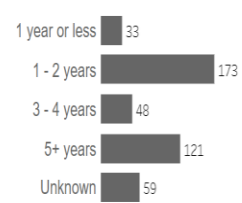


#### Current Population Demographics

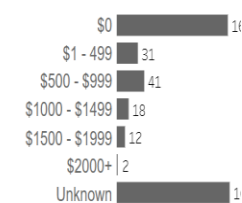
##### Length of Time Homeless



##### Length of Time in Fort Collins

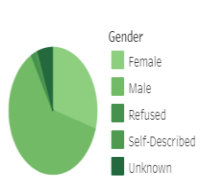


##### Income Levels at Entry

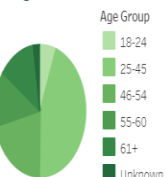


#### Participant Demographics (Self-Reported)

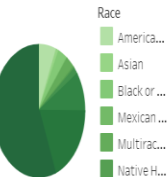
##### Gender Distribution



##### Age Distribution



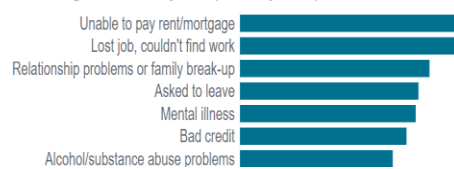
##### Race Distribution



#### Has Experienced Homelessness Before:

Yes	No	Unknown
170	72	192

#### Contributing Factors Snapshot (Self-Reported)

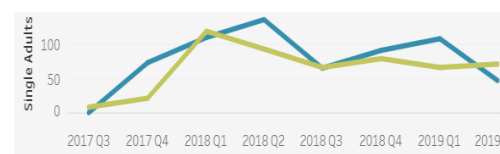


#### Today's Program Totals

Entry	Exit/Housed
434	140

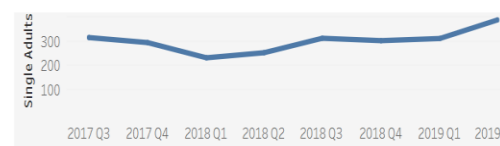
#### Program Target 1:

Are program exits exceeding new entries?  
New Entries and Exits/Housed by Quarter



#### Program Target 2:

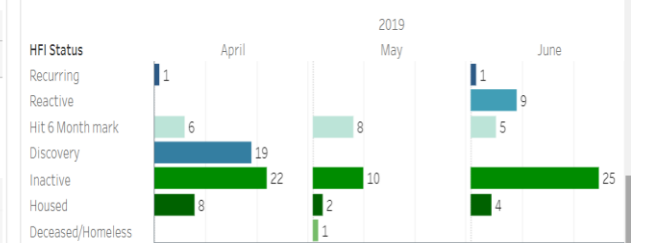
Are we reducing the # of ongoing, 'Active' category?  
Those experiencing long-term homelessness from quarter to quarter, with no change in status. (The dark blue 'active' population accumulation you see to the right).



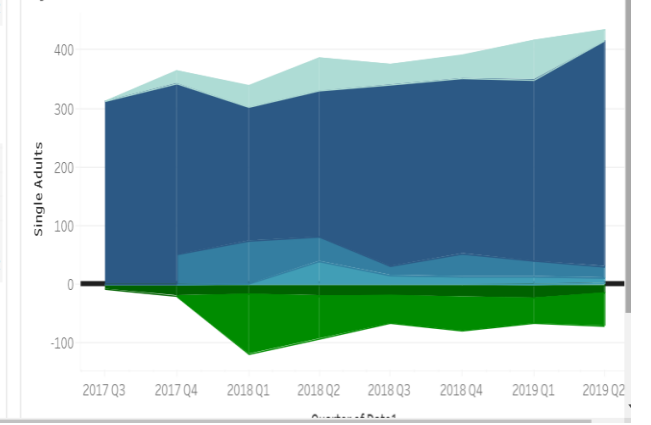
#### Known Program Housing Exits by Type



#### System Flow: Recent Monthly Entries and Exits?

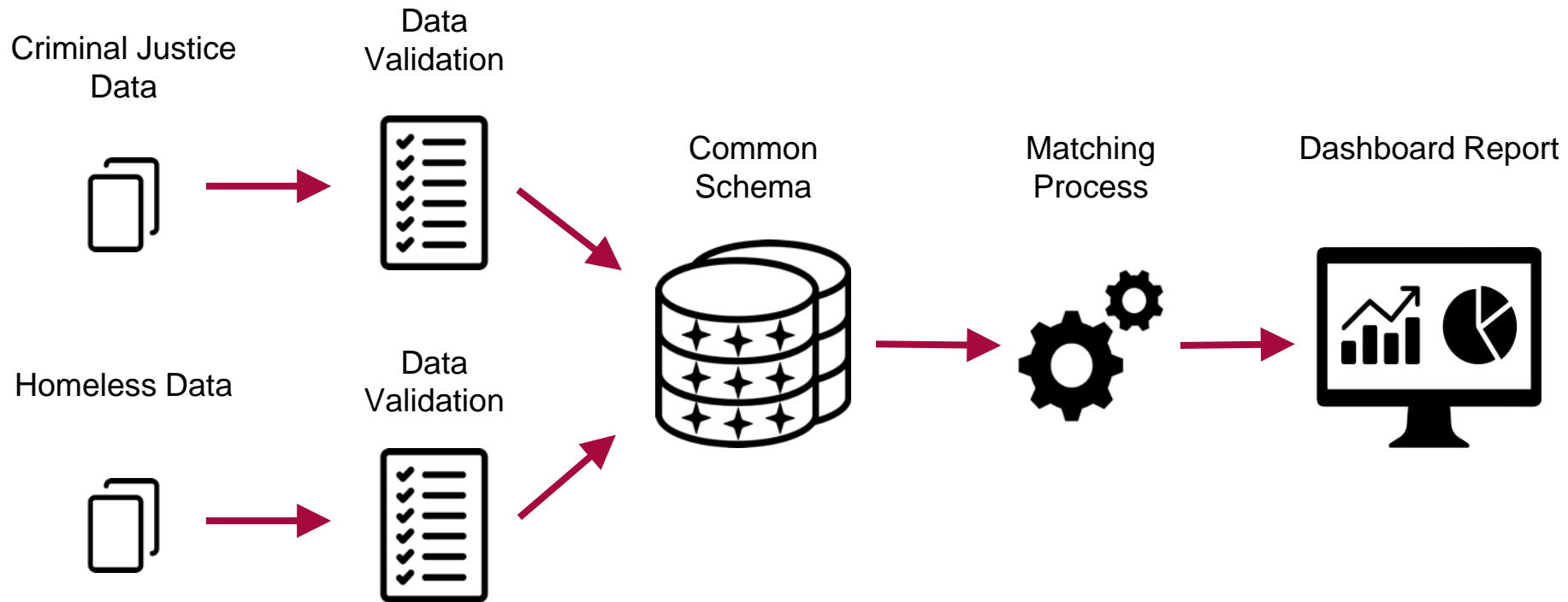


#### System Cumulatives





# FUSE: Data matching tool



## Funding & Capacity Resources

Colorado's Department of Housing (DOH)

20 Tenant Based Housing Vouchers

FTE for Clinical Case Manager

Colorado State University

1-year Data Analysis and Report

## Bridging Systems

Project Managers: Homeward 2020 & Health District of Northern Larimer County

Program Supervision: Homeward Alliance

Business Partner Agreements

Universal Release of Information

Data Use Agreements

## Challenges

- Buy-In from local agencies to participate in HMIS
- CSH's Data Matching Tool required more technical support and staff capacity
- Minimal Staff Capacity/Expertise for Data Analysis and Reporting

## Resolution

Homeward Alliance will be the HMIS lead agency in our region

- Access to federal funding
- Ability to maintain customization of data and reporting outcomes
- Local technical support



**INFLUENCE  
BUILD  
CONNECT**

## **Community Example**

***Using Integrated Data to Support Practice***

**Erin Dalton, Deputy Director**  
**Allegheny County Department of Human  
Services**  
**[Erin.Dalton@alleghenycounty.us](mailto:Erin.Dalton@alleghenycounty.us)**

# Integrated Data Systems



## Childhood & Education Services

Early Intervention  
HeadStart  
Homevisiting  
Family Support Centers  
Child Welfare  
Family Court  
Pittsburgh Public Schools + 10 additional School Districts



## Physical & Behavioral Health

Mental Health Services (Medicaid & Uninsured)  
Substance Use Services (Medicaid & Uninsured)  
Physical Health Services (Medicaid)  
UPMC Health Plan (Commercial)  
Intellectual Disabilities



## Juvenile & Criminal Justice

Juvenile Probation  
Delinquency  
Pittsburgh Bureau of Police  
Criminal Court  
Allegheny County Jail  
911 Dispatches



## Vital Records

Birth Records  
Autopsy Records



## Basic Needs

Homeless  
Housing Supports  
Public Benefits  
Public Housing  
Employment/Unemployment  
Transportation (for medically fragile)  
Aging services & supports



# Using Data to Support



**Coordinated Care**



**Worker Decision Making**



**Management Decision Making**



**Community Use / Open Data**



**Research**


<p><b>Basic Information</b></p> <p><b>SOCIAL SECURITY NUMBER</b> XXX-XX-5247</p> <p><a href="#">Click here to view full SSN</a></p> <p><b>DATE OF BIRTH</b> [Redacted]</p> <p><b>MCI ID</b> 1000449087</p> <p><b>MA RECIPIENT NUMBER</b> [Redacted]</p> <p><b>STATE MCI NUMBER</b> [Redacted]</p> <p><a href="#">Generate PIN</a></p>	<p><b>Address(es)</b></p> <p><b>ADDRESS</b> [Redacted]</p> <p>PITTSBURGH, PA, 15233</p> <p><b>MUNICIPALITY</b> Manchester - Pittsburgh</p> <p><a href="#">11 records available</a></p> <p><a href="#">Search this Address</a></p> <p><a href="#">View 911 data</a></p>	<p><b>Contact</b></p> <p>No Information Available</p>	<p><b>Other Info</b></p> <p><b>RACE</b> Black or African American</p> <p><b>ETHNICITY</b> No Data</p> <p><b>MARITAL STATUS</b> No Data</p> <p><b>LIVING ARRANGEMENT</b> No Data</p> <p><a href="#">11 records available</a></p>
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34 years old, Female

Timeline Display Options

View Monthly  View Yearly

View Involved Program Areas  View All Program Areas

 Filter Program Areas

 Print Timeline



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Life Event	●		●			●		●					●	
CYF Parent (Mainframe/KIDS Merge)														
▶ Community Services														
DHS Housing Supports														
▶ Drug / Alcohol														
▶ Mental Health														
HealthChoices Eligibility														
▶ Jail														
▶ Public Benefit														

Life Event Key  
● = Birth of Child

Please Note: Information being displayed is based upon data that is available for this client

# Improving Response to Homelessness



30,000 calls

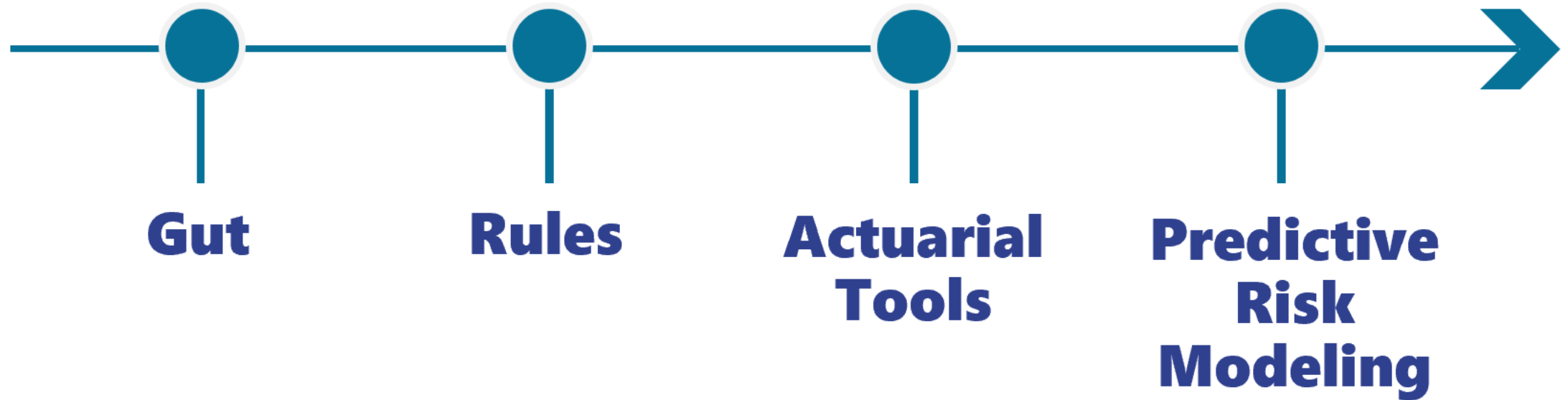


Today, we use an assessment



What if we use the data we already have

# Improving Decision Making



**Demographics  
(Age &  
Gender)**

**Homeless**

**Child Welfare**

**Jail**

**Courts**

**Probation**

**Juvenile  
Probation**

**Assisted  
Housing**

**Behavioral  
Health**

**322 predictors for each individual  
receiving a score**

+ 642 household-level predictors  
aggregated across:  
all adults on the household  
all children on the household

\*Addition of actuarial assessment  
(VI-SPDAT) responses was also  
tested

## INPUTS

### Client History (admin data)

- Homelessness services
- Child welfare
- Behavioral Health (Medicaid funded)
- Assisted Housing
- Court Activity
- Aging Services
- County Jail
- Juvenile Probation
- Independent Living
- Prescription Medication

## PREDICTED OUTCOMES

### We built a PRM tool for a variety of outcomes 6 or 12 months after the call to the hotline

- Booking in County Jail
- Substance use diagnosis
- Inpatient Mental Health stay
- Emergency Department encounter

## MODELING METHODS

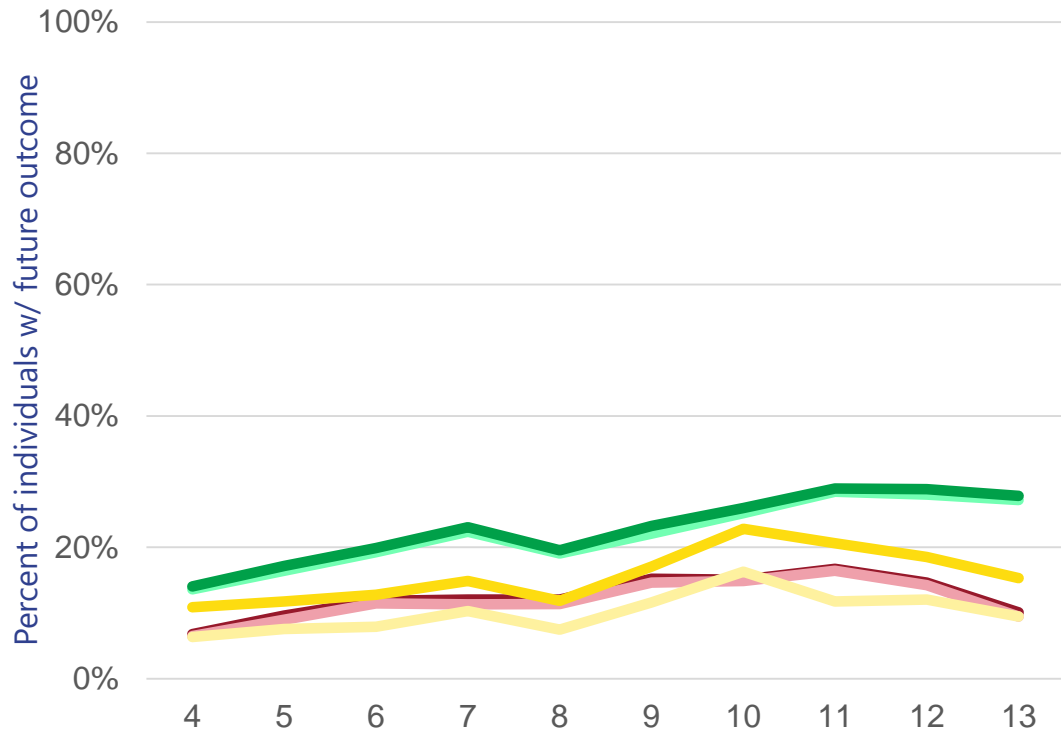
### We compared four modeling methods

- Logistic Regression
- Random Forest
- XGBoost
- LASSO

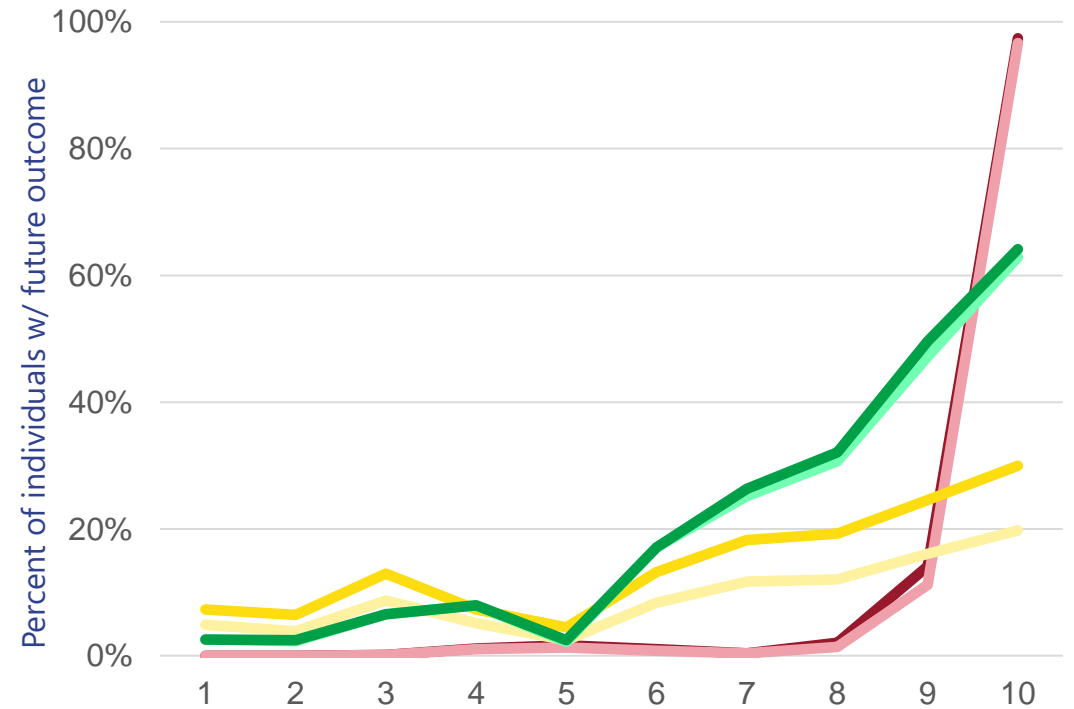


# Current Assessment Vs Predictive Risk Model

## VI-SPDAT SCORE



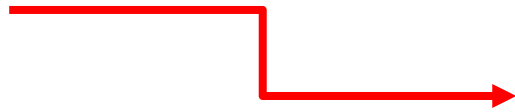
## PREDICTIVE RISK MODEL SCORE



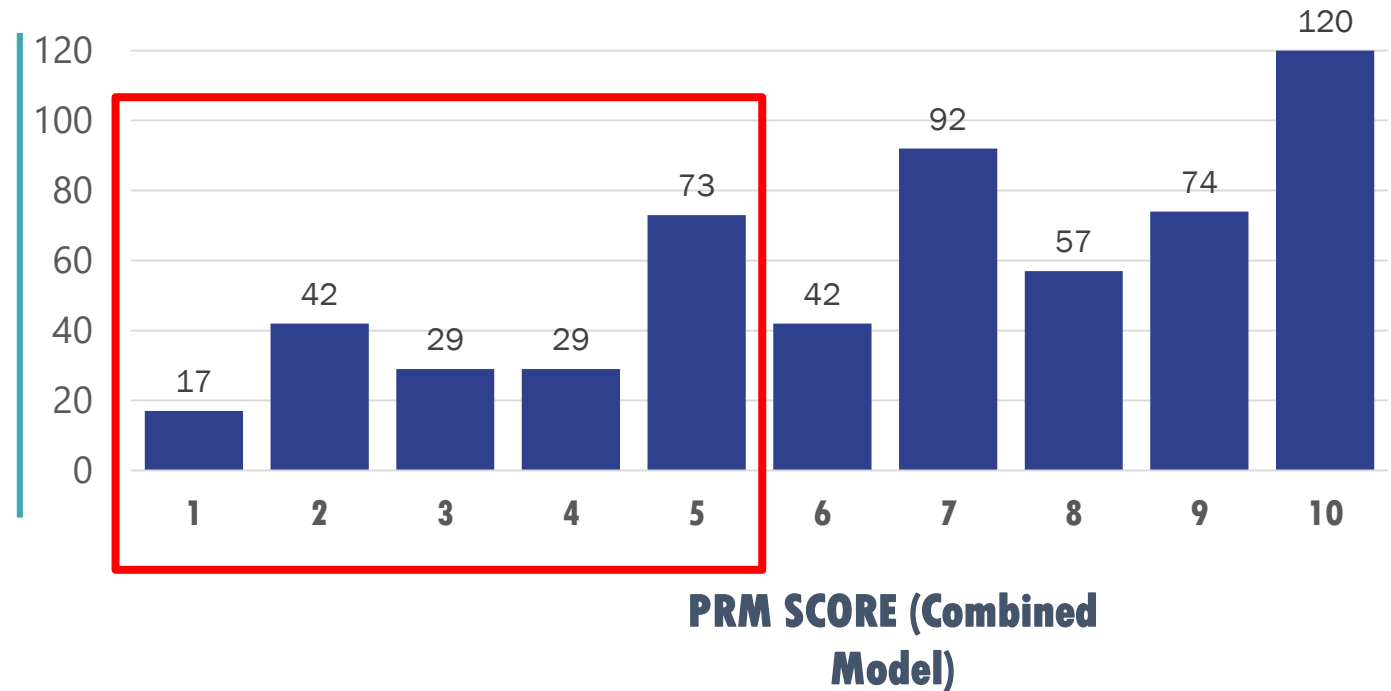
- Mental Health Inpatient 12 mo
- Mental Health Inpatient 6 mo
- Jail Booking 6mo
- Jail Booking 12mo
- Substance Use Svc 6mo
- Substance Use Svc 12mo

# Current Assessment Vs Predictive Risk Model

33% of permanent supportive housing beds are given to individuals with a PRM score of 5 or less



Permanent Supportive Housing (total individuals)

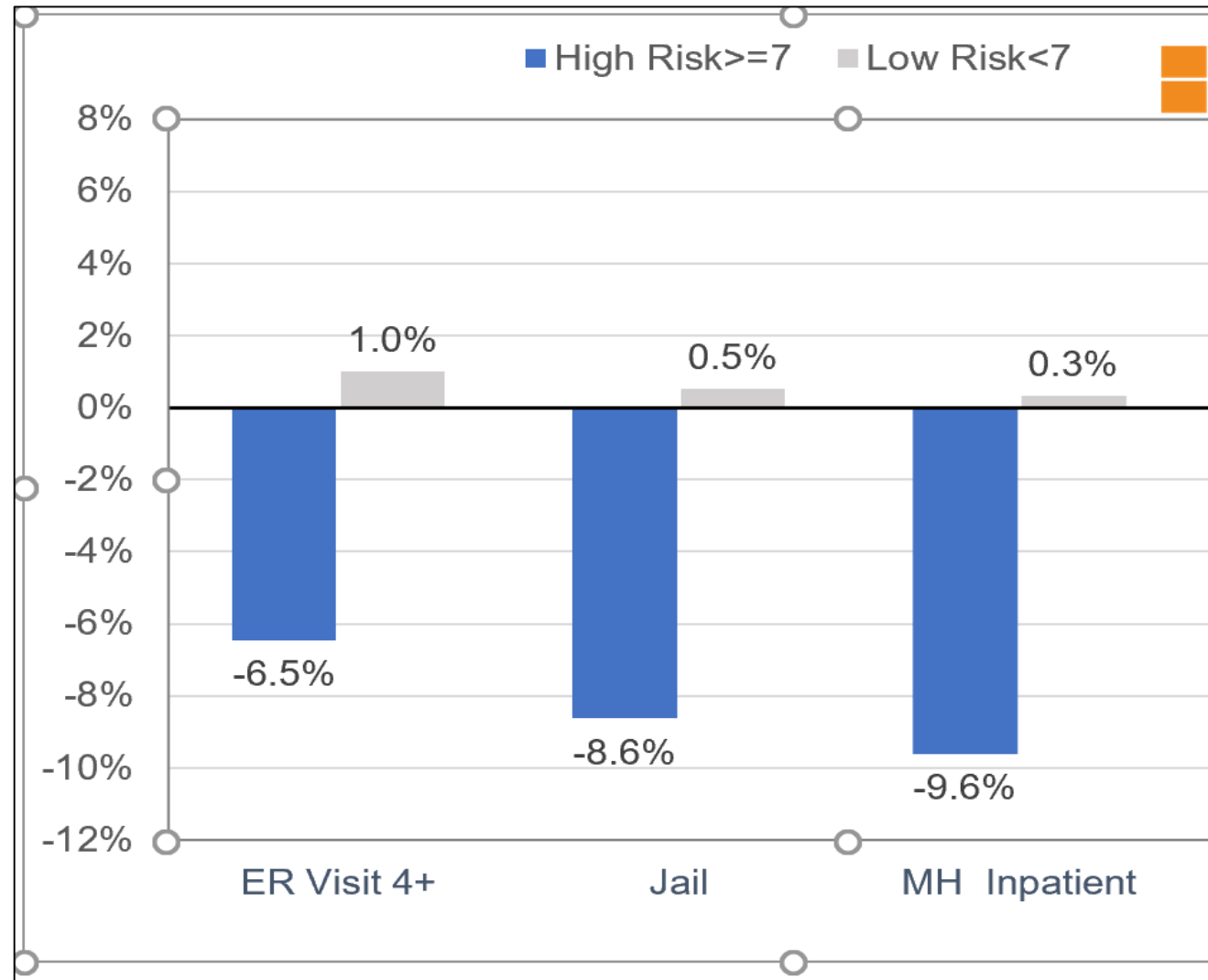


# Permanent Supportive Housing Works Better for Higher Risk Clients



High Risk Groups who received PSH/RRH/Transitional had lower rates of harm

Low Risk Groups who received PSH/RRH/Transitional had (slightly) higher rates of harm



## Enablers

- Government
- Integrated Department
- Long-term Leadership
- Investment in Tech, Analytics & Innovation
- Community Support
- Willingness to take risks to benefit clients

## Detractor

- Current HMIS Marketplace



Allegheny County Department of Human Services

Allegheny County Analytics

Home Topics Visualizations Publications Datasets Videos Resources Tools

**Featured**

**Opioid-Related Overdose Deaths in Allegheny County, 2015–2016 Update**

**Opioid-Related Overdose Deaths in Allegheny County: Report and Data Visualizations**

Allegheny County is experiencing opioid-related overdose rates higher than in the state and in the U.S. In 2016, 93 percent of overdose deaths in the County were opioid-related and 2016 represented the third consecutive year in which the number of fatal overdoses was higher than in any prior year. An increase in the presence of

Browse by Tag

child abuse client  
 perspective court  
 foster care  
 homelessness jail jail  
 collaborative mental  
 health needs  
 assessment police  
 prevention probation  
 substance use system  
 integration

**Recent Publications**

**Youth Who Ran Away from Allegheny County Child**

**Single Mothers Living in Poverty**

**Youth Perspectives on Out-of-Home Placement**

Basic Needs | August 8, 2019  
**SURVEY OF FAMILIES USING HOMELESSNESS CASE MANAGEMENT PROGRAM FINDS SATISFACTION — AND PREFERENCE FOR TEXTING AS A SURVEY METHOD**

TAGS: client perspective, homelessness

The Homeless Services and Supports Coordination (HSSC) program, implemented by the Allegheny County Department of Human Services in 2013, provides comprehensive service coordination for families who use emergency homeless shelters. Upon entering an emergency shelter, participants meet with service coordinators who offer a range of assistance, from accessing public benefits to finding affordable housing, childcare ...

Downloads:

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Basic Needs | February 27, 2019  
**ALLEGHENY COUNTY ANNUAL POINT-IN-TIME HOMELESSNESS COUNT, 2009–PRESENT: INTERACTIVE DASHBOARD**

TAGS: homelessness

The dashboard below displays information about County homelessness trends since 2009. Click here to view a related data brief. Use the tabs to view homelessness data for one year (PIT Homeless Demographics) or trends over time (PIT Trends). Data comes from Allegheny County's annual count of the number of people who were homeless on a ...

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Basic Needs | February 26, 2019  
**ALLEGHENY COUNTY 2018 POINT-IN-TIME HOMELESSNESS: DATA BRIEF**

TAGS: homelessness

Each year, Allegheny County participates in a national effort required by the U.S. Department of Housing and Urban Development (HUD) to count the number of people who were homeless on a single night in January. Although not required by HUD, Allegheny County also conducts a summer point-in-time (PIT) count to better understand warm weather trends. ...

Downloads:

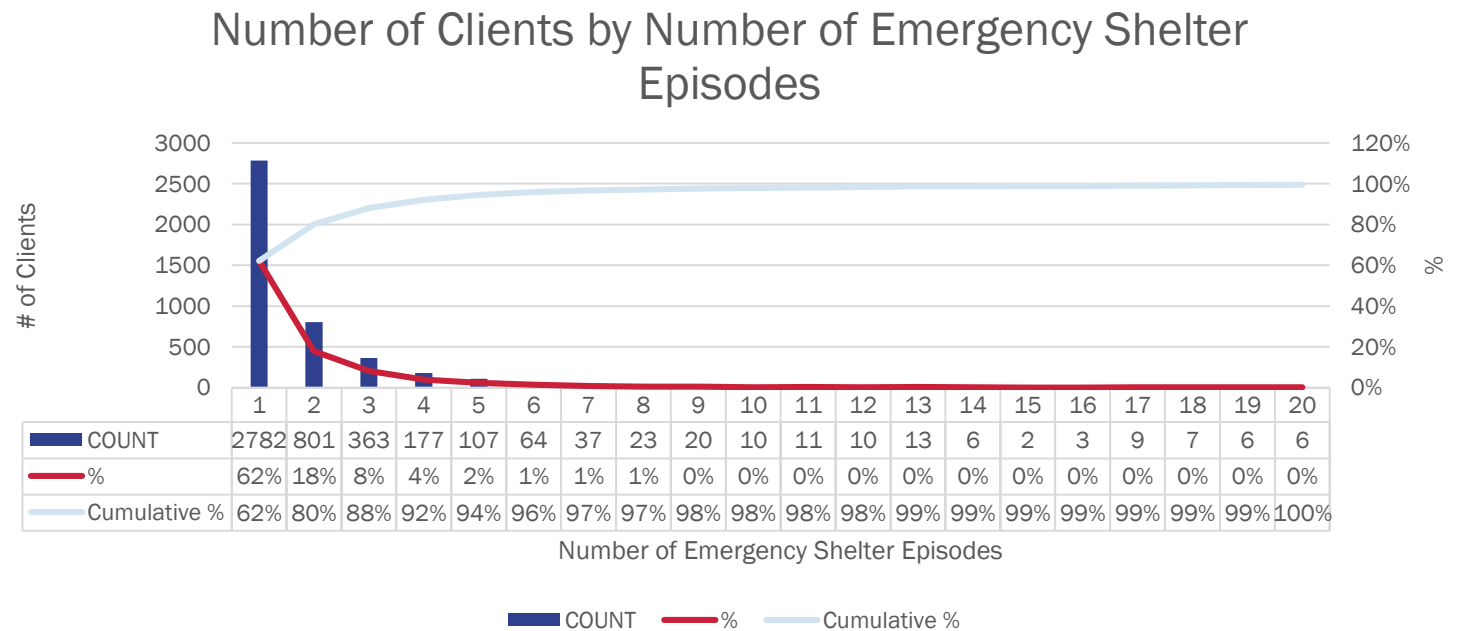
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Basic Needs | July 26, 2018  
**CLIENTS USING ALLEGHENY COUNTY HOMELESSNESS PROGRAMS: INTERACTIVE DASHBOARD**

# Frequent Utilizers of Homeless Services

**FREQUENT UTILIZER DEFINED AS THOSE WHO ACCESSED A SHELTER IN 2016-17, AND HAD 8+ TOTAL STAY INSTANCES**

	Overall	Top 4.2% Client
<b>Client</b>	4,479	144
<b>Person-Beds-Days</b>	245,768	27,343 (10%)
<b>Average Total Day Beds</b>	55	<b>190</b>

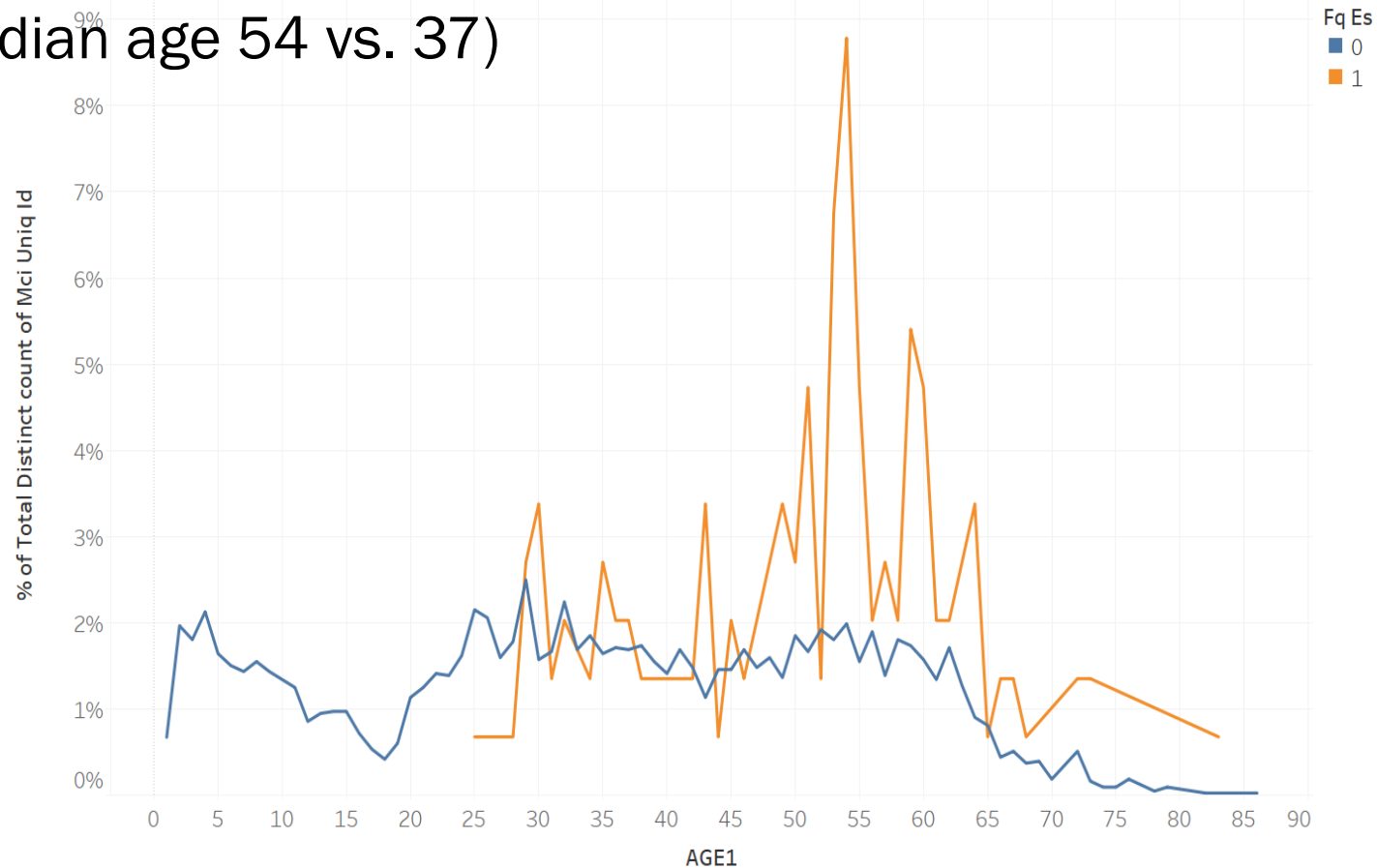


# Homeless Shelter Frequent Utilizers

Frequent utilizers significantly more likely to be male (91% vs. 59%)

Frequent utilizers slightly more likely to be African Americans (63% vs. 59%)

Frequent Utilizers typically older than non-frequent utilizers and have interesting age distribution (median age 54 vs. 37)





# Homeless Shelter Frequent Utilizers

- In terms of service utilization, frequent utilizers and non-frequent utilizers are not very different.
- In general, people who use ANY emergency shelter have high rates of service utilization in mental health crisis and emergency room visits, but there doesn't appear to be large differences by frequent utilization
- Frequent utilizers have higher rates of jail bookings than non-frequent utilizers but not of arrests

	1 Year Before				1 Year After			
	<8	8+	Overall	Ratio	<8	8+	Overall	Ratio
Child welfare parent	7%	4%	6%	0.6	9%	7%	9%	0.8
<b>Homeless shelter</b>	5%	39%	6%	7.7	98%	99%	98%	1
Mental health services	38%	47%	38%	1.2	50%	61%	50%	1.2
<b>Mental health crisis</b>	22%	27%	22%	1.2	18%	16%	18%	0.9
Substance use treatment	16%	17%	16%	1.1	19%	26%	20%	1.3
<b>Emergency Department</b>	47%	52%	47%	1.1	53%	63%	53%	1.2
Public Housing	7%	9%	7%	1.3	8%	7%	8%	0.8
Public benefits	72%	86%	73%	1.2	70%	84%	71%	1.2
<b>Arrest</b>	20%	25%	20%	1.3	20%	30%	21%	1.5
<b>Jail Booking</b>	14%	24%	15%	1.6	16%	27%	17%	1.7

 **[alleghenycountyanalytics.us](http://alleghenycountyanalytics.us)**

 **[Erin.Dalton@alleghenycounty.us](mailto:Erin.Dalton@alleghenycounty.us)**



## Panel Discussion



## Questions & Answers

And don't forget to complete the brief survey after the webinar – link in the chat box!

# Survey Reminder & Contact Info

*We will distribute a brief survey to attendees after today's webinar to get your feedback on the information and resources you need to scale up data sharing between homelessness and human services systems.*

- Kim Keaton: [kim.keaton@csh.org](mailto:kim.keaton@csh.org)
- Matt Lyons: [mylons@aphsa.org](mailto:mylons@aphsa.org)
- Jessie Metcalf: [jessmet@amazon.com](mailto:jessmet@amazon.com)
- Marla Sutherland: [marla@homewardalliance.org](mailto:marla@homewardalliance.org)
- Erin Dalton: [Erin.Dalton@AlleghenyCounty.US](mailto:Erin.Dalton@AlleghenyCounty.US)

