



# Stella Introduction

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# Objectives



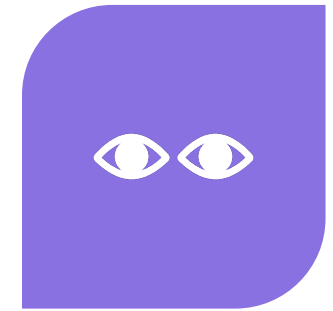
UNDERSTAND WHAT DATA IS  
IN STELLA



KNOW HOW TO ACCESS  
STELLA & HDX



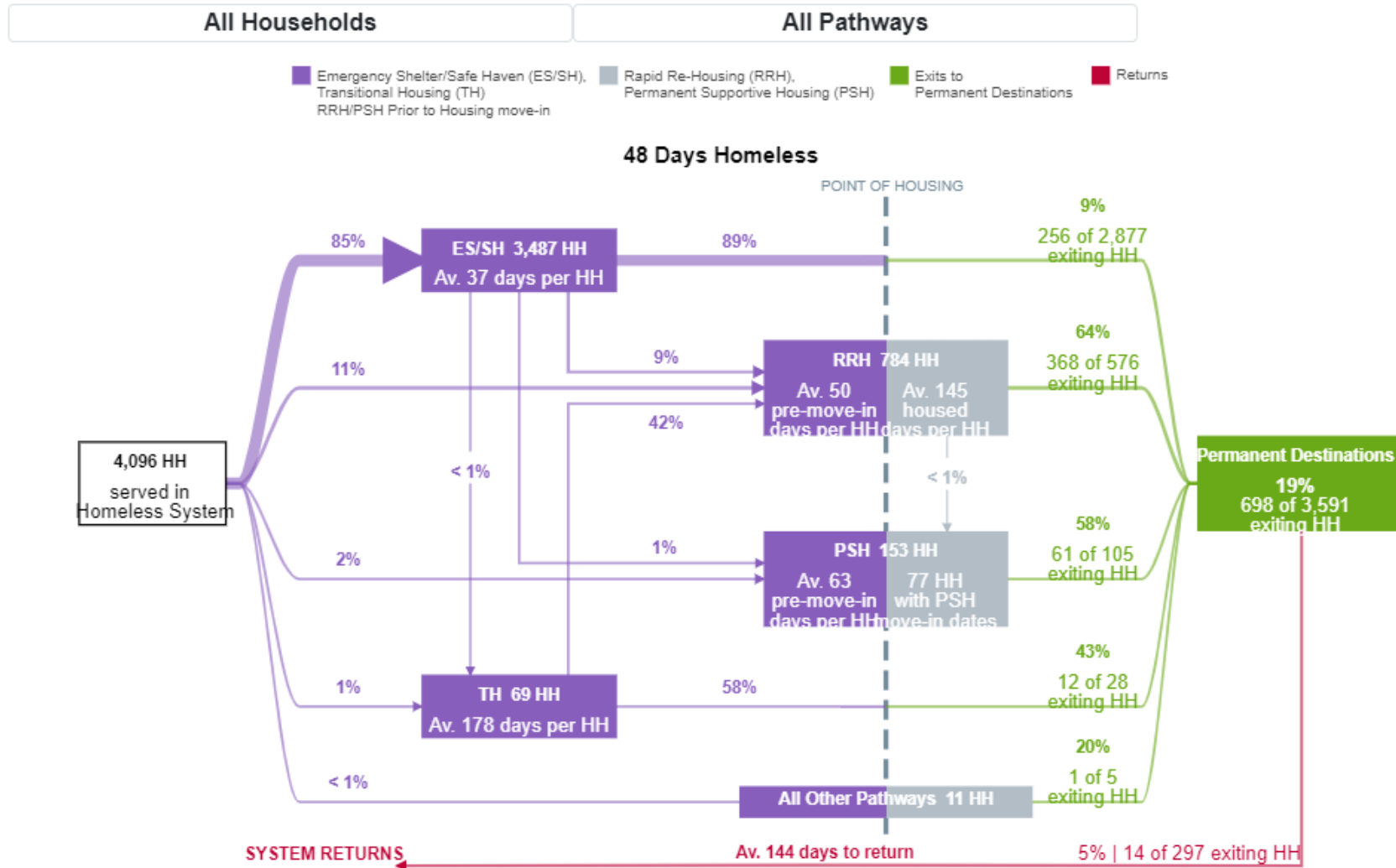
LEARN WHERE TO FIND  
MORE GUIDANCE



DRAW CONNECTIONS  
BETWEEN CHARTS AND  
IMPROVEMENT STRATEGIES

# System Performance Map

Households use different combinations of project types during the time they are served in the homeless system. These project type combinations are referred to as pathways. Each pathway has different average cumulative days homeless, exits to permanent housing and returns to the homeless system. The system map shows performance for the main project types in the homeless system and can be filtered to show performance for the main pathways.



- This visual is called the System Performance Map
- This is the CoC system
- The idea is to think about the project components, instead of projects
- This is hard thing for many community users to comprehend

# Explore & Bookmark These Links

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- HDX Portal (you need an account) to access Stella
  - [HDX 2.0 Homelessness Data Exchange Homelessness Data Exchange \(hudhdx2.info\)](https://hudhdx2.info)
- CoC Analysis Tool Helps Understand the population demographics of the CoC's geography vs. the population demographics of the people entering the homeless system
  - [CoC Analysis Tool: Race and Ethnicity - HUD Exchange](#)
- HUD has developed a lot of resources to help communities understand Stella & their data
  - Basic Resources: [Stella - HUD Exchange](#)
  - Performance Overview Videos: [Stella Performance Overview Videos - HUD Exchange](#)
  - Race and Ethnicity Analysis Guide: [Stella P Race and Ethnicity Analysis Guide - HUD Exchange](#)
  - Stella P Insights and Action Steps Guides: [Stella P Insights and Action Steps Guides - HUD Exchange](#)
  - CoC Performance and Analysis Improvement Toolkit: [CoC Performance Analysis and Improvement Toolkit - HUD Exchange](#)

# Resources on Improvement

- Stella P Insights and Action Steps Guides: [Stella P Insights and Action Steps Guides - HUD Exchange](#)
- CoC Performance and Analysis Improvement Toolkit: [CoC Performance Analysis and Improvement Toolkit - HUD Exchange](#)
- System Performance Improvement Briefs: [Strategies for System Performance Improvement - May 2017 \(hudexchange.info\)](#)

# Who is included in Stella?

Stella visualizes data at the *household level*

It includes households who were active in LSA (and HMIS participating) projects for:

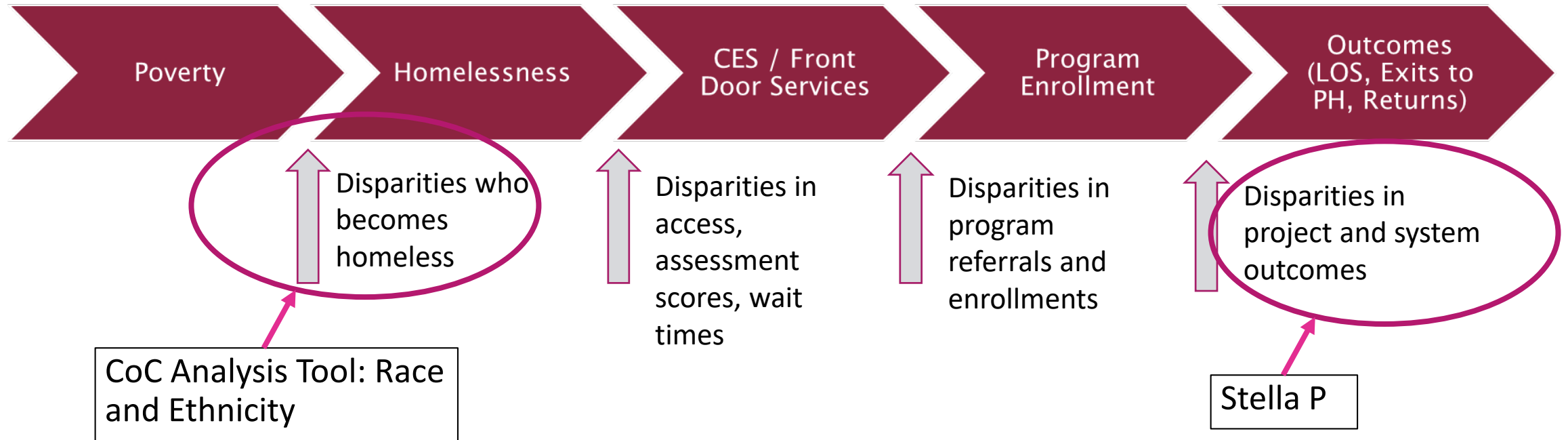
- Emergency Shelter
- Safe Haven
- Transitional Housing
- Rapid Rehousing
- Permanent Supportive Housing

Stella does not include:

- Street Outreach,
- Support Services Only,
- Other Permanent Housing,
- Coordinated Entry
- Victim Service Providers (not in HMIS)

Communities should be aware of these limitations and their overall HMIS coverage when interpreting Stella data

# Stella P in Context: One Piece of the Puzzle





# Stella is HMIS data

## HMIS

- Collected locally
- Uses HUD data standards
- Client level

## LSA

- Export from HMIS
- Annual submission
- Aggregated information
- Removes the specific project information

## Stella

- Visualize the LSA data
- Analyze

# Stella P and Stella M

## Stella Performance (Stella P)

- A data visualization to help communities understand how their homeless response system has been performing on critical performance measures
- Visualize the current or past system

## Stella Modeling (Stella M)

- An interactive tool to help communities conduct system modeling by calculating inventory and performance recommendations based on input
- Visualize a future system

## Access

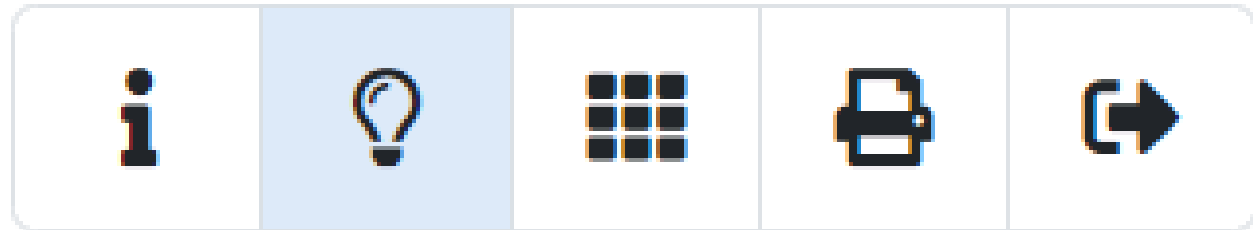
- Both are accessed through the HDX Portal
- [HDX 2.0 Homelessness Data Exchange](https://www.hudhdx2.info)  
[Homelessness Data Exchange \(hudhdx2.info\)](https://www.hudhdx2.info)
- Access to other users at CoCs is approved by a CoC user; if this user needs to be replaced you can use AAQ

## Preparing Local Use LSA Files for Stella P - HUD Exchange

What if I want to analyze part of my CoC?

The screenshot shows the HUD Exchange website interface. At the top, there is a dark blue navigation bar with the HUD Exchange logo and the text "HUD EXCHANGE". To the right of the logo, there are links for "Programs", "Resources", "Trainings", "Program Support", "Grantees", and "News". Further right, there is a search icon and a "Log In" link. A prominent orange button labeled "NEED HOUSING ASSISTANCE?" is also visible. Below the navigation bar, the page title "Preparing Local Use LSA Files for Stella P" is displayed in a large, bold font. To the right of the title are "Print" and "ShareThis" icons. Below the title, the "Date Published" is listed as "March 2023". The "Description" section explains that the guide provides information on how to access the Stella Performance Module (Stella P) through an HDX 2.0 account and includes instructions on preparing Local Use Longitudinal Systems Analysis (LSA) uploads. A box on the right side of the page identifies the "Author Organization" as "Abt Associates" and the "Resource Approver" as "HUD Approved". Below the description, there is a link to "Stella page" and a "Resource Links" section containing a link to the PDF file. At the bottom, the "Tags" section lists "CoC" and "HDX".

# Data Quality



- Data quality problems can diminish the usefulness of your Stella charts
- There are system generated insights which will point you in the right direction; we are working on some improvements
- The current threshold for a system generated insight is 17% so if you have <16% errors it may not show, you would have to look in Eva or your HMIS

Today's presentation will cover 3 system performance measures and the following charts

Households with Days Homeless Trend (3 years)

Time Distribution of Days Homeless

Days Homeless by Pathway

Days Homeless by Population Group

Days Homeless by Race and Ethnicity

Exits to Permanent Destinations Trend (3 years)

Exits by Destination Type

Exits by Pathway

Exits by Population Group

Exits by Race and Ethnicity

Time Distribution of Returns



- [Eva](#) page on HUD Exchange
  - [Eva Quick Start Guide](#)
- [Eva Github](#)
  - Full list of [Eva Checks](#)
  - Submit a [new issue](#)

[Eva](#) is an open-source project intended for local use by HMIS Administrators in Continuums of Care (CoCs) around the U.S. and its territories. Eva is designed to help you assess the accuracy of your HMIS data and its completeness (which was not covered by the previous DQ tool).

[Home](#)[Upload HMIS CSV Export](#)[Edit Local Settings](#)[View Client Counts](#)[Assess Data Quality](#)[View Changelog](#)

## Welcome to Eva!

**Eva** is an open-source project intended for local use by HMIS Administrators in Continuums of Care (CoCs) around the U.S. and its territories. Eva is designed to help you assess the accuracy and completeness of the data within your HMIS. In future iterations it will also assist communities in analyzing HMIS performance data, including coordinated entry, if your community utilizes HMIS for this purpose. Use of this tool is not required by HUD.

Eva is a web-based tool built with R Shiny. This means:

**no CoC data is being retained or viewed by anyone** who uses the software. The only data that is collected is the upload file itself, such as the name of your file and a source information. This is collected for troubleshooting and tool planning purposes.

- You can upload a zipped CSV Export of up to 200 MB. The file must be hashed.
- You can stay up to date with the new features by visiting the Changelog tab.

[Click here to get started](#)

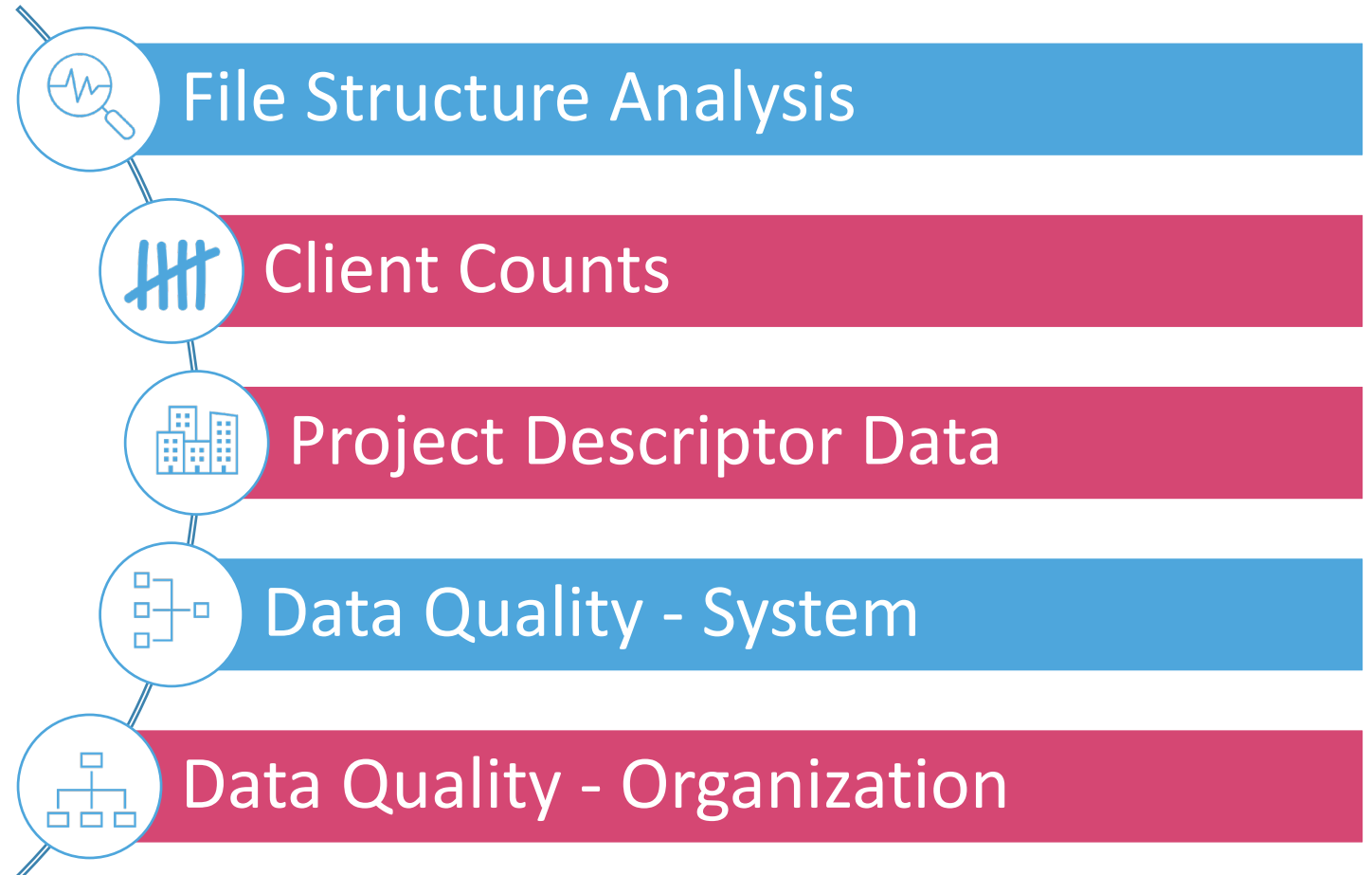
Instructions



Coming Soon: System Analysis  
Overview  
Exits

# What does Eva do?

“She’s everything I’ve ever wanted in a data quality friend.”  
– Not an actual quote, but should be



Entirely new functionality that wasn't in the original DQ Tool



What is being  
worked on  
now

Communities will be able to answer:

- Are more people/households coming into or leaving the system?
- How many people/households experienced homelessness during the period?
- How many people/households attained housing during the period?
- Of those experiencing homelessness on day one, what is their status on the last day?
- What proportion of those served were of a cross-sectional demographic group?
- For those exiting the system, where did they exit to (destination type)?



# North Star

Is your CoC measuring progress towards making homelessness rare, brief, and non-recurring?

Housing households with the longest amount of time homeless is going to move your numbers in the right direction.



Levels	Sample Analysis Questions
System-Level	Is overall performance improving, staying the same, or getting worse?
Household-Level	Are certain household types achieving relatively better or worse outcomes?
Pathway-Level	Which pathways have the greatest impact on overall performance?
Population-Level	Are certain subpopulations (i.e. race/ethnic groups) achieving better or worse outcomes than others?

# CoC Performance Analysis and Improvement Toolkit

- This is a resource for communities to use with Stella P and understand how they can start to translate their tool into action steps
- [CoC Performance Analysis and Improvement Toolkit \(hudexchange.info\)](https://hudexchange.info)

Is the CoC measuring progress towards making homelessness rare, brief, and non-recurring?

# Prioritizing Improvement

- **Impact:** Which system components have the greatest negative impact on overall system performance?
- **Equity:** Is the system serving all racial and ethnic population groups effectively? Are there disparities in outcomes for different populations?
- **CoC Performance Targets:** Is the CoC achieving its performance goals? If not, where are the problem areas?
- **CoC Priorities:** Which areas align with local priorities and strategic plans to end homelessness?

Stella P provides pathway performance insights to help CoCs focus on pathways that have the greatest negative impact. Considering both the performance of the pathway and the number of households that used the pathway, performance insights use “impact scores” to represent how much that pathway is contributing to overall performance on that measure for the whole system.

# Observations Lead to Questions

If certain families have long lengths of stay in Emergency Shelter

⑩ What are the barriers to rapid exits?

If certain providers have increased successful housing placements

⑩ What helped?

## Analysis of Race and Project Pathways

Stella P does not currently show the cross section of race and project pathways. The Race and Ethnicity of HoH and Adults charts in the Comparisons tab of the Demographics section can offer a snapshot of the differences in who is served in each project type for the household selected, but Stella P does not currently show if there is a difference in the performance of these project types by race and ethnicity.

### A sample question of race + pathways

- Are some demographic groups having worse outcomes in RRH?

### These cannot be viewed in Stella P currently

- A community can use their HMIS to analyze
- The new HMIS Data Standards will likely lead to software improvements that make it easier to analyze

# Knowledge Check

- 1) The unit of analysis is households, not persons
- 2) Days Homeless Performance Measure
  - Measured as average, which means that long-stayers have a big impact
- 3) Exits are for people who leave the system
  - Permanent, temporary, or unknown
  - Most people in PSH will stay

The types of households are:

- All Child and Youth
- Long-term Homeless
- Inflow
- Adult Only (AO)
- AO Veteran
- AO Non-Veteran
- AO 18-24 year old
- Adults with Children (AC)
- AC Parenting Youth
- Child Only (CO)

# Demonstration of Stella

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Log in

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Navigate Dashboard and Measures

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Export and Print

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Table View

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View Insights



# Performance Measure – Length of Time Homeless

- What do we want to see from the CoC?
- What is good performance?

Levels	Sample Analysis Questions	Visual
System-Level	Is overall performance improving, staying the same, or getting worse?	Households with Days Homeless Trend
Household-Level	Are certain household types achieving relatively better or worse outcomes?	Time Distribution of Days Homeless
Pathway-Level	Which pathways have the greatest impact on overall performance?	Days Homeless by Pathway
Population-Level	Are certain subpopulations (i.e. race/ethnic groups) achieving better or worse outcomes than others?	Days Homeless by Population Group or Days Homeless by Race/Ethnicity

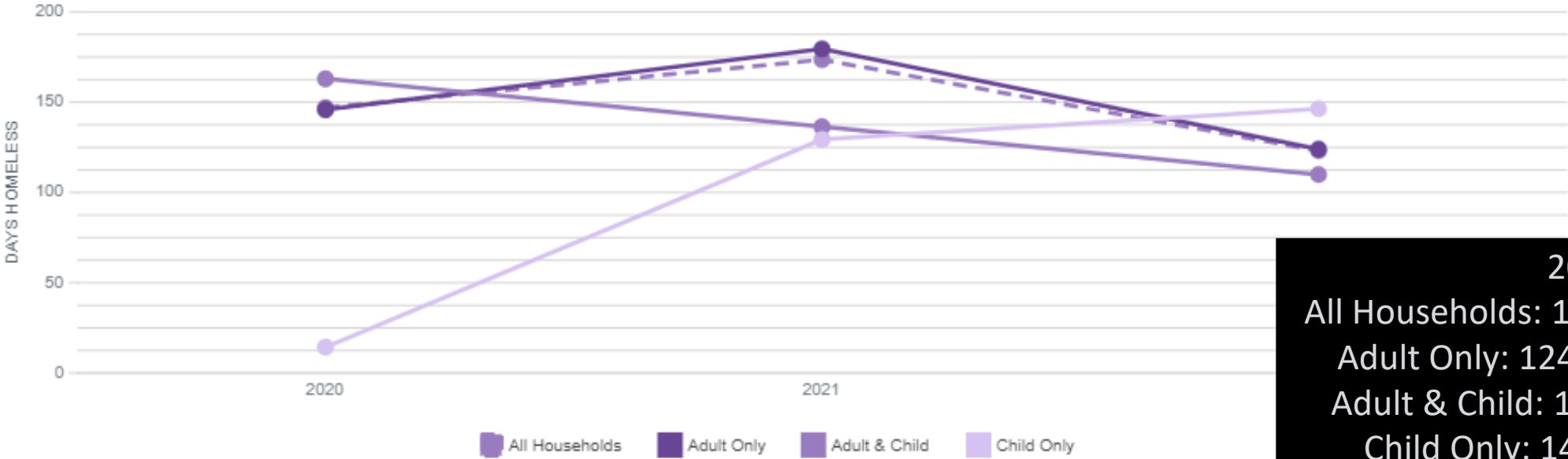
# Households with Days Homeless Trend

For each reporting year, households that had at least one day in ES, SH, TH, or RRH; or at least one day in PSH prior to move-in



## Days Homeless Trend by Household Type

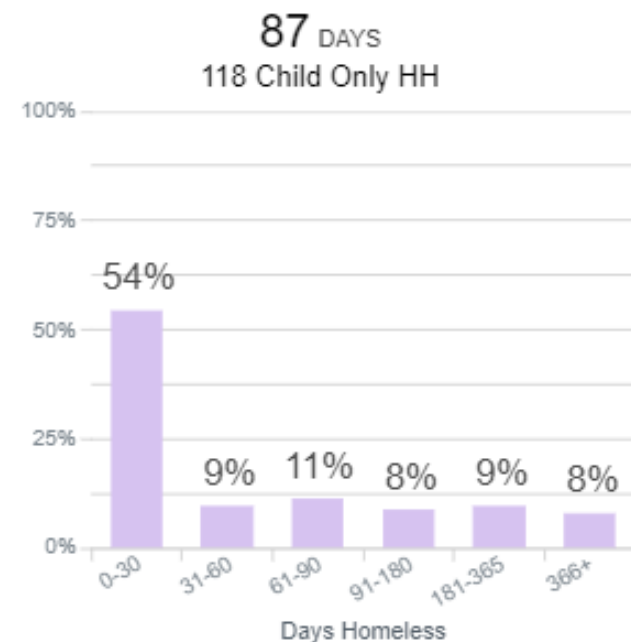
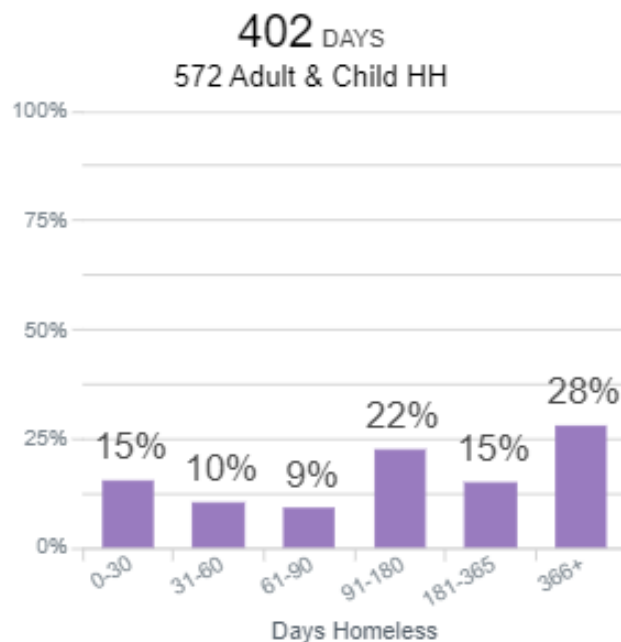
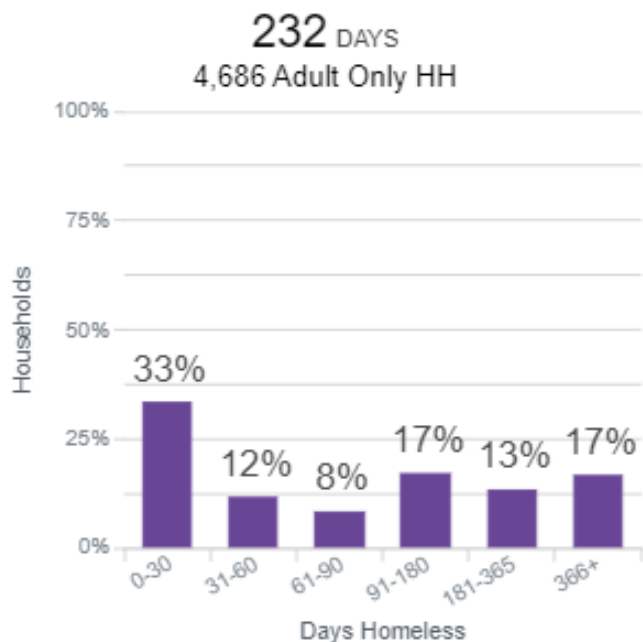
For each reporting year, the average cumulative, unduplicated number of days that households were served in ES, SH, or TH projects; and days in RRH or PSH prior to move-in.



**2022**  
 All Households: 123 Days | 7,250 HH  
 Adult Only: 124 Days | 6,266 HH  
 Adult & Child: 109 Days | 858 HH  
 Child Only: 146 Days | 90 HH

## Time Distribution of Days Homeless

Average cumulative days homeless and distribution by defined time intervals for each household type.



## Time Distribution of Days Homeless

- Which household type has the longest time homeless, on average?
- What is the most common length of time homeless for Adult Only HHs?
- What percentage of Adult & Child HHs are housed within 90 days?
- The bar at the right is 366+ days plus, which is a year or more

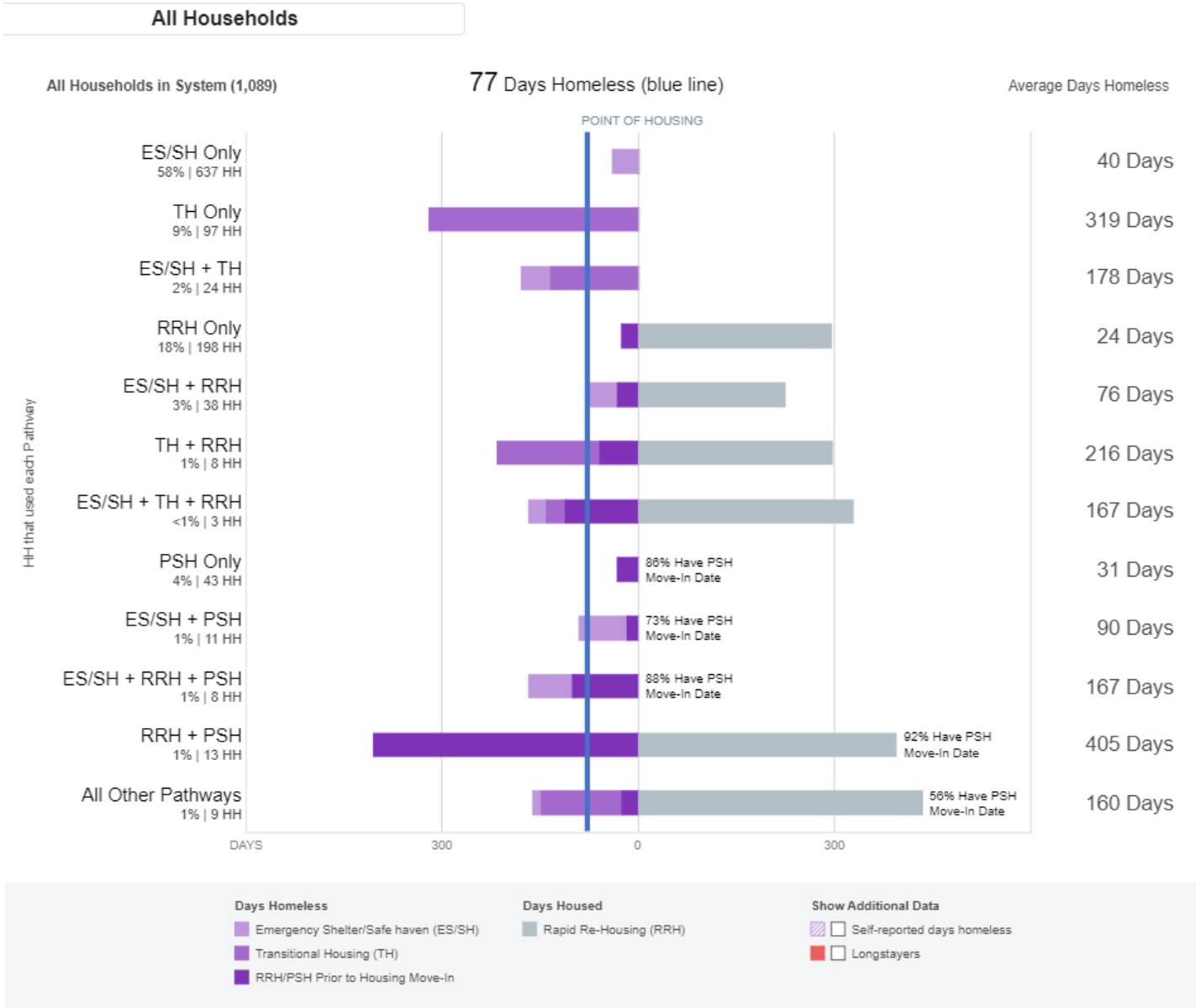
# Days Homeless by Pathway

Percent and number of households that used each pathway and average cumulative days that households in each pathway group were homeless

## Color Coding

- The colors in Stella are meaningful.
- Purple = in ES, SH, TH; or in RRH/PSH prior to move-in
- Gray = in RRH

See the RRH Only & PSH Only Pathways? This might be a way to approximate what percentage of clients are coming from unsheltered locations, since Street Outreach project data is not in this dataset.



# Days Homeless By Population

## By Population Group

- All Households
- Adult Only (AO) 55+
- Adult and Child (AC) 3+ Children
- Fleeing domestic violence
- Have a disabled member
- Have PSH Move-in Date
- First-time homeless
- Returners from a Permanent Destination

## By Race/Ethnicity

- All Households
- American Indian, Alaska Native or Indigenous
- Asian or Asian American
- Black or African American or African
- Multiple Races
- Native Hawaiian or Pacific Islander
- White
- Hispanic/Latin(a)(o)(x)
- Non-Hispanic/Non-Latin(a)(o)(x)
- American Indian, Alaska Native or Indigenous; Hispanic/Latin(a)(o)(x)
- Black, Hispanic/Latin(a)(o)(x)
- Black, Non-Hispanic/Non-Latin(a)(o)(x)/Unknown
- Multi-Racial OR Asian or Asian American OR Native Hawaiian or Pacific Islander OR Unknown; Hispanic/Latin(a)(o)(x)
- Multi-Racial OR Asian or Asian American OR Native Hawaiian or Pacific Islander OR Unknown; Non-Hispanic/Non-Latin(a)(o)(x)
- White, Hispanic/Latin(a)(o)(x)
- White, Non-Hispanic/Non-Latin(a)(o)(x)

Method: Start with the bar on top – this represents the average of the group.

Then compare other bars to this number.

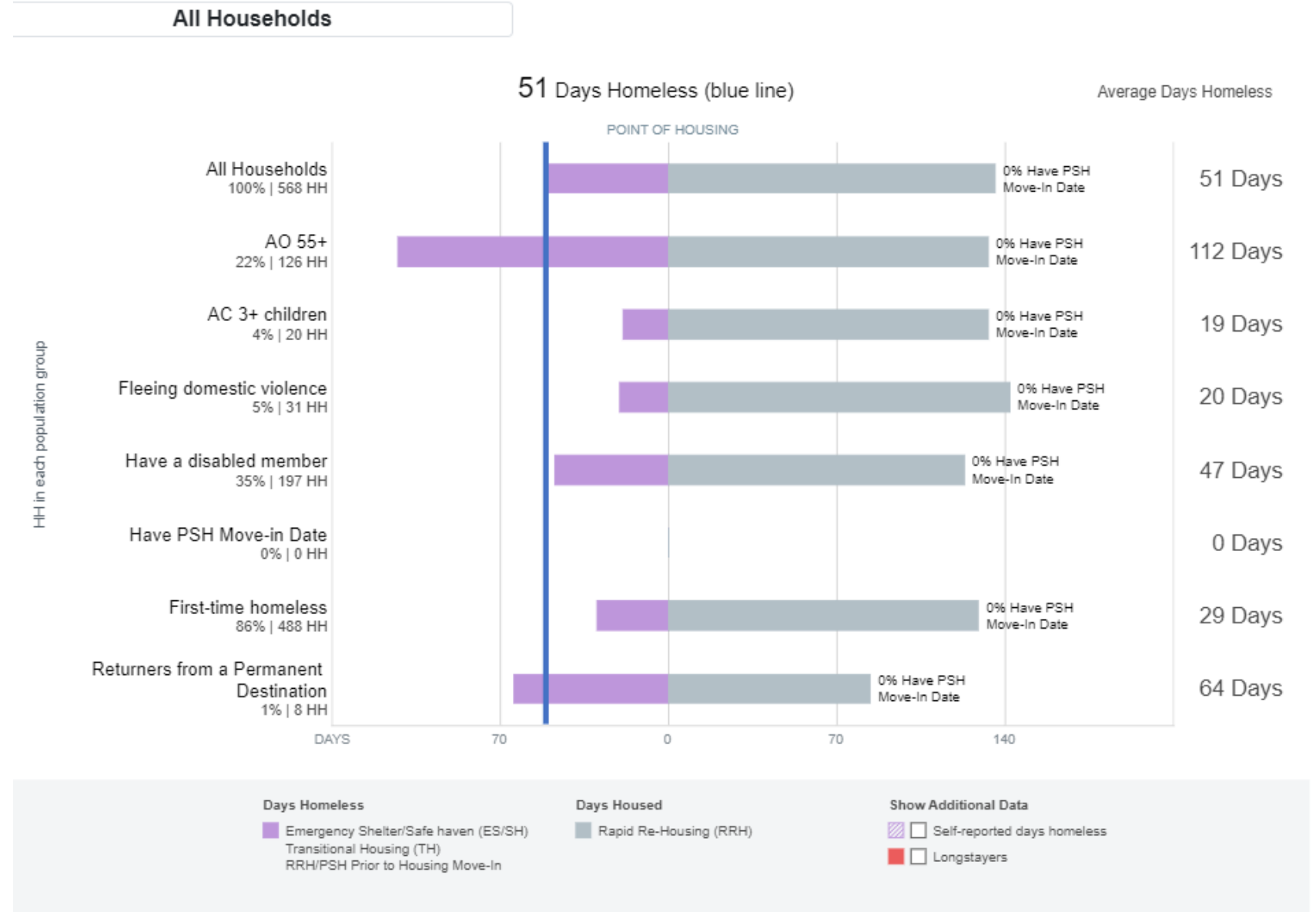
You can also compare groups to each other.

Pay attention to the number on the right (Average Days Homeless) as well as the number of HHs in the group.

There can be disparities in: length of time homeless (purple); length of time in Rapid Re-Housing (gray); and PSH move-in (text).

## Days Homeless by Population Group

Percent and number of households in each population group and average cumulative days homeless for each population group



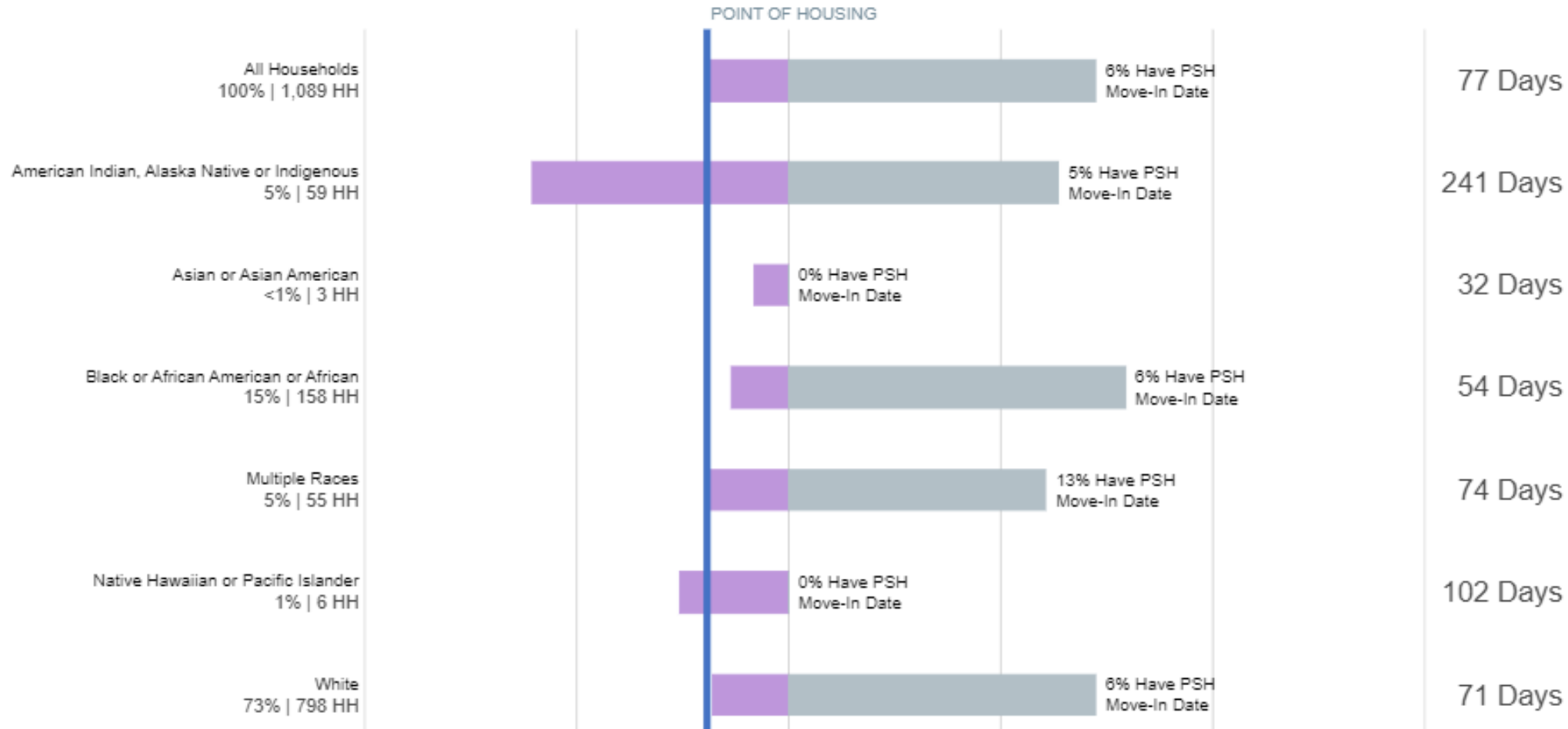
# Days Homeless by Race and Ethnicity

Percent and number of households in each race and ethnicity group and average cumulative days homeless for each group.

## All Households

77 Days Homeless (blue line)

Average Days Homeless



This chart has been cropped so we can see it more easily on this slide. There are additional Race and Ethnicity categories in Stella.

# Performance Measure – Exits to Permanent Destinations

- What do we want to see from the CoC?
- What is good performance?

Levels	Sample Analysis Questions	Visual
System-Level	Is overall performance improving, staying the same, or getting worse?	Exits to Permanent Destinations Trend
Household-Level	Are certain household types achieving relatively better or worse outcomes?	Exits by Destination Type
Pathway-Level	Which pathways have the greatest impact on overall performance?	Exits by Pathway
Population-Level	Are certain subpopulations (i.e. race/ethnic groups) achieving better or worse outcomes than others?	Exits by Population Group or Exits by Race and Ethnicity



# HMIS Exit Options

## Permanent Destinations

- Permanent Housing for formerly homeless persons (other than RRH)
- Rental by client, with RRH subsidy (or similar)
- Rental by client, with VASH subsidy
- Rental by client, with GPD TIP subsidy
- Rental by client, with other ongoing housing subsidy
- One HOPWA funded project to HOPWA permanent housing
- Owned by client, with ongoing housing subsidy
- Rental by client, with no ongoing subsidy
- Owned by client, with no ongoing subsidy
- Staying or living with family, permanent tenure
- Staying for living with friends, permanent tenure

## Temporary Destinations

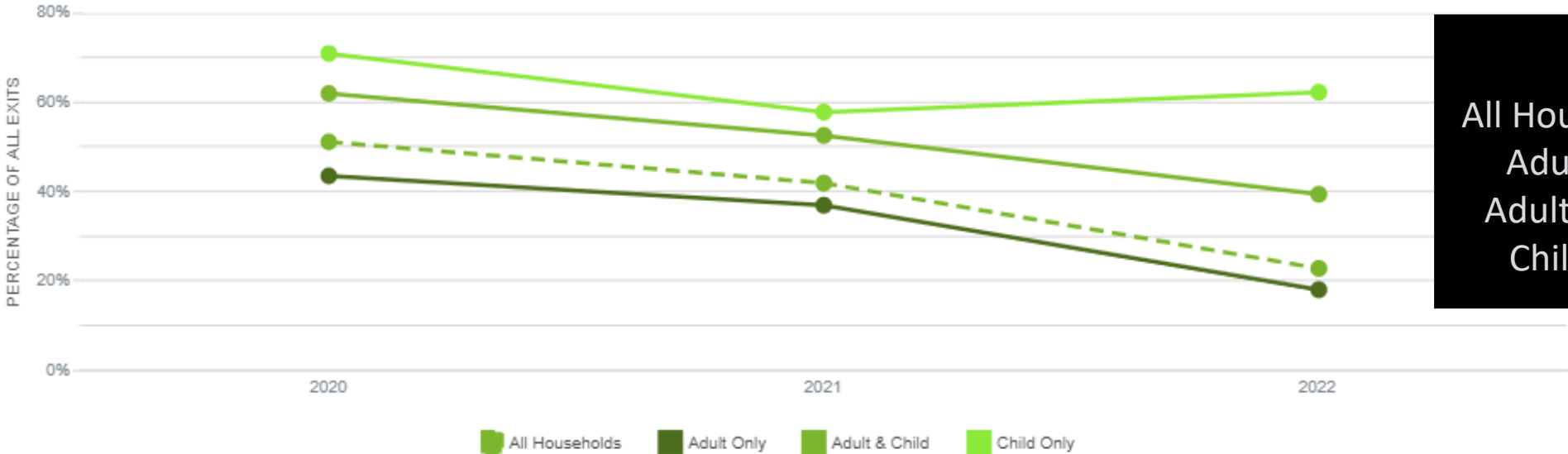
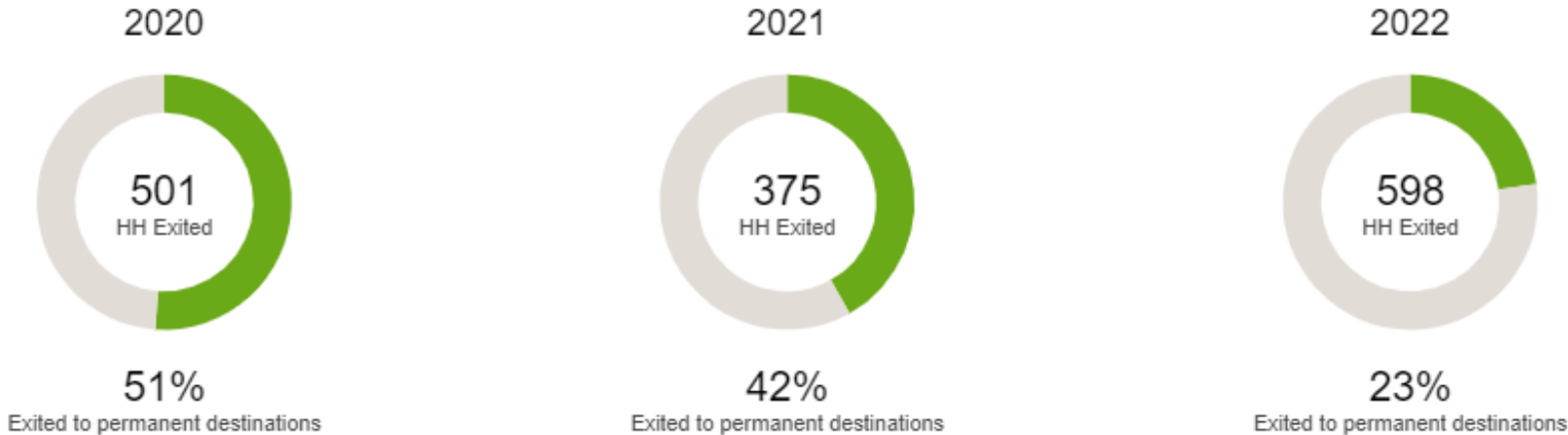
- Foster care home or foster care group home
- Long-term care facility or nursing home
- Hospital or other residential non-psych. medical facility
- Psychiatric hospital or other psychiatric facility
- Substance abuse treatment facility or detox center
- Jail, prison, or juvenile detention facility
- Residential project with no homeless criteria
- Hotel or motel paid for without ES voucher
- Emergency Shelter
- Safe Haven
- One HOPWA funded project to HOPWA Transitional Housing
- Transitional Housing for homeless persons
- Place not meant for habitation
- Staying or living with family, temporary tenure
- Staying or living with friends, temporary tenure

## •Unknown

- Deceased
- Missing
- Client doesn't know
- Client refused

# Exits to Permanent Destinations Trend

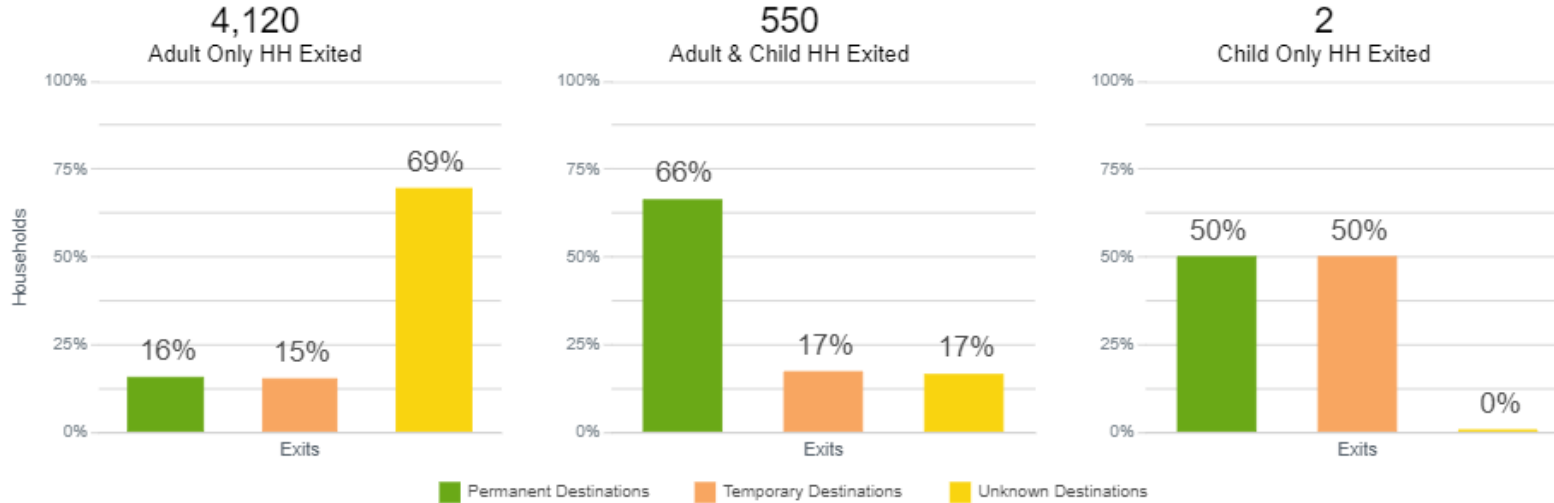
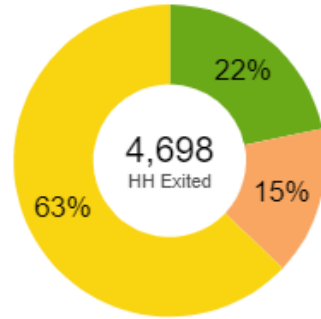
Number of households that exited from the homeless system and percent that exited to permanent destinations within each of the past three years.



**2022**  
 All Households: 23% | 136 HH  
 Adult Only: 18% | 71 HH  
 Adult & Child: 39% | 37 HH  
 Child Only: 62% | 28 HH

## Exits by Destination Type

Percent of households that exited to permanent, temporary, and unknown destinations by household type.



## Questions:

- How does the Adult Only HH chart impact the system chart (the ring chart)?
- How would you evaluate the CoC's ability to exit clients to permanent destinations?
- How would the CoC develop a performance strategy to increase the rates of exits to permanent destinations?

# Exits by Pathway

## Exits by Pathway

Percent and number of households that used each pathway, and percent and number of households in each pathway group that exited to permanent, temporary and unknown destinations.



All Households

All Destination Types

- All Destination Types
- Permanent
- Temporary
- Unknown

All Exiting HH (2,372)

All Households  
100% | 2,372 HH exited



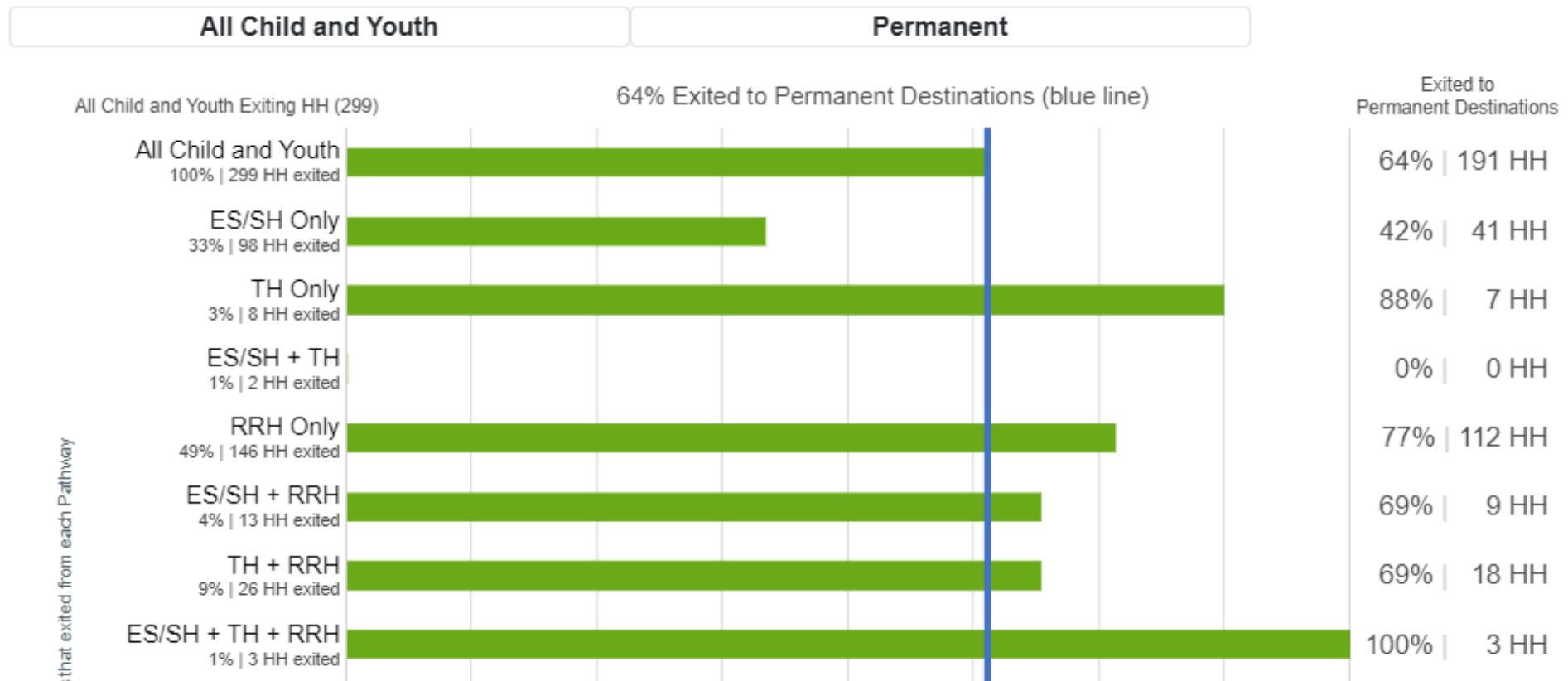
Exited to  
All Destination Types

2,372 HH

- Selecting Permanent from the drop-down can make this an easier graph to analyze
- Remember that more PSH households will stay than exit

## Exits by Pathway

Percent and number of households that used each pathway, and percent and number of households in each pathway group that exited to permanent, temporary and unknown destinations.



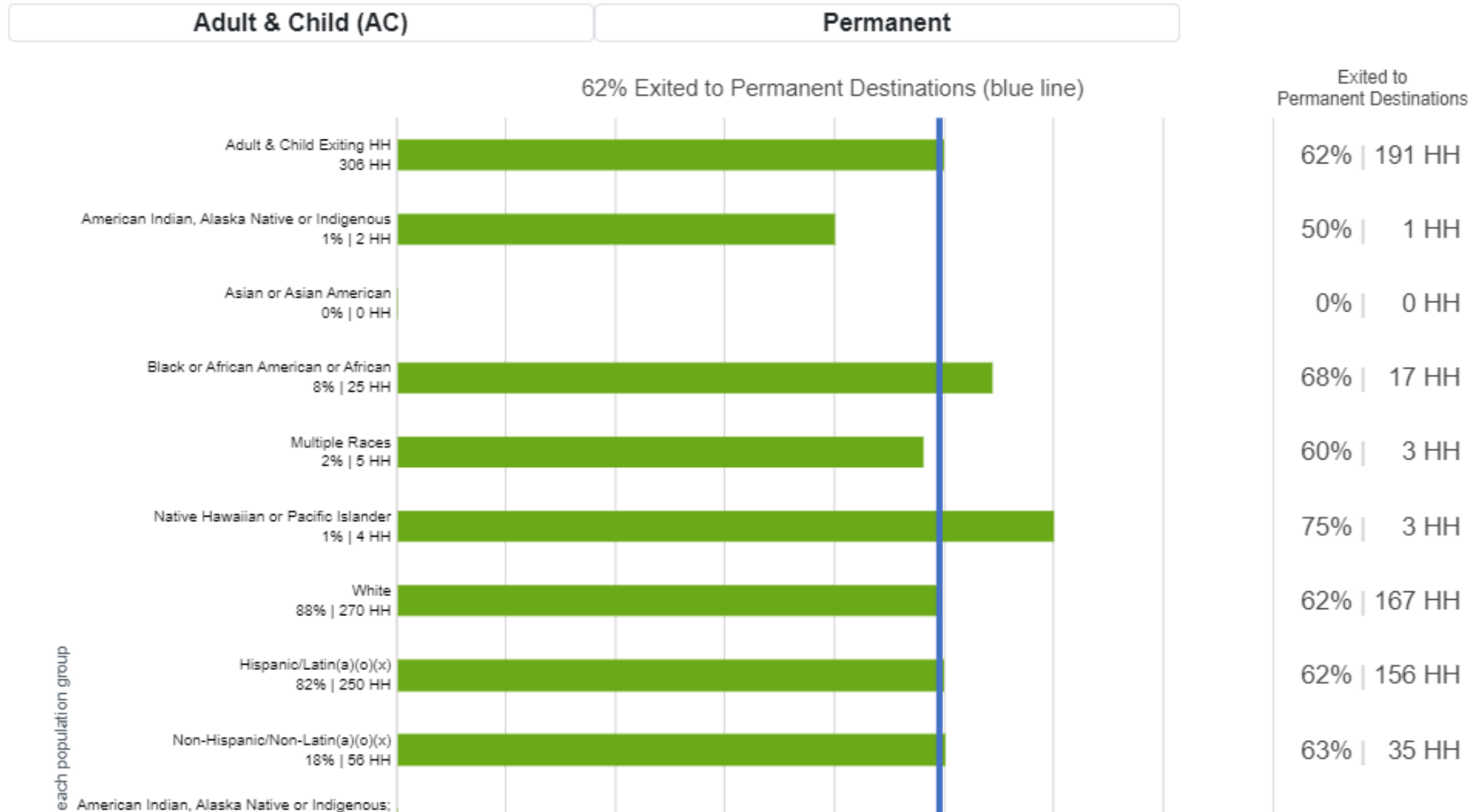
- Which pathway is most impactful on performance?
- How did RRH pathways compare to others in terms of successful exits?
- There were no youth exiting PSH pathways so PSH pathways have been cropped out

# Exits by Race and Ethnicity

This chart has been cropped so we can see it more easily on this slide. There are additional Race and Ethnicity categories in Stella.

## Exits by Race and Ethnicity

Percent and number of households in each race and ethnicity group, and percent and number of households in each group that exited to permanent, temporary, and unknown destinations.

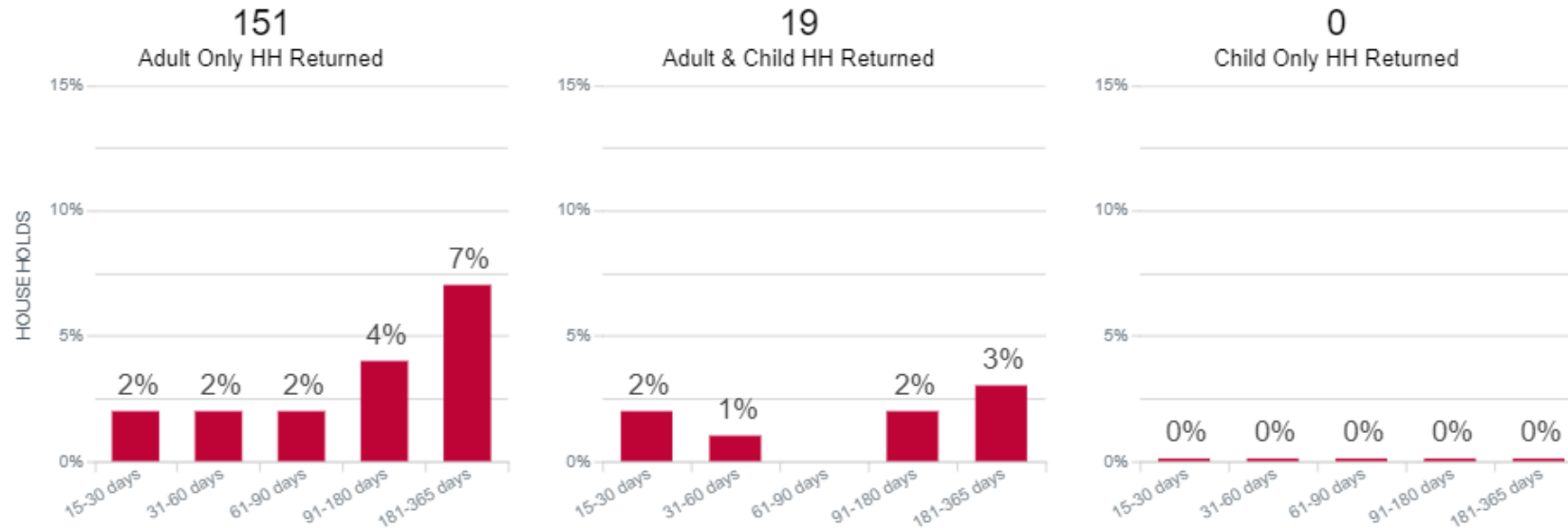


# Returns to Homelessness

## Time Distribution of Returns

Number of households that returned to the homeless system after exiting to a permanent destination and the percent of households who returned within each of the defined time intervals. Results are shown for the exit cohort selected in the dropdown. Return rates are cumulative for the timeframes available for each cohort; only the oldest cohort has return rates for the full three-year period.

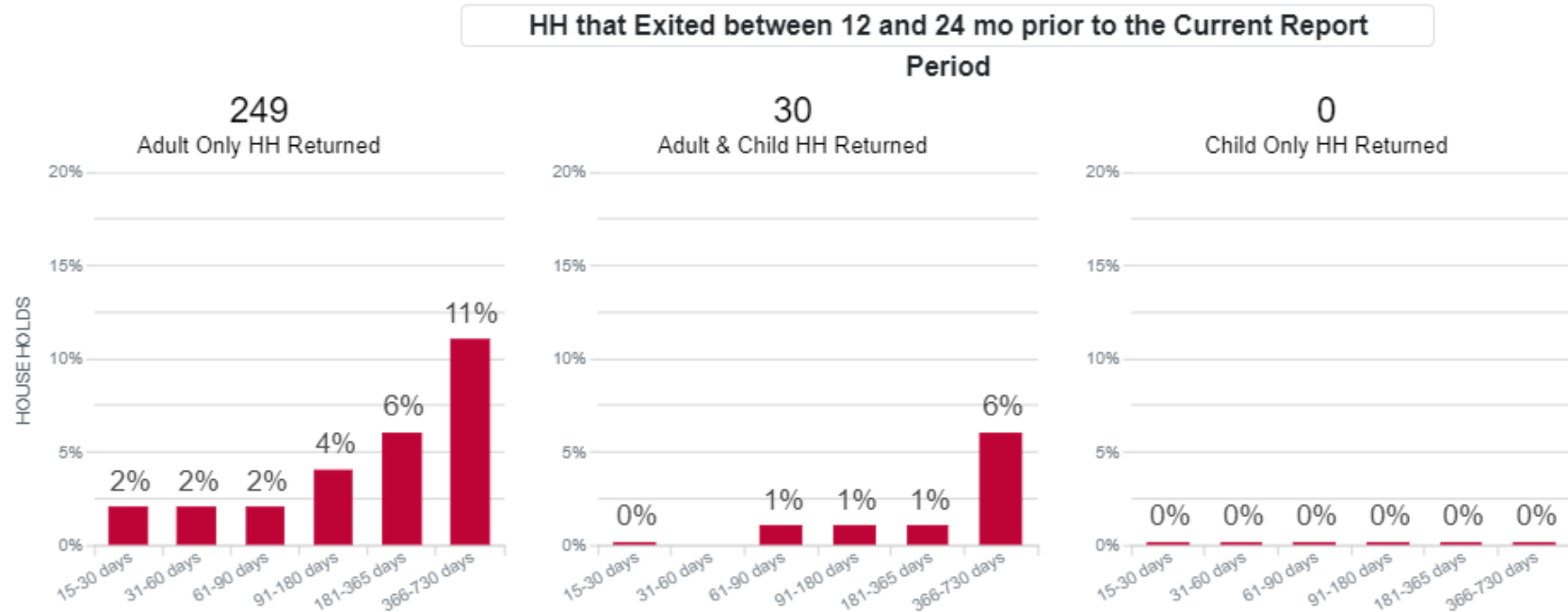
HH that Exited in the 12 mo prior to the Current Report Period



# Returns to Homelessness

## Time Distribution of Returns

Number of households that returned to the homeless system after exiting to a permanent destination and the percent of households who returned within each of the defined time intervals. Results are shown for the exit cohort selected in the dropdown. Return rates are cumulative for the timeframes available for each cohort; only the oldest cohort has return rates for the full three-year period.





# How do communities get TA for Stella?

## Online Resources

Created by TA providers

Always accessible

Desk Officers can also use to understand Stella

## Conferences

National Human Services Data Consortium (NHSDC Conferences)

Often targeted to HMIS personnel

Sometimes posted online

## Community Workshop

Last offered Spring 2022

Stella use also part of other TA projects

## Intensive TA

Not common

Might be one tool, a part of other work with the CoC



## Demographics – Changes Forthcoming/New

- Gender and Race/Ethnicity will be changed very soon (estimate – October 2023)
- Look for the resource “Stella P Race and Ethnicity Analysis Guide” on HUD Exchange
- Clients can choose multiple racial and gender opportunities in HMIS, so it’s a challenge to show the data
- “Multiple race” category may have been accurate, but it may not have been helpful to data analysis
- Hispanic ethnicity was a separate data element (i.e. question) but it will become one racial demographic option ([HMIS Data Standards 2024](#); effective October 1, 2023)
- There will be more graphs that will help users see different views based on single-select numbers or multiple-selected
- We can expect that this is still going to be a limitation for some users