



**Get Connected. Get Help.™**

# Welcome!

January 2025  
Introduction to Looker  
Training



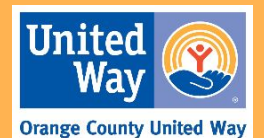
# Agenda

- 1. What is Looker?**
  - Terminology
  - Key Features
  - Accessing Looker in HMIS
  - Looker Models
- 2. Looker Interface**
  - Data Fields
  - Filters
  - Data Results and Visualization
- 3. The Looker Process (Demo)**
  - Creating a Look
  - Exporting Looks
  - Saving Looks
  - Running Saved Looks

Training materials and recording will be available on the [OC HMIS website](#).

# What is Looker?

**Looker** is a data analysis tool directly accessible from HMIS that enables you to **explore**, **analyze**, and **visualize** your agency's data.



# Terminology

These terms all refer to the same thing!

## *Looker*

The name of the product, owned by Google.

## *Explore Tab & Data Analysis Tab*

A description of how to access Looker via HMIS.

## *Data Analysis Tool*

Bitfocus' preferred terminology for Looker.

**2-1-1**

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# Looker's Key Features

Looker is a powerful data analytics and business intelligence (BI) tool that enables you to explore, analyze, and visualize your data in real-time.

## Key Features:

- Links directly with HMIS data to provide real-time\* information regarding HMIS projects, users, clients, enrollments, services, assessments, and referrals.
- Provides access to a wide variety reports you can run to assist with evaluating program performance, monitoring data quality, and performing user management.
- Allows users to download or export data from HMIS in a variety of file formats to interact with outside of the tool.
- Enables HMIS users to save reports to HMIS to quickly find information on frequently requested data.

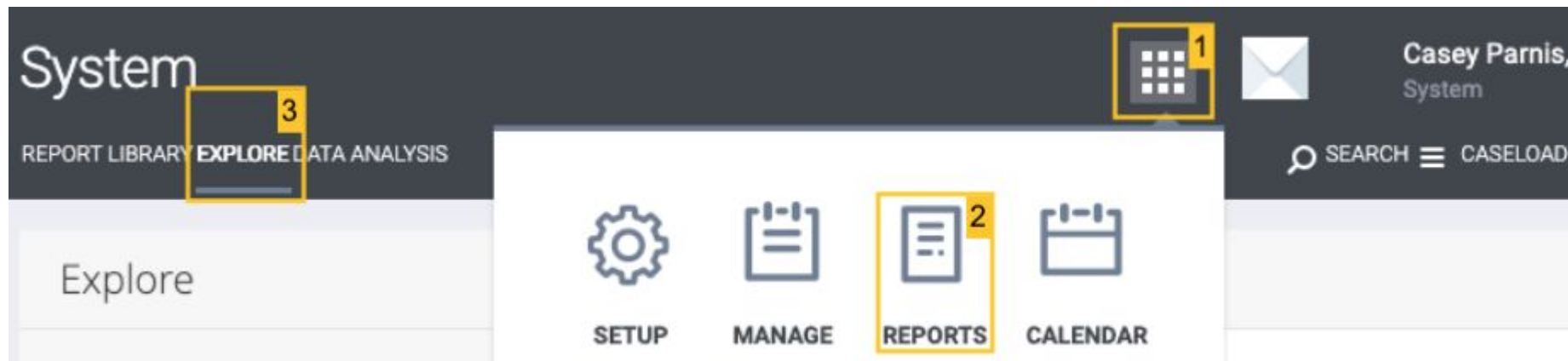


Graphic by: <https://storyset.com/online>

# Accessing Looker

Looker is accessible directly from HMIS.

1. Log-In to HMIS and select the appropriate Agency.
2. Click on the Waffle Icon in the Top Right
3. Click on Reports
4. Click on the appropriate Tab in the top left
  - a. Report Library - Canned HMIS reports developed by HUD/Bitfocus
  - b. Explore - Access Looker to create reports
  - c. Data Analysis - Access Saved Looker reports created by OC HMIS staff and Agency Admins



2-1-1

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# Looker Models

REPORT LIBRARY	EXPLORE	DATA ANALYSIS
EXPLORE		
Client Model		OPEN
Data Import Analysis		OPEN
Data Quality		OPEN
HMIS Performance		OPEN
Inventory (BETA)		OPEN
Outreach (BETA)		OPEN
HMIS Population over Time		OPEN
Project Descriptor Model		OPEN
Reservations		OPEN
Services Model		OPEN

### HMIS Performance

- Generally the right choice
- Clients must have an enrollment to appear

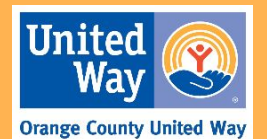
### Services Model

- Gives you access to data about services provided

### Project Descriptor

- Gives you information about your project setup, bed inventory, and staff

# Looker Interface





# Looker Interface - Explore

The screenshot displays the Looker Explore interface. At the top, the navigation bar includes 'System', 'REPORT LIBRARY', 'EXPLORE', and 'DATA ANALYSIS'. The user profile 'Andrew Estaris, System' is visible in the top right corner. The main interface is divided into several sections:

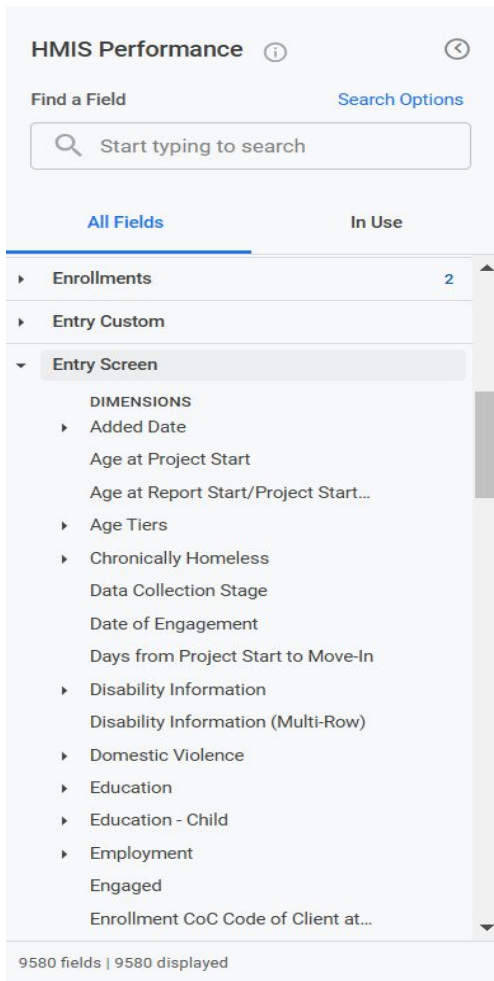
- Explore Panel (Left):** Shows the dataset 'HMIS Performance' and a search bar for fields. A list of fields is shown under 'All Fields', including 'Custom Fields', 'Agencies', 'Bed and Unit Inventory', and 'Client Addresses'. A 'Run' button is located at the top right of this panel.
- Filters Panel (Top Center):** Contains a filter for 'Enrollments Reporting Period' set to 'is in the last 1 quarters'. It includes '+ Filter', '+ New group', and '+ Custom expression' buttons.
- Visualization Panel (Bottom Center):** Shows a 'Data' tab with a 'Results' view. The main area is empty, displaying the instruction 'Select some dimensions or measures.' The 'Row Limit' is set to 500.

Powered by Looker

# Fields

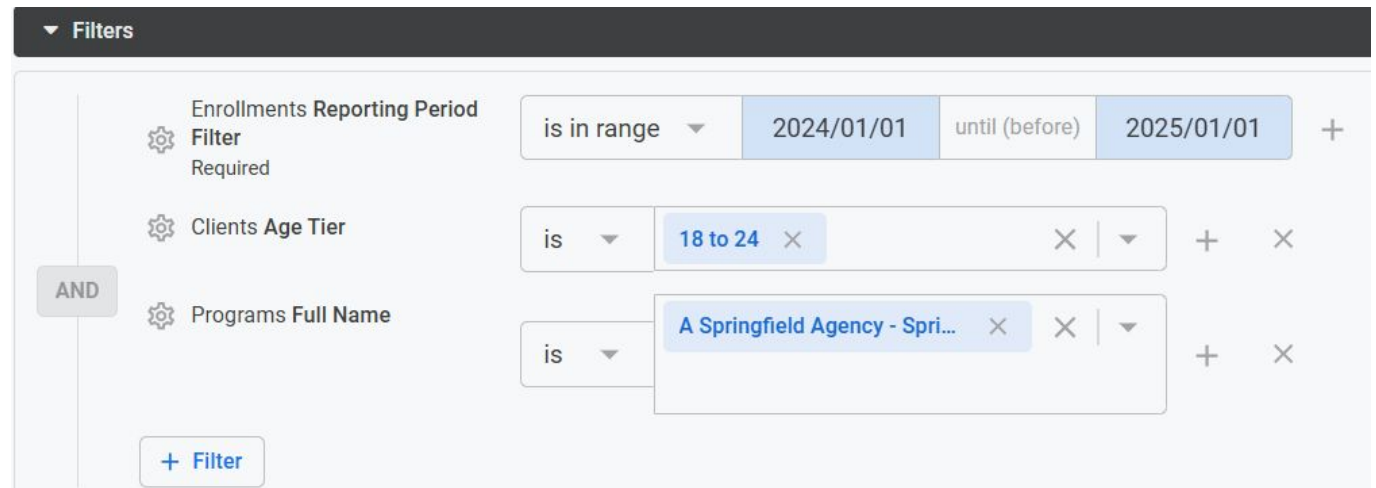
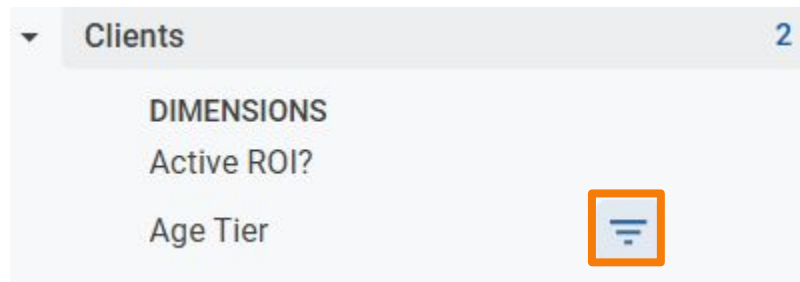
Fields in Looker represent the individual pieces of data that are available to use in a report, visualization, or analysis. These fields are like columns in a spreadsheet or database, containing specific types of data.

- On the left hand side of the Explore page, you'll find the field pane. This pane is where you'll select the fields you want to include in your data analysis project, both in the data you want to export and how to filter that data.
- Fields are organized in Looker based on the 'Screen' they are found in HMIS. For example, the "Entry Screen" will contain data entered in HMIS on the Program Enrollment page.



# Filters

- The topmost section of the report screen is the filter section. The filters pane can help you narrow down your data to focus on specific information.
- Looker automatically applies the Enrollments Reporting Period filter which allows you to filter for clients active in whatever reporting period you specify.
- Keep in mind that when creating date filters in Looker you need to add one day to the end of your reporting period.
- You can use almost any field as a filter. To do so, find the field you want to use, hover over it, and click on the Filter button that appears next to it.



# Data and Visualization

- The bottom section of the report screen is the Data pane. This pane will show you the fields that you have selected for your report.
- The data pane also allows you to set a row limit for your report. If you are working with a large number of fields, we recommend using the row limit to help generate the report faster.
- The Visualization pane will also show you the results of your report, but may look different based on the options selected in this pane. You can configure reports to appear as a wide variety of visualizations, but the examples covered in this training will all use the basic 'table' format.

► Visualization

▼ Data   Results   SQL   Add calculation

Row Limit     Totals    Subtotals

	Clients Unique Identifier ↑	Clients Gender	Clients Race and Ethnicity	Clients Current Age	Clients Veteran Status	Entry Screen Any Disability	Entry Screen Physical	Entry Screen Mental Health	Entry Screen Substance Use Disorder
1	072E77960	Woman (Girl, if child)	Data not collected	55	No	No	No	No	No
2	0A00B69FF	Man (Boy, if child)	White	14	∅	No	No	No	No
3	180C0B49A	Man (Boy, if child)	Multi-Racial	16	∅	Yes	No	No	No
4	2E53AC50D	Man (Boy, if child)	White	37	No	No	No	No	No
5	453E16E34	Woman (Girl, if child)	Data not collected	6	∅	Yes	No	No	No
6	4D28DC8B0	Man (Boy, if child)	Multi-Racial	9	∅	No	No	No	No
7	52D07D307	Woman (Girl, if child)	Multi-Racial	54	No	No	No	No	No
8	5AA8684EF	Man (Boy, if child)	White	18	No	No	No	No	No
9	7777BC48B	Woman (Girl, if child)	Multi-Racial	14	∅	No	No	No	No

# The Looker Process (Demo)

# Creating Looks - Sample Report

The Executive Director of my agency is asking for demographic data for our **Permanent Housing** projects in HMIS. Some of the fields we want information on are **gender, race, ethnicity, age, veteran status,** and **disabling conditions.** We want this report to include anyone who was **enrolled during the 2024 calendar year.**

Who (Filters): Permanent Housing Clients

When (Filters): Anyone enrolled during 2024 (Reporting Period Filter)

What (Fields) : Demographic Data (Race, Ethnicity, Age, Veteran Status, Disabling Condition)

HMIS Performance

Find a Field

Search Options

Start typing to search

All Fields

In Use

Agencies

Agency Name

Clients

- Current Age
- Gender
- Race and Ethnicity
- Unique Identifier
- Veteran Status · Veteran Information

Enrollments

Reporting Period Filter

Entry Screen

- Any Disability · Disability Information
- Mental Health · Disability Information
- Physical · Disability Information
- Substance Use Disorder · Disability I...

12 fields | 12 displayed

Filters

Enrollments Reporting Period Filter Required is in range 2024/01/01 until (before) 2025/01/01

Programs Project Type Code is PH - Housing Only PH - Housing with Service... PH - Permanent Supportiv...

Agencies Agency Name is A Springfield Agency

+ When?

Who?

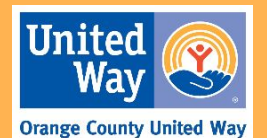
Visualization

Clients Unique Identifier ↑	Clients Gender	Clients Race and Ethnicity	Clients Current Age	Clients Veteran Status	Entry Screen Any Disability	Entry Screen Physical	Entry Screen Mental Health	Entry Screen Substance Use Disorder
1 072E77960	Woman (Girl, if child)	Data not collected	55	No	No	No	No	No
2 0A00B69FF	Man (Boy, if child)	White	14	0	No	No	No	No
3 180C0B49A	Man (Boy, if child)	Multi-Racial	16	0	Yes	No	No	No
4 2E53AC50D	Man (Boy, if child)	White	37	No	No	No	No	No
5 453E16E34	Woman (Girl, if child)	Data not collected	6	0	Yes	No	No	No
6 4D28DC8B0	Man (Boy, if child)	Multi-Racial	9	0	No	No	No	No
7 52D07D307	Woman (Girl, if child)	Multi-Racial	54	No	No	No	No	No
8 5AA8684EF	Man (Boy, if child)	White	18	No	No	No	No	No
9 7777BC48B	Woman (Girl, if child)	Multi-Racial	14	0	No	No	No	No

What?



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# Exporting Data from Looks

After creating your report, you can export the data from Looker.

Data can be exported from Looks in a variety of formats.

To export data from Looker, click on the  icon in the top right, then click download.

You will be prompted with a screen where you can select the file format, rename the file, and apply different options. When exporting Looks, we recommend using the following options:

- Format: Excel Spreadsheet
- Results: With Visualization Options Applied
- Data Values: Formatted
- Number of Rows and Columns to Include: All Results



# Exporting Data from Looks

Save Look 500 rows · 1.905s · 2m ago Run

Filters Enrollment Reporting Period Filter is in the last 1 quarter

Visualization

Data Results SQL Add calculation

Row limit reached. Results may be incomplete

	Clients Unique Identifier ↑	Clients Gender
1	00027E909	Woman (Girl, if child)

**Download**

Format: Excel Spreadsheet (Excel 2007 or later)

Filename: oc\_connection\_model base 2025-01-13T1052

Results

- With visualizations options applied
- As displayed in the data table

Data values

- Formatted
- Unformatted (no rounding, special characters, etc.)

Number of rows and columns to include

- Current result table
- All results
- Custom

Remove all sorts from query

Open in Browser Cancel Download

Save...  
Download ⬇️ ⬆️ + CTRL + L  
Merge results  
Remove fields and filters CTRL + K  
Clear cache and refresh ↻ ⬆️ + CTRL + ↵

# Saving Looks

Looks can also be saved in HMIS for future use.

To save your Look, click the purple Save Look button. Your saved Looks will appear on the Data Analysis tab under the [Agency Name] Reports dropdown.

The screenshot displays the HMIS interface with a 'Save Look' dialog box open. The dialog box has a title bar 'SAVE LOOK' and a close button. It contains a 'Look' dropdown menu set to 'New Look' and a 'Name' input field. At the bottom are 'CANCEL' and 'SAVE' buttons. In the background, the 'Explore' section shows a 'Save Look' button highlighted with a red box. The interface also displays '500 rows · 1.905s · 10m ago', a 'Run' button, and a settings gear icon. The 'Filters' section shows 'Enrollments Reporting Period Filter is in the last 1 quarter'. The 'Visualization' section is expanded. The 'Data' and 'Results' tabs are visible, with a warning message 'Row limit reached. Results' shown. The 'Row Limit' is set to 500, and 'Totals' and 'Subtotals' are also visible.

# Accessing and Running Saved Looks

Saved Reports can be accessed by navigating to the Reports Page, then clicking on the “Data Analysis Tab”

Orange County United Way

REPORT LIBRARY EXPLORE **DATA ANALYSIS**

DATA ANALYSIS

Built In Reports	8 rep
Orange County Training System Reports	30 rep
Orange County United Way Reports	4 rep

Andrew Estaris,  
Orange County United Way

SEARCH CASELOAD

CLARITY  
HUMAN SERVICES

SETUP MANAGE REPORTS CALENDAR

ATTENDANCE MERGE DATA IMPORT OUTREACH

INVENTORY

# Creating Looks - Sample Report #2

I'm a program manager for a newly funded Emergency Shelter, and I want to run a report to show data on various performance metrics **for new enrollments last year**. Let's create a report that tells us **how many new clients** enrolled in our Emergency Shelter this year, their **average length of stay**, and **how many of them exited to Permanent Housing**.

Who: Emergency Shelter Clients

What: Performance Metrics - New Enrollments, Average Length of Stay, Exits to PH

When: New Enrollments last year (Project Start Date = 2024)

# Sample Report #2 - Program Level Data

Explore Save Look 1 row · 0.063s · just now Run

**HMIS Performance**

Find a Field Search Options

All Fields In Use

**Custom Fields**

- Count of Housed on Exit

**Clients**

- Count Client IDs

**Enrollments**

- Date • Project Start Date
- Average Days in Project
- Reporting Period Filter

**Programs**

- Name

Clear all Clear fields keep filters

**Filters**

- Enrollments Reporting Period Filter Required is any time +
- Enrollments Project Start Date is in the year 2024 + ×
- AND
- Programs Name is Training - Emergency Shelter × × + ×

+ Filter


+ New group + Custom expression

**Visualization**

**Data** **Results** **SQL** Add calculation Row Limit 500 Totals

Programs Name	Clients Count Client IDs ↓	Enrollments Average Days in Project	Count of Housed on Exit
1 Training - Emergency Shelter	12	31.25	1

# Final Notes & Best Practices

- Data Refresh Rates
  - While most data should be available in Looker as soon as it is entered in HMIS, some fields are subject to a '[Data Refresh Rate](#)' and may only be available in Looker a day after it is entered in HMIS.
  - If data is not appearing in Looker after the data refresh time, try 'clearing the cache' by clicking the  icon in the top right.
- Review Before You Create
  - Search existing Looks or Dashboards to see if your need is already addressed
  - Filters on existing reports can be adjusted if needed.
- Avoid Overwriting Existing Looks
  - Please do not make any changes to any reports you did not create. Some reports have been created by HMIS staff and are used by multiple agencies. We are unable to restore the reports if they are overwritten.
- Reach out to the HMIS HelpDesk if you have any questions
  - We are happy to assist with any questions or inquiries you have regarding Looker.

# Q&A

**Reminder: Please enter your agency name and email  
in the chat box for attendance**

Thank you  
Have a great day!

Training materials and recording will  
be available on the [OC HMIS website](#).





**United  
Way**



**Orange County United Way**