AIMS MANUAL: QUERIES & DASHBOARDS

Research and Analysis

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Overview of AIMS

AIMS is an information management system created by Catalis for the use of court record management. This system allows for inputting of client data related to the Problem-Solving Courts, which includes demographics, drug test results, program results, treatment and education information, and other pertinent information related to each individual client and their program outcomes. AIMS uses queries to obtain data records and those queries are used for data visualization via dashboards.

Queries

Conducting a Query: What is a Query and Why Use Them

What exactly is a query?

A query is a way to ask for specific information from a system. Think of it as a search tool that helps you pull out only data that meet certain conditions you set.

For example: “Show me all clients with an admission date after July 1, 2025.” “List all involvements where client status is ‘Terminated’ and are in the Anne Arundel District Veterans Treatment Court.”

In both scenarios, you are narrowing down the data to exactly what you want to see. This is the purpose of a query: ***to ask data a question and receiving focused answers***.

Now that you know what a query is.

Why use queries?

Queries save time, help with accuracy, and make data analysis easier. Essentially, queries are efficient, precise, repeatable, insightful, and assist with data analysis.

Instead of scrolling through tons of data or records, a query will give you the exact number of rows or data points you need. Efficiency at its best! Queries help with applying multiple conditions, such as dates and values, so you can get specific results (i.e., precision). Once you create a query, you can save and reuse it whenever you need that specific data question answered again. Queries help with spotting trends or showcasing areas that need attention. Finally, queries help answer the important questions like “How many clients are currently active in the OPSC programs?” or “What sanctions were the most useful for clients within the Veterans Treatment Court programs?”

Figure 1: Core Message

CORE MESSAGE

Learning how to conduct queries is a valuable skill when working with data and information systems. Queries allow you to go from excessive information to clear, insightful data, which helps you make informed decisions.

Writing a Query

Now that you know what queries are and why they are useful, let's learn

how to write one. Queries are created using simple rules and operators to tell the system ***what to find***.

Query Components

Every line in a query has three main parts[1].

- The **column** contains the information you're interested in (e.g., Status, Age at Admission, Location, Days in Program).
- A **value** from the column is used to create conditions for filtering (e.g., Graduated, 35, Anne Arundel District Veterans Treatment Court)
- An **operator** tells the system how to treat that value (e.g., Status= Graduated, Age < 35, Contains, Is Empty)

Next, you will learn about each operator in more detail.

Understanding AND vs. OR

When creating queries with more than one line, two main operators you will always use are **AND** and **OR**. These operators are used to combine multiple conditions and tells the system how to match data. Understanding the differences between the two is essential for accurate results.

AND

- **AND** means that both conditions must be true.
- *Example*: Show me clients in Anne Arundel District Veterans Treatment Court *AND* who are over the age of 50.

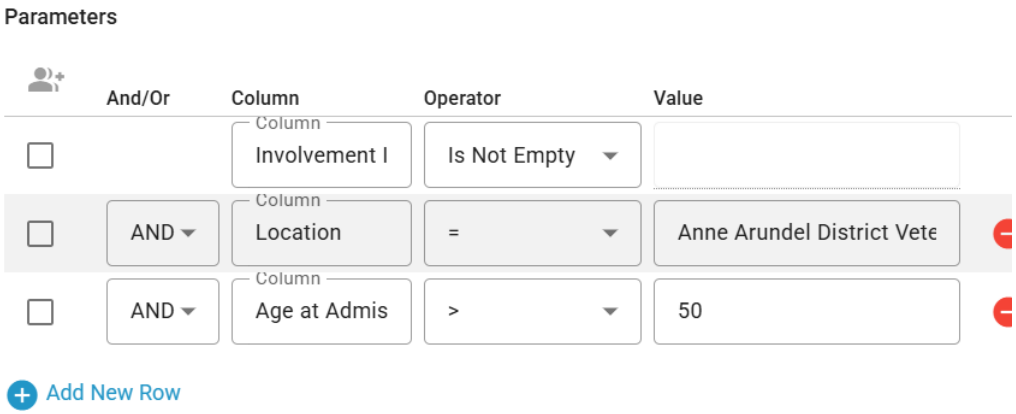
[1] In AIMS, there are four main parts, as the AND/OR is a separate parameter.

- The results will **only** get clients who are in the Anne Arundel District Veterans Treatment Court who are over the age of 50.

IMPORTANT

For coordinators, queries are already set in your designated court unless you have multiple courts. If there are multiple courts, you should add those locations; if not, a location query is not necessary.

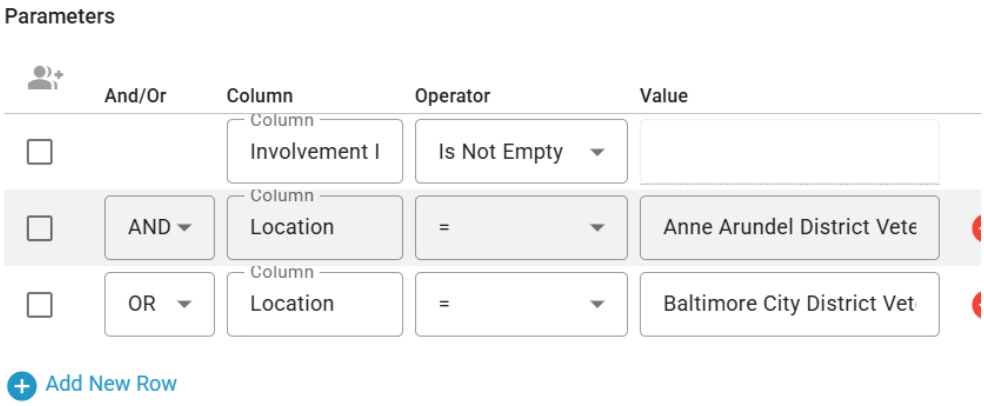
Figure 2: Example Parameter "AND"



OR

- **OR** means that at least one of the conditions must be true.
- Example: Show me the clients who are in Anne Arundel District Veterans Court OR Baltimore City District Veterans Treatment Court.
- The results will show clients in Anne Arundel District Veterans Court as well as clients in Baltimore City District Veterans Treatment Court.

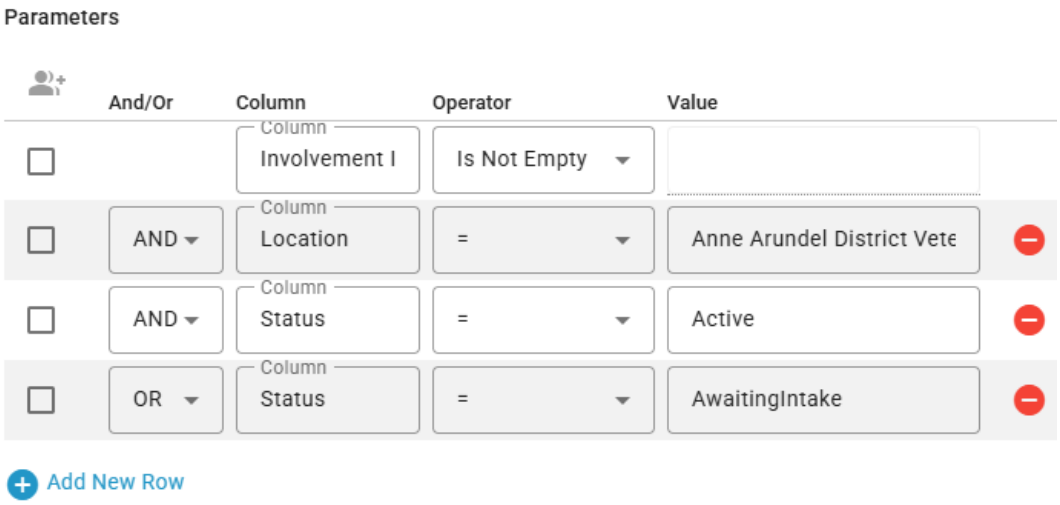
Figure 3: Example Parameter "OR"



You can use both operators in one query. For instance, in the query above, there is already a condition set for the data (i.e. “Involvement ID Is Not Empty”). Now, using AND to include one location and then OR to include the other.

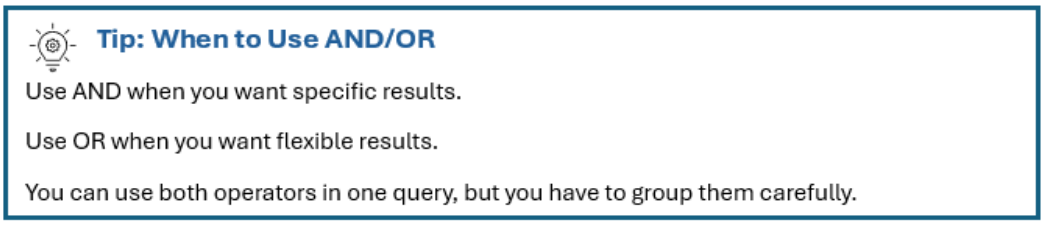
Another *OR* example looks at client statuses. You want to know how many clients are active OR awaiting intake within Anne Arundel District Veterans Treatment Court. In AIMS, this is based on status. See AIMS Cheat Sheet: Query Edition for more information about AIMS specific data entry.

Figure 4: Example Parameter " OR"



For status in AIMS, “Awaiting Intake” is one word. Remember that queries can be case sensitive.

Figure 5: Tip



Additional Operators

There are other comparison symbols for queries to obtain results. These additional operators help with narrowing down to specific data needed (See Table 1).

See also Cheat Sheet: Queries for useful information.

Table 1: Query Operators

Operator	**Meaning**	**Example**	**Results**
=	Equals	Status **=** "Graduated"	Finds records where clients status is Graduated
!= or <>	Not equal to	Age **!=** 35	Finds records where Age is not 35
>	Greater than	Days in Program **>** 120	Finds records where Days in Program is more than 120 days
<	Less than	Age **<** 45	Finds records where Age is less than 45
>=	Greater than or equal to	Months in Program **>=** 24	Finds records where Months in Program are greater than or equal to 24
<=	Less than or equal to	Months in Program **<=** 12	Finds records where Months in Program is less than or equal to 12
Contains	Text includes a value	Location **Contains** Adult Drug	Finds names of courts with "Adult Drug" in the name
Is Empty	Field is blank or has no data	Address **Is Empty**	Finds records with no Address
Is Not Empty	Field has some value	Address **Is Not Empty**	Finds records where the Address is filled
Starts with	Text begins with certain letters	Location **Starts with** Anne Arundel	Finds records where Court program

			names Start with “Anne Arundel”
Ends with	Text ends with certain letters	Location **Ends with** Treatment Court	Finds records where Court program names End with “Treatment Court”

Common Query Mistakes

Even if you are experienced with using queries particularly when conditions are complex, or data is inconsistent, mistakes can be made. This section covers common query mishaps, what they look like, and how to avoid them as much as possible.

Mistake #1: Wrong Operator Used

Using “=” when you need to use “Contains”, or using AND when you meant OR, is common and can change the results you want.

Example: Full Name = “Tra”

This will only return names exactly equal to “Tra”. It will not give names such as Tracy or Tracie.

To fix this, use the correct operator for what you need.

Fixed: Full Name CONTAINS “Tra”

Mistake #2: Over-Filtering (Too Many Conditions)

If you add too many filters too soon this may give you **no** results, despite having valid data.

To fix this, start with one or two simple conditions, test results, and then build the conditions gradually.

Mistake #3: Assuming Clean Data

Even if your query is written well and correct, sometimes you may not get the data you want, especially if the data is inconsistent. In some cases, names may be misspelled or there are clerical data issues, such as dates of birth or even program entry and exit dates.

It is best to review your data ahead of time, if possible, and use filters to see all available options (e.g., using the operator “Contains” instead of “=”).

***Summary*:** Use the right operator, test your query in small batches, and watch for inconsistent entries.

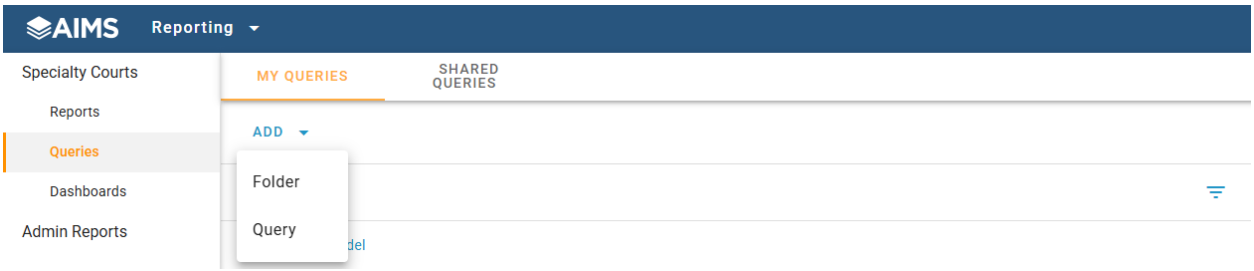
Hands-On Practice #1: Client Information Query

Now that you understand how queries work, it is time to practice creating and running queries using real-life examples! In this section, you will walk through step-by-step exercises using AIMS.

Step 1: Open AIMS>Specialty Courts>Queries

In the AIMS interface, the query interface is located under Specialty Courts. Once there, click on “ADD” and “Query”.

Figure 6: AIMS-Add Query



Step 2: Data Sources>Clients.

Now, it’s time create and run a query. Under the Query Editor:

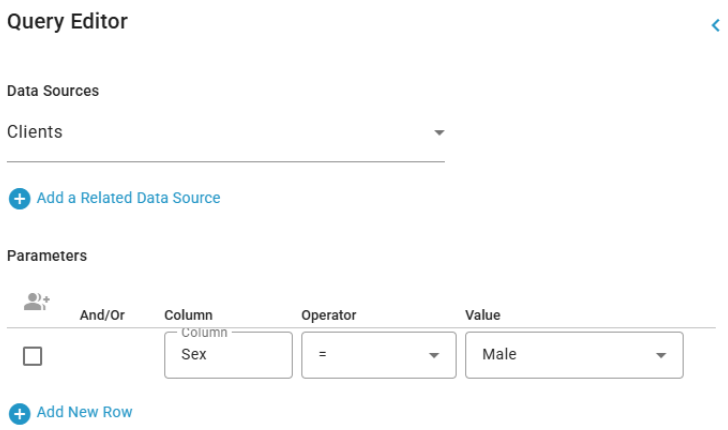
Use “Clients” as a data source. This will allow for you to look at client demographic information, such as First and Last Name, Date of Birth, Sex, Race, and Employment Status.

Let’s run a query: You want to get results for all clients that are male. To do this, think about your operator and what results you are trying to get. If you *only* want male clients, then the “=” operator is the most accurate[2].

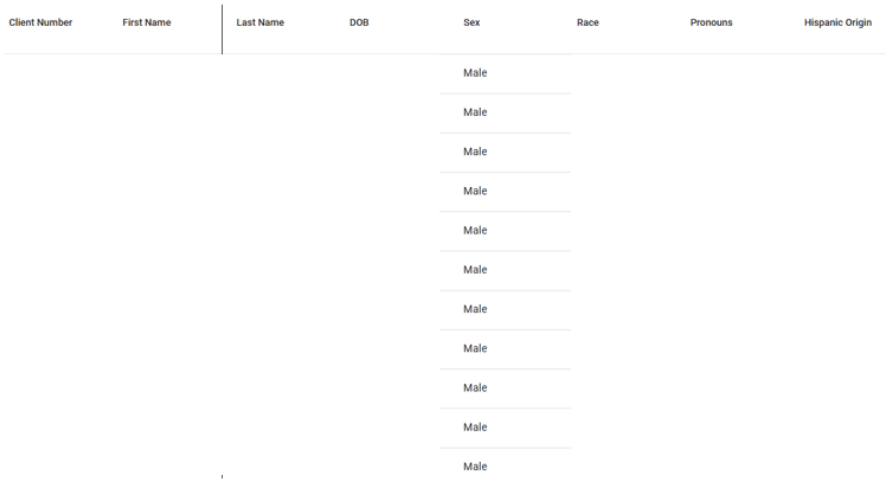
In AIMS, in the “Column” section, select “Sex”, Operator “=”, and Value “Male”. Click ‘Apply’.

[2] If you were to use the “Contains” operator, the term “Female” would also be included in your results, which is not what you want. However, AIMS only allows the options =, !=, Is Empty or Is Not Empty, for this form of data.

Figure 7: AIMS-Client Query Editor



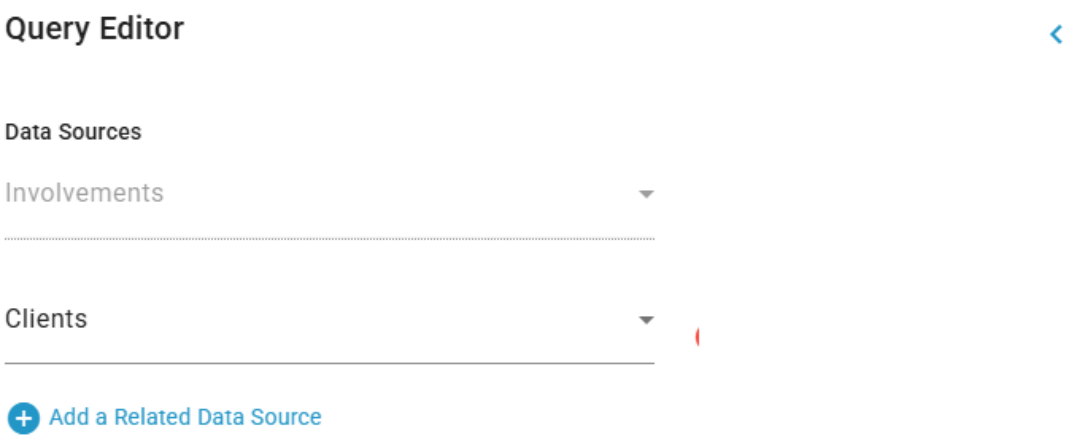
Your results will show all clients who were entered into the system as "Male."



If you want to keep this query, click "Save" and name it.

Hands-On Practice #2: Involvement Query

The AIMS data source, 'Involvements', contains data related to program outcomes, such as Status, Admission Date, Exit Date, Age at Admission, and others. When querying, if you only want information on program related data, your data source should include 'Involvements.' AIMS allows for multiple data sources to be added on. For this practice query, you will add 'Clients.' Adding clients will give you both parameters to choose from program related data and client related data (think client demographics).



After adding in the data sources, you can now run a query. Let's say you want to see all clients in Anne Arundel Circuit Adult Drug Court whose Age at Admission is at least 36. Before you create the query, think about your operators, What do you need to answer this question?

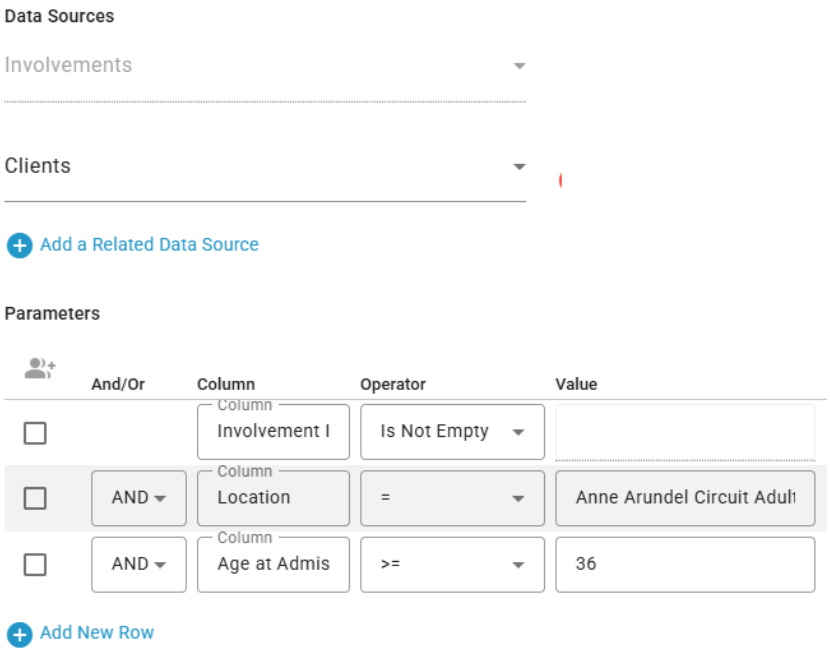
You need a location set to return results for only Anne Arundel Circuit Adult Drug Court and age at admission to show clients 36 or older (see Table 1).

The basics of this query are:

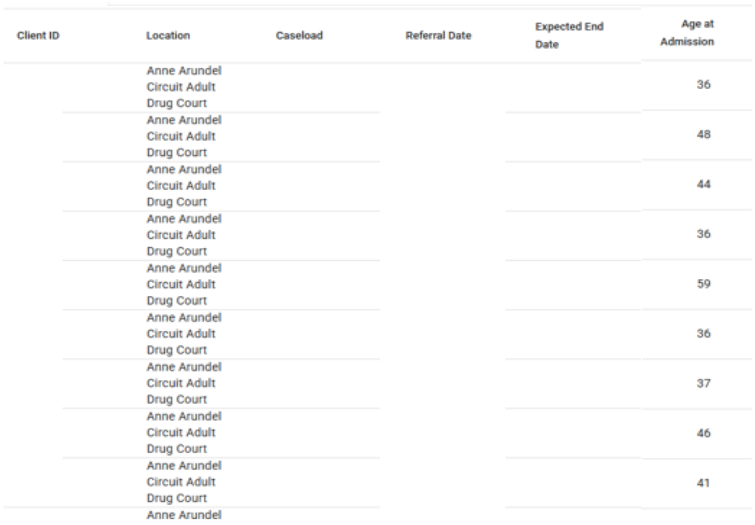
Involvement ID "Is Not Empty"

AND Location = Anne Arundel Circuit Adult Drug Court

AND Age at Admission >= 36



Your results should show the total number of clients within the Anne Arundel Circuit Adult Drug Court, aged 36 or older.



Client ID	Location	Caseload	Referral Date	Expected End Date	Age at Admission
	Anne Arundel Circuit Adult Drug Court				36
	Anne Arundel Circuit Adult Drug Court				48
	Anne Arundel Circuit Adult Drug Court				44
	Anne Arundel Circuit Adult Drug Court				36
	Anne Arundel Circuit Adult Drug Court				59
	Anne Arundel Circuit Adult Drug Court				36
	Anne Arundel Circuit Adult Drug Court				37
	Anne Arundel Circuit Adult Drug Court				46
	Anne Arundel Circuit Adult Drug Court				41
	Anne Arundel				

In the query, the Client data source was not used specifically in the query. *Remember, the data sources are only what you need to run a query, but it is good practice to add and remove to see the difference in results.*

If you want to keep this query, click "Save" and name it.

IMPORTANT

It is important to note that for queries using 'Involvements' it is best to start the query with the parameter "Involvement ID IS Not Empty", this parameter will ensure that only clients with program related data are included.

Hands-On Practice #3: Involvement Query

This next query will use program data. You want to know how many clients are within the District Mental Health Courts in Montgomery or Baltimore City.

Building the query, you will think of what operators you need.

Query:

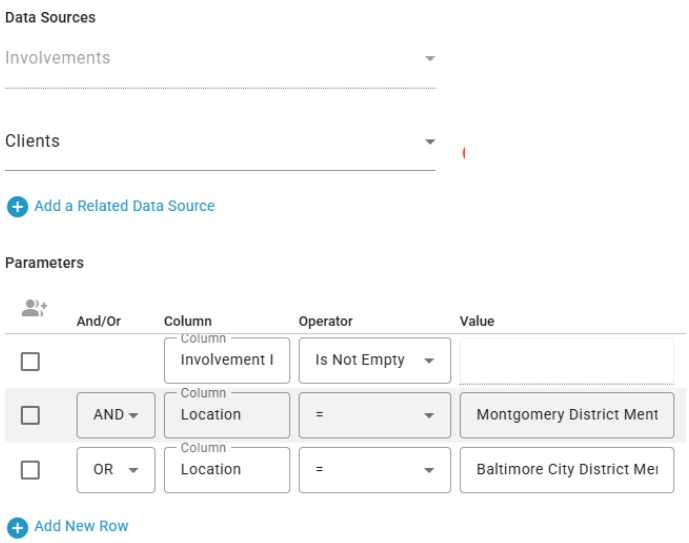
Involvement ID "Is Not Empty"

AND Location = Montgomery District Mental Health Court

OR Location = Baltimore City District Mental Health Court

Remember: AND is for only and OR is for either!

The AND to include the first location is necessary to limit our query to the two locations we need. If you were to put OR , it would show all courts in the system.



Your results should show both mental health courts and the total number of clients.

If you want to keep this query, click "Save" and name it.

Understanding the Strengths of Queries

Queries are powerful tools that help you search, filter, and look at data efficiently. Queries help you interact with your data in meaningful ways!

Focused Data Retrieval

Queries allow you to retrieve only the data that you need. Instead of manually scanning large spreadsheets or databases, you can apply certain conditions to narrow down your results.

Timesaving

Once you create a query, you can save and reuse it as many times as needed! This is helpful for routine reports or dashboards that normally require regular updating.

Automated Reporting

Queries can be linked directly to visual dashboards and reports (more details later in this manual). As new data is added, your reports can automatically refresh, saving you time!

Pattern Recognition

Queries allow you to explore data in a multitude of ways, helping with seeing patterns, tracking behavior, or answering specific questions. For example, you can highlight what incentives are the most effective within a treatment program.

Understanding the Limitations of Queries

While queries are helpful, understanding the limitations of queries is important. Knowing what queries *can't* do will help with expectations and avoid confusion when doing data searches.

Data Accuracy

If information is missing, outdated, or inconsistently entered (e.g., different name spellings, incorrect dates entered), the query results may be incomplete or even misleading. Queries DO NOT clean, nor do they correct your data. Queries can only return what you ask of it based on the rules and conditions you apply.

Complexity

Queries do not always account for complex relationships or the context of the data, unless they are already built within the system. For instance, if you want to know why a client was terminated from a program, the query will only show the 'termination reason', but queries can not interpret case-specific nuances unless that information is stored in structured fields.

Clear Conditions

Queries work at their best, when conditions are clear and concise. Broad queries may give you too much information to be useful, while overly narrow queries may give you nothing. That's why you should create your queries carefully and test them in increments.

Database Limitations

Some systems, like AIMS, have technical limitations on how many filters, records, or even types of operators available to use in a query. This can impact performance or stop you from running complex queries without changing to a more advanced mode or requesting support from system administrators.

It is important to note that queries DO NOT make decisions for you, rather they are tools for pulling data for you to make informed decisions. Interpreting results, recognizing trends, and taking certain actions still depend on YOU and your understanding of a program you are using.

Dashboards

Introduction to Dashboards: What They Are and Why Are They Needed?

What are Dashboards?

Dashboards are visual tools that showcase important data in a way that is easy to read, understand, and act on. A dashboard brings together key information like totals, trends, comparisons, and charts onto a single screen, so you can track progress, monitor performances, or make informed decisions.

Dashboards are often built using data from queries or reports, and they automatically update whenever the data changes. Dashboards help you see what's going on immediately.

Why Do We Need Dashboards?

Dashboards simplify complex data, turning it into visuals, such as graphs and charts. They save time by showing you real-time updates, all in one place! Dashboards can help you stay focused on what matters, such as key metrics involving admissions, testing, and other program outcomes. Dashboards can help with informed decisions related to programmatic operations by showing trends and comparisons. Finally, dashboards make communicating via data easier, especially for teams, the public, or leadership with clear visual summaries of data without having to run reports.

Creating a Dashboard

Components of a Dashboard

A dashboard is made up of multiple components that work together to give you a clear picture of what is going on with your data. Each component plays a specific role like summarizing numbers, showing trends, and some let you dig deeper into the data. Learning what each component does will help you better understand and use dashboards with confidence!

Tiles

Tiles are the building blocks of dashboards, with each one focusing on a specific piece of information, such as clients by gender, clients by age, and total number of active clients. They can show numbers, charts, and tables.

Example: A tile labeled "Anne Arundel Circuit ADC Active Clients by Gender" showing a bar graph.

Visuals and Charts

Charts are used to turn numbers into visuals. Common types of chart visuals are:

- Regular Bar Charts: comparing groups (e.g., cases by gender)
- Grouped Bar Charts: shows two categories side by side (e.g., enrolled vs exited)
- Stacked Bar Charts: breaks a total into segments (e.g., exit types by termination reason)
- Pie Charts: showing percentages (e.g., termination reason by type)
- Gauge Charts: showing percentages or progress towards a target (e.g., # of clients graduated)

KPIs (Key Performance Indicators)

KPIs are highlighted numbers that represent important metrics you are tracking. These are usually shown in large numbers, bolded text to grab your attention. KPIs help staff and leadership monitor whether program goals are being met.

Examples:

- % of clients Graduated
- Average days in program
- Number of drug tests taken

Filters

Filters lets users customize what they see on the dashboard without changing the data itself. Normally, filters are dropdowns or checkboxes that let you focus on specific time periods, locations, and status.

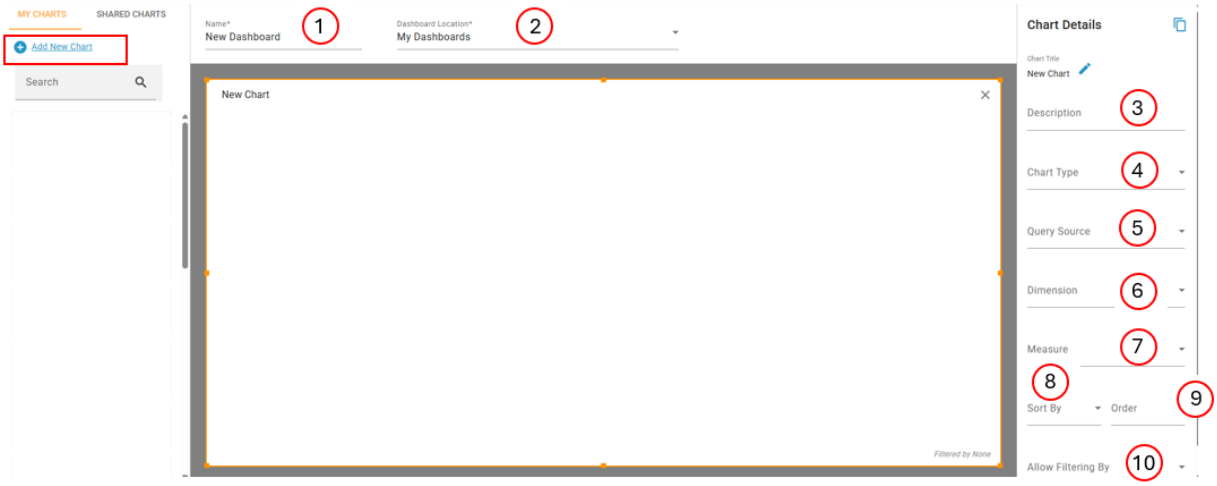
Examples:

- Referral Date
- Admission Date
- Exit Date
- Status

AIMS Dashboard Components

AIMS dashboard has multiple components, with additional features depending on the visuals used.

Figure 8: AIMS Dashboard Interface



1. **Name** of Dashboard
2. **Dashboard Location**: My Dashboards
3. **Description** of Chart
4. **Chart Type**: Bar Charts (Horizontal and Vertical; Stacked and Grouped); Pie Chart, Gauge Chart, KPI Chart)
5. **Query Source**: Select a query to pull data for the dashboard
6. **Dimension**: Data for the type of visual (e.g. bar portion for the bar graph; think what you're trying to show such as gender or age range)
7. **Measure**: the number you're trying to show(think counts, average age, average days)
8. **Sort By**: Sort by label or value
9. **Order**: Ascending or Descending
10. **Allow Filtering By**: Filtering by Admission Date, Ordered Date, Referral Date, etc.

Hands-On Practice #4: Clients by Gender (Bar Chart)

Now that you've learned what dashboards are and how they work, it's time to put that knowledge into practice. This hands-on practice will walk you through how to interact with a dashboard, interpret the visuals, and understand how the data is being pulled from queries.

Remember: Every dashboard visual is being powered by a query in the background; meaning, depending on how the data is filtered and structured during the query setup, determines what you see in the visuals.

Before you start with dashboards, let's make and save a query first. The focus of this query is client demographic information. You want to know about active client demographics for Anne Arundel Circuit Adult Drug Court.

Step 1: Add queries (see earlier hands-on practice)

Query

Data Sources: Involvements, Clients, and Client Demographics *(Demographics is optional; you will get the same results with Involvement and Clients)*

Remember: You make the query your own, use different parameters to see if you get different results.

Parameters:

Involvement ID "Is Not Empty"

Location = Anne Arundel Circuit Adult Drug Court

Status = Active (Meaning in AIMS, the status is set to "Active")

Your query should show all "active" clients in Anne Arundel Circuit Adult Drug Court and their demographic information, in addition to program data.

After creating the query, we can move to dashboards! Our first dashboard will focus on looking at client demographics, specifically looking at gender.

Before you create the dashboard, think of how you want to show the data. If you are looking at gender, you are comparing (see section on chart types)! A good choice to start out with is a bar graph. You can choose if you want it to be vertical or horizontal (whatever fits your aesthetic!).

Like queries, in AIMS, starting a dashboard is the same.

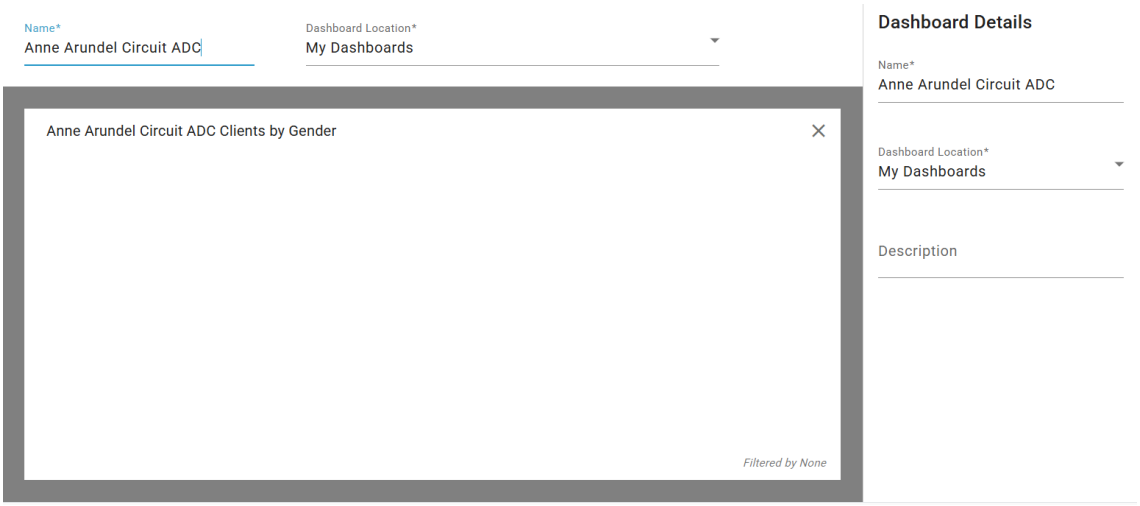
Step 1: Open AIMS>Specialty Courts>Dashboards

Step 2: Add>Dashboard

Step 3: Name the Dashboard (this could be your court program name)

Step 4: Click 'Add New Chart' and name it (e.g., Anne Arundel Clients by Gender)

****Your chart name should be relevant to what the chart/graph is describing****



Once you've added the chart, it is time to add the query.

Step 5: Click on the white space that contains the chart and more chart details will appear.

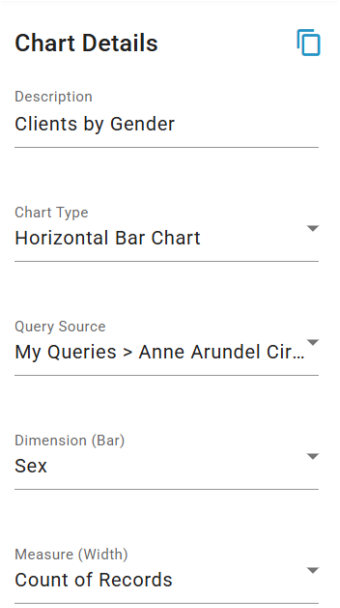
Step 6: You can now add a description of your chart (optional but encouraged)

Step 7: Chart type: Choose a type of bar chart (horizontal bar chart or vertical bar chart)

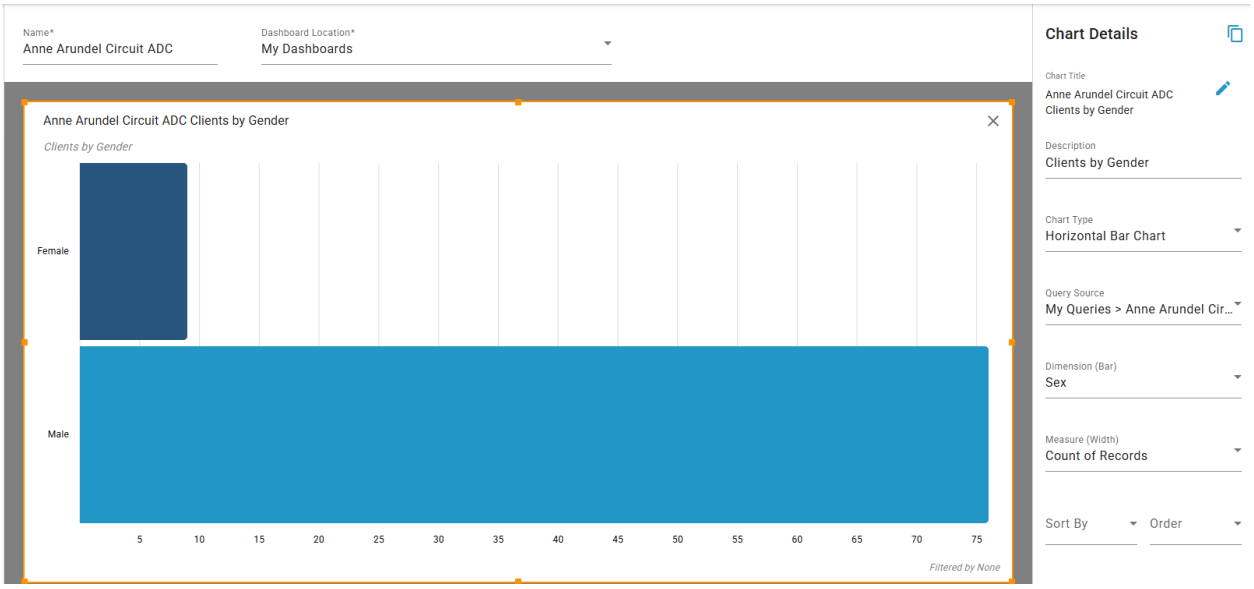
Step 8: Now, choose your query source—select the query you just made.

Step 9: Dimensions (Bar): This will be what you are looking at (category). In this case Gender or Sex.

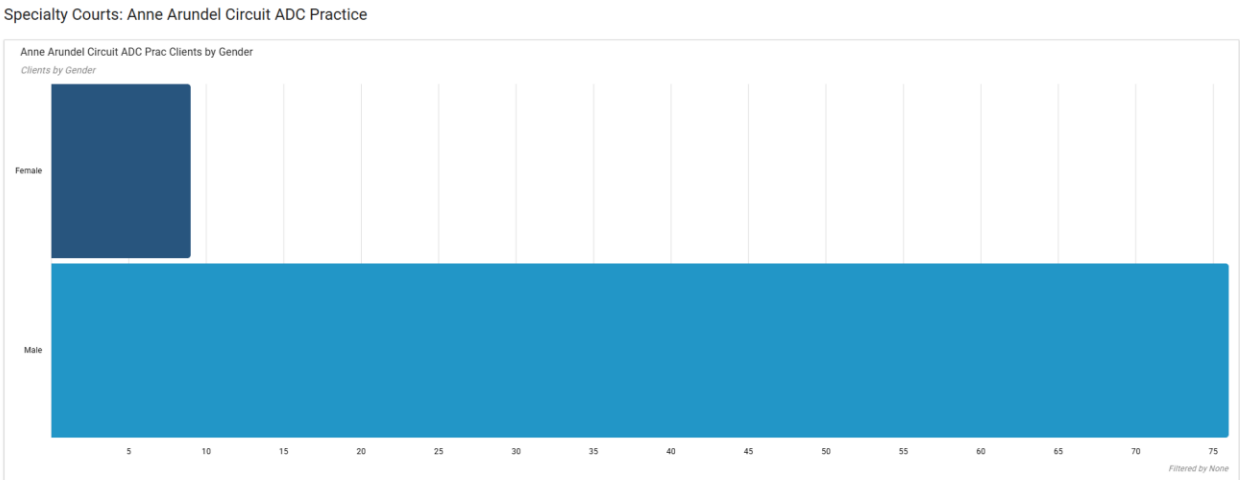
Step 10: Measure (Width): This will involve numbers. In this case, you want the count of records.



You should then have your first dashboard visual made!



Next steps are to save your dashboard. Click 'Save'. After saving it to your 'My Dashboard', you should be able to click your dashboard to appear in widescreen.



Now, you are going to continue to build this dashboard by adding more charts!

You can reopen your dashboard OR if your dashboard is in full view mode (like above), click the edit icon (pencil).

Hands-On Practice #5: Clients by Age (Bar Chart)

Step 1: Click 'Add New Chart'. This should add a second chart to the dashboard.

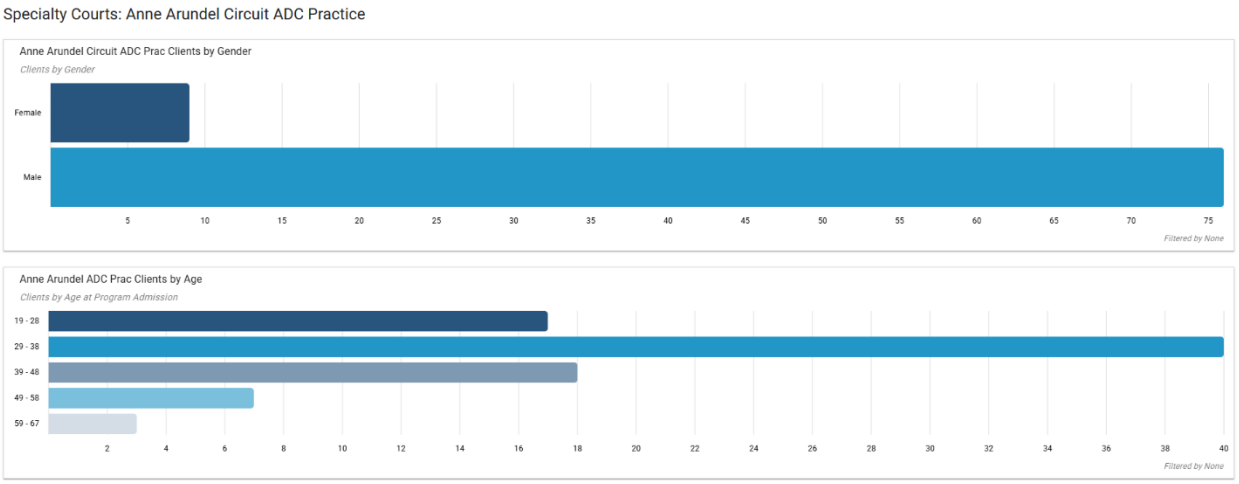
Step 2: Name your Chart. You are going to look at Clients by Age. You can also choose to add a description to the chart. In this case, it will be clients by age at admission to the program.

Step 3: You are going to do a similar chart to the previous one. Pick a type of chart, whether vertical or horizontal. The query source is the same query as before.

Step 4: For Dimension, you are looking at 'Age at Admission'

Step 5: Measure—you are looking at numbers. There are TWO options: you can look at just the count of records, this will show counts of each client within different age groups OR you can Average Age at Admission; this will show all clients within the Anne Arundel program whether they are "active" or not. For this practice, we will look at the Count of Records (It does not matter which category it falls under like Client or Involvements).

You should have two charts!



You are going to continue to build this dashboard. Let's add a chart looking at Clients by Race and Ethnicity.

Hands-On Practice #6: Clients by Race/Ethnicity (Grouped Bar Chart)

Step 1: Just as before, add a new chart. Name the chart and provide a description.

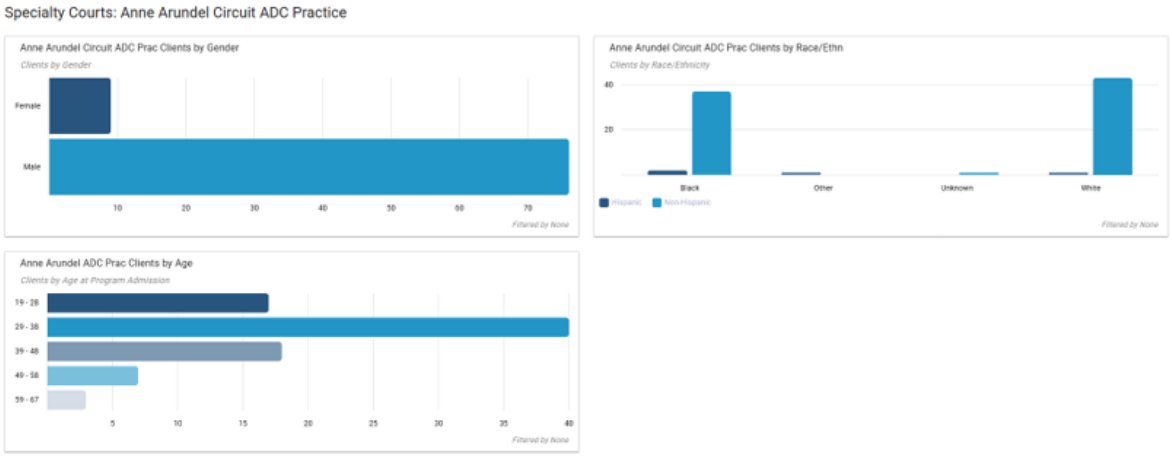
Step 2: For this chart, race and ethnicity are two different categories. So, the chart needs two categories at once. In this case, you will choose a grouped or stacked chart (horizontal or vertical). For this practice, a grouped chart is used[3].

Step 3: Dimension 1—For the bar of the graph, you will want to pick Race (this is the main category).

Step 4: Dimension 2—You will pick 'Hispanic Origin', this is the second category and the ethnicity portion.

Step 5: Measure—Count of Records (same as before, you are looking at the number for each category).

You should have a Grouped Bar Chart with Race and Ethnicity. The darker color showing Hispanic origins and the lighter color non-Hispanic.



Tip: Grouped vs. Stacked Bar Charts

Use **grouped** to compare values within a category.

Use **stacked** to show how each part adds up to a total.

[3] Grouped bar charts are great for showing visualizations where the categories are shown side by side for easy comparison. Think of it like bars standing next to each other in a group. While stacked bar charts show different categories on top of each other in a single bar to show part-to-whole relationships. Think of it like when there is one tall bar per category and that is split into colored sections. (see also Cheat Sheet: Interpreting Dashboards)

Hands-On Practice # 7: Client Contact (KPI Chart)

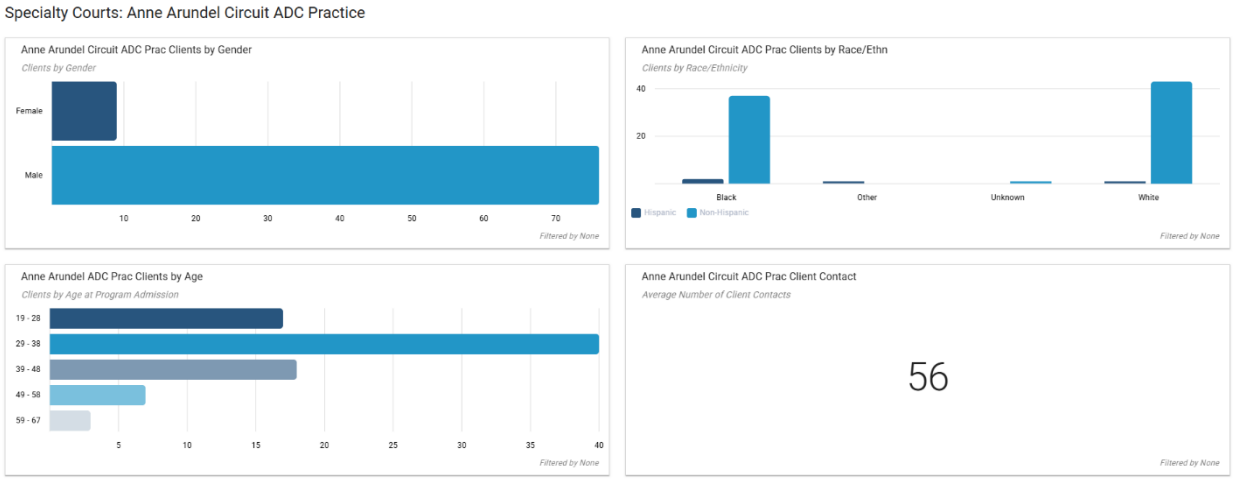
Let's add one more chart. You want to show the average number of contacts a client makes while in the program with their program coordinator or case manager. To show this number in a dashboard, you can use a KPI Chart. As described above, KPI charts show large numbers to grasp attention and show important metrics you are tracking.

Following the same steps to create a new chart:

For this chart, the Chart type is 'KPI Chart'. Then choose your same query, followed by 'Average Number of Contacts'

You will see a chart with a large number displaying the average number of contacts for a client.

Now, you have a full dashboard! This dashboard shows you clients demographics and a key program measure. You can add more or less charts in your dashboard.



See also Cheat Sheet: Building an Effective Dashboard for quick tips.

Ready-to-Use Dashboards: Use What is Already Available

The AIMS has preset dashboards ready for you to use. The dashboards are great for continuous monitoring of your program data and keeping up with what is happening. For example, you can check admission numbers, and if you notice a drop in admissions or too large of a number, that is an anomaly that you can address.

To get to the ready-to-use dashboards:

Step 1: Open AIMS>Dashboards> Shared Dashboards>PSC Coordinators

Note: The drop down for each folder (the arrow) is above the folder name

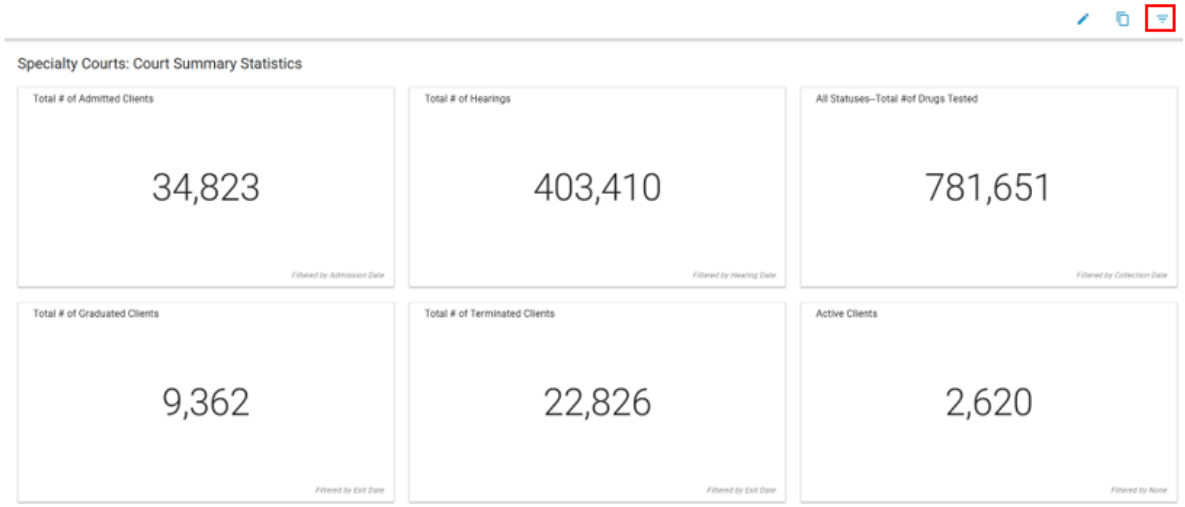
Ready-to-Use Dashboard #1: Court Summary Statistics

Under the PSC Coordinators folder in the shared dashboards is a dashboard entitled "Court Summary Statistics."

This dashboard contains six performance metrics:

- Total number of admitted clients
- Total number of hearings
- Total number of graduated clients
- Total number of terminated clients
- Total number active clients
- For all statuses, the total number of drugs tested

The dashboards can be filtered by date ranges, such admission date, hearing date, collection date, and exit date, and locations.

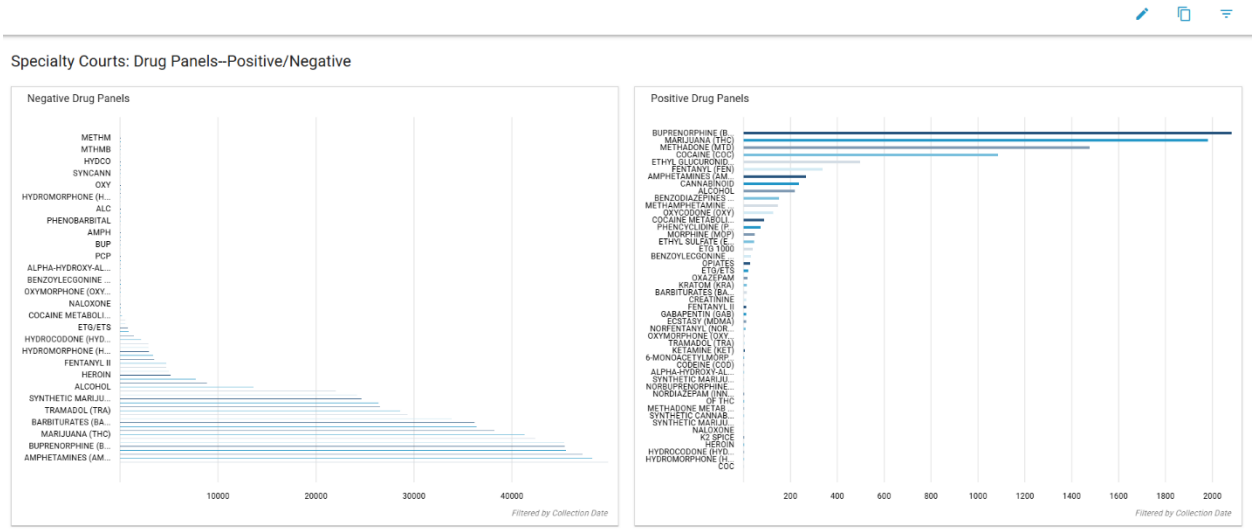


IMPORTANT

Active Clients: this number represents any client that is active at any point in time. This number is **NOT** represented by admission dates or status dates or any date range.

Ready-to-Use Dashboard #2: Drug Panels

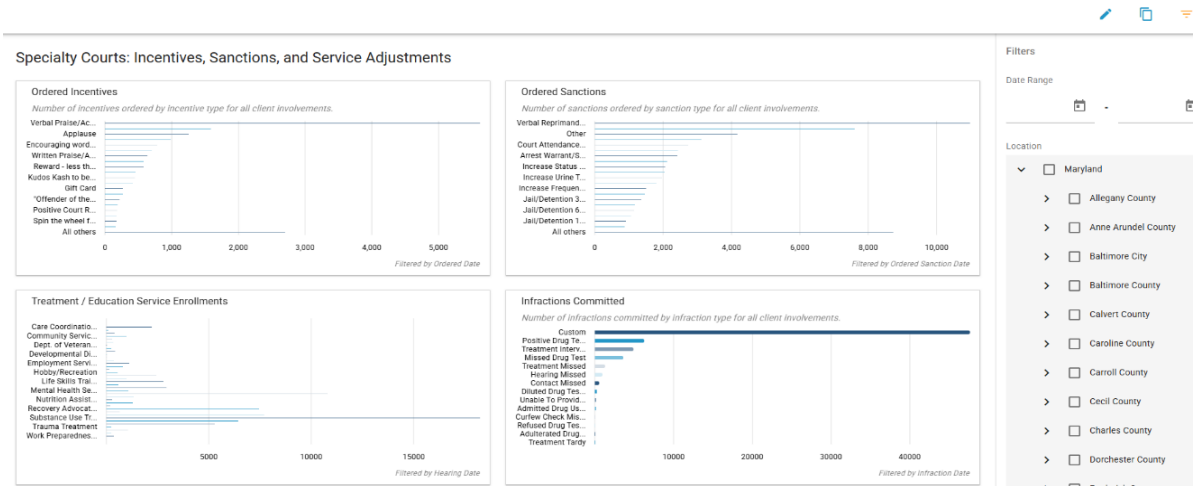
This dashboard contains both number of negative and positive drug results for drug panels. This dashboard can also be filtered by date (collection date) and court.



Ready-to-Use Dashboard #3: Incentives, Sanctions, and Service Adjustments

This dashboard displays:

- Total number of ordered incentives
- Total number of ordered sanctions
- Total number of treatment/education service enrollments
- Total number of infractions committed



This dashboard can also be filtered by date range and location.

Interpreting Dashboards

What is the purpose?

Before diving into the visuals, you should first ask yourself: *What is this dashboard trying to measure or what question are you trying to answer?*

Think of further questions like:

- Do I want to track performance over time?
- Am I comparing programs or even locations?
- Do I want to show specific performance metrics?
- Do I want to show goal progression?

Knowing the purpose of your dashboard will help you focus on the important visuals and avoid information overload.

Are there patterns and trends?

Instead of just looking at the values, try to look to see if things are changing based on your knowledge of your program.

Are numbers going up or down? Are they staying the same?

Are certain categories taking up most of the total?

Example: Let's say there's a KPI chart showing the 'Average Numbers of Client Contacts: 30'. Now ask yourself, is this number within your target range?

Outliers and Unexpected Results

Sometimes things that are insightful come from abnormal data. For instance, there may be a location with unusually low success rate, a sudden spike in admissions, or a program that is underperforming or overperforming consistently.

It is good practice to flag anything that is a surprise to you or doesn't match up to what you expect.

Think Critically

Once you interpret your results, think critically on what the data is showing you. *What does this information mean to your team, clients or the program? Is there a next step or decision to be made?*

Interpreting data should guide you to insightful thoughts and, in some cases, action is needed.

Common Interpretation Mishaps

There are some common interpretation pitfalls you should try to avoid.

1. Assuming causation: Just because two numbers move together or look right together doesn't mean one causes or leads to the other.
2. Ignoring context: Always consider the context of the data as it relates to program changes, policy changes, or other external factors.
3. Overfocusing: Do not hyperfocus on one metric, a dashboard is meant to tell a story across multiple pieces of data.

See also Cheat Sheet: Interpreting Dashboards for quick tips.

Understanding the Strengths of Dashboards

Dashboards are great tools that bring data to life. People can view key information at-a-glance through these visualizations and summaries.

Quick Visuals

Dashboards can transform complex data into easy-to-read visuals like bar charts and KPIs. This makes it faster and easier for users to understand what's going on.

Real-Time Monitoring

When linked to frequently updated data, dashboards can provide semi-real time view of data activity. This allows you to track progress and respond quickly to any changes.

Goal Tracking

Dashboards are ideal for monitoring performance against goals. Gauge charts and KPI charts are particularly useful for seeing how a program is doing over time.

Better Communication

Dashboards are helpful for sharing data with others. The visuals make the information more engaging and easier to present.

Understanding the Limitations of Dashboards

Despite dashboards being helpful, there are limitations to its use. It is important to know what dashboard *can't* do.

Query Accuracy

Dashboards only show what they are told to show. So, if a query is incorrect or too limited, the dashboard could show misleading information. Always verify the logic behind the data.

Lack of Detailed Context

Dashboard display summaries and patterns, but they often don't include deeper context . For example, a drop in program admissions may show on the dashboards, but the reason *why* is not shown.

Limited Chart Types

In AIMS, users are limited to gauge charts, KPI charts, pie charts, and three types of bar charts. This can restrict how data is analyzed and presented, especially for more complex trends over time.

User Interpretation

Dashboard do not make decisions. Users must be trained to interpret visuals correctly and avoid jumping to conclusions as well as understand the context of the data before making decisions.

Use dashboards to start a conversation and not as a final answer. Dashboards should prompt questions, support decision-making, and help track performance combined with program knowledge, reports, and team discussions.

Exporting Data

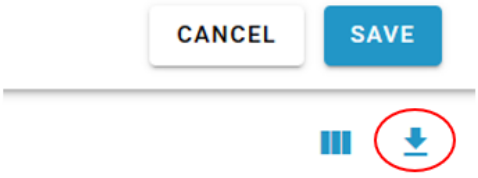
Exporting query results allows you to download and save data that you filtered using specific criteria. This is helpful for reporting and sharing with team members as well as doing additional analysis outside of the system (e.g., in Excel).

When to Export a Query

You may want to export a query when you filtered for a specific group, you want to review clean data in Excel, you're preparing reports or presentations, or you need to share specific results with others.

How to Export Query Results

1. Run your query as normal
2. Once you get the results you want, click 'Download Arrow' in the top right corner under Save.
3. AIMS automatically exports queries as a .CSV file (which is best for Excel)



Best Practices: Exporting Data

When downloading .csv files, it is best to name your files clearly, so it's easier to find later. Double-check your filters before exporting to make sure the right data is included. Avoid sharing raw exports that include sensitive or personal identifiable information unless required or authorized. If you make changes to the .csv file and want to save those changes, make sure to save the .csv file as a .xlsx file. Finally, always include the query parameters (e.g., filters, date range) when sending exports so that others understand what the data represents.

In AIMS, you cannot export dashboards, but you can take a screenshot if you need a static photo.

Cheat Sheet: Queries

Query Building Blocks

Component	What It Means	Example
Column	The field you want to filter by	Status, Admission Date, Location
Operator	The rule for filtering data	Equals, Contains, Is Empty
Value	The data you're looking for	Graduated, 07/20/2025, Anne Arundel Circuit
Condition (AND/OR)	How the filters connect	AND = both true, OR = either one true

Common Operators

Operator	**Meaning**	**Example**	**Results**
=	Equals	Status **=** "Graduated"	Finds records where clients status is Graduated
!= or <>	Not equal to	Age **!=** 35	Finds records where Age is not 35
>	Greater than	Days in Program **>** 120	Finds records where Days in Program is more than 120 days
<	Less than	Age **<** 45	Finds records where Age is less than 45
>=	Greater than or equal to	Months in Program **>=** 24	Finds records where Months in Program are greater than or equal to 24
<=	Less than or equal to	Months in Program **<=** 12	Finds records where Months in Program is less than or equal to 12

Contains	Text includes a value	Location **Contains** Adult Drug	Finds names of courts with “Adult Drug” in the name
Is Empty	Field is blank or has no data	Address **Is Empty**	Finds records with no Address
Is Not Empty	Field has some value	Address **Is Not Empty**	Finds records where the Address is filled
Starts with	Text begins with certain letters	Location **Starts with** Anne Arundel	Finds records where Court program names Start with “Anne Arundel”
Ends with	Text ends with certain letters	Location **Ends with** Treatment Court	Finds records where Court program names End with “Treatment Court”

AND vs OR

Condition	How It Works	Example
AND	Both conditions must be true	Status = Active AND Location= Anne Arundel Circuit Adult Drug Court Only clients who are active and in Anne Arundel will show
OR	Either conditions can be true	Status =Active OR Graduated Shows clients who are either active or graduated

Tips for Writing Good Queries

- Start with one filter and test it
- Use “Is Empty” to find missing data
- Use “AND” for narrowing results, “OR” for expanding
- Be specific with values (watch for typos)
- Check if the column is case-sensitive

Cheat Sheet: Building an Effective Dashboard

What to Include	**Reasoning**
Clear Title	What is the dashboard showing?
Filters	Allow users to filter data by dates/years (if possible)
Key Metrics	Use KPI charts to highlight important numbers
Comparisons	Add bar charts to compare values across groups
Goal Tracking	Use gauge charts or bar visuals to show progress
Trends	Highlight changes over time or shifts in categories
Minimal Pie Charts	Use only if the data fits well into small, distinct categories

Best Practices

- Start simple: Don't overwhelm yourself with too many visuals
- Prioritize Relevance: Only show charts that answer key questions
- Label Clearly: Every chart should have a title and description
- Check Your Query Logic: Dashboards rely on accurate queries. If the query is wrong, the visuals will be misleading.

Cheat Sheet: Interpreting Dashboards

Use this guide to help understand what the visuals on your dashboard are telling you.

Chart Type	What It Shows	How to Read It	Tips
Bar Chart (Regular)	Counts or values by category	Taller bars = higher values	Good for comparing groups side-by-side
Stacked Bar Chart	Parts of whole over one category	Each color segment= sub-group total	Use to show composition within categories
Grouped Bar Chart	Compare sub-groups across multiple categories	Each group has multiple bars	Helps spot trends across programs or locations
Pie Chart	Percentages of a whole	Bigger slice = larger percentage	Works best with less than 6 categories
Gauge Chart	Progress towards a goal	Needle shows value against a scale	Good for tracking targets
KPI Chart/Card	Single key metric	Shows one important number	Quick snapshot (e.g., total # of admitted clients)

Visual Interpretation Tips

- Hover for Details: Most visuals show exact numbers or percentages when hovered over.
- Use Filters: Narrow the data to a specific group for a more accurate view
- Compare Carefully: Watch for scale differences (i.e., when two visuals might look similar but represent different totals)

Glossary of Terms

Term	Definition
Query	A request to search and filter specific data based on set rules
Column	A specific category of information in the data
Value	The exact data you are looking for within a column
Operator	A rule that defines how the system compares the column to your value
AND	A logic condition that means **both** criteria must be true
OR	A logic condition that means **either** of the criteria must be true
Record/Row	One complete data entry about a client
Filter	A way to narrow your data results using query criteria
KPI (Key Performance Indicator)	A measurable value that shows progress toward a goal
Gauge Chart	A circular visual that shows progress toward a target
Pie Chart	A chart that displays proportions or percentages of a whole
Bar Chart	A chart that uses bars to compare values across categories (can be stacked or grouped)
Stacked Bar Chart	Shows parts of a whole in each bar. Useful for comparing totals and components
Grouped Bar Chart	Places bars side by side to compare multiple values for each category

AIMS Cheat Sheet: Query Edition

Use this guide for **status** entries in a line of query.

Status
Active
AwaitingIntake
Denied
Graduated
Terminated
Suspended
Referred

For more information or questions, please contact Taylor Robinson, Ph.D., PSC Senior Researcher at 410-260-1090 or taylor.robinson@mdcourts.gov