



NFLIS-Drug Public Data Query System

Quick Reference Guide



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Overview of the NFLIS-Drug Public Data Query System

The U.S. Drug Enforcement Administration's NFLIS-Drug public Data Query System (DQS) is an interface that allows you to query data in the NFLIS-Drug database. This section describes the DQS and each of the query parameters and options available to help you define or build a query. To access the DQS, select the DQS option under the Data Resources menu. Figure 1 is a preview of the DQS dashboard.

Figure 1. DQS Dashboard

NFLIS PUBLIC DQS DATA QUERY SYSTEM Home / DQS

Public DQS User Guide

Drug

Saved Queries

Analysis Type
Base Drugs List

Aggregation
Annual

Date Type *
Submission Date

Date Range
Year From: 2022
Year To: 2022

Location
National

☐ Show Synonyms

Drug Category

Available Drugs

- 4-methyl-N,N-DMG
- (2,6-Dimethylphenoxy)acetic acid
- (2-Bromoethyl)benzene
- (6aR,9S)-Delta-10-Tetrahydrocannabinol
- (9S)-Delta-6a(10a)-Tetrahydrocannabinol
- (Fluorophenyl)propylamine
- (S)-N-Methyl-1-(1-(1,4-Cycloheptadienyl))-2-Propanamine
- 1,1,1,2-Tetrafluoroethane
- 1,1,1-Trichloroethane (Methyl Chloroform)
- 1,1-Difluoroethane
- 1,2,3,4-Tetrahydroamine
- 1,2,3,4-Tetrahydronaphthalene
- 1,2-Benzenedicarboxamide
- 1,2-Cyclopentanediol
- 1,2-Dibromo-4,5-methylenedioxybenzene
- 1,2-Difluoroethane

Selected Drugs

Submit Query **Save Query**

150

DQS Dashboard

The user interface allows you to customize queries based on the available NFLIS data parameters. You can query individual or multiple drugs by name or by assigned NFLIS drug category or categories, which returns all drugs that fall into the selected categories. Query results are returned on the NFLIS-Drug Data Query System Results page, which includes a summary of the selected parameters and a set of tabs, Pivot and Visualization, for tabular and visual presentation of the data, respectively.

DQS Query Parameters

1. Saved Queries

- You can save a query (Figure 2) and quickly recall it for use again.
- The Load Saved Query feature allows you to load a saved query.
- A saved query can be run as is, or you can change the parameters to run a new query. Changes to a loaded query are not saved to the original query. You must save the changes as a new query to preserve them.
- The Manage Saved Queries feature (Figure 3) allows you to manage information relating to a saved query, such as its name and description. You can also disable a query and re-enable disabled queries from the Disabled Saved Queries tab.

Figure 2. Saved Queries

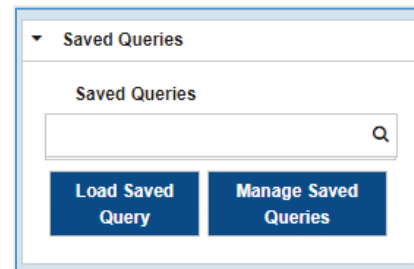
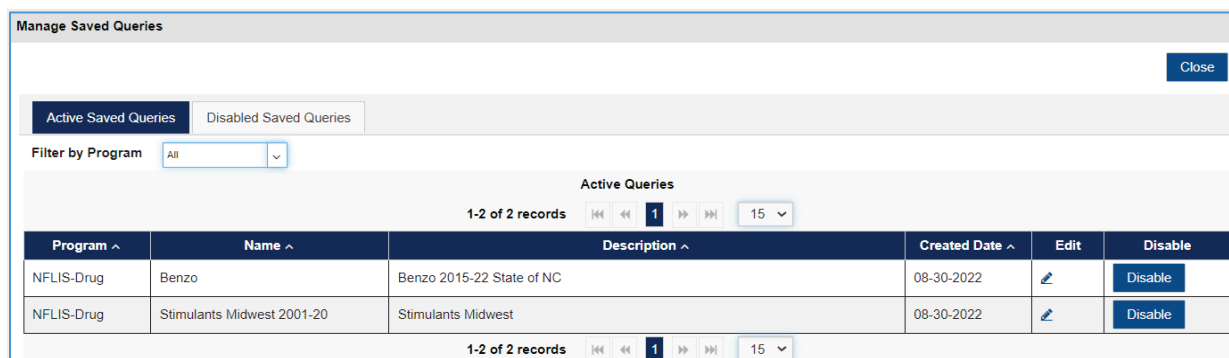


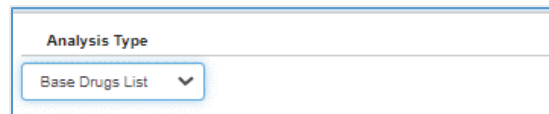
Figure 3. Manage Saved Queries



2. Analysis Type (Figure 4)

- Base Drugs List**
 - This option allows you to customize a list of selected drugs for a data request.
 - The output is all reported salt forms of the selected drug or drugs.
- Top 50 Drugs List**
 - The output of this list is only the top 50 reported drugs fully aggregated on the selected parameters.

Figure 4. Analysis Type



3. Aggregation (Figure 5)

- *Annual* is a calendar year aggregation from January 1 through December 31 of one or more selected years.
- *Semi-annual* is a calendar year–based 6-month aggregation of one or more selected years.
 - January 1 to June 30
 - July 1 to December 31

4. Date Type (Figure 5)

- *Submission Date* is preselected; it is the month and year in which items were submitted for testing.

5. Date Range (Figure 5)

- *Date Range* consists of a pair of drop-down lists, *Year From* and *Year To*, which contain the available years of data reflected in NFLIS.
- *Year From* allows you to select the starting year for the data request.
- *Year To* allows you to select the ending year for the data request.
- Data are available from 1997 to the year of the latest published NFLIS-Drug Annual Report.
- Dates must be selected from earliest year to most recent year. For example, to query the date range of 2010 to 2020, 2010 must be entered in *Year From*, and 2020 must be entered in *Year To*. A reverse ordering of the year values will not return any data.
- If querying a single year, enter that year in *Year From* and *Year To*, as shown in Figure 5.

Figure 5. Aggregation, Date Type, and Date Range

The screenshot shows a web form with three main sections. The first section, 'Aggregation', has a dropdown menu with 'Annual' selected. The second section, 'Date Type *', has a radio button selected for 'Submission Date'. The third section, 'Date Range', contains two dropdown menus: 'Year From' and 'Year To', both of which have '2021' selected.

6. Location (Figure 6)

- *National* (default) aggregates data nationally.
- *Region* aggregates data within the four U.S. regions defined by the U.S. Census Bureau (West, Midwest, Northeast, and South).
- *State* aggregates the data for each selected State.

Figure 6. Location

The screenshot shows a web form with a single section titled 'Location'. It contains a dropdown menu with 'National' selected.

7. Selecting Drugs for the Base Drugs List Query (Figure 7)

Figure 7. Show Synonyms, Drug Category, Available Drugs, and Selected Drugs

The screenshot displays the NFLIS-Drug Public Data Query System interface. At the top, there is a 'Show Synonyms' checkbox and a 'Drug Category' dropdown menu. Below these are two main panels: 'Available Drugs' and 'Selected Drugs'.

Available Drugs: This panel contains a list of drug names, including: 1-(1,3-BENZODIOXOL-5-YL)-2-(BENZYLAMINO)BUTAN-1-ONE, (2,6-Dimethylphenoxy)acetic acid, (2-Bromoethyl)benzene, (6aR,9S)-Delta-10-Tetrahydrocannabinol, (9S)-Delta-6a(10a)-Tetrahydrocannabinol, (Fluorophenyl)propylamine, (S)-N-Methyl-1-(1-(1,4Cycloheptadienyl))-2-Propanamine, 1,1,1,2-Tetrafluoroethane, 1,1,1-Trichloroethane (Methyl Chloroform), 1,1-Difluoroethane, 1,2,3,4-Tetrahydroharmane, 1,2,3,4-Tetrahydronaphthalene, 1,2-Benzenedicarboxamide, 1,2-Cyclopentanediol, 1,2-Dibromo-4,5-methylenedioxybenzene, and 1,2-Difluoroethane.

Selected Drugs: This panel contains a list of selected drug names, including: 4F-MDMB-BUTICA, 5F-MDMB-PICA, ADB-BUTINACA, MDMB-4en-PICA, MDMB-4en-PINACA, Oxycodone, Tramadol, ANPP, Buprenorphine, Hydrocodone, Acetaminophen, Codeine, and Morphine.

7a. Show Synonyms

- Check the Show Synonyms box to include drug synonyms in the Available Drugs list.
- An asterisk denotes a synonym to distinguish it from the primary drug name used in the output of a data request.
- When synonyms are displayed, a selected NFLIS drug name and its corresponding synonyms are selected and moved as a group.
- The ability to display drug synonyms in the Available Drugs and Selected Drugs lists can assist in drug name searches and does not affect the reported counts of any selected drug.

7b. Drug Category

- The Drug Category feature highlights the NFLIS-defined list of drug categories.
- Enter text in the search box to search for and select a category.
- You may check one or more categories to include in a query.
- Available drug categories are as follows:
 - Stimulants
 - Depressants and Tranquilizers
 - Hallucinogens
 - Narcotics
 - Benzodiazepines
 - Synthetic Cannabinoids
 - Synthetic Cathinones
 - Fentanyl and Fentanyl-Related Compounds
 - Analgesics
 - Steroids
 - Phenethylamines
 - Tryptamines
 - Antidepressants
 - Phenethylamines (2C Series) H
 - Phenethylamines (D Series) H
 - Psychedelics
- All drugs that are part of a category are included in your query and do not need to be added as a selected drug.
- Adding a specific drug to the Selected Drugs list from the Available Drugs list, which may also be included in a selected category, does not affect the count of reports for that drug. It ensures that a specific drug is included in the DQS query.

7c. Available Drugs and Selected Drugs

- This feature becomes available when the selected analysis type is Base Drugs list.

- Customize your lists of selected drugs by adding drugs to or removing them from your data requests.
- Scroll through the Available Drugs list or use the Search feature to locate the desired drugs.
- The > button *adds* individually selected drugs to the Selected Drugs list.
- The >> button *adds* all listed drugs to the Selected Drugs list.
- The < button *removes* individually selected drugs from the Selected Drugs list.
- The << button *removes* all listed drugs from the Selected Drugs list.
- Use the filter textbox above the list of drugs to filter the Available Drugs list by entering the desired text.
 - The textbox has a dynamic function that matches text as it is entered.
 - Wild cards are automatically included at the beginning and end of the filter text for partial text matching.
 - Clear the filter text to restore the list to its full contents.
- Add drugs of interest to the Selected Drugs list for a specific query.
 - Double-click on a drug name to add it to the Selected Drugs list.
 - Click on the drug name, then click on the > button to add the drug to the selected list.

Submit Query Button

- Once all query options have been selected, click on the Submit Query button to submit the query.
- If there are any issues with the query, a note will appear at the top of the DQS for you to review and address. Possible issues include the following:
 - No selected drug or drug category
 - *Year From* date later than *Year To* date
 - No data returned by the query based on the selected parameters

Save Query Button

- Once all query options have been selected, click on the Save Query button to save and name the query for future use.
- Saved queries can be managed with the Saved Queries feature described earlier.

Understanding Drug Reports and Aggregate Counts

- A drug seizure case can vary in size and can consist of one or more exhibits or items submitted for testing.
- A tested item may result in the identification of one or more drugs.
- Each identified drug reported to NFLIS is referred to as a drug report.
- If an item is reported to contain multiple forms of a single NFLIS base drug, then each form is counted in the raw counts. For example, if an item is reported to contain cocaine base and cocaine hydrochloride, the DQS query will return a count of two cocaine reports.

DQS Pivot Tab

The results from a NFLIS DQS query are rendered on a separate page in the NFLIS Pivot Grid (Figure 8). The Pivot Grid allows you to work with the data returned from the query while remaining in the NFLIS interface. The following features of the Pivot Grid page are described:

Figure 8. NFLIS Pivot Grid

Pivot | Visualization

NFLIS-DRUG

Selected Filters

Analysis Type:	Base Drugs List
Aggregation:	Semi-annual
Date Type:	Submission Date
Date From:	1/1/2019
Date To:	12/31/2021
Location:	State
Selected States:	AK,CA,CT,CO,DE,FL,GA,IA,ID,IN,KY,KS

[Show Table](#)
[Excel Export](#)
[CSV Export](#)
[CSV Raw Data Export](#)

Table

LABTYPE

BASE_DESCRIPTION

BASE_DESCRIPTION	DRUG_CATEGORY_DESCRIPTION	PERIOD	2019		2020		2021		Totals
			SA1 (JAN - JUN)	SA2 (JUL - DEC)	SA1 (JAN - JUN)	SA2 (JUL - DEC)	SA1 (JAN - JUN)		
4F-MDMB-BUTICA	Synthetic Cannabinoids				11	107	3	121	
5F-MDMB-PICA	Synthetic Cannabinoids		509	632	460	151	12	1,764	
ADB-BUTINACA	Synthetic Cannabinoids				9	88	224	321	
ANPP	Fentanyl and Fentanyl-related		337	341	330	366	128	1,532	
Acetaminophen	Analgesics		1,005	807	762	694	161	3,429	
Buprenorphine	Narcotic Analgesics		1,652	1,429	1,381	1,294	286	6,042	
Codeine	Narcotic Analgesics		330	168	139	110	48	795	
Hydrocodone	Narcotic Analgesics		2,139	1,623	1,237	939	254	6,192	
MDMB-4en-PICA	Synthetic Cannabinoids					1		1	
MDMB-4en-PINACA	Synthetic Cannabinoids		74	528	361	1,490	215	2,668	
Morphine	Narcotic Analgesics		478	363	413	243	58	1,555	
Oxycodone	Narcotic Analgesics		2,806	2,589	2,161	1,699	537	9,792	
Tramadol	Narcotic Analgesics		739	606	586	629	191	2,951	
Totals			10,069	9,686	7,890	8,041	2,117	37,163	

Selected Filters

- This section displays the parameters selected for the query.
- If individual drugs are selected, they will be listed under this section.

Show Table

- The Show Table feature displays the query results in a table that complies with [Section 508 standards](#).

Excel Export

- The Excel Export feature allows you to download the data to a local computer in Microsoft Excel format.
- The contents of the export are based on the layout of the data presented, which you may have altered through interactions with the Pivot Grid.

CSV Export

- The CSV Export feature allows you to download the data to a local computer in comma-separated values (CSV) format.
- The contents of the export are based on the layout of the data presented, which you may have altered through interactions with the Pivot Grid.

CSV Raw Data Export

- The CSV Raw Data Export feature allows you to download the raw data set returned by the query to a local computer in CSV format.
- The contents of the export are unaffected by any interactions with the Pivot Grid.

Pivot Grid

- The Pivot Grid has many built-in functions for generating various views of the data.
- The default presentation of the data highlights the selected drugs and their counts across the selected years.
- The layout of the data grid can be altered by dragging and dropping the available variables to the row group or column group sections. For example, for a State-level query, the State variable can be added to the row group to show the reported drugs grouped by State.
- The default view of the data is the Table view. Additional views include the following:

○ Table Bar Chart	○ Bar Chart
○ Heat Map	○ Stacked Bar Chart
○ Row Heat Map	○ Line Chart
○ Col Heat Map	○ Scatter Chart
○ Horizontal Bar Chart	○ Area Chart
○ Horizontal Stacked Bar Chart	
- The default analytical function is Integer Sum, which shows the simple counts of the reports. Additional options include the following functions:

○ Count	○ First
○ Count Unique Values	○ Last
○ List Unique Values	○ Sum over Sum
○ Sum	○ 80% Upper Bound
○ Average	○ 80% Lower Bound
○ Median	○ Sum as Fraction of Totals
○ Sample Variance	○ Sum as Fraction of Rows
○ Sample Standard Deviation	○ Sum as Fraction of Columns
○ Minimum	○ Count as Fraction of Total
○ Maximum	
- DRUG_REPORTS should always be the selected option for the count of reports value.

DQS Visualization Tab

The DQS dashboard also includes the Visualization tab, a feature to produce a set of simple downloadable visualizations based on the queried data. Click on the tab to access the visualizations.

- The default view for all visualizations is the simple presentation of the data aggregated across the query parameters.

- The interface allows you to manipulate the graphics using filters. A brief description of the filters and graphics follows.
- The visualizations' titles describe the content of the visualizations based on the aggregation of the selected State (or All States), drug (or All Drugs), and year (or All Years).
- Each visualization has the following features:
 - The Show Chart button displays a tabular view of the data for Section 508 compliance.
 - The Download Table button downloads the data presented in the visualization as an Excel spreadsheet.
 - The Download PNG button downloads the visualization in PNG image format.

Filters (Figure 9)

- The filters allow you to refine the visualizations based on Year, State, Drug Group, and/or Search Drugs.
- By default, the Filters sidebar is collapsed.
 - Click on the Filters button to expand the sidebar.
 - Click on the Collapse button to collapse the sidebar.
- The visualizations update as the filters are selected.
- Year
 - By default, all years are aggregated in the visualizations.
 - To see an individual year, select it from the list of available years included in the query result set.
 - Be aware of whether a complete or a partial year was requested in the query because this parameter may affect the comparability of the data across years.
- State
 - By default, all States are aggregated in the visualizations.
 - To see an individual State, select it from the list of available States included in the query result set.
 - This option is available only for State-level queries.
- Drug Group
 - When multiple drug groups are represented in the data, select a drug group to isolate those drugs in the visualizations.
- Search Drugs
 - This option allows you to select the drugs to be included in the visualizations.
 - The *All Drugs* option includes all drugs in the generation of the visualizations.
 - The *Selected Drugs* option includes only the selected drugs in the generation of the visualizations.
 - To select multiple drugs, press and hold the Ctrl (Control) key and click on drug names to be included in the visualizations.
 - Use the *Search Drugs* filter to search the list of available drugs.
- Normalize State Map Report Counts (Averaged Across Years)
 - Not Normalized presents the raw counts of the included drugs.
 - Normalized presents the data averaged across years.
- Clicking on the Clear Filters button resets the filters to their default values.

Figure 9. Visualization Filters

Filters

Year:
All Years

State:
All States

Drug Group:
All Drug Groups

Search Drugs:

Drug Search Results:

- All Drugs
- 2-Chloroethcathinone
- 2,3-Pentylone isomer
- 3-CEC
- 3-CEC

Normalize State Map Report Counts (Averaged Across Years)

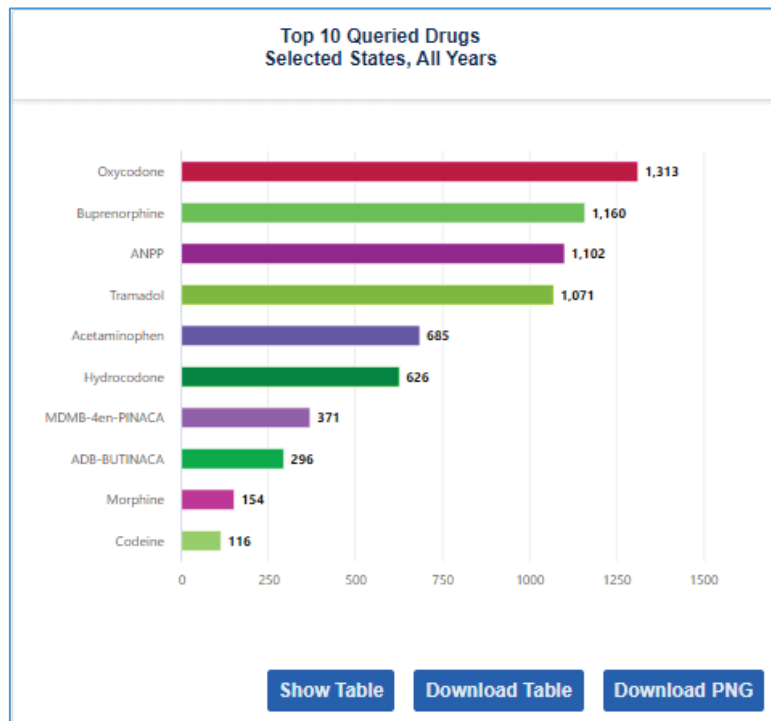
☒ Not Normalized ☐ Normalized

[Clear Filters](#)

*This dashboard is rendered based on data selected from 51 states, 293 drugs from 4 drug groups, reported during 01/2018 - 12/2021

Top (n) Queried Drugs (Figure 10)

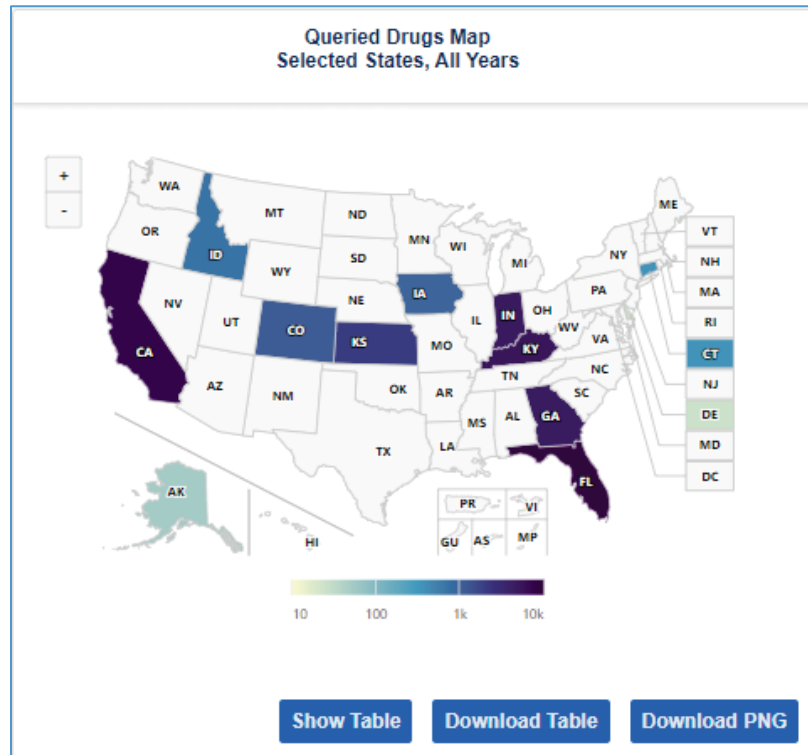
- This feature displays up to the top 10 drugs based on the filter criteria.
- This feature is a subset of the Top 50 Queried Drugs visualization.
- Click on one of the displayed drugs to highlight it in the Top (n) Queried Drugs, Queried Drugs Map, and Queried Drug Groups Tree Map.
- Hover over one of the bars to display more detail about that bar.

Figure 10. Top (n) Queried Drugs

Queried Drugs Map (Figure 11)

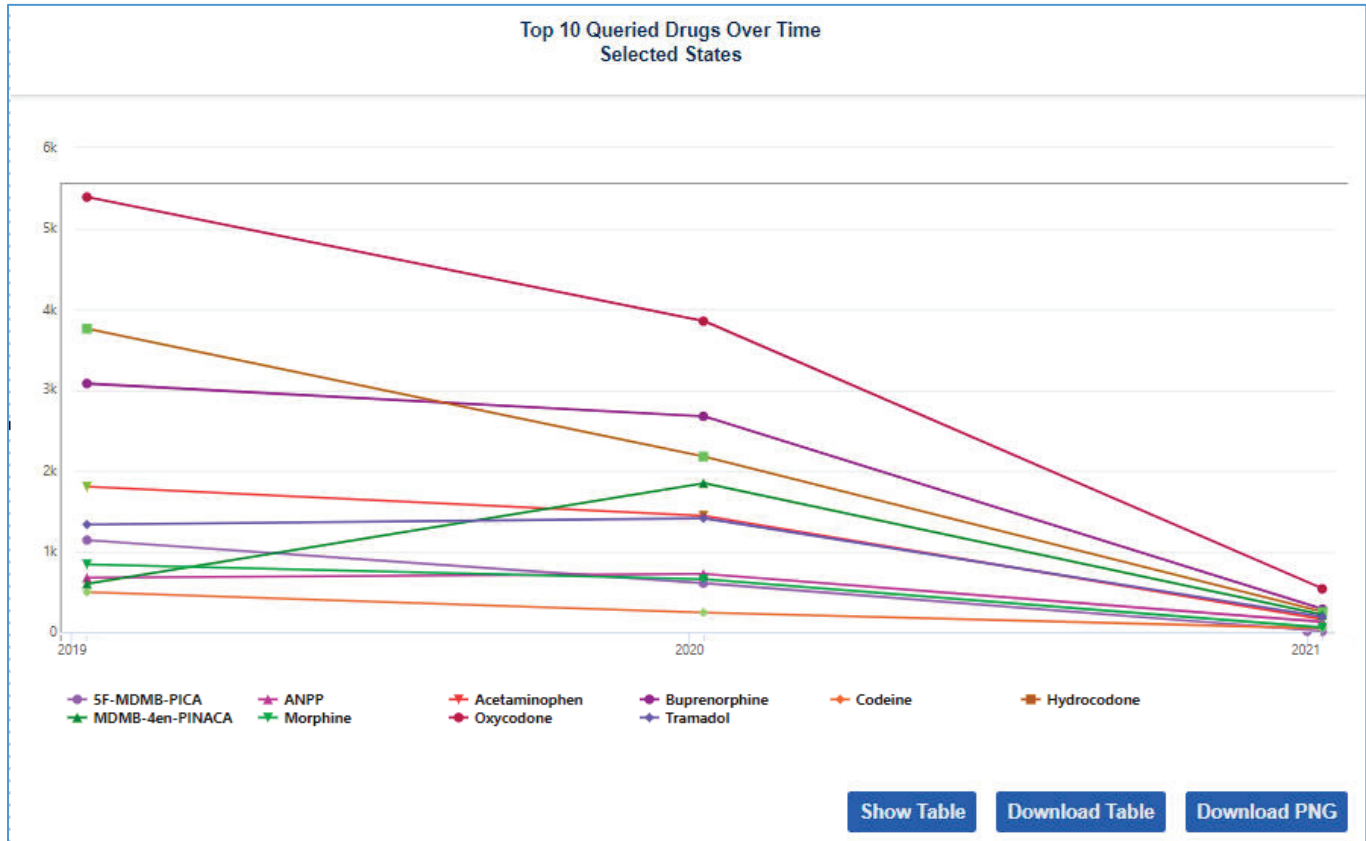
- This feature presents a national map of the data by State level.
- Hover over a State to display more detail about that State.
- Zoom in or out using the plus (+) or minus (-) buttons.

Figure 11. Queried Drugs Map



Top (n) Queried Drugs Over Time (Figure 12)

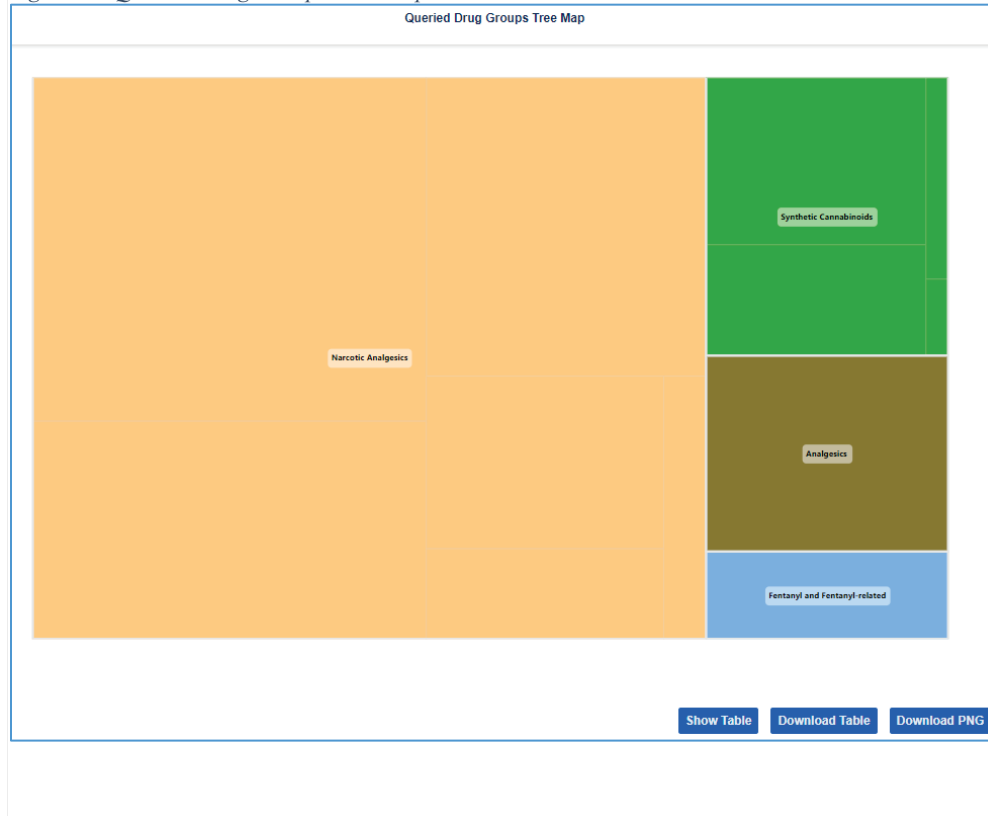
- This feature presents a line graph of drug counts across the years queried.
- Hover over a line or a point on a line to display more detail about that line or point.

Figure 12. Top (n) Queried Drugs Over Time

Queried Drug Groups Tree Map (Figures 13 and 14)

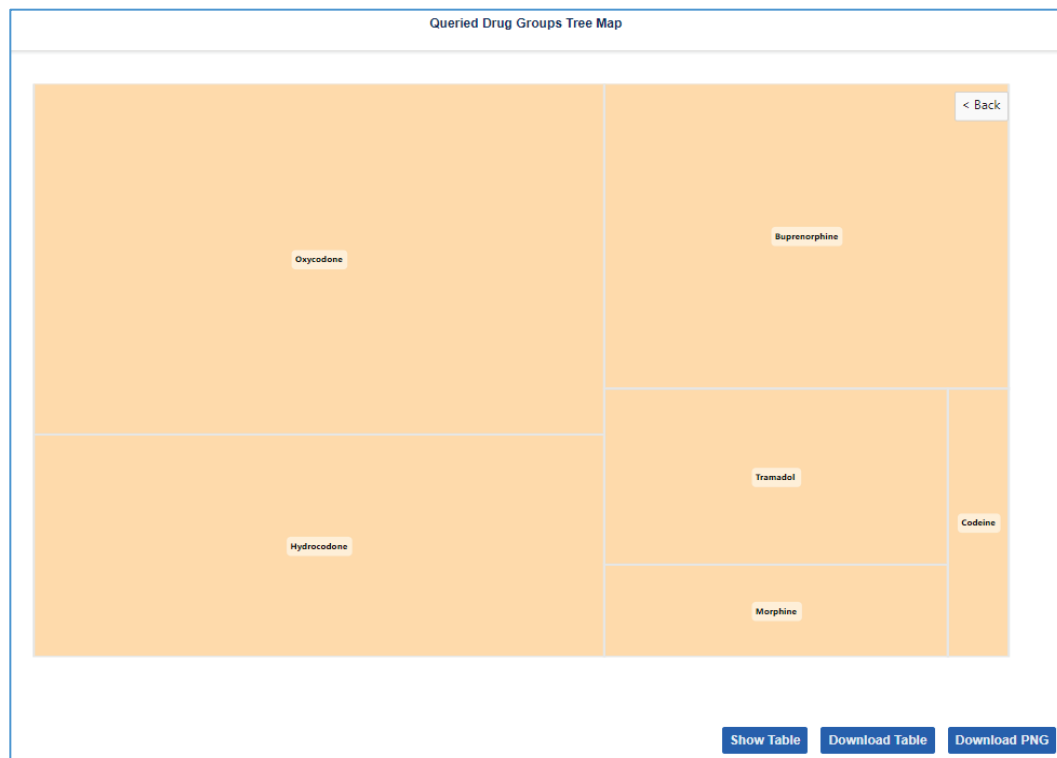
- This feature displays a tree map of the drug categories and the corresponding drugs included in selected (unfiltered or filtered) data (Figure 13).

Figure 13. Queried Drug Groups Tree Map



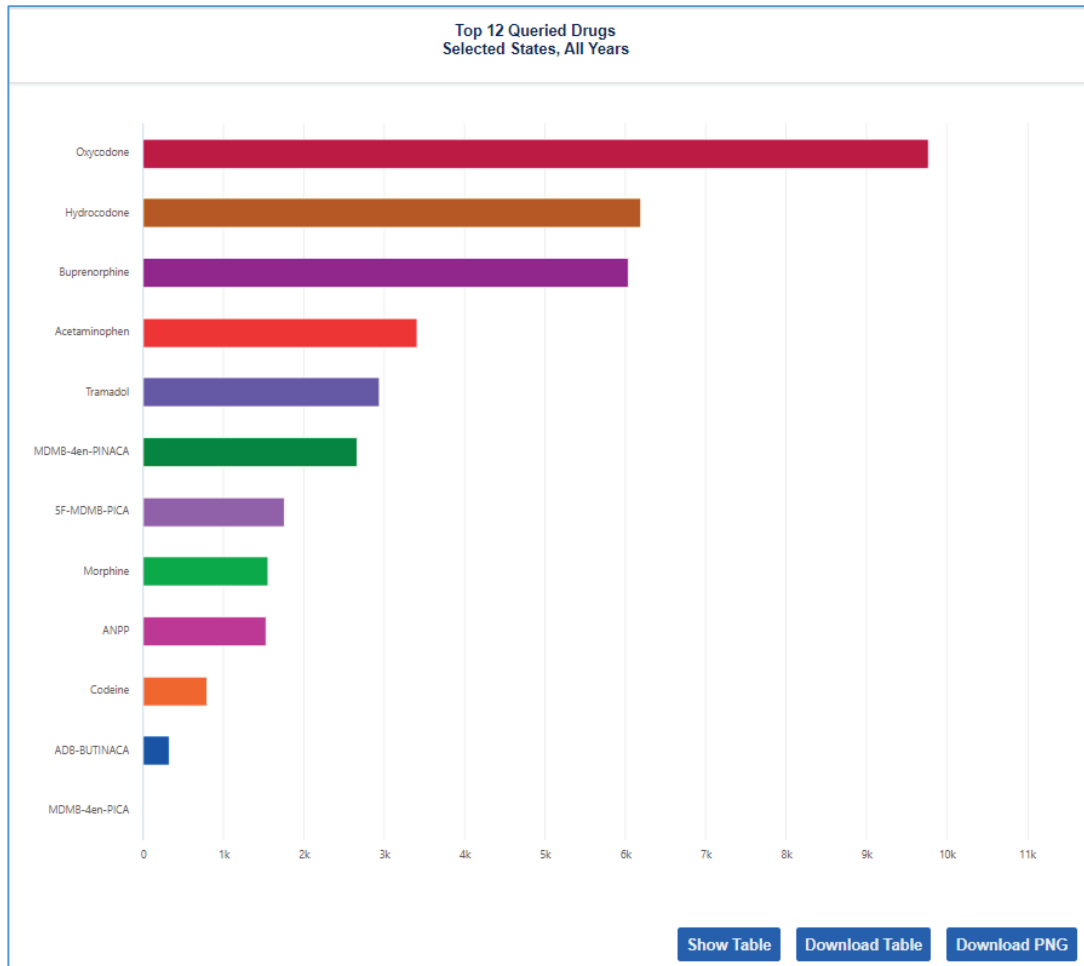
- Click on a specific drug category to get more details about the drugs reported in the query results for that category (Figure 14).

Figure 14. Queried Drug Groups Tree Map (drill down to a specific drug category)



Top 50 Queried Drugs (Figure 15)

- This feature displays up to the top 50 drugs from the queried data set.
- Select a State to view the top 50 drugs for the selected State across the selected years.
- Select a single year to view the top 50 drugs for the selected year for the selected State (or All States).

Figure 15. Top 50 Queried Drugs

Support

Please contact NFLIS with questions, support requests, or reports of issues with the DQS.

NFLIS Help Desk

Phone: 1-888-966-3547 (888-96-NFLIS)

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