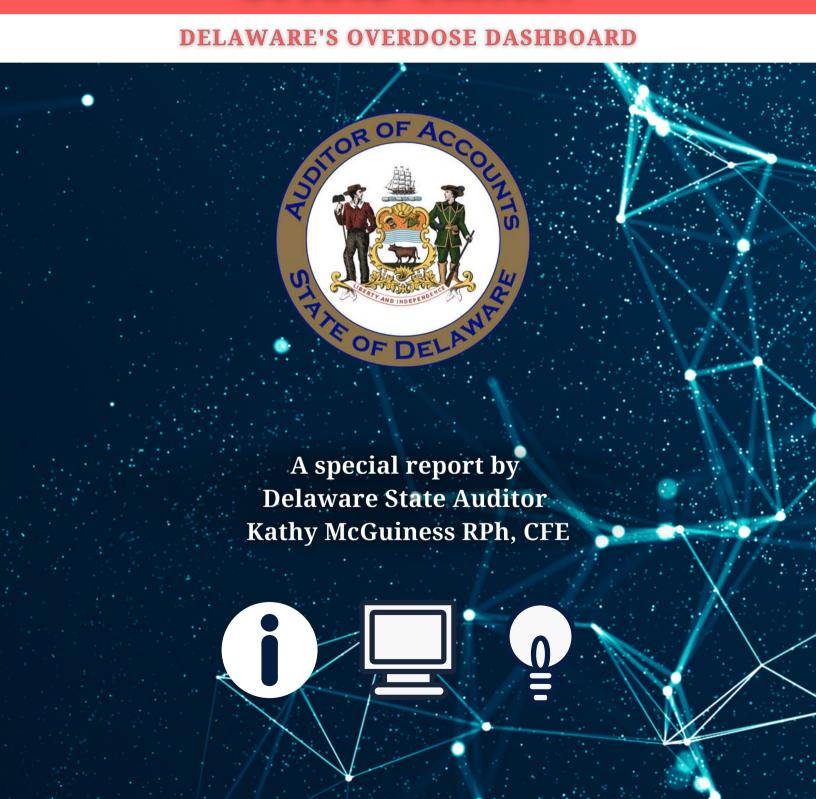
FALLING SHORT DURING THE OPIOID CRISIS?





Falling Short During the Opioid Crisis? Delaware's Overdose Dashboard

What Was Performed? A special report that reviewed Delaware's drug overdose data on Delaware Health and Social Services' *My Healthy Community* Data Dashboard, specifically sections related to drug overdoses.

Why This Engagement? In accordance with 29 Del. C. §2909, the State Auditor shall file written reports covering the Auditor's postaudits with the state agency concerned, the Governor, the General Assembly, the Attorney General and the Director of the Office of Management and Budget; and, if the Auditor deems necessary, the Auditor may present special reports to the General Assembly for consideration and action.

The audit reports shall set forth: (1) Whether all expenditures have been for the purpose authorized in the appropriations therefor; (2) Whether all receipts have been accounted for and paid into the State Treasury as required by law; (3) All illegal and unbusinesslike practices; (4) Recommendations for greater simplicity, accuracy, efficiency and economy; and (5) Such data, information and recommendations as the Auditor of Accounts may deem advisable and necessary.

This special report evaluates potential changes to expand the DHSS data dashboard to improve data quality, increase community awareness of key issues regarding the opioid crisis, and better inform response efforts. This report also explores best practices from neighboring states and compares efforts to provide thorough information that can be used to better address the opioid crisis.

What Was Found?

- <u>Data Timeliness Issues:</u> The drug overdose statistics provided on the *My Healthy Community* Dashboard are not up-to-date with current available information.
- <u>Missing Data Comprehensiveness:</u> The dashboard lacks demographic breakdowns of data as well as key statistics for areas such as treatment, recovery, and local data.
- <u>Lack of Functionality:</u> The dashboard is lacking in several areas for ideal functionality, creating user issues and barriers to access of key data.
- Recommendations: This report contains 4 recommendations for and analysis of Delaware's data dashboard for drug overdose data.

The new special report, "Falling Short During the Opioid Crisis? Delaware's Overdose Dashboard" can be found here.

For any questions regarding the attached report, please contact State Auditor Kathleen K. McGuiness at <u>Kathleen.Mcguiness@delaware.gov.</u>



§ 2909. Audit reports.

(a) The Auditor of Accounts shall file written reports covering the Auditor's postaudits with the state agency concerned, the Governor, the General Assembly, the Attorney General and the Director of the Office of Management and Budget; and, if the Auditor deems necessary, the Auditor may present special reports to the General Assembly for consideration and action.

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- (1) Whether all expenditures have been for the purpose authorized in the appropriations therefor;
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 - (3) All illegal and unbusinesslike practices;
- (4) Recommendations for greater simplicity, accuracy, efficiency and economy; and
- (5) Such data, information and recommendations as the Auditor of Accounts may deem advisable and necessary.



State of Delaware Office of Auditor of Accounts

Kathleen K McGuiness, CFE, RPh State Auditor



Dear Fellow Delawareans,

The opioid crisis has taken a major toll on the lives of families across our state with Delaware ranked 3rd in the nation for drug overdose mortality in 2020. We are battling a juggernaut as each year hundreds of Delaware families go through the heartbreaking tragedy of losing a loved one from a drug overdose, and there is no end in sight. It is beyond time to give Delawareans the most up-to-date knowledge about this crisis as possible, and the best way to do that is to continuously improve the State's centralized hub for the public to access current and in-depth information.

Access to information empowers Delawareans with the ability to recognize local trends and the flexibility to respond in meaningful ways. Communication is key to increased preparedness and awareness for communities to counter the complex challenges of drug addiction. Concerned residents must have data at their fingertips and that data must be relevant for the prevention and treatment assistance so desperately needed by local Delaware communities.

In this special report, my office sought meaningful ways for State organizations to influence a change in the alarming trend of addiction and we identified some specific improvement opportunities for greater simplicity, accuracy and transparency on the State's Drug Overdose Deaths web page. Drug overdose mortality is one statistic where the First State must not become first and perhaps, through a commitment to continuous improvement, together we can sow the seeds of positive change. Publishing statistics in a timely and comprehensive manner conveys to the public that the issue is real, dangerous, and that the State is committed to action.

Thank you for the opportunity to serve you.

Sincerely,

Kathy McGuiness, RPh, CFE

Main Office: 302-739-4241

INTRODUCTION

The opioid crisis is a major concern in the United States and Delaware's state agencies have prioritized efforts to attack the cause at its roots as well as combat the aftermath of illicit opioids, yet the mortality rate in Delaware remains among the highest in the country. In 2020, Delaware ranked third highest in the nation with 47.3 overdose deaths per one-hundred-thousand residents,¹ a number that increased in 2021.²

The Delaware Drug Overdose Fatality Review Commission found that in a sample of overdose deaths from 2019, 40% had experienced at least one prior non-fatal overdose.³ A principal cause of Delaware's spiraling numbers is contained in the 2021 Delaware Division of Forensic Science Annual Report. The report noted 428 of the 515 drug overdose deaths in the state from 2021 involved fentanyl, the drug most commonly found in compounds tested from postmortem patients.⁴

CRITICAL FACTS

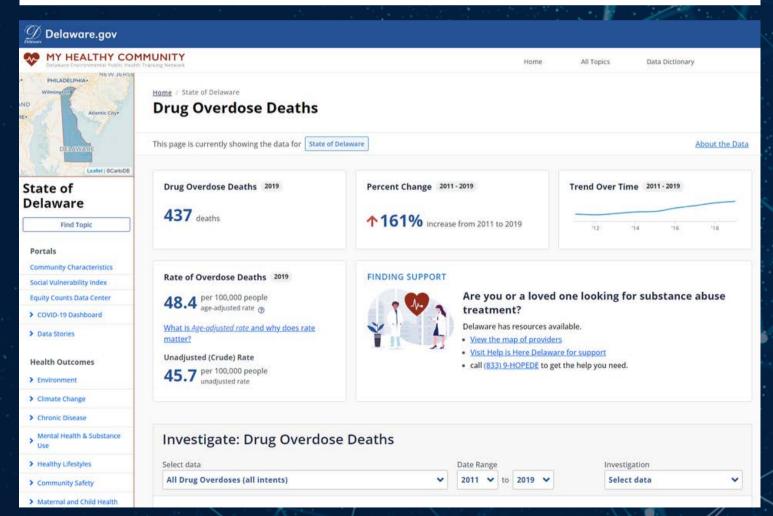
- 3RD HIGHEST
 OVERDOSE MORTALITY
 RATE IN 2020
- 428 OF 515
 OVERDOSES IN 2021
 INVOLVED FENTANYL
- 3.3 BILLION
 LETHAL DOSES OF
 FENTANYL SEIZED BY
 USCBP SINCE 2021

Fentanyl, prescriptively used in medical settings as a means of treating severe pain, carries a potency nearly 100 times higher than morphine. The dangers of fentanyl are seen once it leaves the controlled environments of hospitals and is instead developed and distributed illegally. The amounts of illicit drugs, specifically fentanyl, crossing the border in recent years has been alarming. The United States Customs and Border Protection noted that over 7.3 tons of fentanyl was seized in 2021, and the 2022 reported seizures are projected to continue at the same rate. Depending on body size, fentanyl can be deadly at just 2 milligrams, an amount found in 42% of illicit market counterfeit prescription pills according to the DEA. The lethal dose of fentanyl suggests that since 2021, over 3.3 billion (10-times the U.S. population) potential lethal doses of fentanyl have been seized by the United States Customs and Border Protection.

INTRODUCTION 1

Today, drug overdoses are soaring and fentanyl is widespread throughout state. Delaware lacks a drug abuse/overdose data dashboard which is timely, available, comprehensive, and comparable to regional states. Delawareans have to rummage for data, as there is a scarcity of information centrally located on the My Healthy Community dashboard, to comprehend the level of drug overdose fatalities. Delawareans need unrestricted access to critical information, including detailed information about fatal and nonfatal opioid overdose incidents occurring (including from fentanyl), demographics of those most affected, treatment statistics that pinpoint community successes.

When current critical data is available, communities can make more informed decisions based on analyzed facts rather than acting upon under-informed perceptions. Anything less than providing a near real-time thorough understanding of the situation may degrades public trust and bolsters a perception of indifference. The need for transparency and accountability necessitates unrestricted and unfiltered access to easily digestible data for the public.



Source: DHSS My Healthy Community Dashboard

INTRODUCTION 2

EXCERPTS FROM DELAWARE'S DRUG HISTORY

DOJ press release reports: The Prescription Drug Advisory Committee found that Delaware had the nation's ninth highest drug overdose rate and had the nation's fifth highest overall rate for opioid sales.

August 6, 2015

Surge in Fentanyl-Related Overdoses Pushes State's Fatal Overdoses Total Past 300 for 2016; Health and Law Enforcement Officals Urge Delawareans Struggling with Addiction to Seek Treatment

February 14, 2017

Delaware Division of Public Health through the integration of 12 multiagency datasets, has developed a demographic picture of the Delawareans who died from drug overdoses in 2017. DPH released the Drug Overdose Mortality Surveillance Report...

August 14, 2019

Through September Delaware's overdose deaths involving fentanyl have more than doubled over 2015, with an increasingly higher percentage of the alarming uptick occurring in Kent and Sussex counties and a slight increase among people in their 30s and 40s

December 9, 2016

Record Total Number of Deaths in Delaware from Suspected Overdoses in August Announced: Health Warning Is Stark: Assume Any Illicit Substance Being Used Includes Fentanyl

September 11, 2018

In what health officials fear is another consequence of the uncertainty associated with the COVID-19 pandemic Delaware's overdose deaths increased more than 15% in 2021 to a records high 515, according to the Delaware Division of Forensic Science...

May 25, 2022

Source: Delaware News Archives

RESEARCH AND BACKGROUND

This scope of this project is to study and assess Delaware's current drug overdose deaths dashboard to determine if enhancements are needed that would positively affect the end user experience and better inform the response to substance abuse issues in the state. The State Auditor office's approach began with research into the opioid crisis in the United States, and particularly Delaware, to establish a baseline understanding of current concerns. Delaware specific research focused on available drug overdose data from sources such as Delaware's *My Healthy Community* data dashboard as well as reports issued by related state agencies such as the Delaware Division of Forensic Science and the Delaware Overdose Fatality Review Commission. A regional state comparison of overdose data dashboards provided the context of Delaware's implementation and a review of data dashboard best practices refined the project.

Created in 2019, Delaware's My Healthy Community dashboard is a website tool used to present statistics gathered from multiple sources in a visual or dissected form for the public. Data dashboards are used to:

- Compile and display a variety of complex statistics and information
- Visualize information at a glance in an easily digestible format
- Provide access to comparisons between different categories of data
- Uncover and understand relationships and trends

Dashboards are an effective means of communicating important information to a wide audience as opposed to descriptive reports, as our brains process images 60 thousand times faster than words.⁸

"The State of Delaware wants to make data more transparent, accessible to the public and easier to understand. Being aware of what is going on in our neighborhoods can empower communities to initiate improvements and improve health outcomes." 9

- Delaware Health and Social Services

PROJECT RESULTS

Research and analysis revealed:

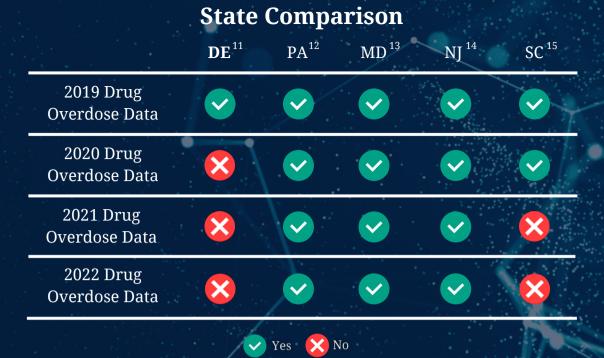
- The Delaware dashboard does not deliver on the promise of providing current awareness of what is going on in neighborhoods, or comprehensive information to empower communities to initiate improvements and improve health outcomes.
- When compared to information contained in data dashboards by regional states, Delaware's *My Healthy Community* dashboard could improve by adjusting to support communities with updated and additional detailed data.
- Compared to other states, there are noticeable gaps in the data provided to the Delaware public.
- Access to available drug overdose data on the *My Healthy Community* dashboard is hindered by a lack of effective website functionality and the available data is aged.

TIMELINESS OF DATA

We observed a noticeable delay in Delaware's dashboard, which led us to conduct research on when the dashboard was last updated and whether the delay was due to availability. We analyzed timeliness of dashboard data by locating the most recent Delaware-specific data through public searches and compared what was available versus what was presented on the dashboard. Additionally, we evaluated regional states' overdose data dashboards to determine if delayed data was standard.

Internet archives disclosed that the *Drug Overdose Deaths* section of the dashboard was last updated in February 2022 with 2019 data. Prior to the 2022 update, the page's most recent data was from 2018. Aged data introduces difficulties for communities to initiate improvements and improve health outcomes.

Regional states have implemented similar data dashboards to increase awareness for the general public on the severity and growth of drug overdoses. States such as Maryland, New Jersey, and Pennsylvania neighboring Delaware have seen their states struggle with the same rise of fentanyl and other opioids in recent years and have put together up-to-date and in-depth data visualizations to demonstrate trends and localized severity for their residents.



There is a notable disparity between the recency of data provided by Delaware compared to surrounding states. Delaware's dashboard was only recently updated to include 2019 data, whereas states like New Jersey, Maryland, and Pennsylvania display statistics from the current year and for some categories as recent as the previous week. Providing data on a more frequent, recent basis allows for accurate analysis of trends and guides more efficient actions.

We found that the delay in data presentation by Delaware is not due to collection issues. The Delaware Division of Forensic Science released their 2021 Annual Report ¹⁶ in April, containing detailed breakdowns of 2021 drug overdose deaths. A DHSS news article from June 8th, 2022, outlined that May 2022 set the new record for drug overdose deaths in a single month at 42, an analysis available just 8 days after the end of the month. ¹⁷ Non-fatal drug overdoses are available from the CDC ¹⁸ as recent as March 2022 on their *Drug Overdose Surveillance and Epidemiology (DOSE)* Dashboard.

The *Drug Overdose Deaths* page contains an "about the data" link, which indicates in a pop-up that the data shown on the dashboard is obtained from the *Delaware Health Statistics Center*, a DHSS page containing a variety of reports from the agency. Within the *Delaware Health Statistics Center* is a page titled *Delaware Vital Statistics Annual Report – 2019* containing several reports, and within the *Mortality* report are statistics for drug overdoses in the state. This report, available in November 2021, details drug overdose deaths including graphical analysis by race and drug type, specifically fentanyl.

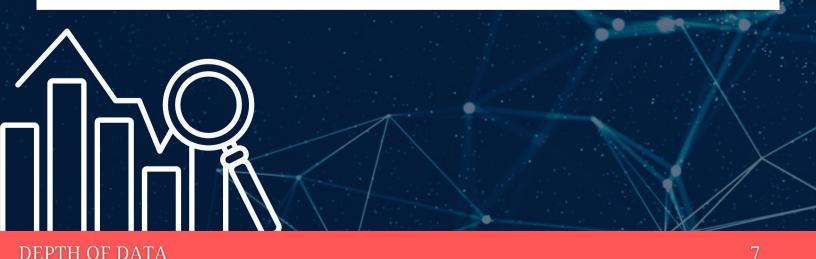
DEPTH OF DATA

Designing a data dashboard that meets the needs of those using the information requires an understanding from the user's perspective. To evaluate the data dashboard's ability to cover the scope of the problem Delaware faces in combating Drug Overdose Deaths, our office considered the dashboard data from the user's viewpoints: Does the provided data prove a thorough understanding of the issue? To evaluate comprehensiveness, prior to evaluating Delaware's dashboard we considered the following.

If a civic leader were to view Delaware's Drug Overdose Deaths dashboard, could that civic leader find information about...

- What drugs pose the largest threat?
- Which demographics are most at risk?
- Which communities are affected most?
- Is there a way to identify specific current trends?
- What are the warning signs of a community in danger?
- What are the primary factors affecting drug overdoses?
- Is there a tool to compare data between Delaware communities?
- Where can people find information about drug treatment programs?
- How does a person know if someone is using or is addicted to drugs?
- How often has Narcan been used and how many lives have been saved?
- What are the current strategies and evidence-based outcomes that may be used to mitigate threats?

After considering these questions, though some of them may be answered using Delaware's current version of the My Healthy Community dashboard, there is a noticeable lack of vital information provided to users.



The *Drug Overdose Deaths* page is a portion of the dashboard with data that may be helpful to communities wanting to be better prepared and respond more effectively through the better understanding of the changes that have occurred in drug usage. The State of Delaware has several pages relevant to opioids in Delaware, such as *Drug Overdose Deaths*, *Prescription Monitoring Program*, and *Suspected Non-fatal Drug Overdoses*, all located under the *Mental Health & Substance Abuse* tab of the sidebar. These pages contain several useful categories of Delaware-based statistics, including total overdoses, the rate of those overdoses over time including breakdowns by drug type, prescriptions filled by Delaware residents, and heatmaps to indicate trends across the state.

The dashboard also features resources such as locations of treatment providers, Naloxone distribution centers, and a link to *Help Is Here Delaware*, a program designed to combat drug overdoses in the state. However, the heatmaps on these overdose-related pages only show data as recent as 2017 and are not interactive, and the locations for treatment providers and Naloxone distribution centers are not currently available.

There are several areas that are lacking on Delaware's dashboard. It noticeably excludes any kind of information or data specific to fentanyl within the State's dashboard. Fentanyl continues to be the biggest threat in terms of drug overdoses in Delaware – over 80 percent of drug overdose deaths involved fentanyl, and it is now the lead cause of death among adults age 18-45 nationwide. Analysis of available data in the dashboard indicate that fentanyl data is grouped with "Synthetic Opioids other than Methadone", as the rates for that category match the high numbers seen from other Delaware reports that include fentanyl.

The dashboard also lacks vital demographic statistics such as race and age which are critical for defining high-risk areas and developing targeted solutions for disproportionately impacted communities. In addition, there are not any statistics provided related to drug overdose or addiction treatment, an area that would provide proof of concept for programs and actions in which Delaware is involved in combatting the opioid crisis in the state.

DEPTH OF DATA 8

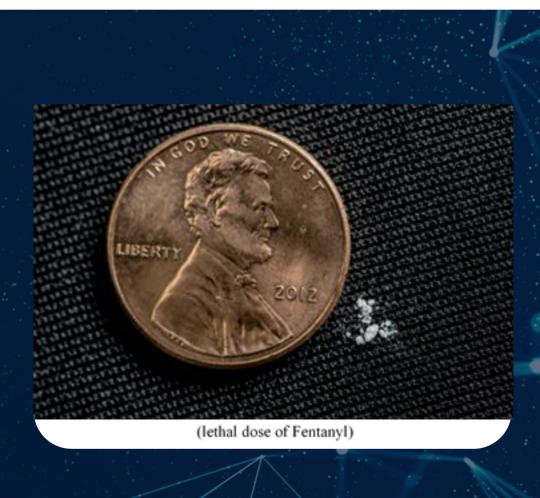
State Comparison

DE	PA	MD	NJ	SC
•	×	×	8	×
×	⊘	•	8	⊘
•	O	×	©	8
×	•	×	•	× ×
×	•	•	©	S
×	•	•	•	×
×	•	×	•	•
×	•	⊘	•	•
×	•	×	•	✓
×	•	×	⊘	•
•	•	×	•	•
•	•	•	•	•
		X	•	×

DEPTH OF DATA 9

When compared to neighboring states, Delaware has a deficiency of comprehensive information for overdose statistics. States such as Pennsylvania display detailed information to provide much needed clarity for identifying trends and courses of action. Maryland, while lacking demographic statistics on their dashboard, includes various drug-type visualizations to determine where the largest dangers lie. Delaware lacks comprehensive statistics leaving information seekers to endure the labyrinth of web search results to draw comparisons within and without state borders.

Several states are hosting Narcan statistics, creating a dashboard that not only provides information about the dangers of opioids, but also heralds the tools that save lives. Narcan, a medication to quickly reverse opioid overdoses also known as Naloxone, ²² is a powerful tool in the fight against opioid overdoses; however, dashboard visitors are unable to view the effectiveness of Narcan for Delaware as there are no presented statistics related to Narcan. Inclusion of data, such as how many instances Narcan was used in such as EMS settings and amounts distributed throughout the community, calls attention to successes and highlights actions for potential life-saving practices.



DEPTH OF DATA 10

FUNCTIONALITY ANALYSIS

A functional dashboard is more likely to attract more visitors, experience more re-visits, and keep visitors exploring on the dashboard for longer periods. Following a review of functionality best practices common to multiple pages dedicated to web design, we evaluated the functionality of Delaware's drug overdose deaths sections of the dashboard based on experiences navigating the site for the first time.

Site visitors encounter quick statistics such as total overdose deaths from 2019, as well as the death rate per 100K population as a default rate and an age-adjusted rate. To view non-fatal overdose statistics, the user must open the correct drop down from the menu on the left-hand side of the page, an action that is not immediately obvious. Additionally, to filter the data shown on the page, the user must select a box that says "State of Delaware" near the top of the page, which brings a long list of available location filters, however almost no data points are viewable below the county level rendering the filtering futile. Additionally, though raw data is available to download from the *My Healthy Community* dashboard, navigation required to locate the correct data sets is complex and there is not a direct, intuitive way to do so. Delaware's *Help Is Here* site contains drug overdose awareness information as well as public outreach programs, however the link is among several at the bottom of each page, hindering visibility.

Further analysis found that Delaware's drug overdose dashboard lacked several key data dashboard best practices such as grouping metrics together, passing the "at-a-glance" test, and making sure data is relevant, ²³ creating an unpleasant and unproductive end-user experience. We found the dashboard also did not have the following:

- clear organization and layout
- detailed filtering/drill down capabilities
- display and grouping of useful metrics together
- demographic comparisons
- geographic visualizations
- interactive maps
- · counts for some data
- correct data labels on all charts
- contact ability for dashboard-specific questions/requests

With these concerns in mind, we compared this user experience with that of regional states' data dashboards.

Many of Delaware's neighboring states have ensured site visitors have access to a robust data dashboard with critical information for residents to which is both accessible and understandable. Other states have created dedicated dashboards to present relevant overdose and opioid information in a central location, presenting several categories of important statistics at a glance, including resources for citizens to explore the dangers communities are facing and provide a catalyst for actions. The states represented below publish dashboards which include a variety of data comparison and visualizations to provide users with an easily digestible synopsis of where the opioid crisis stands in the state. Interactive maps allow users to view not only how local communities are affected but how surrounding communities are as well.

	DE	ompar PA	MD	NJ	SC
Dedicated Overdose/Opioid Dashboard	×	•	✓	•	✓
Consistent* Data Metrics Displayed	×	•	•	•	•
Compact Displays of Useful Metrics	×	•	•	8	Q
Filtering/Drill Down Capabilities		•	8	×	•
Data Point/Demographic Comparison	•	•	✓	•	•
Interactive Maps	×	•	•	•	S
Site Stresses Danger of Overdoses/Opioids	×	•	V	•	•
Direct Data Download Link	×	•	×	×	•
Collection of Overdose and Opioid Reports	×	•	•	⊘	•
List/Map of Treatment Providers	**	•	×	×	•

^{*}Delaware uses "rates" instead of counts, a contrast to all other dashboards reviewed. These rates change across the dashboard; fatal overdoses are per 100K, non-fatal overdoses are per 10K. These rates are not explicitly mentioned on the charts for Overdose Deaths, only a number is provided.

^{**} The map/list found on Delaware's dashboard has been taken down for maintenance since March 2022 and has not been returned

OBSERVATIONS & RECOMMENDATIONS

OBSERVATION #1

FENTANYL-SPECIFIC DATA IS OMITTED FROM DELAWARE'S DASHBOARD

Fentanyl is not mentioned a single time on Delaware's My Healthy Community public dashboard. Fentanyl appears to be grouped within "Synthetic Opioids other than Methadone" on the public data dashboard. Fentanyl is a major issue plaguing Delawareans and is curiously absent.

RECOMMENDATION #1

EXPAND DASHBOARD TO INCLUDE DATA AND INFORMATION ABOUT FENTANYL

• Providing information about fentanyl in Delaware is vital to fighting overdoses in our state. Any effort to combat overdoses should be supplemented with statistics about the rise of this extremely potent and deadly drug so that Delaware residents may fully understand the crisis at hand.

OBSERVATION #2

DATA IS NOT FOLLOWING A CONSISTENT SCHEDULED UPDATE TO KEEP METRICS RELEVANT TO THE GOAL

The My Healthy Community Dashboard overdose statistics are outdated. In the first quarter of 2022, the statistics were updated with 2019 data. Heat maps have not been updated to include information more recent than 2017.

RECOMMENDATION #2

ENHANCE DATA RELEVANCY BY UPDATING DATA DISPLAYED ON THE DASHBOARD ON A CONSISTENT AND TIMELY SCHEDULE

• Provide the public with accurate, timely data to empower them with the tools to create change in their communities. Information that is nearly 3 years old does not provide enough information for effective change, especially considering the exponential increase in overdoses across the United States.

OBSERVATION #3

THERE IS A LACK OF COMPREHENSIVE DRUG OVERDOSE DATA ON THE DASHBOARD

Delaware's drug overdose dashboard fails to provide localized data, demographic categories such as race or age, and key data points such as overdose-related emergency room visits, Narcan distributions and administrations, and recovery statistics to give Delaware residents more information.

• The State, through Help Is Here Delaware, has taken an approach of wide distribution of Narcan, but there are no numbers to indicate the program's success in terms of distribution or effectiveness.

RECOMMENDATION #3

EXPAND DASHBOARD INFORMATION TO PROVIDE COMPREHENSIVE, INFORMATIVE DATA TO THE PUBLIC

- Provide additional data points and categorizations to draw comparisons and analyze trends.
 - Add key data points such as demographic comparisons, treatment statistics, and localized figures so that numbers regarding drug overdoses tell a more specific and informative story.

OBSERVATION #4

SITE FUNCTIONALITY ISSUES THAT HINDER AN EFFECTIVE USER EXPERIENCE

The My Healthy Community dashboard's drug overdose section is hidden among several other categories inside Mental Health and Substance Abuse and relevant statistics are shown across multiple pages that are not grouped together. Use of the dashboard is hindered by a lack of drill-down and filtering options, and end users are left without a clear story to follow from the data. Though other state agencies have provided more recent and in-depth information about drug overdoses, those reports are not linked to the data dashboard and must be specifically researched by users seeking to obtain that information.

RECOMMENDATION #4

REVAMP DASHBOARD TO IMPROVE USABILITY FOR THE PUBLIC

- Present data in a way that is easily digestible in a short visit to the site.
- Break data down more specifically so it can be compared to surrounding areas and understand impacts on local communities.
- Present timely data to help communities in search of solutions.
- Group pages together and centralize relevant information to tell a single story.
- Ensure the public is able to easily access and navigate relevant information quickly.
- Ensure filters are in the right locations, work correctly, apply to the right scope, do not become blank or confusing when users filter information.

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