

Responding to Current Overdose Trends Utilizing Detect to Protect Campaign and Application of Overdose Data

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RESPONDING TO CURRENT OVERDOSE TRENDS

Utilizing Detect To Protect Campaign and
Application Of Overdose Data



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Department of
Health



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SEPTEMBER 2025 - OFFICE OF HARM REDUCTION

OFFICE OF HARM REDUCTION

Who We Are

- Branch of the Erie County Department of Health dedicated to response after overdose and overdose prevention education



Office Goals

- Keep individuals safe and alive
- Mitigate potential consequences of substance use by meeting individuals where they are at and not leaving them there
- Provide variety of support services including peer navigation

PRESENTATION SPEAKERS



ANGELA DIETER

Director of Office of
Harm Reduction



MARILYN LENUS

Overdoes Fatality Review
Program Coordinator



JASON MEURLIN

Data Analyst

PRESENTATION OBJECTIVES

DATA TO ACTION



DETECT TO PROTECT

Media Campaign
successes and challenges



OVERDOSE FATALITY REVIEW PROGRAM

Case selection and resource tool



HEAT MAPS

Person/Community
centered Peer Outreach



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Health**

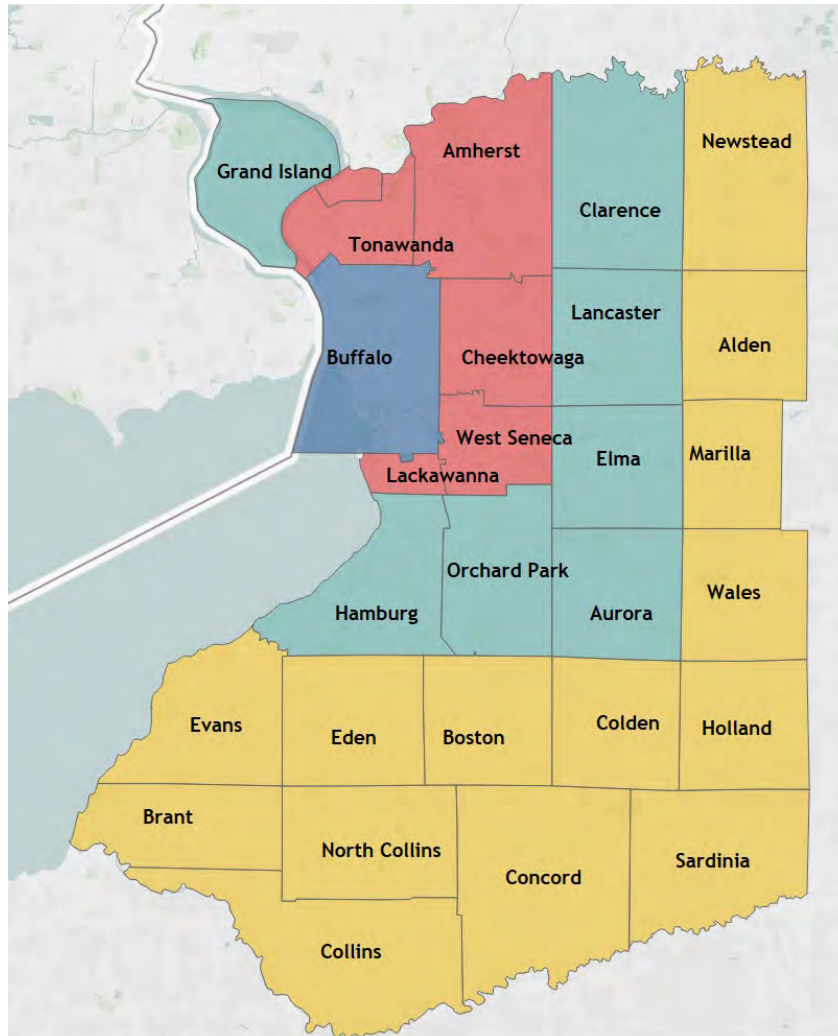


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ERIE COUNTY



ERIE COUNTY



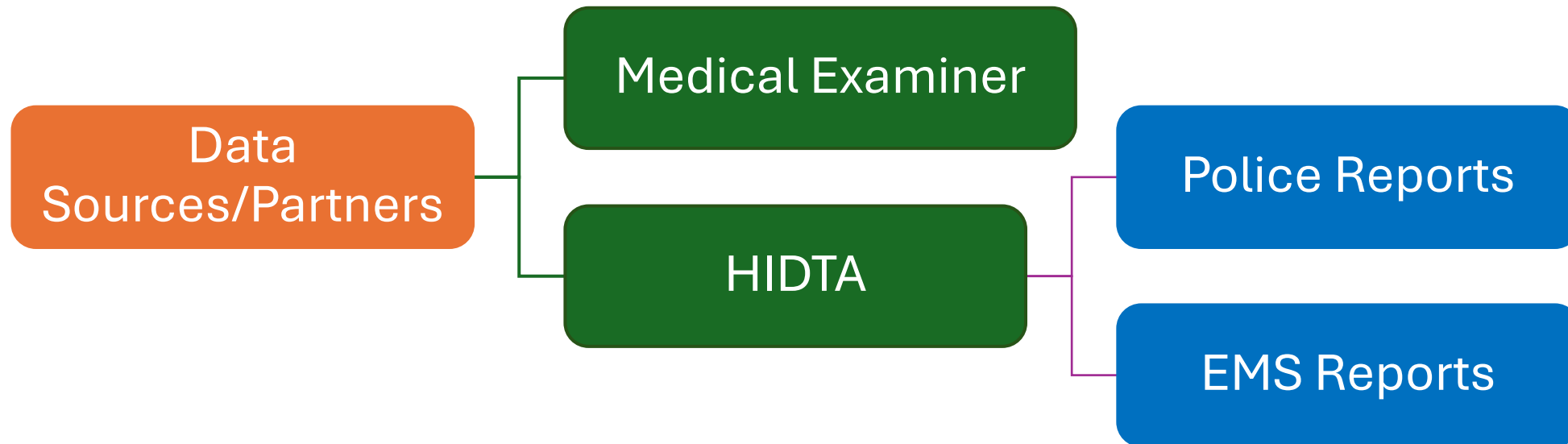
Map Legend

-  Urban (City of Buffalo)
-  Inner Suburb
-  Outer Suburb
-  Rural

ERIE COUNTY

	Population % (n=954,236) 2020 Census	2022 Overdose % (n=379)	2023 Overdose % (n=436)	2024 Overdose % (n=359)
White	79%	68%	65%	64%
Black	14%	28%	32%	32%
Native American	0.70%	2%	2%	2%
Hispanic	6%	11%	11%	9%
20-29	14%	13%	8%	8%
30-39	13%	29%	24%	21%
40-49	11%	23%	20%	22%
50-59	14%	21%	24%	28%
>60	25%	13%	24%	20%

Data Sources





DETECT TO PROTECT

The holidays can disrupt your usual routine. DYK that if you're using cocaine, it could contain fentanyl which is an opioid? Even one bump can be deadly.

Test your cocaine, carry Narcan and never use alone to prevent a deadly overdose.

Order fentanyl test strips and Narcan at [Erie.gov/Detect](https://erie.gov/Detect)



Impact Marketing + Communications (Impact) worked with the Erie County, NY Department of Health to launch a harm reduction media campaign called Detect to Protect to **reach individuals at risk for drug overdoses and death as well as their family members, friends, and community leaders to support harm reduction messaging, education, and activities.**

The campaign focused on the rise of fentanyl-related overdoses involving cocaine, the disproportionately impact the area is seeing in communities of color, and that this is overwhelmingly occurring among older residents.



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Data to Action – Detect to Protect

Media Ads ran through the end of December 2024:



Radio



**Streaming
Audio & Video**



Social Media



**Audience- Based
display ads**



**Location- Based
display ads**

***Targeted Season Trends:**

- November – A tailored radio spot was launched in response to an anticipated increase in overdoses during the holiday season.
- December - Negotiated a radio message to be aired during a Buffalo Bills playoff pre-game show, during the game, and Mon-Fri on WGR (the official radio station of the Buffalo Bills)

AUDIENCE-BASED DISPLAY ADS

DETECT TO PROTECT

Even occasional cocaine
use can be deadly.

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it may contain fentanyl
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AUDIENCE-BASED vs. LOCATION BASED DISPLAY ADS



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TO PROTECT**

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**DETECT
TO PROTECT**

Tamarr Young
DoForSelf Foundation,
BestSelf Behavioral Health
and Clubhouse Buffalo -
Restoration Society, Inc.

**City of Good
Neighbors**

**Protect yourself.
Protect your neighbor.
Protect your community.**

Order fentanyl test strips and Narcan and find out how to use them at [Erie.gov/Detect](https://erie.gov/detect).
Keep them for yourself and **give them** to your customers, neighbors, family, and friends.
Test your cocaine, crack and other drugs, **never use alone**, and **take turns** to prevent a deadly overdose.



Order fentanyl test strips and Narcan at **Erie.gov/Detect**



LOCATION-BASED DISPLAY ADS



Deacon Anthony Doran
Second Chance Ministries

City of Good Neighbors

Protect yourself.
Protect your neighbor.
Protect your community.

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Narcan at **Erie.gov/Detect**



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Kenneth Gaston, MA
GROUP Ministries, Inc.

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DETECT TO PROTECT



“I became a recovery coach in memory of my son so that I could help another person be able to have a good life.”

- Nancy Mariani

Order fentanyl test strips and Narcan at [Erie.gov/Detect](https://erie.gov/Detect)



LOSS INTO ACTION

GUILT

ISOLATION

SELF-BLAME

RESENTMENT



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Challenges & Successes

In 2024, the campaign produced:



More than
9.4 million
impressions
on social media



More than
5.5 million
impressions
via location-based
and audience-based
display ads



More than
2 million
impressions
via streaming audio



More than
1.8 million
impressions
on streaming video



More than
133,000 visits
to the campaign website
to order fentanyl test
strips and Narcan



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Challenges & Successes

In addition, there were significant increases in harm reduction supply ordering and distribution, including:



374% increase
in ordering and
distribution of
fentanyl test strips¹



1,796% increase
in ordering and
distribution of xylazine
test strips¹



236% increase
in ordering and
distribution of
Narcan kits²



Overall, opioid overdose deaths

decreased in 2024 by 14% from a high of 436 in 2023.

Monthly deaths decreased from 40 in June 2024 to 25 in July and 23 in August 2024 after the full campaign launched.

Challenges & Successes

To date, the campaign has won a:



**2024 Gold MUSE
Creative Award for
Best Advertising
Campaign**



**2024 Bronze
Healthcare Digital
Marketing Award for
Best Digital Marketing
Campaign**



**2024 Gold Viddy
Award for Best Public
Service Announcement**



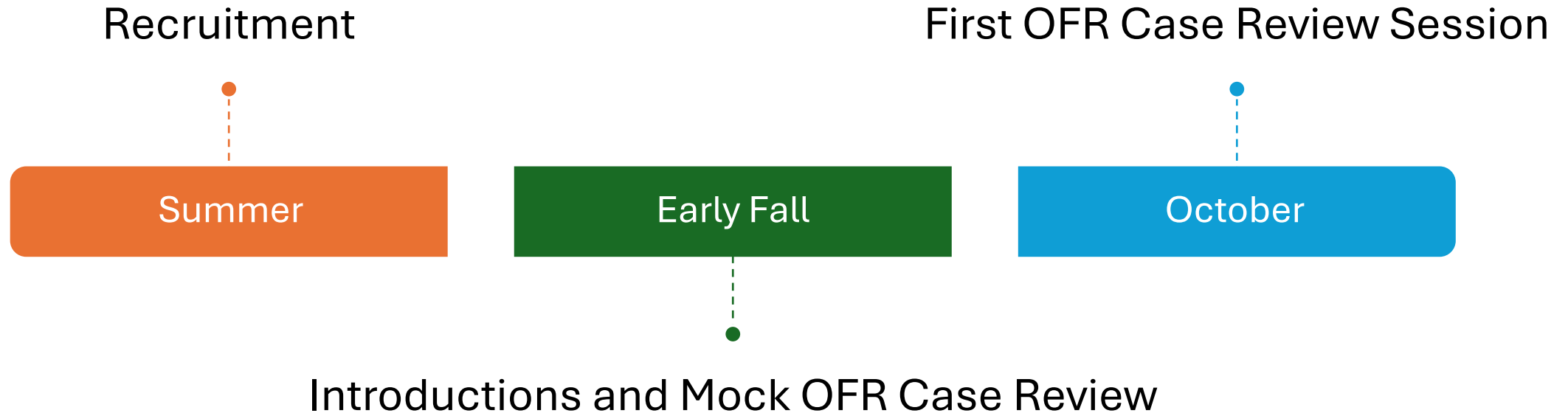
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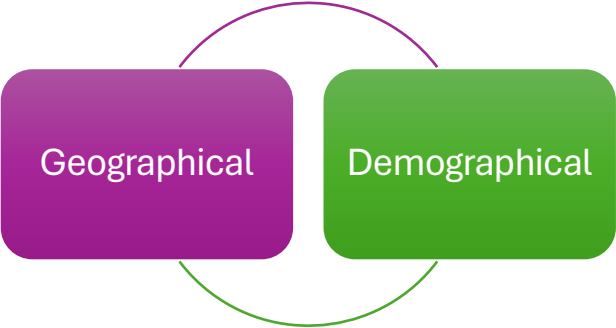
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Data to Action – Overdose Fatality Review Program

Program Timeline 2024



Theme Based- Case Review Selection



ECCDOH OFR Program Case Selection Overview

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Erie County Department of Health



OVERDOSE FATALITY REVIEW PROGRAM

Case Selection Summary – Session 2

FATAL OVERDOSE AGGREGATE DATA

**Note: Population estimates for adjusted death rates were derived from the 2022 American Community Survey 5-Year Estimates, with race categories grouped into White and Non-White due to sample size limitations.*

Table 1: Zip Code-Based Population-Adjusted Overdose Deaths Comparison (Q4 2023 To Q1 2024)

Zip Code	Q4 2023 Population Adjusted Deaths	Q1 2024 Population Adjusted Deaths	Q-Q Change
14212	52.2	90.3	37.6
14202	0.0	27.3	27.3
14201	15.8	39.6	23.8
14211	16.6	37.3	20.7

Table 2: Demographic-Based Population-Adjusted Overdose Deaths Comparison (Q4 2023 To Q1 2024)

Groups	Q4 2023 Population Adjusted Deaths	Q1 2024 Population Adjusted Deaths	Q-Q Percent Change
Non-White	5.1	5.8	14.6
White	12.1	12.5	3.2

CASE SELECTION SUMMARY

Observations:

The quarter-over-quarter analysis revealed significant geographic and demographic shifts in population-adjusted overdose deaths. ZIP code 14212 experienced the greatest

ECCDOH OFR Program Case Selection Overview

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increase in Q-Q change, highlighting a possible hotspot for targeted intervention. Additionally, the Non-White demographic group saw a higher percent increase in population-adjusted deaths compared to the White demographic group.

Inclusion Criteria:

1. ZIP code: 14212, based on the largest Q-Q change in population-adjusted overdose deaths (+37.6).

2. Demographic: Non-White individuals, reflecting the highest Q-Q percent change (+14.6%).

3. Cases with at least five deaths in the selected ZIP code and demographic group.

Exclusion Criteria:

1. ZIP codes and demographic categories with fewer than five deaths.

2. Overdose cases outside the selected ZIP code or demographic group.

Decision Rationale:

The selection process focused on identifying cases from the ZIP code and demographic category with the highest observed increases in overdose deaths. This approach ensures the review highlights areas and groups most impacted by recent trends.

Methodology:

• ZIP Code Selection: ZIP code 14212 was identified as the target location due to its substantial Q-Q change (+37.6). A random selection process was applied to identify a representative case from this ZIP code.

• Demographic Selection: Non-White individuals were identified as the target demographic based on the highest Q-Q percent increase (+14.6%). One case was randomly selected from this demographic group, ensuring the individual resided in the target ZIP code.

SELECTED CASES

• Case 1: A Female, Native American, aged 50+ from zip-code 14212

• Case 2: A Male, Black, Non-Hispanic, aged 30+ from zip-code 14212

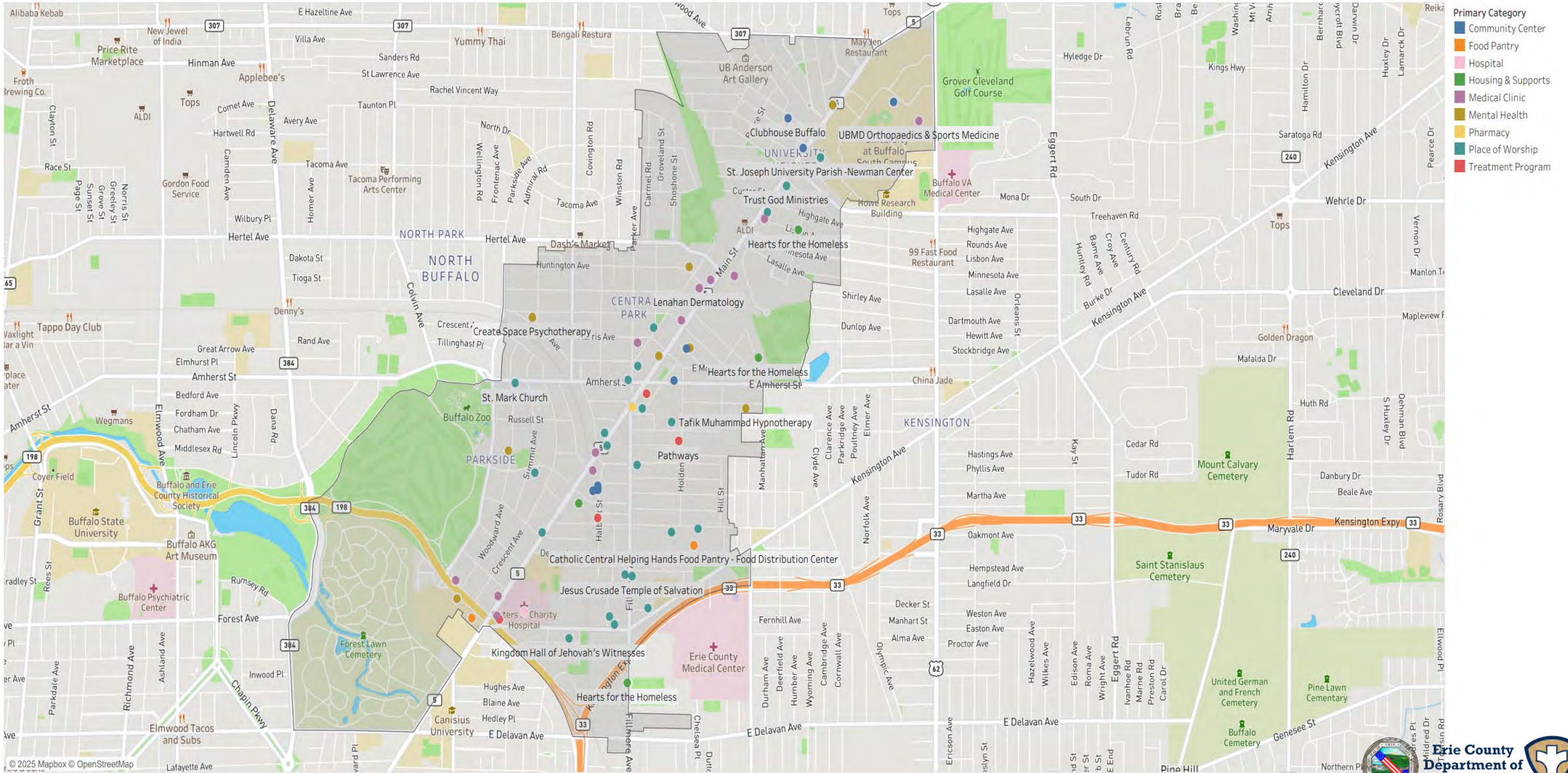


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OFR Map 14214



RESOURCE MAPPING PER ZIPCODE

OFR Map 14214

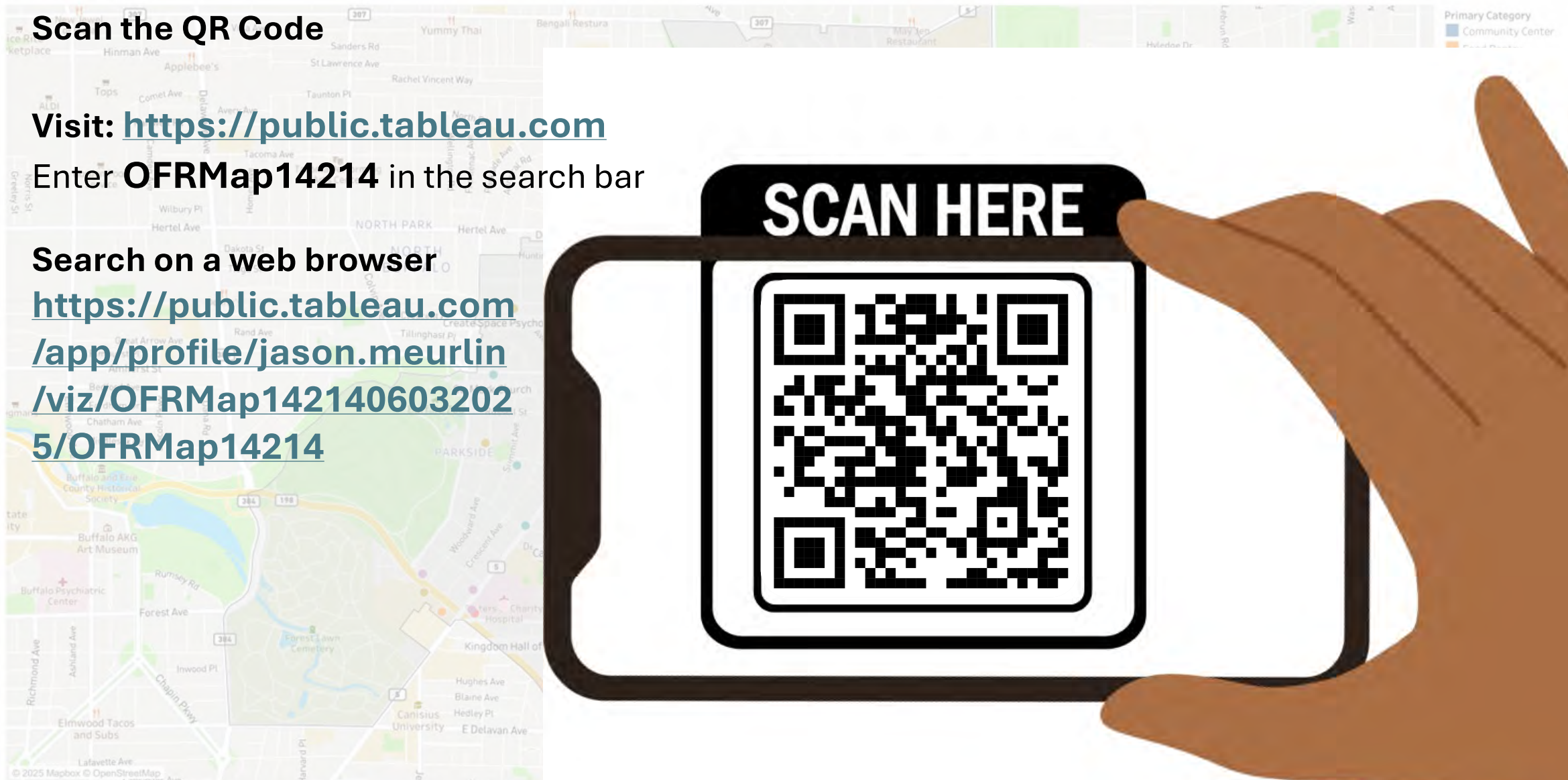
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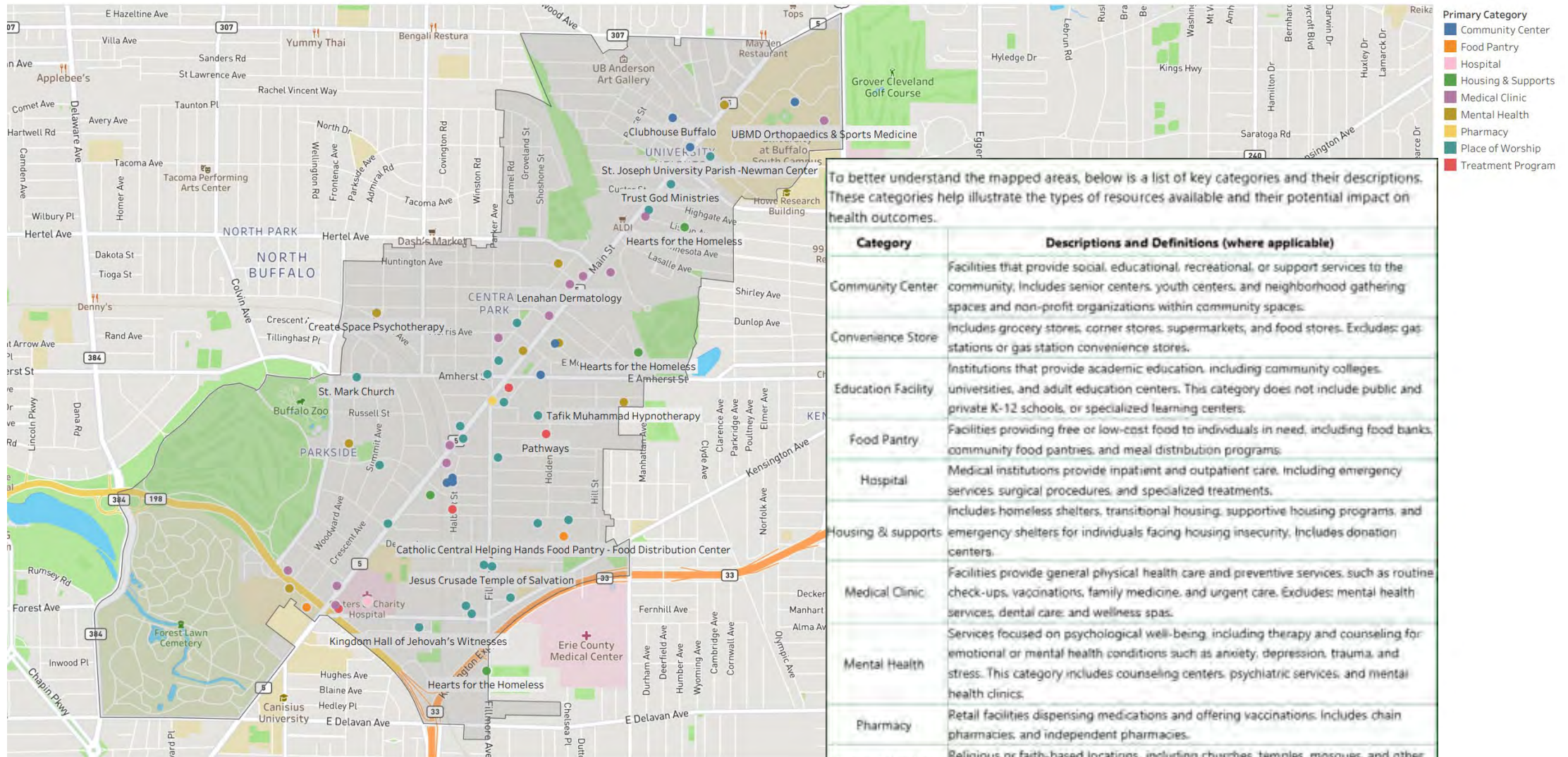
Enter **OFRMap14214** in the search bar

Search on a web browser

<https://public.tableau.com/app/profile/jason.meurlin/viz/OFRMap1421406032025/OFRMap14214>



RESOURCE MAPPING PER ZIP CODE

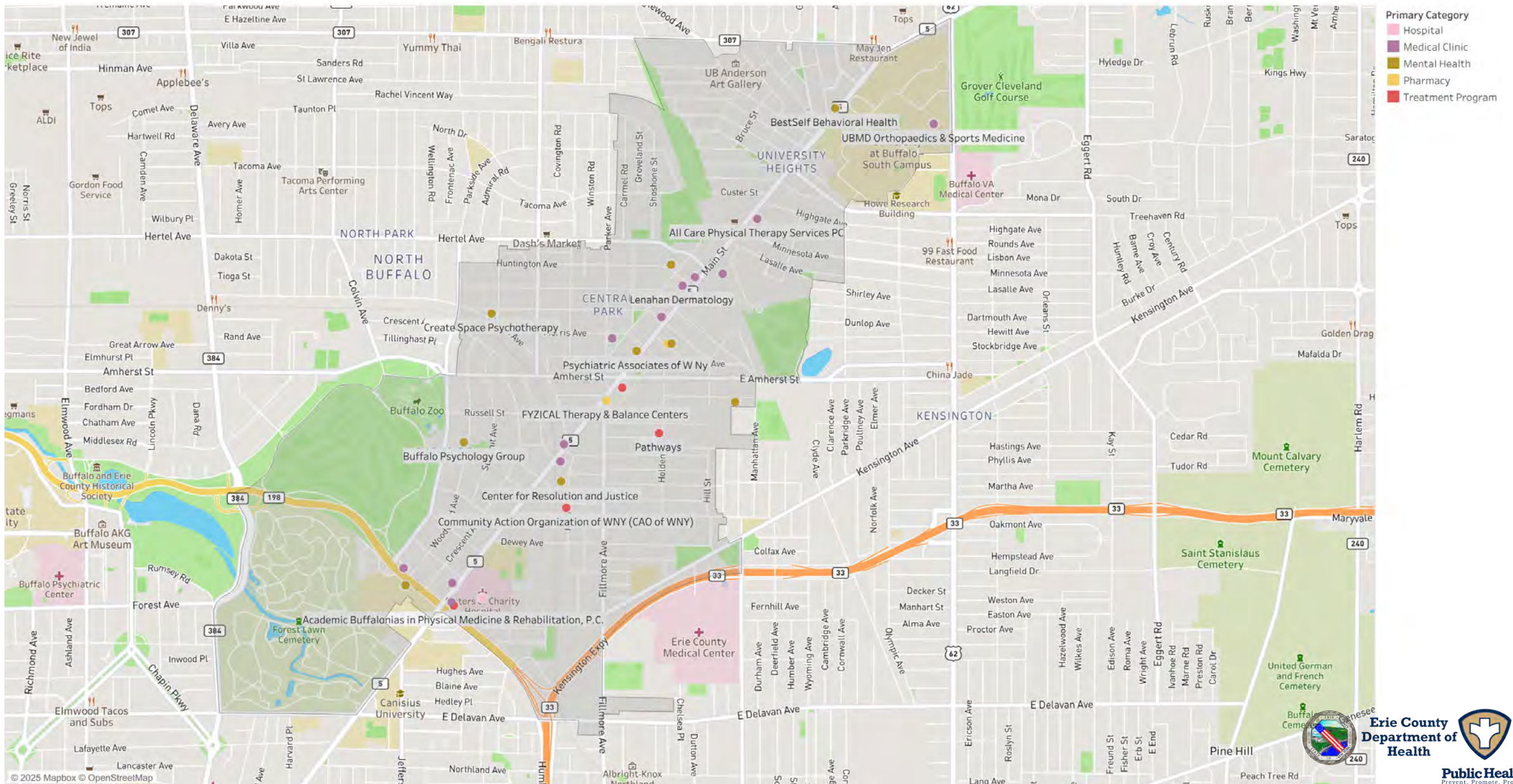


To better understand the mapped areas, below is a list of key categories and their descriptions. These categories help illustrate the types of resources available and their potential impact on health outcomes.

Category	Descriptions and Definitions (where applicable)
Community Center	Facilities that provide social, educational, recreational, or support services to the community. Includes senior centers, youth centers, and neighborhood gathering spaces and non-profit organizations within community spaces.
Convenience Store	Includes grocery stores, corner stores, supermarkets, and food stores. Excludes gas stations or gas station convenience stores.
Education Facility	Institutions that provide academic education, including community colleges, universities, and adult education centers. This category does not include public and private K-12 schools, or specialized learning centers.
Food Pantry	Facilities providing free or low-cost food to individuals in need, including food banks, community food pantries, and meal distribution programs.
Hospital	Medical institutions provide inpatient and outpatient care. Including emergency services, surgical procedures, and specialized treatments.
Housing & supports	Includes homeless shelters, transitional housing, supportive housing programs, and emergency shelters for individuals facing housing insecurity. Includes donation centers.
Medical Clinic	Facilities provide general physical health care and preventive services, such as routine check-ups, vaccinations, family medicine, and urgent care. Excludes: mental health services, dental care, and wellness spas.
Mental Health	Services focused on psychological well-being, including therapy and counseling for emotional or mental health conditions such as anxiety, depression, trauma, and stress. This category includes counseling centers, psychiatric services, and mental health clinics.
Pharmacy	Retail facilities dispensing medications and offering vaccinations. Includes chain pharmacies, and independent pharmacies.
Place of Worship	Religious or faith-based locations, including churches, temples, mosques, and other places used for worship and spiritual gatherings.
Transit Stop	Designated public transportation stops, including bus stations, and transit hubs.
Treatment Program	Facilities and programs providing support for Alcohol Use Disorder (AUD), substance use disorder (SUD), Domestic Violence (DV) services, counseling, rehabilitation, and related health testing services.

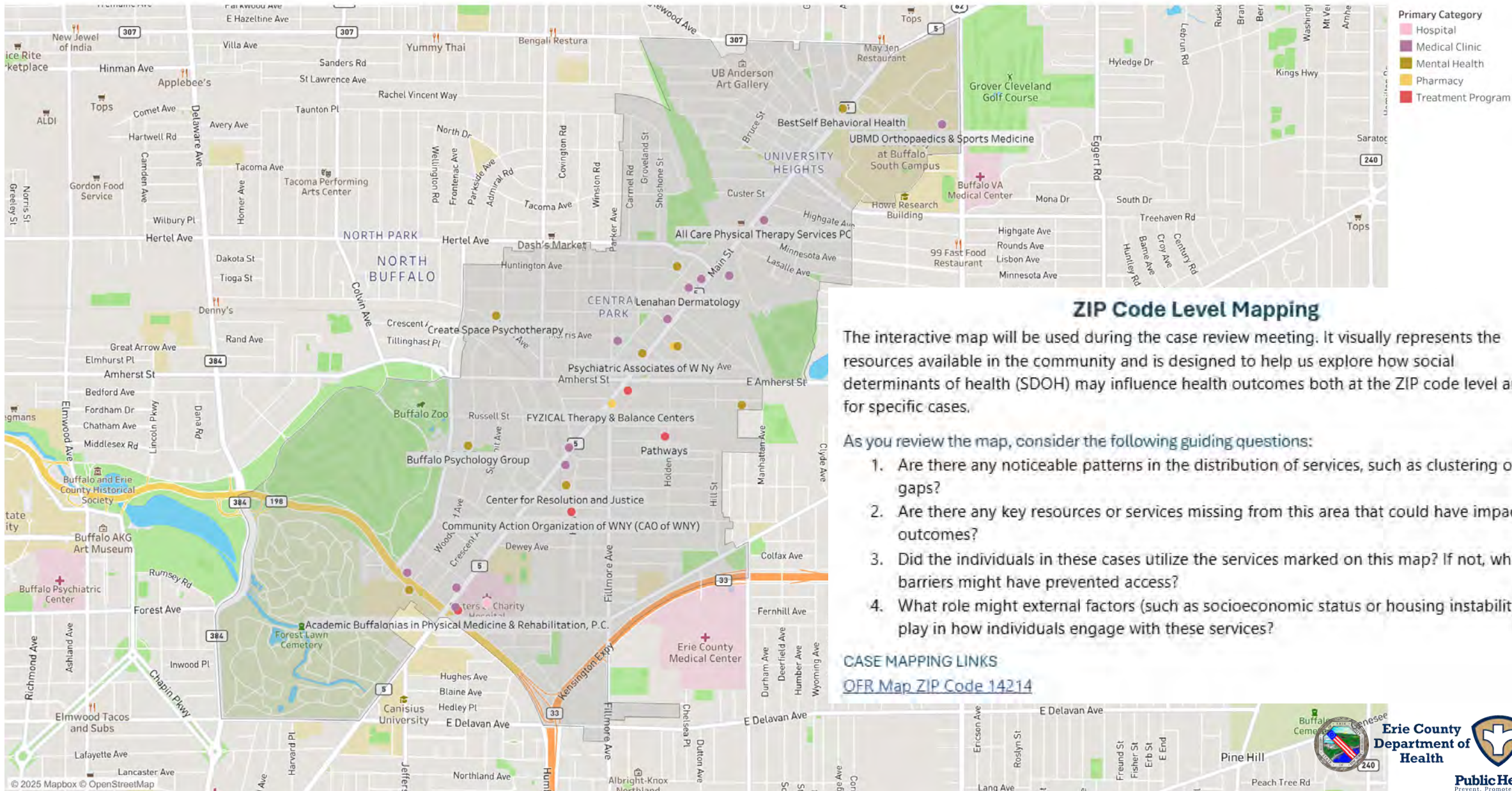
RESOURCE MAPPING PER ZIPCODE

OFR Map 14214



RESOURCE MAPPING PER ZIPCODE

OFR Map 14214



Challenges & Successes



Completed four OFR Case Review Sessions (2 Cases each)

Total of 6-8 recommendations

Enhance data-sharing pathways

Expand support to other initiatives (e.g., peer outreach)



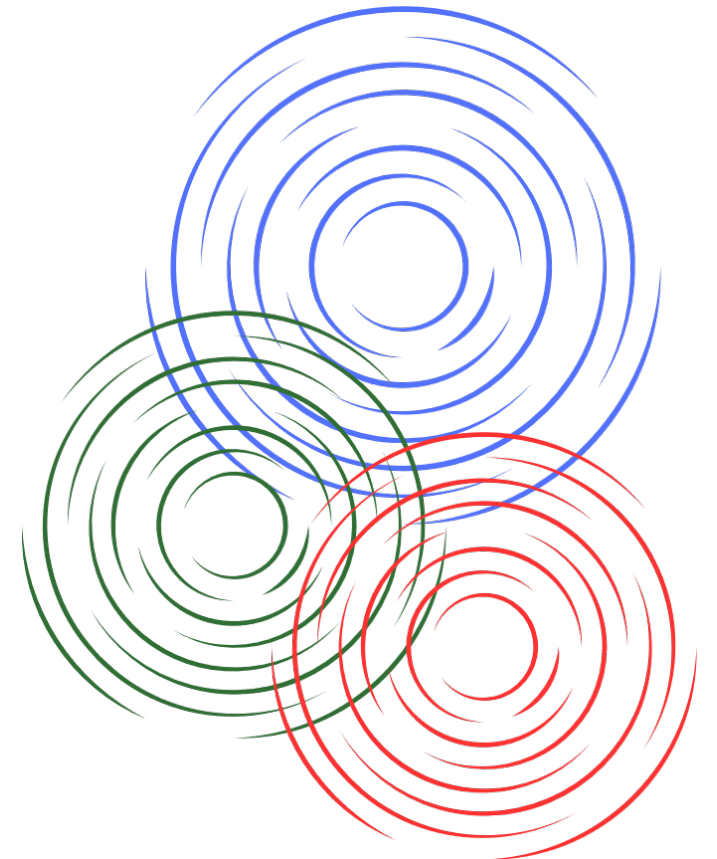
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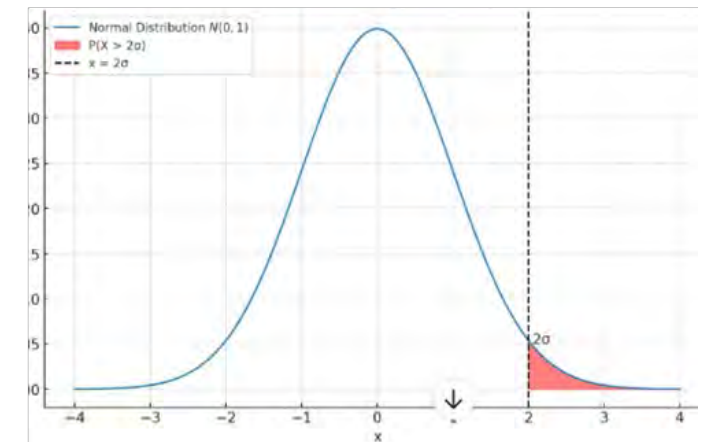
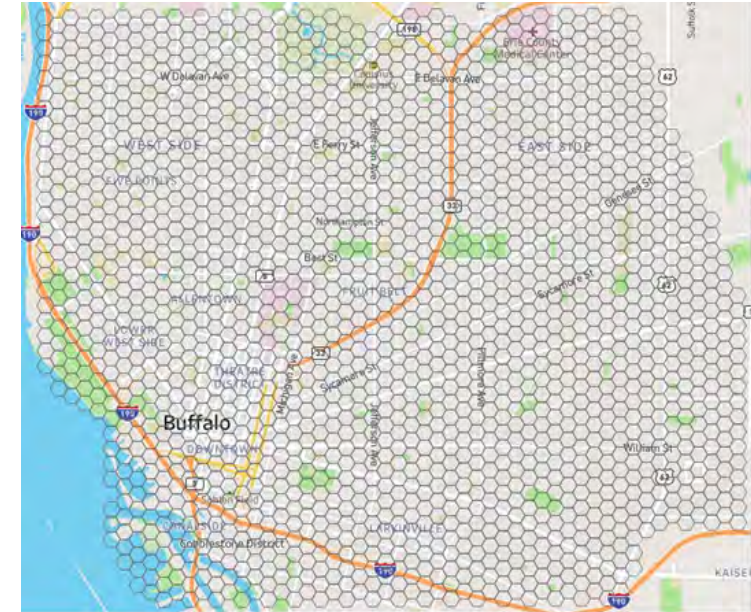
Data to Action – Heat Maps

- What are heat maps and why are they useful?
 - Use color to represent intensity
 - Allow us to monitor shifts in overdose reporting
 - Seasonally and geographically
- Data aggregated by HIDTA
 - Typically 3:1 ratio of non-fatal to fatal reports
- Helpful analogy
 - Each report is like a stone thrown in a pond, making ripples
 - The more ripples overlap, the “hotter” the cluster



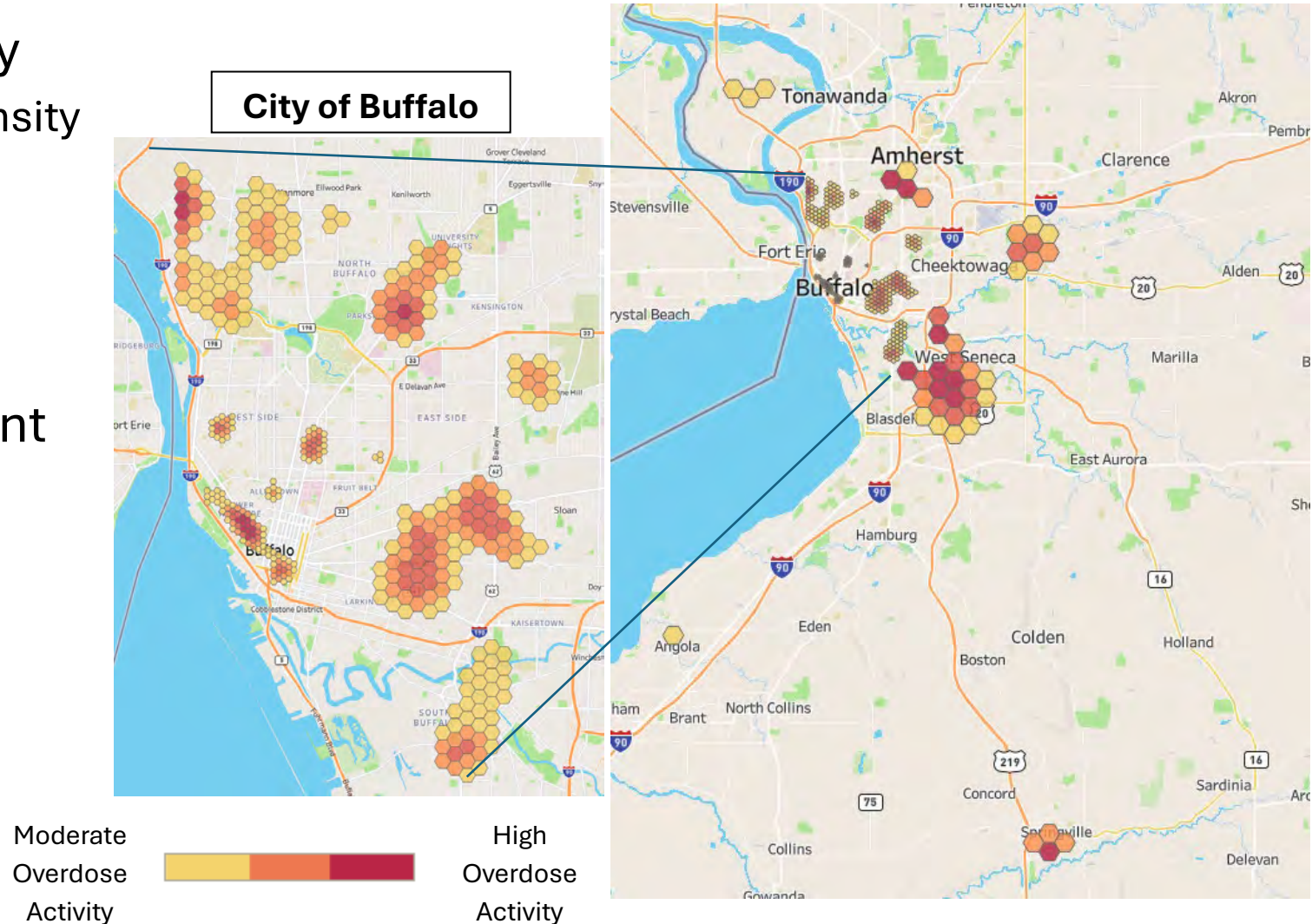
Data to Action – Heat Map Methodology

- Getis-Ord Statistic (G_i^*)
 - Fit hexagonal grid over analysis area
 - Determine how many events occur in each cell
 - Define spatial relationships (inverse distance)
 - Calculate Z-scores
- Software
 - Analysis conducted in R
 - Parker Webb, translation from GIS
 - Visualizations in Tableau
- Modifications
 - Scale cell size of grid based on report density
 - Scale inverse distance weighting factor
 - Weighting decays more slowly in less dense areas
 - Apply Gaussian smoothing



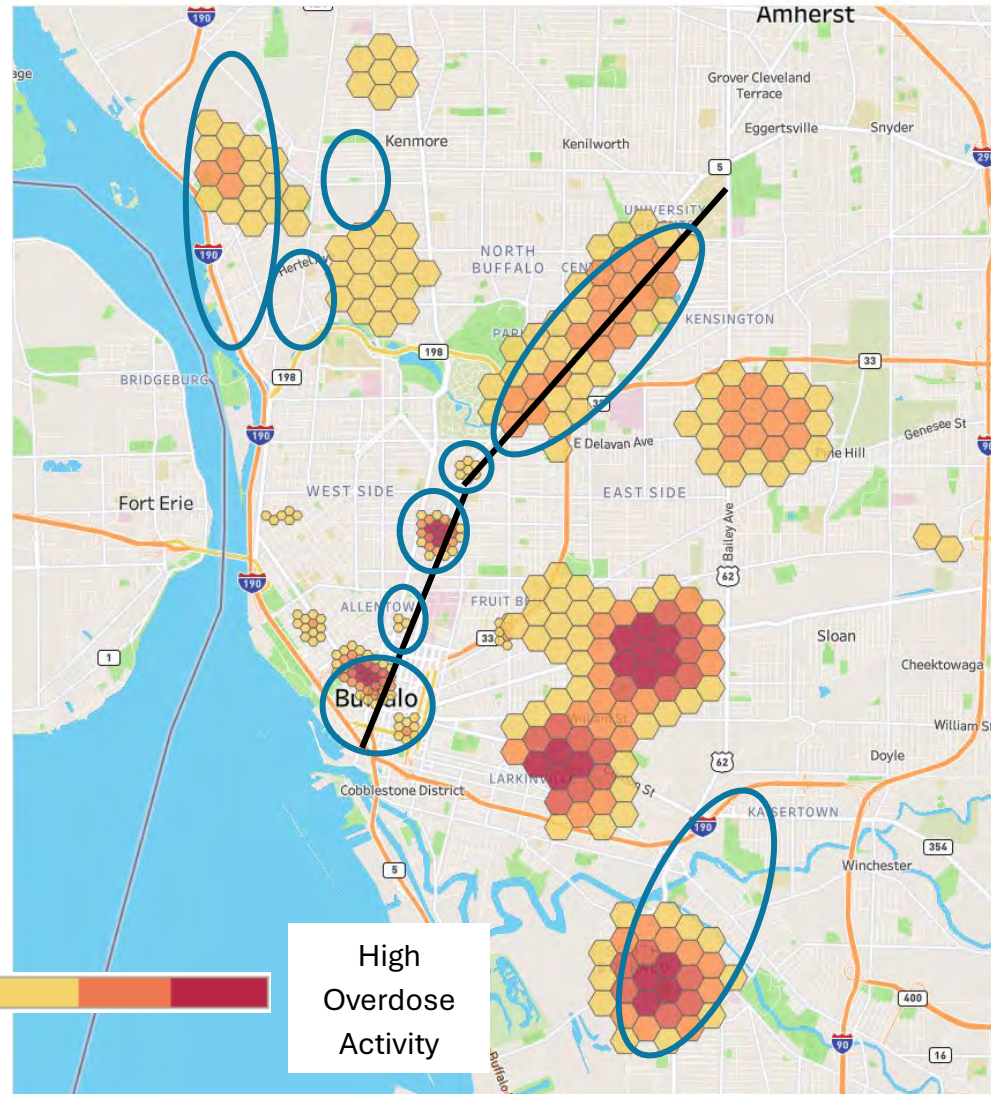
Data to Action – Methodology

- Accounting for incident density
 - Smaller grid spacing for high density
 - More data = more granularity
 - Larger cells needed to detect clusters in less dense areas
- Separate heat maps for different density groups
 - Areas with similar population densities are grouped together
 - 30-40 reports minimum

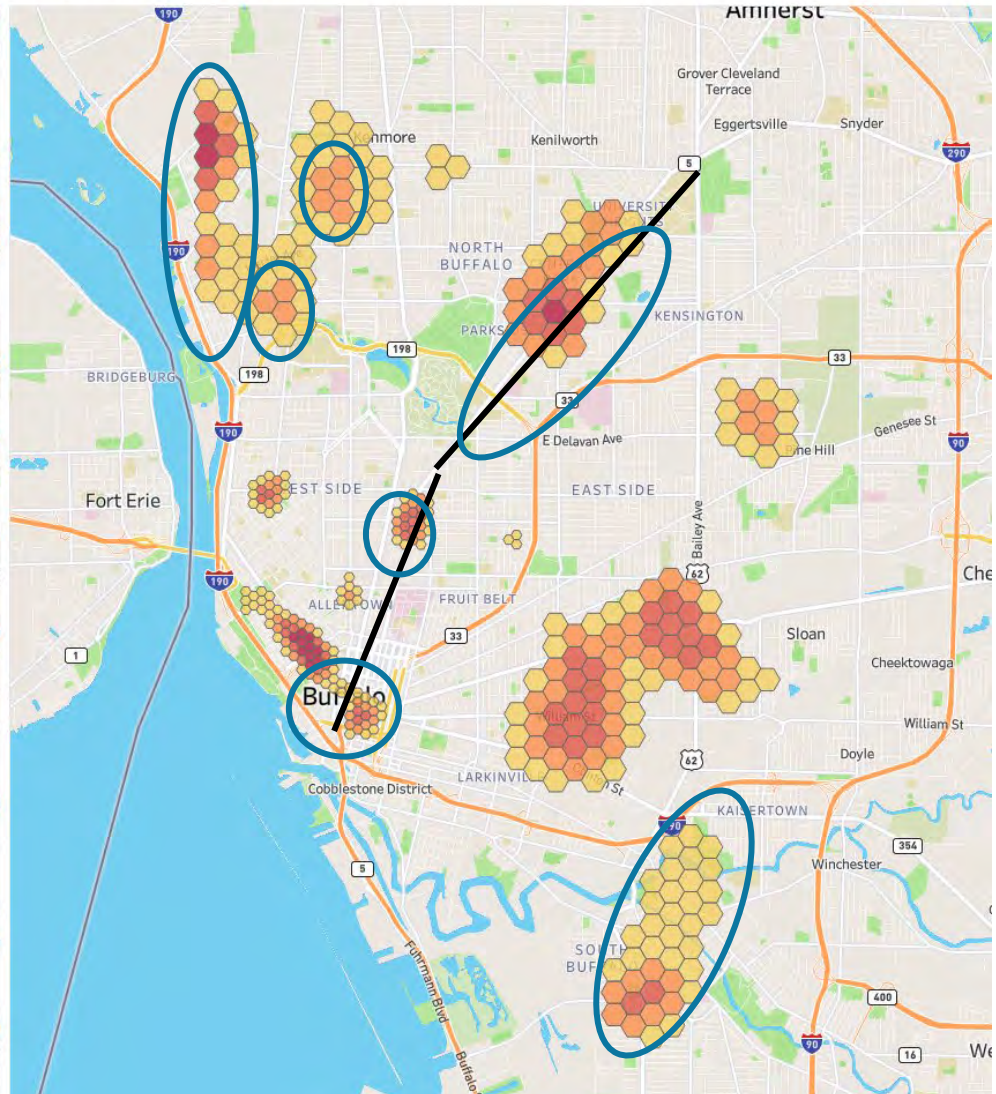


Heat Map Examples – Seasonal Shifts

December 2024 - February 2025

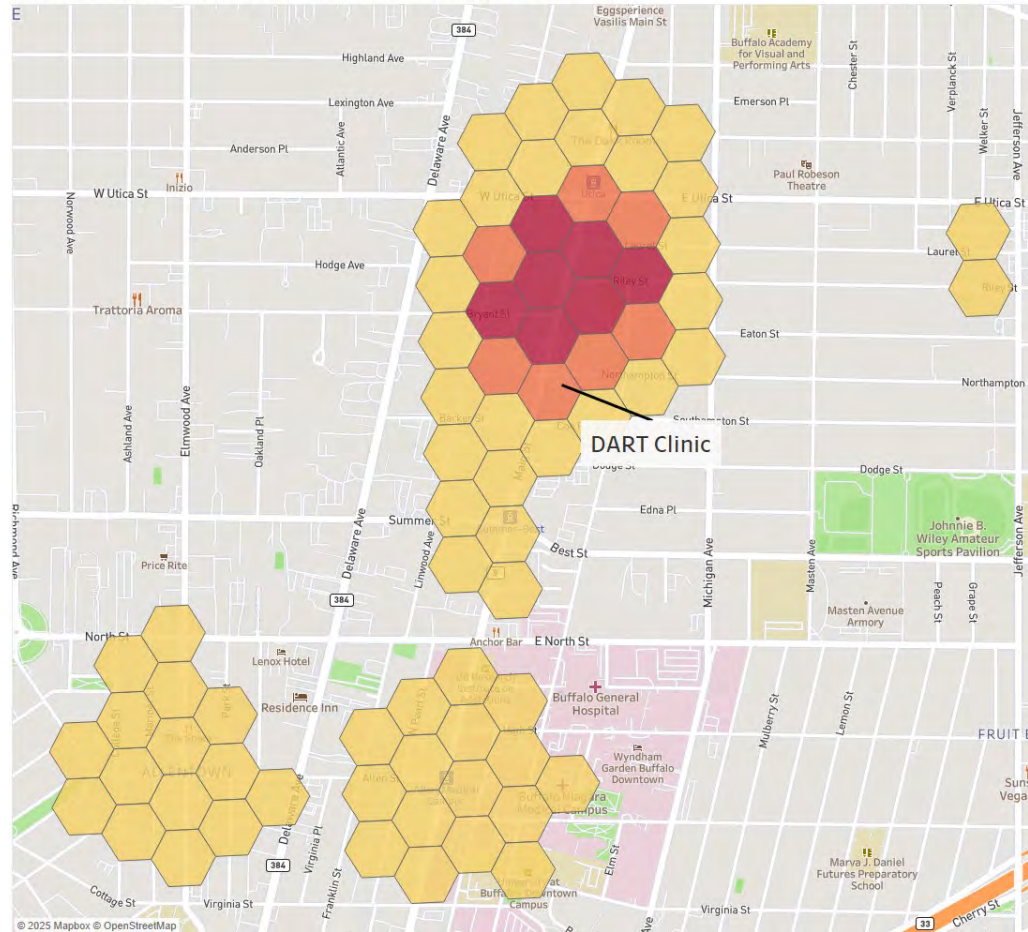


May through July 2025



Heat Map Examples – Specific Locations

Reports within 1.5 KM of DART Clinic, January - August 2025



Moderate
Overdose
Activity



High
Overdose
Activity

Heat Maps - Challenges & Successes

Challenges

- Selecting regional density groupings
- Mapping rural areas
 - ❖ Need to use long time periods or group with other regions

Successes

- Able to find hotspots within specific subregions
- Weekly updates for coordinators and Peer Navigators
 - ❖ Flex outreach vs. regular outreach and case follow-up



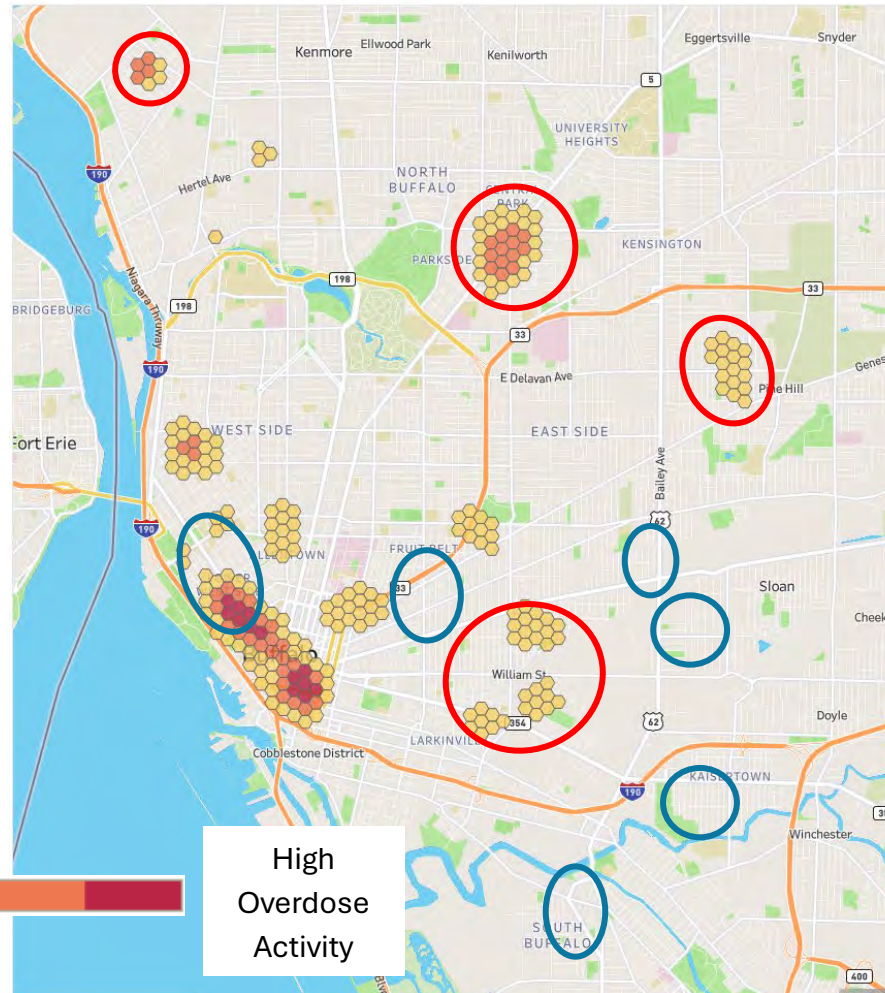
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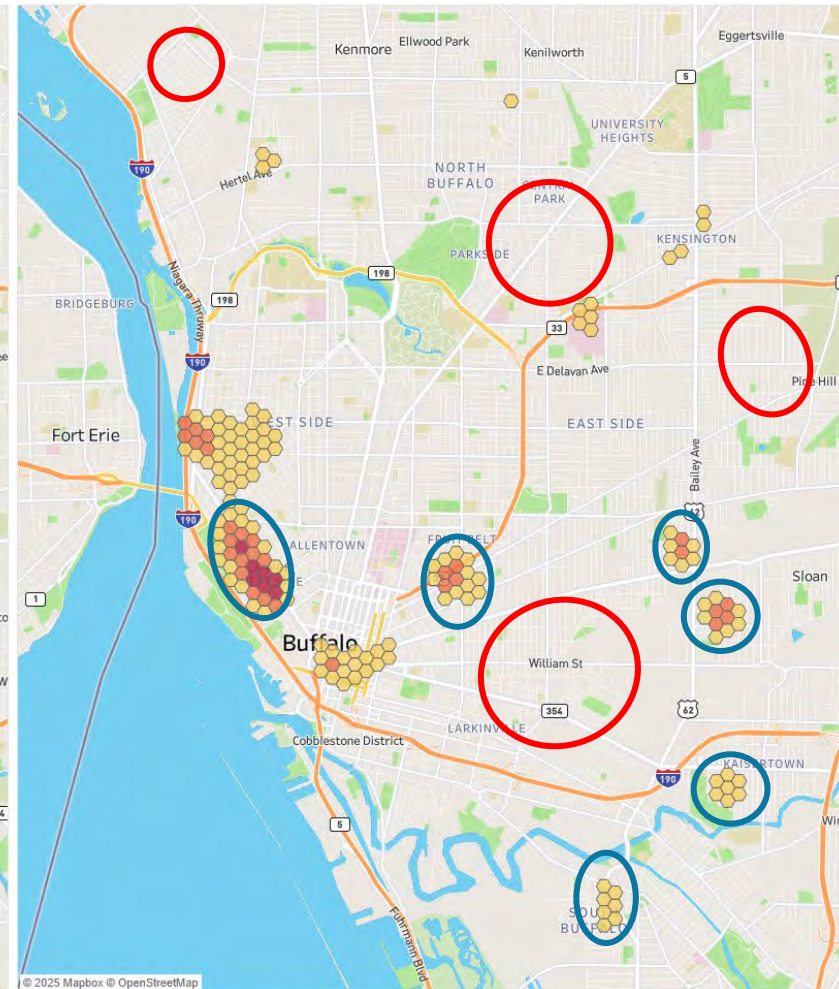
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Responding to Shifts in Overdose Locations

6-8-2025 through 7-19-2025



7-20-2025 through 8-30-2025



Moderate
Overdose
Activity



High
Overdose
Activity

PRESENTATION OBJECTIVES

DATA TO ACTION



DETECT TO PROTECT

Media Campaign
successes and challenges



OVERDOSE FATALITY REVIEW PROGRAM

Case selection and resource tool



HEAT MAPS

Person/Community
centered Peer Outreach



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NEXT STEPS

Detect to Protect (Media Campaign)

- Rolling out phase 2 of campaign 'City of Neighbors'
- Location/Community Based-Ads
- Champions within faith communities

OFR Program

- Preparing 2024 Annual report
- Expanding Zip code mapping into other initiatives (e.g., peer outreach, share with business or community members)
- Broadening data sources, partnerships and collaborations

Heat Maps

- Disseminating more widely to other community organizations (data webinars)
- Attempting to find root causes of hotspots
- Feedback from experts/academics



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QUESTIONS



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PRESENTATION SPEAKERS



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THANK YOU



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