PHIX

Overview of Data Sharing Success in West Texas for
UNIT Members
2/26/2025
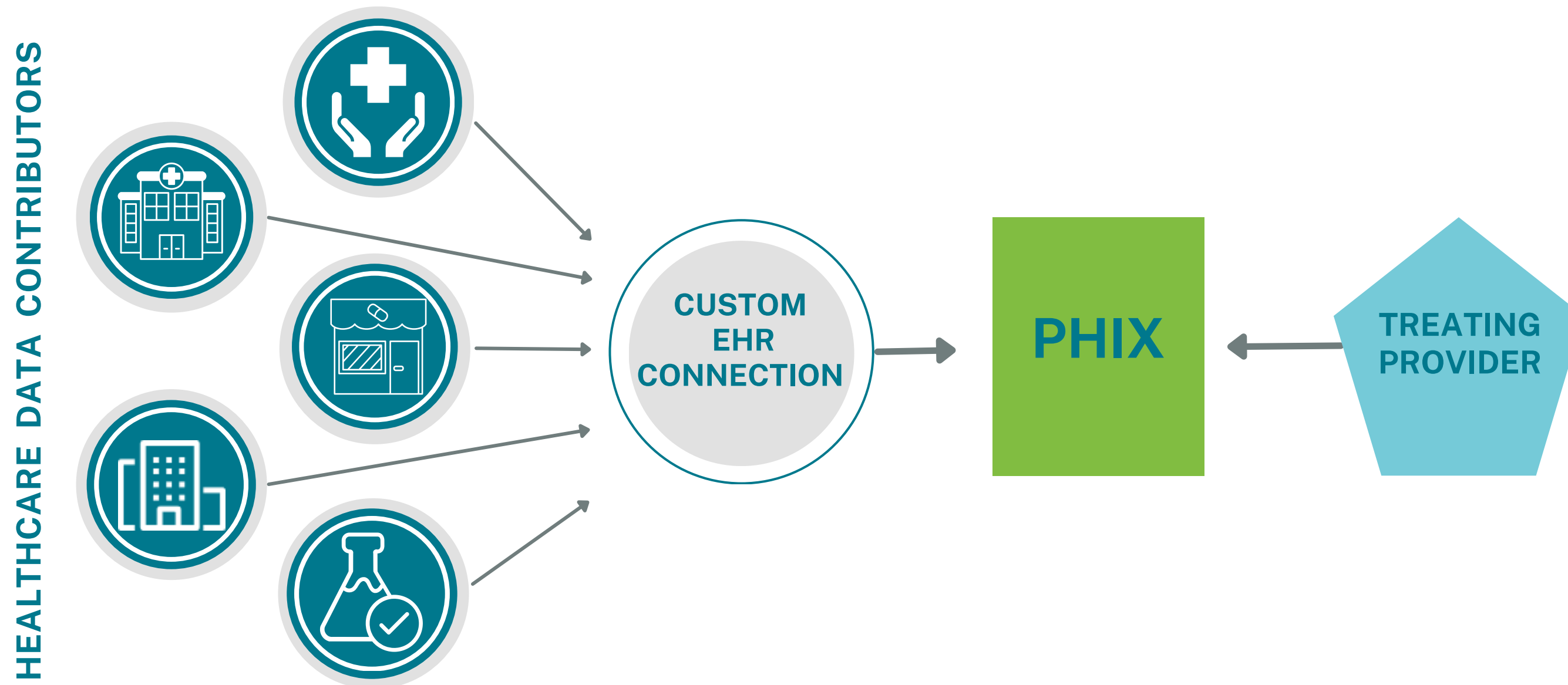
PHIX Data Exchange Network

Treating providers may securely access the following type of information through PHIX:

- Diagnosis & Problem list
- Allergies
- Medications
- Immunizations
- Lab Results
- Radiology reports
- Pathology reports
- Clinical Notes, including discharge summaries, progress notes, and consult notes

Committees

Technology

Privacy & Security

Data Use & Analysis

Governance

Strategic Planning

Quality Reporting

Syndromic Surveillance

Growth

Research

Non-Medical Drivers of Health

Value

Access to critical health data through PHIX is timely, saves lives, and improves quality.

2023 study published in the *Annals of Family Medicine* examined whether primary care physicians' use of PHIX to access data about patient care transitions reduced the likelihood of the patient being re-hospitalized.

When PHIX was accessed by primary care physicians after hospitalization, the likelihood of a **return visit to the ED decreased by 53%** while **re-hospitalization decreased by 61%**.

User Highlight

"PHIX is an incredible tool that allows us to better understand someone's history when we have a call. We can see the last time they had an EDO [Emergency Detention Order], why they were brought in, and any substance use. When someone has dementia, we can use the demographics section to help find their family."

Crisis Intervention Team, Emergence Health Network

"I had a patient who I was wondering what the origin of their low blood pressure was and when I logged into PHIX I saw that they had a mildly elevated white blood cell count and that help me to understand that the patient could have been septic or that the origin of low blood pressure was of infectious origin. Because of PHIX I sent the patient to the hospital and the patient was found to be septic after all. *This was a lifesaving referral because of lab values I received through PHIX because of lab values I received through PHIX*."

Physician Assistant, Federally Qualified Health Center

Partners

PHIX is based in El Paso and serves hospitals, physicians, and patients in **west Texas** and **southern New Mexico**.
Partners include:

- University Medical Center of El Paso (Level I Trauma Center serving 280 mile radius around El Paso)
- El Paso Children's Hospital
- The Hospitals of Providence (Tenet Healthcare)
- Las Palmas Del Sol Health Care (HCA Healthcare)
- Texas Tech University Health Sciences Center El Paso
- Emergence Heatlh Network (Local Mental Health Authority)
- Federally Qualified Health Centers: Centro De Salud Familiar La Fe, Project Vida, San Vicente
- City of El Paso: Public Health, Fire, Community & Human Development
- National Connections: Veterans Administration and Department of Defense
- State Connections: ImmTrac, Prescription Drug Monitoring Program
- Private clinics (Approximately 368 locations)
- Social Service Agencies: El Pasoans Fighting Hunger Food Bank
- New Mexico: Gila Regional Medical Center Hospital, primary care and specialty clinics, and post-acute care

National and State Connections

PHIX National eHealth Exchange Connection Highlights

Veterans Administration

Department of Defense

DaVita Kidney Care

Parkland Health

C3 HIE: San Antonio health information exchange

SYNCRONYS: New Mexico health information exchange

Contexture: Arizona's health information exchange

Fresenius Medical Care

Children's Health System of Texas

Shannon Health

Texas Health Resources

CommonSpirit Health

Presbyterian Healthcare Services

JPS Health Network

Kelsey-Seybold Clinic

University of Texas Medical Branch

UT Southwestern Medical Center

"We had a patient who was a veteran in the hospital and in need of hospice services. He didn't have any family locally, so we used PHIX clinical viewer to identify who the medical attorney was and admit the patient, because of our ability to have access to this information."

Tender Care Home and Health Hospice

Using Data to Address Local Challenges

Clinical Viewer

Non-Medical Drivers of Health

Notifications
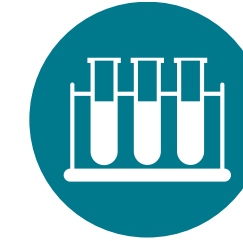
Lab Ordering and Results System

Public Health Syndromic Surveillance

Vaccine Information Exchange
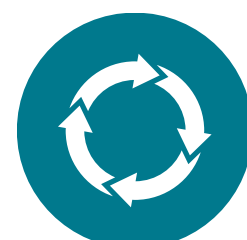
Closed-Loop Referrals

Trauma Image Sharing

Data Analysis

Public Health Data System

Notifications

Hospital

Patient is admitted and/or discharged from the hospital

Notification

PHIX captures hospital visit and sends notifications to providers

Provider

Provider receives patient notifications

Clinical Viewer

PHIX

Provider reviews details in PHIX clinical viewer to support care coordination

PHIX notifies providers and insurance carriers when their patients are admitted to and/or discharged from the hospital or emergency department (ADT Notifications).

Custom notifications are developed to support specific use cases. For example, PHIX provides notifications for elevated HbA1c results to support diabetes care coordination.

"PHIX has been very helpful to our program and our diabetes classes, weekly I receive a list of patients with their HBa1c results, then I distribute that list to my staff, then they contact and invite patients to the diabetes/ prediabetes classes, so PHIX has been a great resource for our program."

Chronic Conditions Care Program Coordinator,
Federally Qualified Health Center

Trauma Image Sharing

1 Patient identified for transfer

2 Transferring facility sends image content via the PHIX trauma system

3 Distribution list at hospital receives email/text notification for images received

4 Hospital view images in directly in their PACs or via the PHIX trauma system

5 Clinicians use images to inform care

"Before PHIX had officially gone live with trauma image sharing with Gila Regional Medical Center, one of the lead radiology techs at Gila Regional Medical Center called PHIX to let our team know that they had a really urgent need to use the system because they had a patient whose brain was bleeding that was being transferred to Del Sol. PHIX assisted Gila Regional Medical Center with pushing the DICOM images to Del Sol. **The trauma physicians at Del Sol were able to review the images while the patient was on the helicopter and prepared accordingly.** As a result, the patient did not need to be re-scanned upon arrival. **The surgery was performed, and the patient lived.** The following day, the patient had comparative imaging done the next day to evaluate progress."

Gila Regional Medical Center and Del Sol Medical Center

Data Analysis to Support Public Health

Leading workgroup on how to support the region with diabetes-related data.

Comprised of healthcare providers, program managers, and researches involved in diabetes intervention and prevention.

Iterative data analysis process to answer questions like....
- *Where is diabetes in the El Paso region?*
- *How well managed is diabetes?*
- *Are individuals with diabetes improving?*

Where is diabetes in the El Paso region?

Type 2 Diabetes and Prediabetes Diagnoses, El Paso County

% Census Population with Type 2 Diabetes and Prediabetes
- 0.1 – 2.6 %
- 2.6 – 5.2 %
- 5.2 – 7.8 %
- 7.8 – 10.4 %
- 10.4 – 12.9 %
- 12.9 – 15.5 %
- 15.5 – 18.1 %
- 18.1 – 20.7 %

PASO DEL NORTE HEALTH FOUNDATION
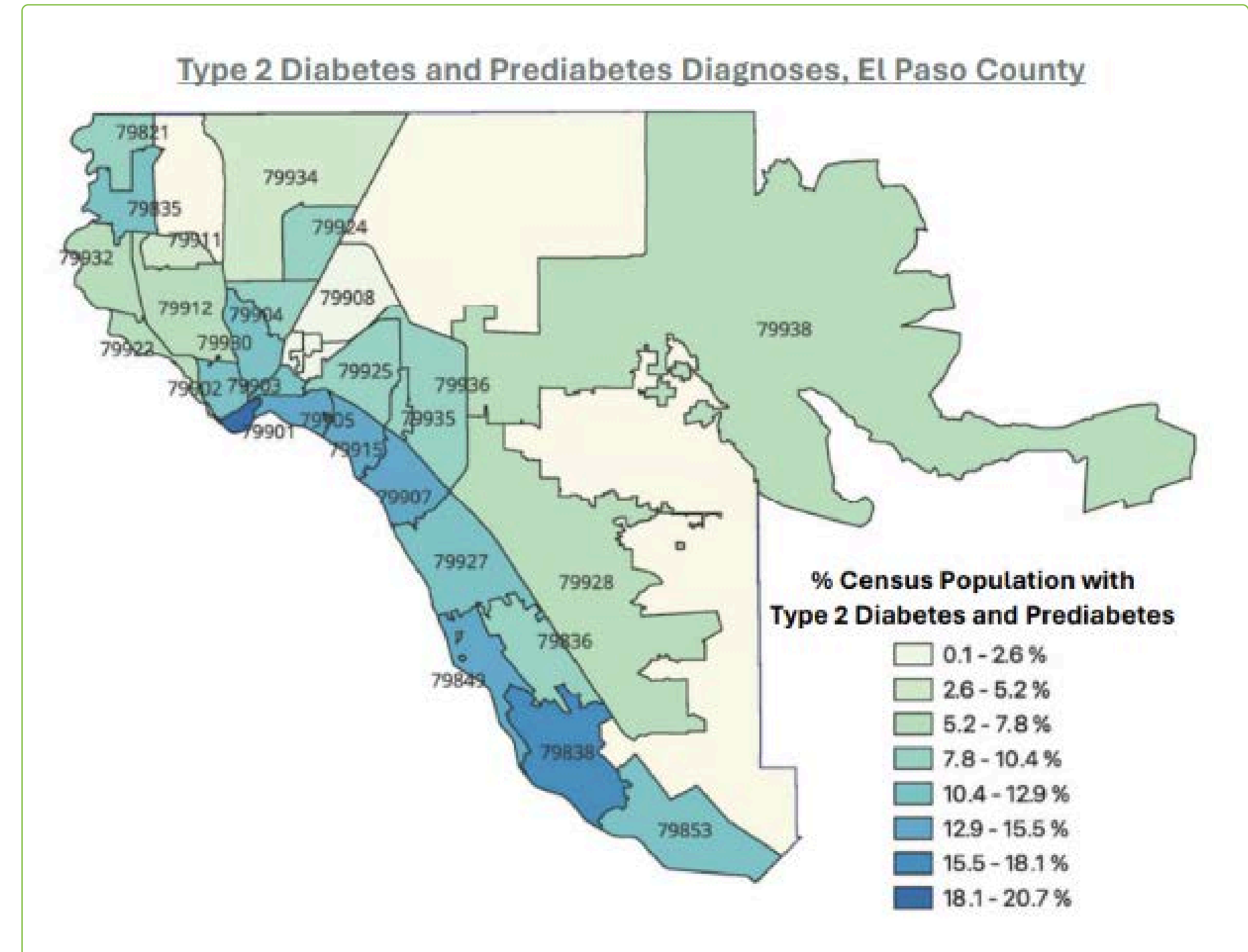
Data Analysis to Support Public Health

How well managed is diabetes?

"Notably, we can see an ebb and flow in HbA1c scores throughout the year . . . Further analysis is needed to identify the factors driving these fluctuations. If identified, then it may be possible to improve diabetes management through community-wide efforts that anticipate and address such factors."

David Cistola, MD, PhD
Texas Tech University
Health Sciences Center
El Paso

Median HbA1c Results for Individuals with Type 2 Diabetes

Legend:
— ADA recommendation for people with diabetes: HbA1c below 7%
— Median HbA1c
- - - Trendline

Y-axis: HbA1c (6.8, 7.0, 7.2, 7.4, 7.6, 7.8, 8.0)

X-axis: Month-Year (Jan-2021, Mar-2021, May-2021, Jul-2021, Sep-2021, Nov-2021, Jan-2022, Mar-2022, May-2022, Jul-2022, Sep-2022, Nov-2022, Jan-2023, Mar-2023, May-2023)
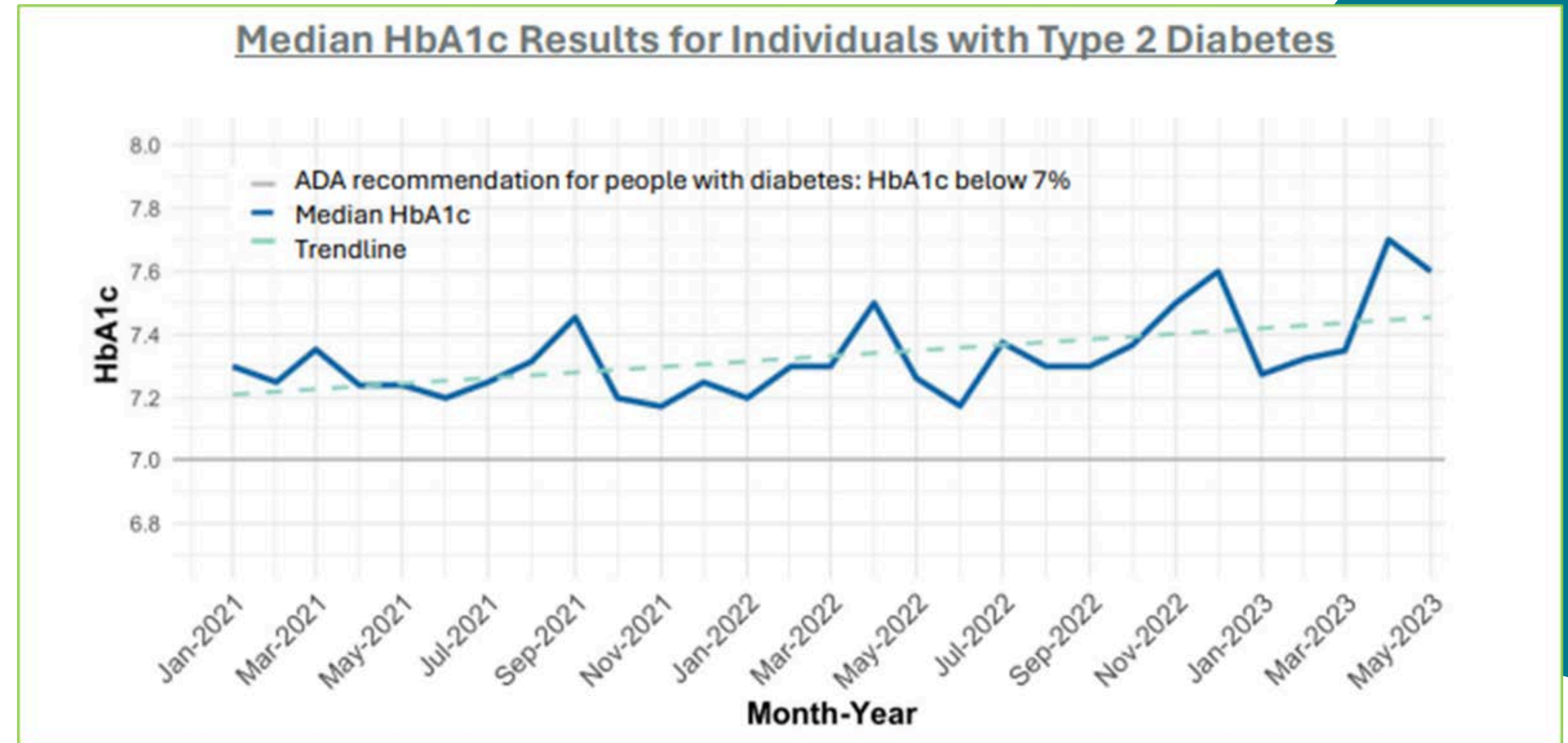
Data Analysis to Support Public Health

Are individuals with diabetes improving?

"A number of factors, such as diet, lifestyle, exercise and health access, can influence El Paso's HbA1c levels. More in-depth analysis is required to understand this geographic variation. It would be interesting to explore how cultural practices and social factors correlate with HbA1c results in these zip codes."

Hector Ocaranza, MD
Health Authority, City of El Paso

MCID Improvement of HbA1c Results Over Time by Zip Code

MCID Worsening of HbA1c Results Over Time by Zip Code

% of individuals that improved or worsened

- 0 – 2%
- 2 – 4%
- 4 – 6%
- 6 – 8%
- 8 – 10%
- 10 – 12%
- 12 – 14%
- 14 – 16%
- 16 – 18%
- 18 – 20%
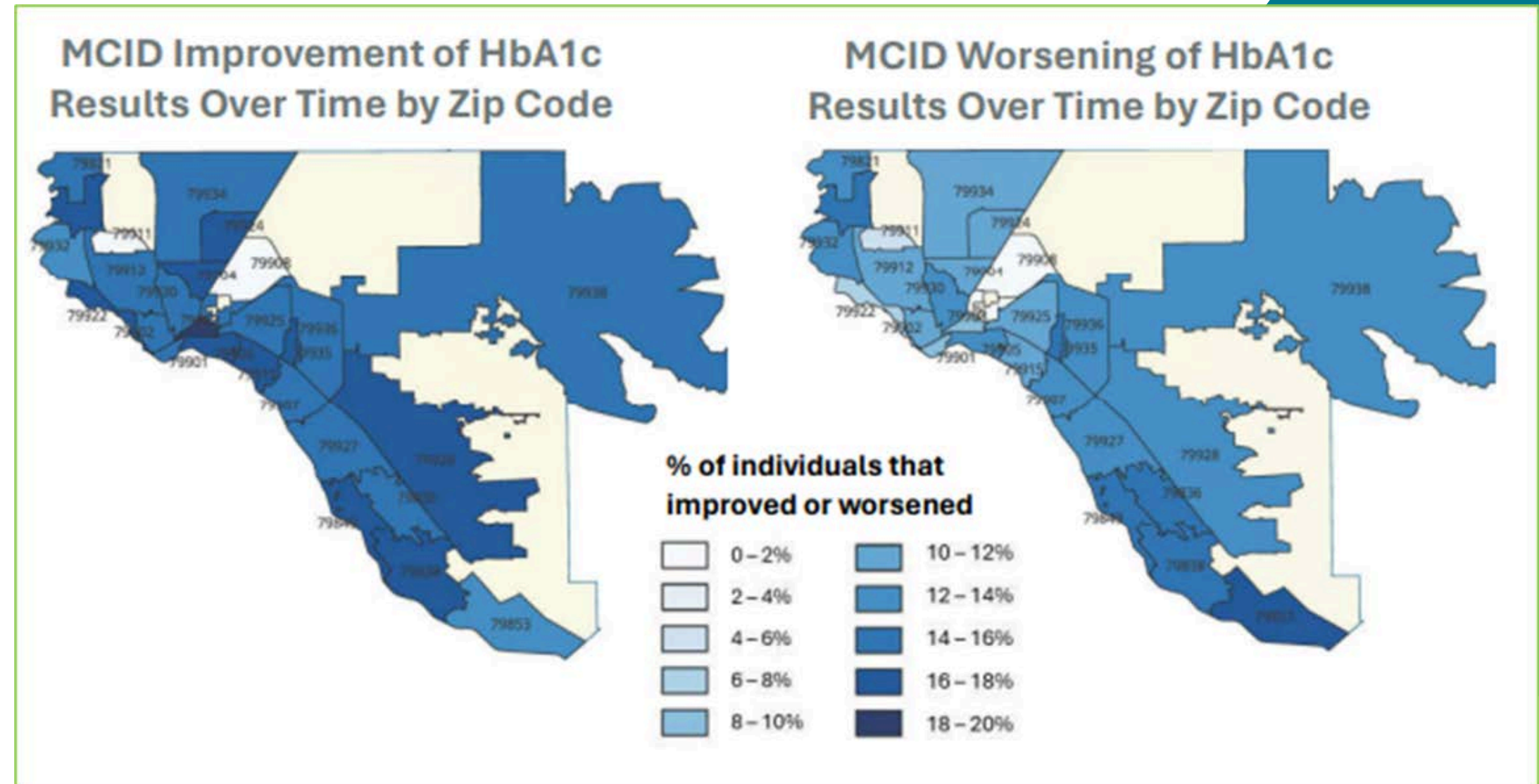
Disease Monitoring & Adverse Outcomes

Paso Del Norte Region - Maternal Health at Delivery
El Paso County (01/01/2021 - 10/31/2024)

	Total Deliveries	Total Deliveries El Paso County
	53,718	42,938

Deliveries with Hypertensive Disorders

Hypertensive Disorders	4,287
Pre-eclampsia	3,106
Hemorrhaging	1,220
Postpartum Hemorrhage	85
Placenta Accreta	81
Puerperal Sepsis	43
Uterine Rupture	31
Placenta Percreta	17
Placenta Increta	14

Age at Delivery with Complications
- 50-59 0.02%
- 40-49 2.94%
- 10-19 6.10%
- 30-39 38.16%
- 20-29 54.72%

Race
- Other 9.14%
- Unknown 2.44%
- Black 2.70%
- White 86.79%

Ethnicity
- NA 39.76%
- Hispanic/Latino 53.42%
- Not Hispanic/Latino 6.14%

Total Deliveries Over Time

Pre-eclampsia, Eclampsia, Hypertensive Disorders, and Maternal Hemorrhaging as % of All Deliveries Over Time

Community Health Dashboard

	Diagnosis	# of Visits	# of Patients
Overall Health Conditions El Paso County (01/01/2021 - 10/31/2024)	Hypertension Influenza Pre-diabetes Type I diabetes Type II diabetes	21,688	13,293

Visit Type

- Emergency 34.32%
- Outpatient 60.19%
- Inpatient 5.58%

Age

- 80-89 5.95%
- 70-79 8.98%
- 60-69 11.88%
- 50-59 12.78%
- 40-49 14.60%
- 30-39 20.78%
- 20-29 26.06%

Gender

- Unknown 0.51%
- Male 45.52%
- Female 54.46%

Race

- American Indian or Alaska Native 2.25%
- Unknown 17.81%
- White 67.90%

Ethnicity

- Not Hispanic / Latino 1.98%
- Hispanic / Latino 21.16%
- NA 77.54%
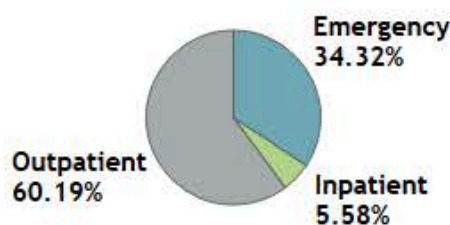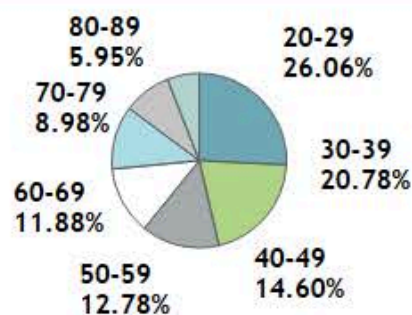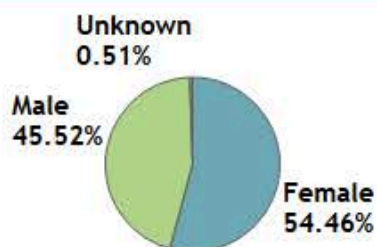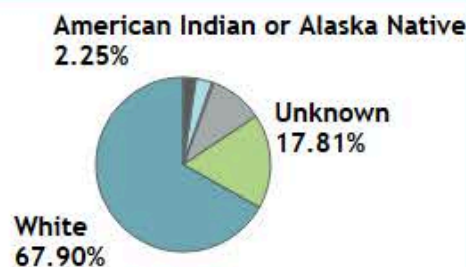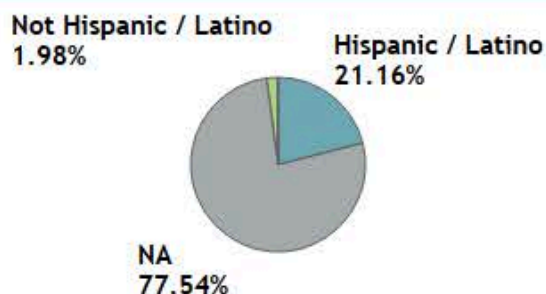
Patient Count by ZIP

Prevalence
0.015 — 2.362

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Visits over Time

Encounter Date

- Patient Count
- Visit Count

Distinct count of Visit Id

(X-axis: January 2021 through October 2024)
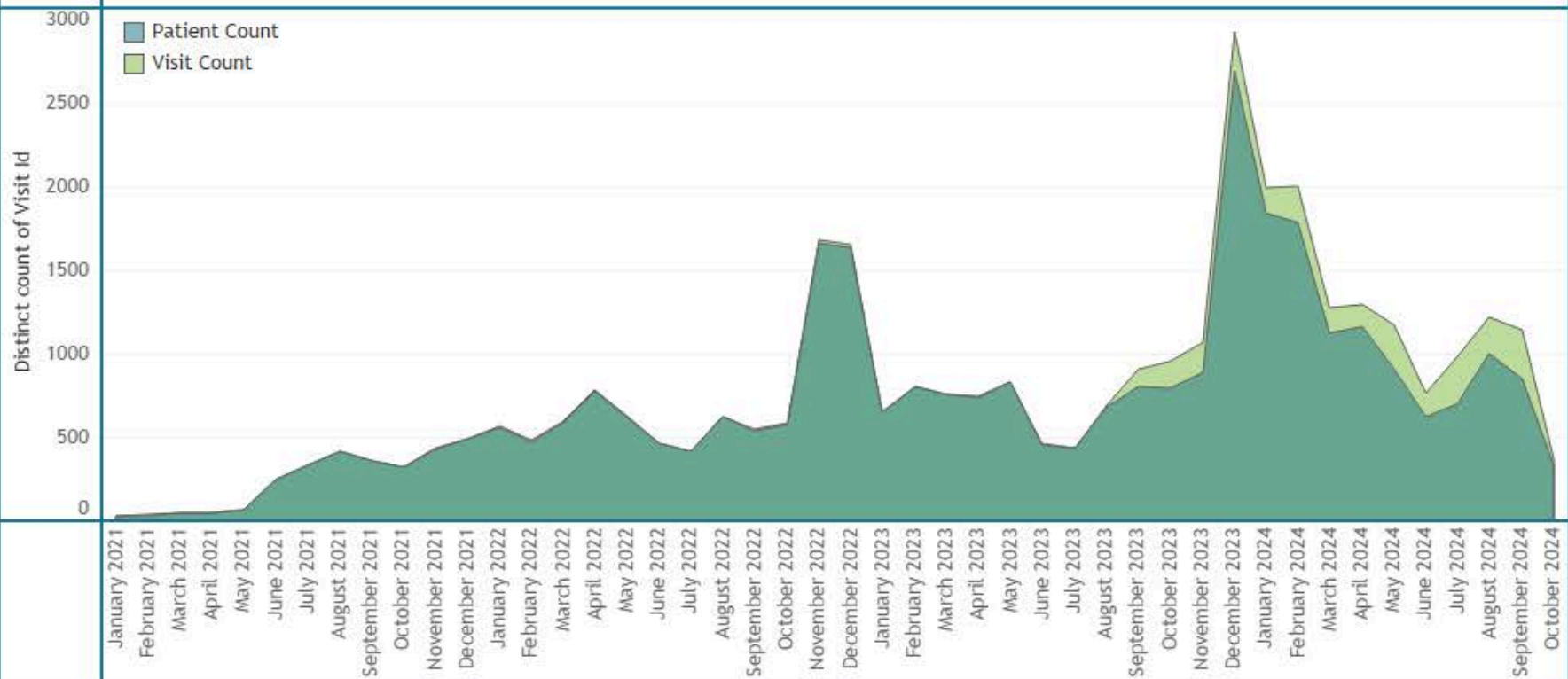
Disease Prediction Dashboard
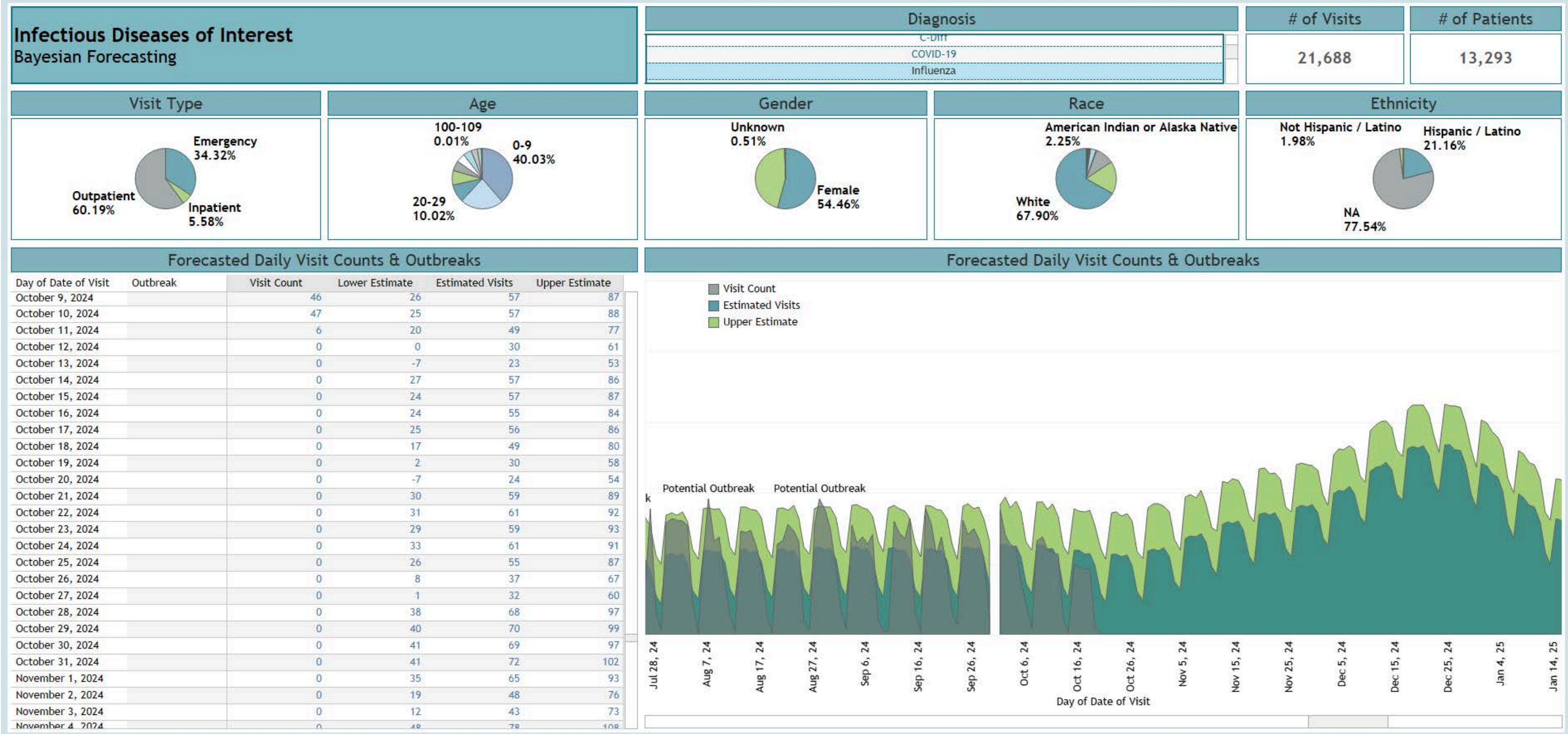
Emergency Response Support

During COVID19, supported **transfers to the Alternative Care Site at the El Paso Convention Center during COVID19**, significantly reducing the time required for transfer appropriately.

During COVID19, supported **transfers to William Beaumont Army Medical Center** by identifying eligible patients at community hospitals.

During withdrawal from Afghanistan, supported **continuity of care for Afghan refugees at Fort Bliss** by facilizing access to community hospital records.

Non Medical Drivers of Health

Climate · Housing · Workforce · Food · Justice · Education
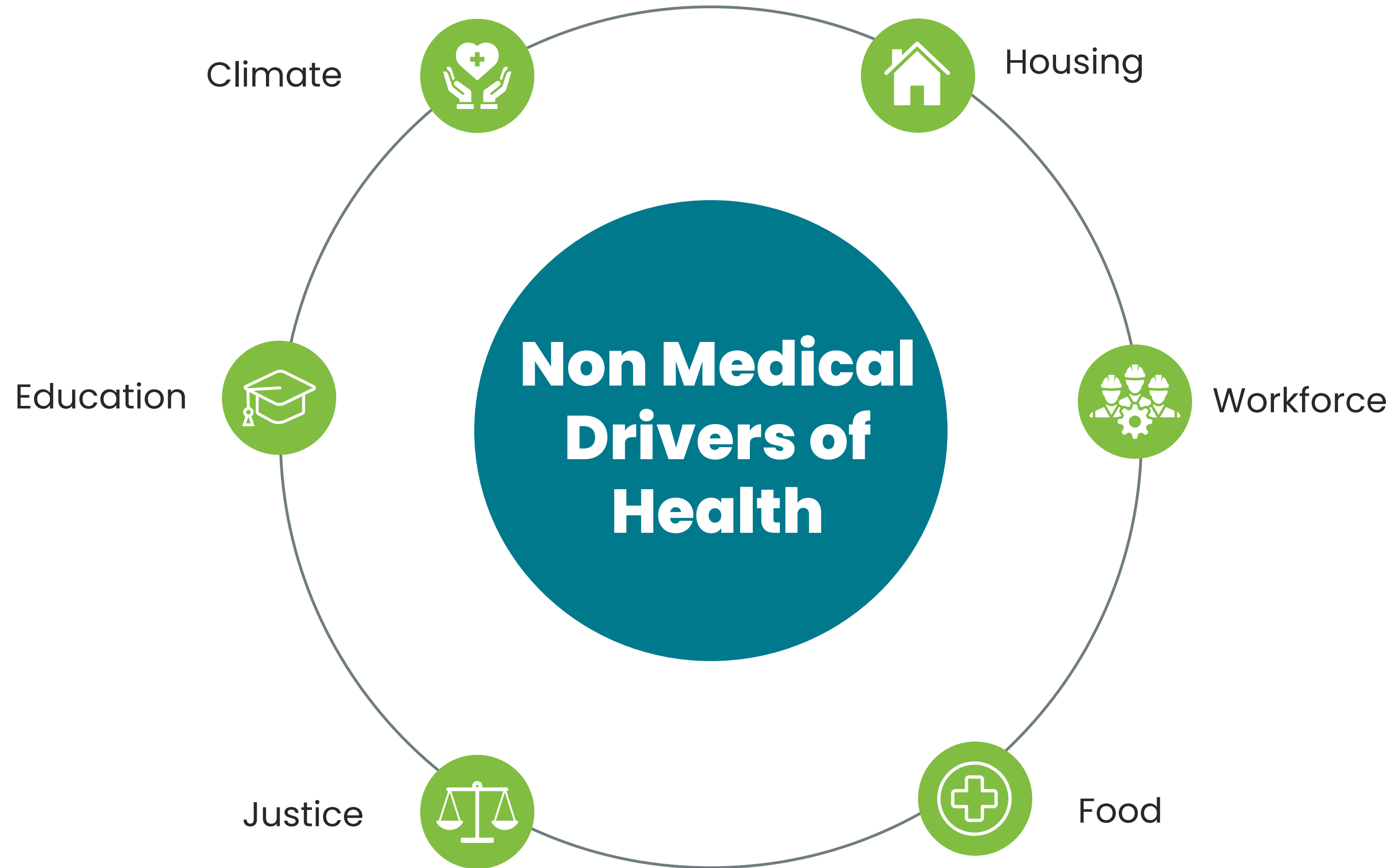
Social Needs Screenings: Collect screening data to identify social needs.

Coordination / Referrals: Support coordination and referrals across sectors (eg, health provider referrals to social services).

High Utilizers: Identify individuals that leverage a higher number of services across sectors.

Community Analysis: Analyze community-level trends and needs to inform policy and program development.

Holistic Care: Support sharing information on health care and social services within and across sectors at the individual level.

Non Medical Drivers of Health

Analyzing Environmental Factors & Health

Environmental Factors
El Paso County (01/01/2021 - 10/31/2024)

Diagnosis
Bronchiectasis Visits
COPD Visits
Myocardial Infarction Visits
Stroke Visits

Environmental Pollutant
CO
NO2
O3
Overall AQI

# of Visits	# of Patients
12,412	9,455

Visit Type
Outpatient 16.18%
Emergency 2.57%
Inpatient 81.76%

Age
100-109 0.21%
30-39 2.86%
50-59 13.62%
60-69 23.65%
70-79 26.68%

Gender
Unknown 0.61%
Female 43.61%
Male 56.30%

Race
American Indian or Alaska Native 0.31%
White 87.86%

Ethnicity
Not Hispanic / Latino 11.73%
Hispanic / Latino 41.03%
NA 50.77%

Results from Linear Regressions

		Outcome				
		Angina Pectoris Visits	Myocardial Infarction Visits	Stroke Visits	Asthma Visits	COPD Visits
AQI	Test statistic	-0.611	0.059	-0.047	-0.082	-0.040
	Error	0.115	0.030	0.035	0.150	0.062
	p-value	0.000	0.053	0.183	0.586	0.518
NO2	Test statistic	0.136	0.071	0.085	0.371	0.130
	Error	0.078	0.021	0.024	0.102	0.043
	p-value	0.084	0.001	0.000	0.000	0.002
O3	Test statistic	0.214	-0.048	0.039	0.086	0.063
	Error	0.066	0.017	0.020	0.084	0.035
	p-value	0.001	0.005	0.048	0.308	0.077
PM2.5	Test statistic	0.270	-0.053	0.012	-0.093	-0.022
	Error	0.098	0.026	0.030	0.129	0.054
	p-value	0.006	0.042	0.678	0.469	0.675

Predictors (pollutants) are displayed in blue if statistically significant (p-value of <0.05). None of the included pollutants were predictive of bronchiectasis visits, so results were omitted.

Visits over Time

Legend
Pollutant Value
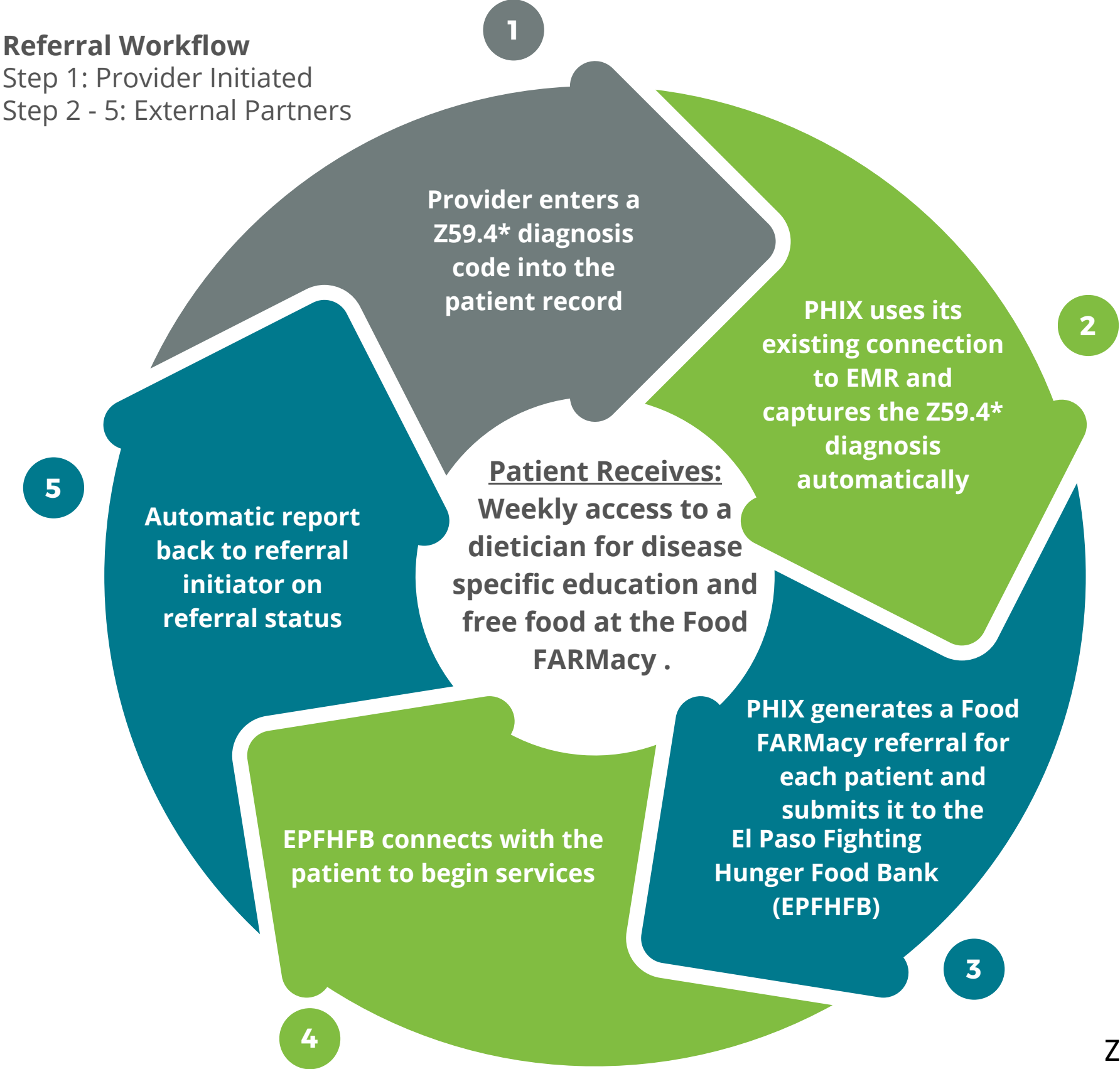Visit Count

Closed-Loop Referrals

Support secure, electronic process for sending referrals and receiving closed-loop communication when the patient is seen. This system was developed with generous funding from the Paso del Norte Health Foundation.

Example: Food FARMacy

The El Pasoans Fighting Hunger Food Bank has partnered with PHIX so providers can send closed-loop electronic referrals to their Food FARMacy. The Food FARMacy providers patients with access to health food and a team of nutrition experts to help them take the next steps toward a healthier life.

Closed-Loop Referrals: Sample Work-Flow

Referral Workflow
Step 1: Provider Initiated
Step 2 - 5: External Partners

1. Provider enters a Z59.4* diagnosis code into the patient record

2. PHIX uses its existing connection to EMR and captures the Z59.4* diagnosis automatically

3. PHIX generates a Food FARMacy referral for each patient and submits it to the El Paso Fighting Hunger Food Bank (EPFHFB)

4. EPFHFB connects with the patient to begin services

5. Automatic report back to referral initiator on referral status

Patient Receives:
Weekly access to a dietician for disease specific education and free food at the Food FARMacy .
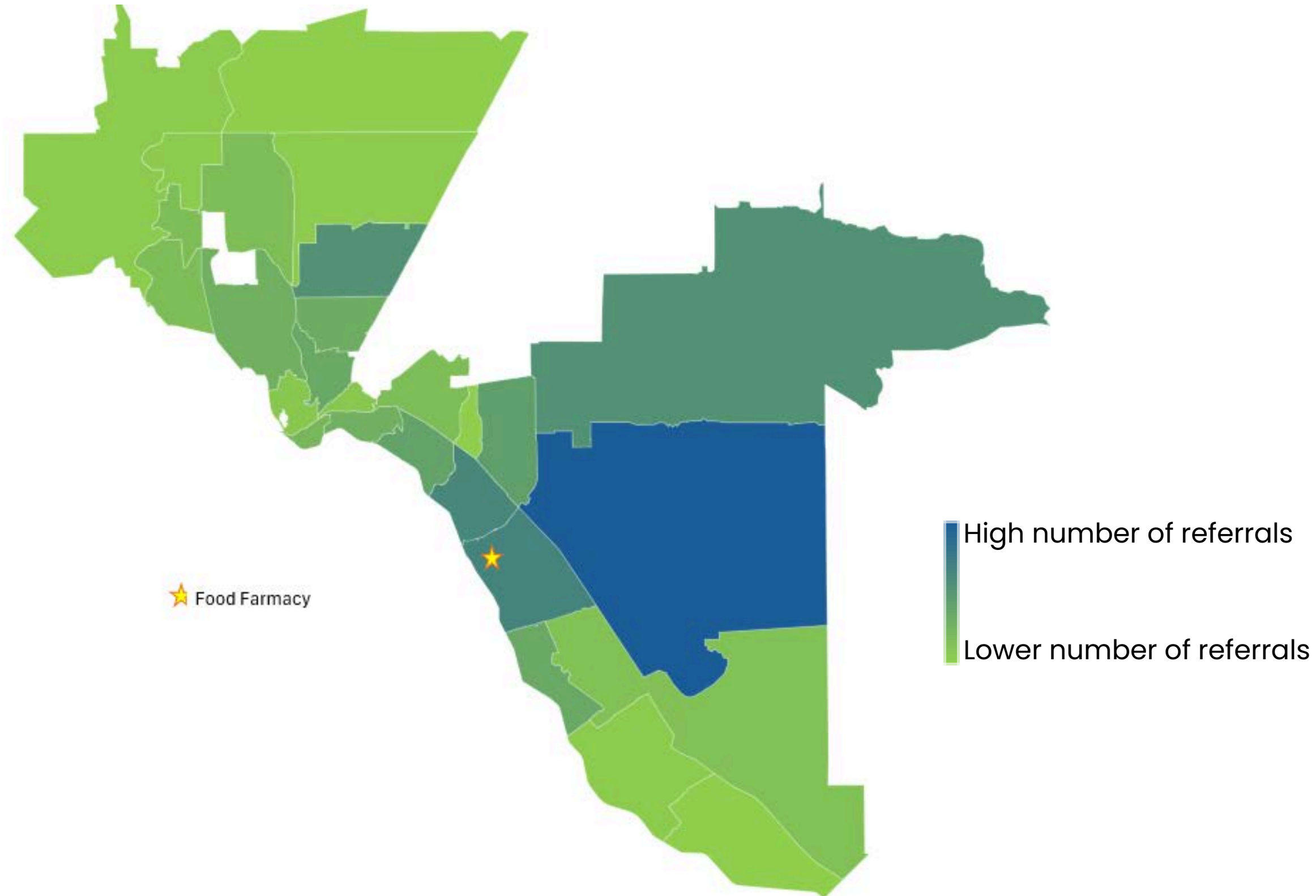
Z59.4 is an ICD-10 code for food insecurity.

Programmatic and Outcomes Analyses

**Provider Referrals to Food FARMacy by Zip Code,
El Paso County, October 2023 to September 2024**

⭐ Food Farmacy

High number of referrals

Lower number of referrals

THANK YOU

Emily Hartmann

915-242-0674

ehartmann@phixnetwork.org