El Paso's Health Information Exchange

October 11, 2023

What is a health information exchange?

- Health Information Exchange (HIEs) facilitate clinical data sharing between hospitals, clinics, public health, and other health providers.

- There are five regional HIEs in Texas, two of which are based in the border region.

- Together, regional HIEs in Texas serve 39 million patients.

Introduction to El Paso's borderland region

- Located on borders of New Mexico and Mexico

- El Paso / Ciudad Juarez geographically isolated

- Large Hispanic population (El Paso - 82.9%)

- Common to seek health care across borders

Introduction to PHIX

PHIX is a 501(c)3 non-profit founded by El Paso health leaders in 2010 with the mission to improve health through collaboration and data technology.

- Based in El Paso and serve hospitals, physicians, and patients in west Texas and southern New Mexico.

- Facilitate health and social services data sharing between hospitals, clinics, public health, laboratories, imaging centers, mental health organizations, physicians, and social service organizations (eg, food banks, housing agencies).

- Financially sustainable through our local community and partners. Primary revenue sources include membership fees, service fees, and grants.

Integrate and leverage data to solve local challenges

Real-time data shared includes:

- Diagnoses
- Allergies
- Medications
- Immunizations
- Lab results
- Radiology reports
- Pathology reports
- Clinical notes, including discharge summaries, progress notes, and consult notes

Healthcare is local

Local partnerships, trust, and governance are core to success.

PHIX's local data sharing 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 Health 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 Development
- Veterans Administration and Department of Defense
- El Pasoans Fighting Hunger Food FARMacy

Value

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

Value Story: Timely data saves lives

"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*."

Physician Assistant, Federally Qualified Health Center

Value

Access to critical health data through PHIX reduces costs and readmissions.

Value Analysis: 2023 Annals of Family Medicine

Patient discharged from the hospital

Patient Seen by Primary Care Provider (PCP) within 30 days post discharge

Did PCP access PHIX

Yes

No

ED admission increased from **99 to 238 days**

ED visits **decreased** by **53%**

Re-hospitalization **decreased** by **61%**

Control group
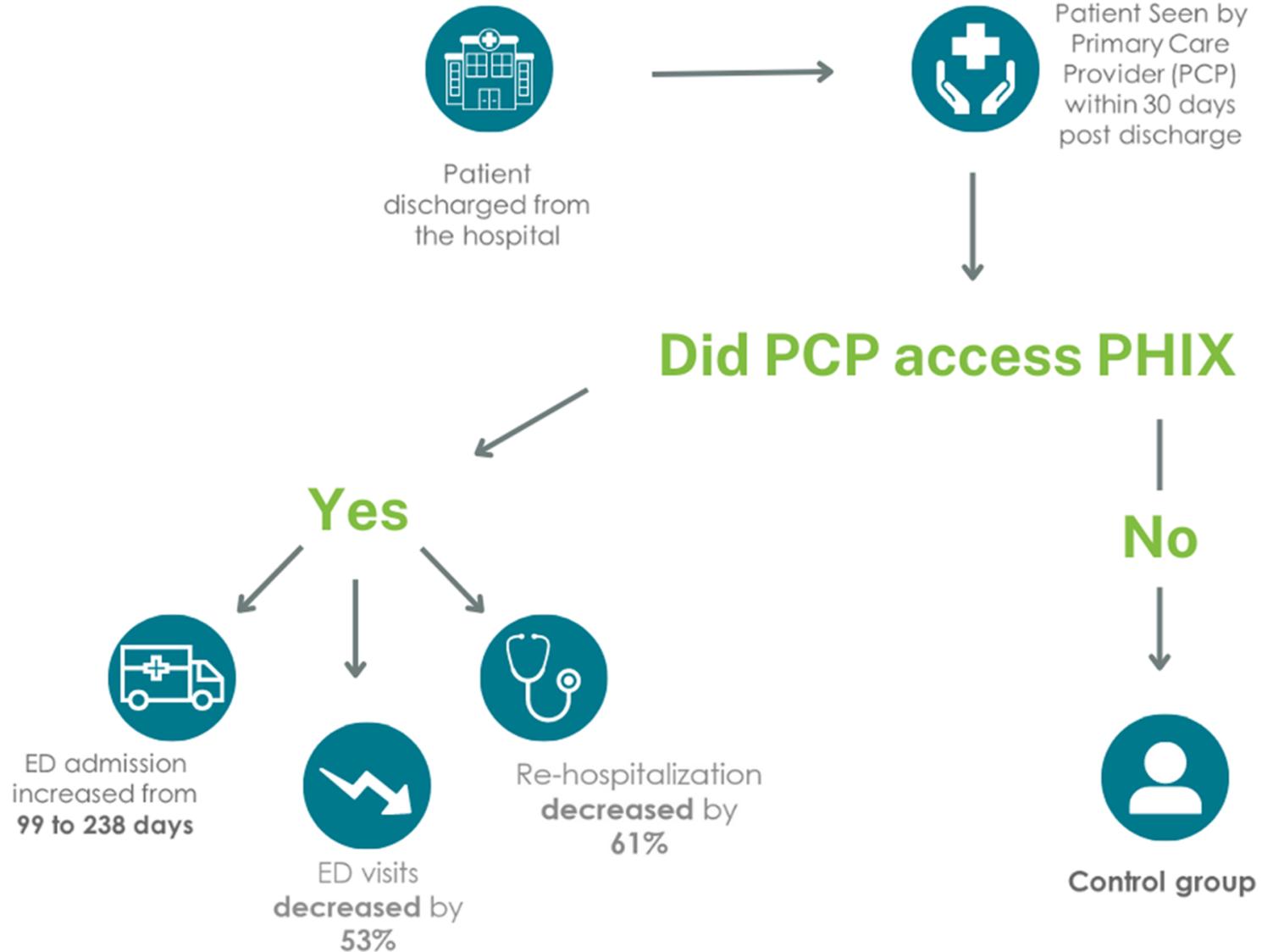
Public Health is founding partner of PHIX

Founding Board

City of El Paso Department of Public Health (DPH) was a founding partner of PHIX and has a dedicated seat on PHIX's Board of Directors.

Initial Use Cases

Since 2016, DPH has used PHIX to support Medicaid Waiver programs and continuity of care.

COVID19 Expansion

In 2020, PHIX's work with the DPH significantly expanded during the COVID19 pandemic.

Ongoing Partnership and Innovation

PHIX collaborates with DPH regularly on new initiatives. For example, currently collaborating on public health surveillance system.

Emergency Response Support

- Supported transfers to the Alternative Care Site at the El Paso Convention Center during COVID19, significantly reducing the time required for transfer approval.

- Supported transfers to William Beaumont Army Medical Center by identifying eligible patients at community hospitals.

- Supported continuity of care for Afghan refugees at Fort Bliss by facilitating access to community hospital records.

Supported Public Health during COVID19

March 2020	DPH Laboratory operated on paper and was the only lab that could do COVID19 testing locally.
April 2020	PHIX developed and implemented an electronic ordering and results system for COVID19 in less than 3 weeks. The electronic system sent positive results to Epidemiologists electronically to begin case investigations.
April 2020 to Present	▪ Infrastructure expanded as needs changed to serve **drive-thru testing sites** across the region (local and national labs). ▪ **Notification system** developed to send results to patients electronically. ▪ Set-up and host **case investigation** and **contact tracing** system. ▪ **Supported research** on COVID19 vaccine efficacy, including CDC VISION Network. ▪ Connected mass vaccinations sites in El Paso to **ImmTrac for electronic reporting**.

Community relationships and needs drive PHIX's services

Clinical Viewer

Secure Messaging

Notifications
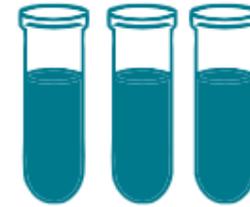
Lab Ordering and Results System

Vaccine Information Exchange

Closed-Loop Referrals

Trauma Image Sharing

Data Analysis

Trauma Image Sharing

1	2	3	4	5
Patient identified for transfer	Transferring facility sends image content via the PHIX trauma system	Distribution list at hospital receives email/text notification for images received	Hospital logs in securely to download files via the PHIX trauma system	Clinicians access trauma images to inform care

Closed-Loop Referrals

- Electronic referrals sent through PHIX to specialists, health education programs, and social service providers.
  - Referrals are received and managed electronically.
  - Alerts sent back to referring provider when patient is seen.
- El Pasoans Fighting Hunger Food FARMacy was first social service organization to receive referrals through PHIX.

Data Analysis to Support Public Health

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

- **Population Health:** What community level analyses would support program and policy development?

- **Learning Health System:** How can we identify success stories and learn from the treating clinicians?

- **Direct Clinical Care:** What additional data would benefit clinicians at point of care?

Prediabetes and Diabetes Type II By Zip Code, 2022

El Paso County

% of Census Population
- 0.1 - 3.1 %
- 3.1 - 6.1 %
- 6.1 - 9.2 %
- 9.2 - 12.2 %
- 12.2 - 15.2 %
- 15.2 - 18.2 %
- 18.2 - 21.2 %
- 21.2 - 24.2 %
- Uninhabited Land

0   10   20 km

*Population includes all those from the study population which includes those with Type II Diabetes and Prediabetes.

PASO DEL NORTE
HEALTH FOUNDATION
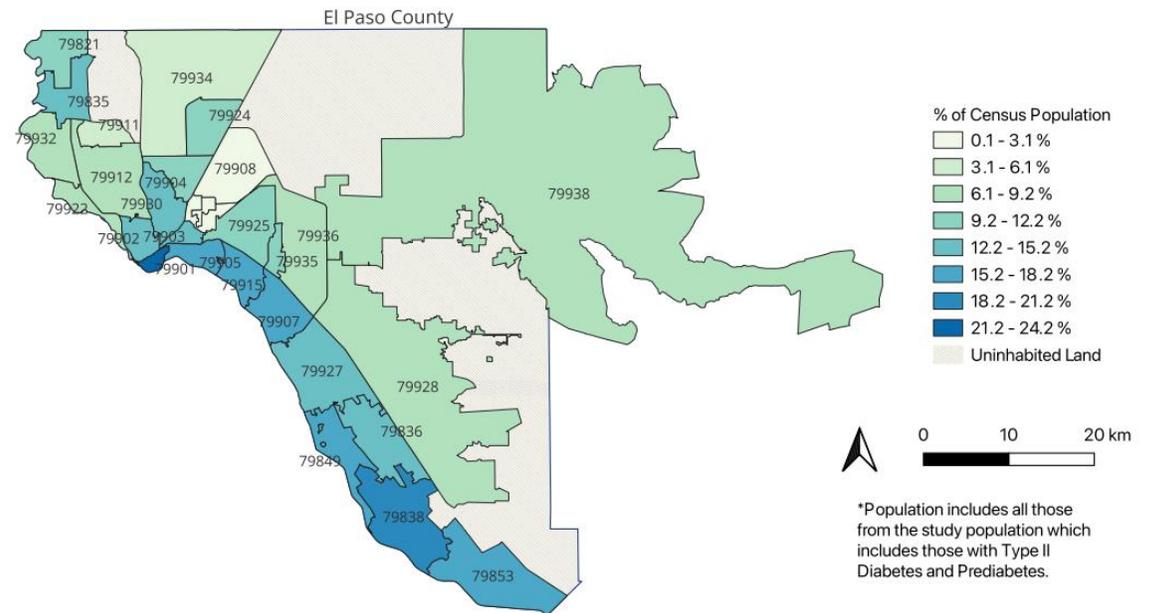
Local Public Health Surveillance System

Supported by El Paso County ARPA Funding for Non-Profits

Real-Time Data

- Hospitals
- Emergency Departments
- Urgent Cares
- Pharmacies
- Public Health
- EMS

- Establish baseline trends
- Analyze data to identify spikes and outliers
- Utilize data to identify, track, and manage key public health trends

Data-Driven Decision Making

- Alerts to Public Health
- Regular Updates to Community Leaders
- Information on Key Trends to Providers

Vision: PHIX Social Factors of Health Committee

Health Care

Schools

Social Services

Cross-Sector Community Data Sharing and Analysis

Housing

Justice

Workforce

Future initiatives to support public health

CROSS-BORDER COLLABORATION

ELECTRONIC HEALTH RECORD FOR EMERGENCIES

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