

Data Modernization at DCHHS

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BCHC DATA SUMMIT

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DCHHS
Safe families, healthy lives
Dallas County Health and Human Services



Dallas County Health & Human Services (DCHHS)

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Serves as the public health agency for the City of Dallas and Dallas County, serving 31 municipalities with a population of over 2.6 million people (larger than 15 states by population).

Mission: To optimize and protect the health and well-being of all Dallas County residents and support achievement of better health outcomes for all.

What We Do:

- Emergency Preparedness and Pandemic Response
- Epidemiology
- Infectious Disease Outbreak Investigation and Control
- HIV, STI & TB Treatment and Prevention
- Immunizations
- Environmental Health
- Food Safety and Food Inspections
- Public Health Laboratory
- Chronic Disease Prevention
- Community Outreach and Education
- Social Services (Housing Vouchers, Weatherization and Energy Assistance)

Budget: \$337 million

Staffing: 695 FTE's

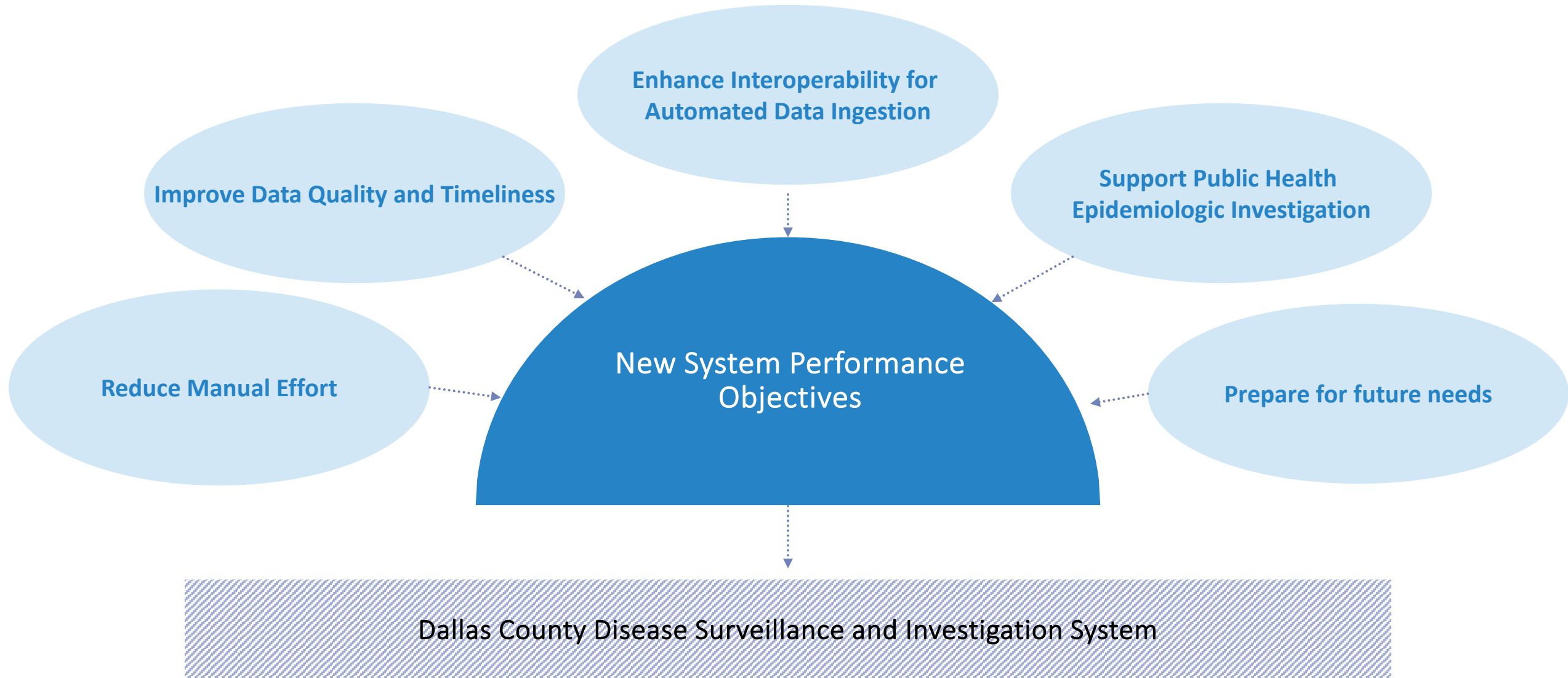
The Public Health Problem

COVID-19 strained existing public health systems

- Volume and variety of data generated and processed
- Management of contact tracing
- Reporting demands
- Increased manual burden on disease investigators
- Inability to get timely and accurate data at a granular level to assess disparities, target interventions to priority communities and assess impact of local interventions.

COVID-19 exposed gaps in the public health disease surveillance and investigation infrastructure.

In response, DCHHS began the process of change to modernize the systems, processes, and workflows to handle the ever-changing public health space.



Solution Overview

Data Ingestion

- MuleSoft and Rhapsody
- Data Sources:
 - Lab (ELR)
 - Hospital (eICR)
 - Immunization (ImmTrac)
 - Mortality
 - Automation
 - Future: Social Services, EMS Response, Others

Data Processing

- Informatica MDM
- Matching and Merging
- Address Doctor and PCCI
- Data transformations and updates
- Deduplication of records

Disease Surveillance

- Salesforce
- Disease Monitoring
- Disease Investigation
- Contact Tracing
- Outbound integration of data to NEDSS and other state and federal systems

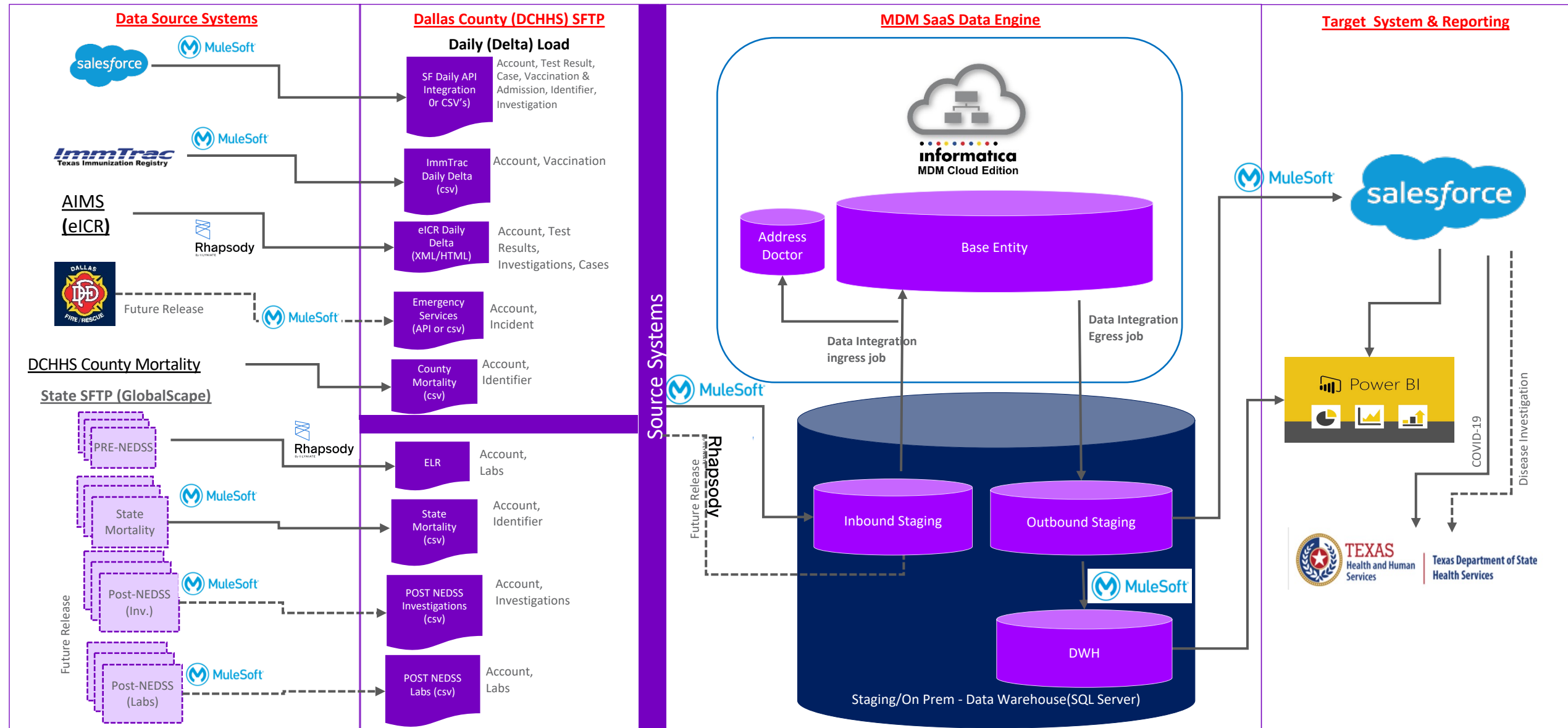
Data Analysis

- Salesforce
- Standard Reports
- Customized Queries and Reports
- Power BI Data Visualizations
- Raw data access

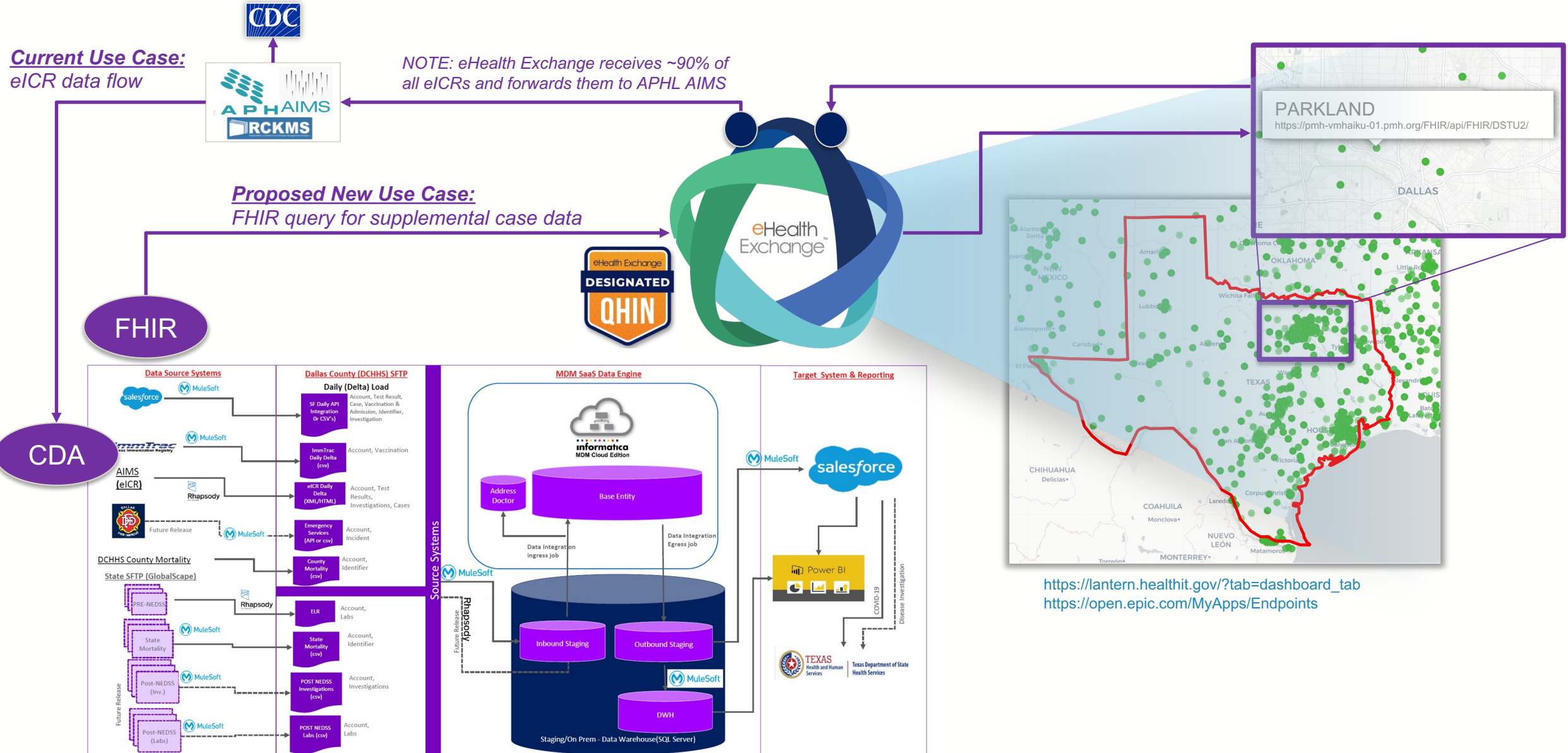
Communication

- Salesforce, Twillio, and Cisco
- Patient Outreach and Monitoring
 - Text Messaging
 - Email
 - Phone

End to End Delta Data Flow



Dallas County: FHIR Query & Response (aligned w/ Helios and TEFCA)



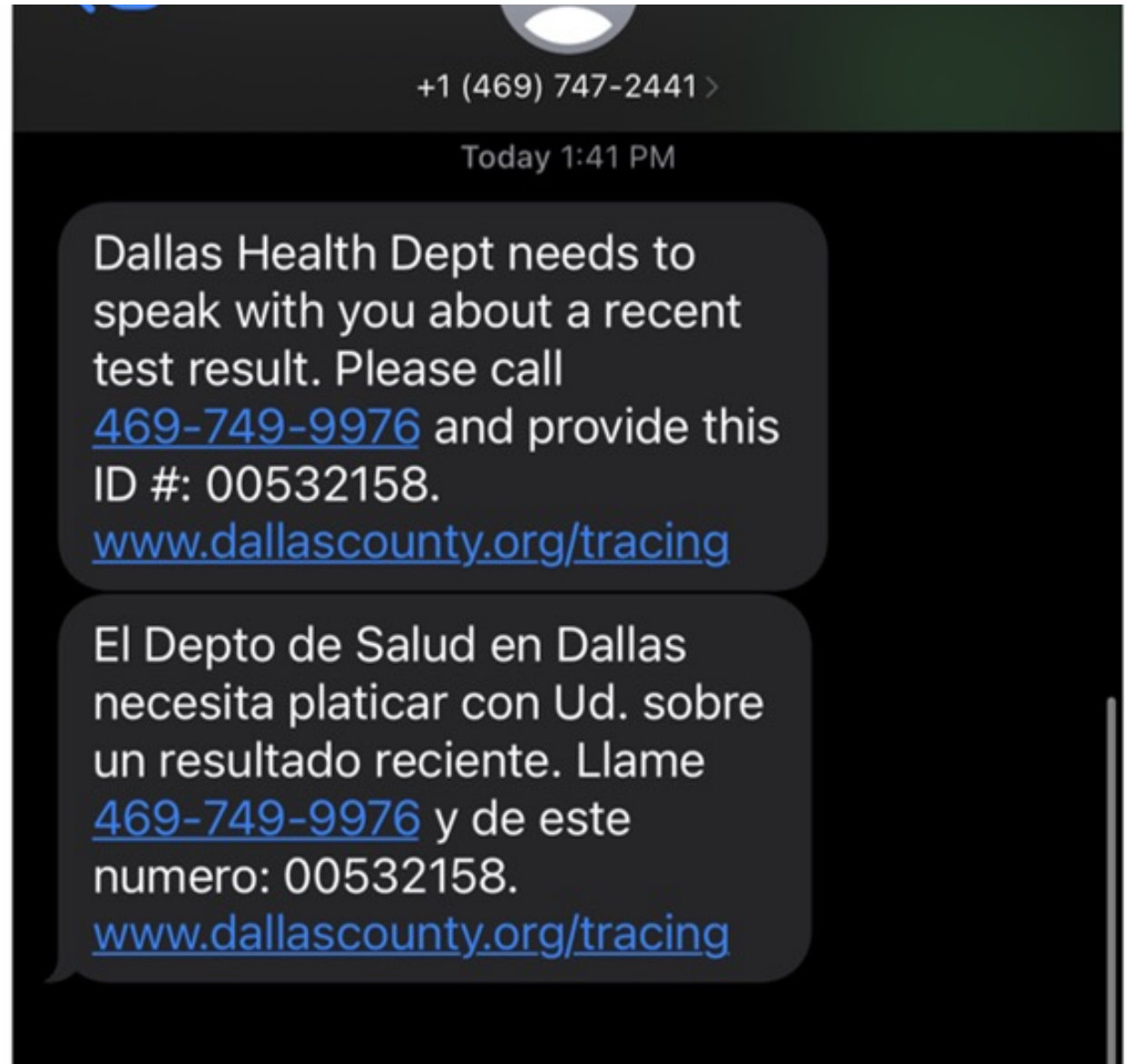
DCHHS Platform Demo

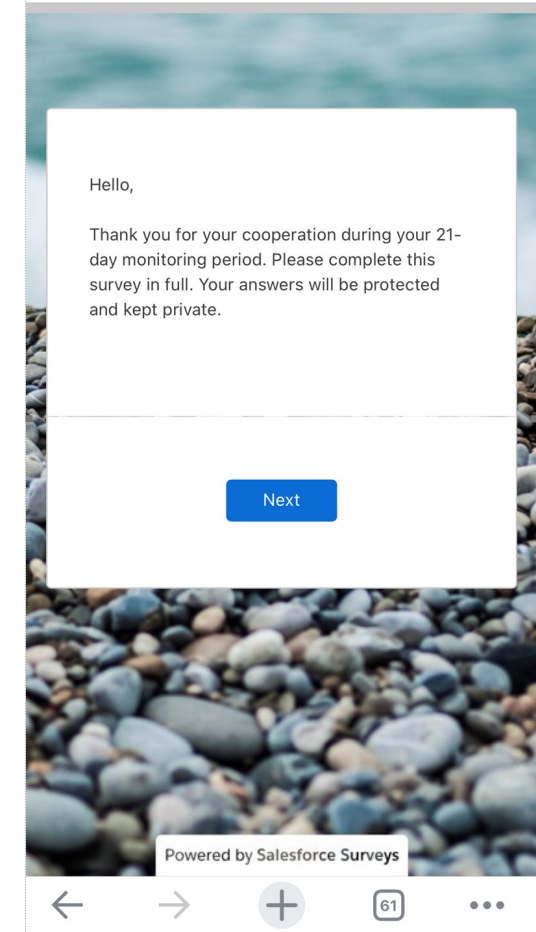
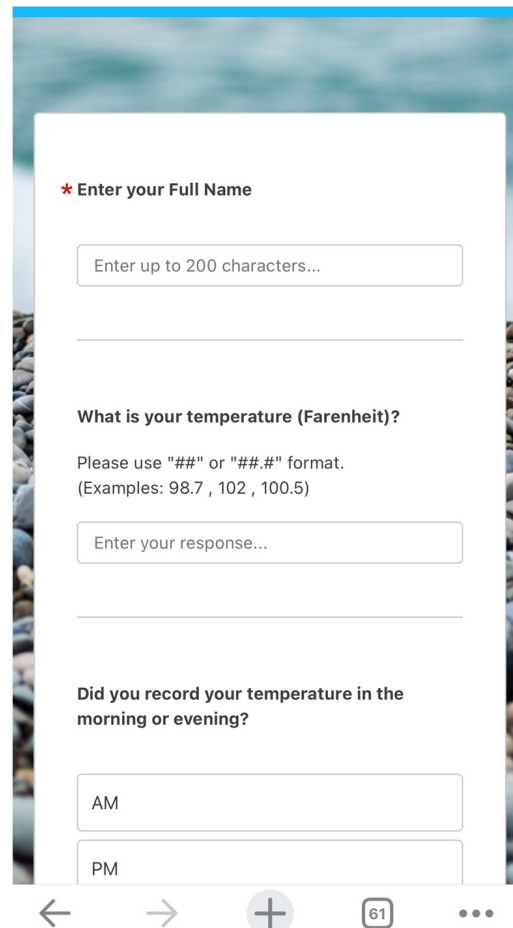
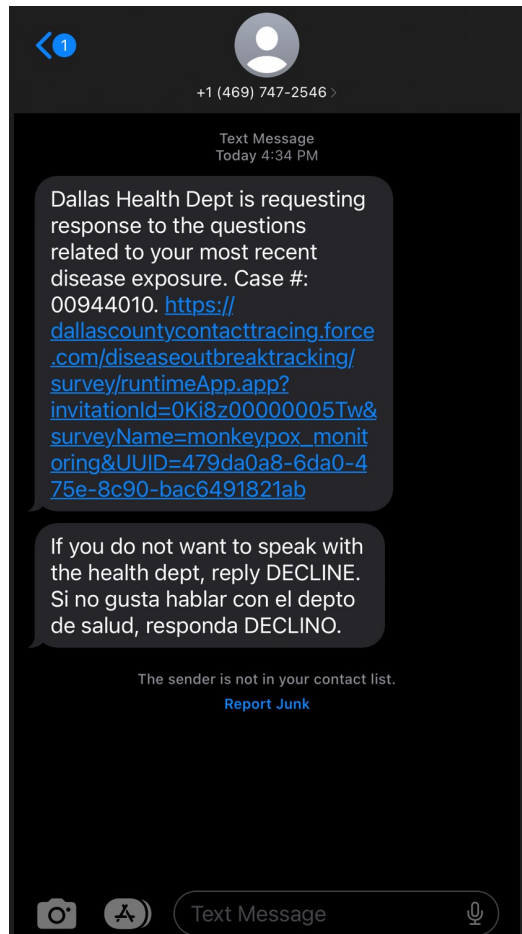
The screenshot displays the DCHHS Platform interface. At the top, there is a search bar and navigation tabs for 'Contact Tracing', 'Search for/Create Person', and several active user sessions. The main content area is divided into three panels:

- Patient Details:** A sidebar on the left containing personal information for Will Oldham Jr., including name, birthdate (7/2/1996), age (26), gender (Male), race (White), ethnicity (Non-Hispanic or Latino), language (English), country of birth (United States), emergency contact (Rachel Corbin), and address (2705 Tanner Street).
- Case Pertussis:** A central panel showing case details. The case patient is Will Oldham Jr. (Case Number: 00973080). Patient information includes Male, born 07-02-1996 (26 yrs). Investigation status is Closed. A table below lists one investigation on 6/13/2023 at 4:35 PM, confirmed as Pertussis.
- Condition History:** A section showing a timeline of the condition. The case number is 00973080, patient is Will Oldham Jr., and the condition is Pertussis. The reporting source is listed as Test Result.

On the right side, there is an activity feed with various categories: Investigations (1), Hospital Admissions (1), Vaccinations (0), Contact Encounters (0), Interactions Provided by..., Test Results (1), Outbreaks (0), and Merged Cases (0). Below this is a 'Most Recent Activity' section with a search bar and a feed of updates, including one from Rachel Corbin stating 'Case updated' 18h ago.

Automatic Text Messaging





Disease Monitoring

Salesforce Reports and Dashboards

Dashboard

Call Analysis Dashboard

View reports on inbound and outbound calls, including information about traffic and average queue and duration times.

⚠ Last refreshed 117 days ago. Refresh this dashboard to see the latest data.

As of Mar 17, 2022, 6:16 PM Viewing as Automated Integration User

Refresh

Edit

Subscribe

▼

Date

Call Type

Case Owner

All

All

All

Total Inbound Calls

Created Date	Record Count
3/13/2021	28
3/14/2021	51
3/15/2021	72
3/16/2021	76
3/17/2021	35
3/18/2021	49
3/19/2021	62
3/20/2021	13
3/21/2021	44
3/22/2021	59
3/23/2021	71
3/24/2021	74
3/25/2021	48
3/26/2021	51
3/27/2021	19
3/28/2021	8
3/29/2021	108
3/30/2021	63
3/31/2021	59
4/1/2021	41
4/2/2021	47
4/3/2021	12
4/4/2021	1
4/5/2021	63
4/6/2021	66
4/7/2021	61
4/8/2021	59
4/9/2021	53
4/10/2021	15
4/11/2021	45
4/12/2021	63
4/13/2021	61
4/14/2021	47
4/15/2021	32
4/16/2021	33
4/17/2021	3
4/18/2021	47
4/19/2021	52
4/20/2021	66
4/21/2021	44
4/22/2021	42
4/23/2021	38
4/24/2021	13
4/25/2021	40
4/26/2021	53
4/27/2021	66
4/28/2021	48
4/29/2021	66
4/30/2021	40
5/1/2021	13

[View Report \(Inbound Calls\)](#)

Total Outbound Calls

Created Date	Record Count
11/17/2020	1
3/13/2021	114
3/14/2021	225
3/15/2021	338
3/16/2021	269
3/17/2021	189
3/18/2021	278
3/19/2021	159
3/20/2021	68
3/21/2021	147
3/22/2021	207
3/23/2021	244
3/24/2021	182
3/25/2021	222
3/26/2021	202
3/27/2021	73
3/28/2021	80
3/29/2021	289
3/30/2021	307
3/31/2021	250
4/1/2021	173
4/2/2021	183
4/3/2021	47
4/4/2021	5
4/5/2021	197
4/6/2021	188
4/7/2021	232
4/8/2021	206
4/9/2021	158
4/10/2021	71
4/11/2021	105
4/12/2021	241
4/13/2021	205
4/14/2021	201
4/15/2021	164
4/16/2021	131
4/17/2021	23
4/18/2021	91
4/19/2021	133
4/20/2021	221
4/21/2021	195
4/22/2021	191
4/23/2021	104
4/24/2021	52
4/25/2021	122
4/26/2021	193
4/27/2021	270
4/28/2021	204
4/29/2021	194
4/30/2021	126

[View Report \(Outbound Calls\)](#)

Peak Hours

Hour	Record Count
07:00	0
08:00	1500
09:00	3800
10:00	4800
11:00	5200
12:00	4800
13:00	4500
14:00	4600
15:00	5000
16:00	3500
17:00	1500
18:00	200
19:00	100
20:00	100
21:00	100

Peak Number of Total Calls

Created Date	Record Count
11/17/2020	0
3/13/2021	150
3/14/2021	280
3/15/2021	410
3/16/2021	350
3/17/2021	220
3/18/2021	330
3/19/2021	220
3/20/2021	80
3/21/2021	180
3/22/2021	280
3/23/2021	320
3/24/2021	260
3/25/2021	270
3/26/2021	260
3/27/2021	90
3/28/2021	90
3/29/2021	390
3/30/2021	370
3/31/2021	310
4/1/2021	210
4/2/2021	230
4/3/2021	50
4/4/2021	0
4/5/2021	260
4/6/2021	270
4/7/2021	290
4/8/2021	210
4/9/2021	200
4/10/2021	80
4/11/2021	140
4/12/2021	310
4/13/2021	270
4/14/2021	260
4/15/2021	190
4/16/2021	160
4/17/2021	20
4/18/2021	130
4/19/2021	180
4/20/2021	290
4/21/2021	240
4/22/2021	230
4/23/2021	130
4/24/2021	150
4/25/2021	250
4/26/2021	330
4/27/2021	260
4/28/2021	260
4/29/2021	160
4/30/2021	40
5/1/2021	180
5/2/2021	170
5/3/2021	230

[Phone](#)

[History](#)



COVID-19 Dashboard

Last Updated
6/2/2023

Home

Age

Gender

Race/Ethnicity

Municipalities

Deaths



Reset to default



Learn about this dashboard

TOTAL CASES

Dallas County Residents Only

Daily Average Count
7 Days Trailing

23

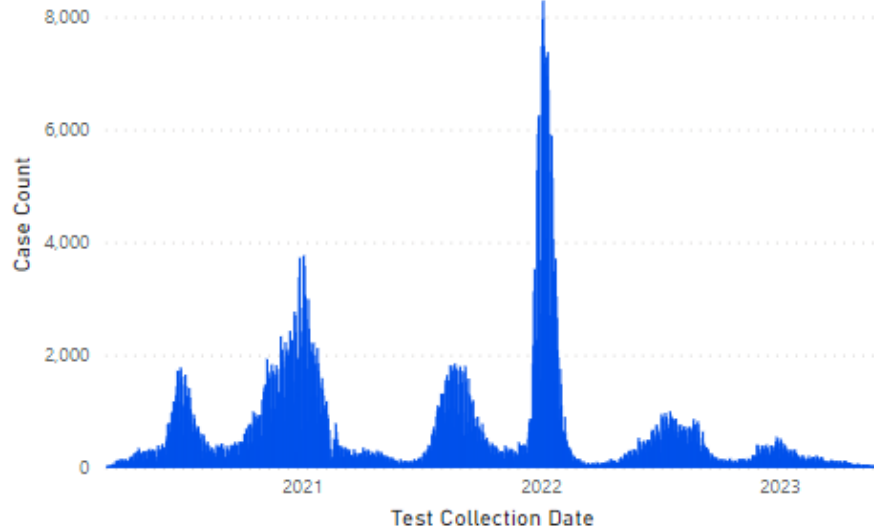


Cumulative

723,683

Prior Week Daily Average: 36

Daily Countywide Cases



CONFIRMED CASES

Dallas County Residents Only

Cumulative

576,440

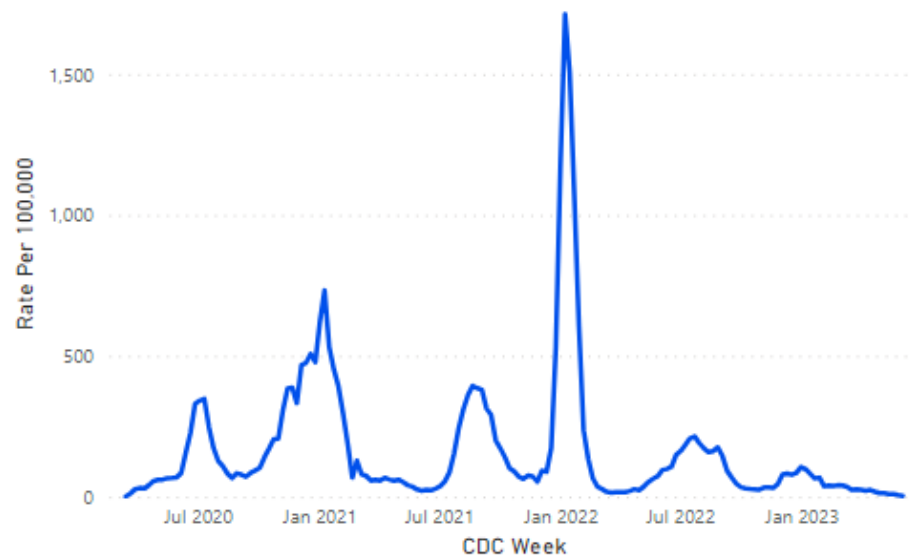
PROBABLE CASES

Dallas County Residents Only

Cumulative

147,243

Weekly Countywide Rates



DEATHS

Dallas County Residents Only

Latest Week Count

1



Prior Week Count: 1

Cumulative

7,096

*7 Days Trailing refers to the last whole week of data received from the CDC. We take those 7 days and to get the daily average. 'Prior Week Daily Average' refers to the daily average of 7 days before that.



FILTERS

*Ctrl + Click to select multiple items in filter drop down

Investigation Start Date

1/9/1961 5/3/2024



Condition

All

City

All

Hospital Name

All

Age Range

All

Gender

All

Race

All

Case Status

All

Total Number of Cases
All Conditions

55,321

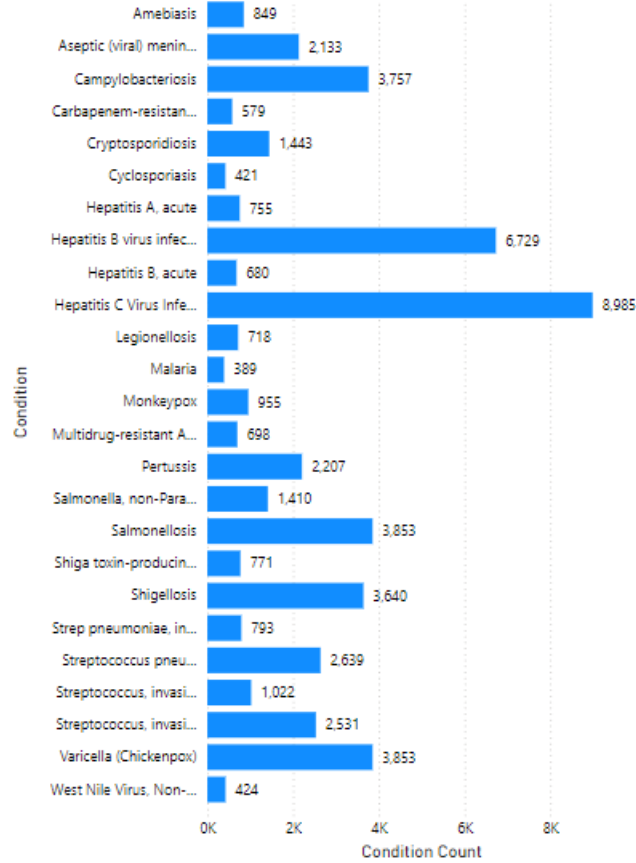
Total Number of Cases
Top 25 Conditions

52,234

New Cases
7 Days Trailing

60

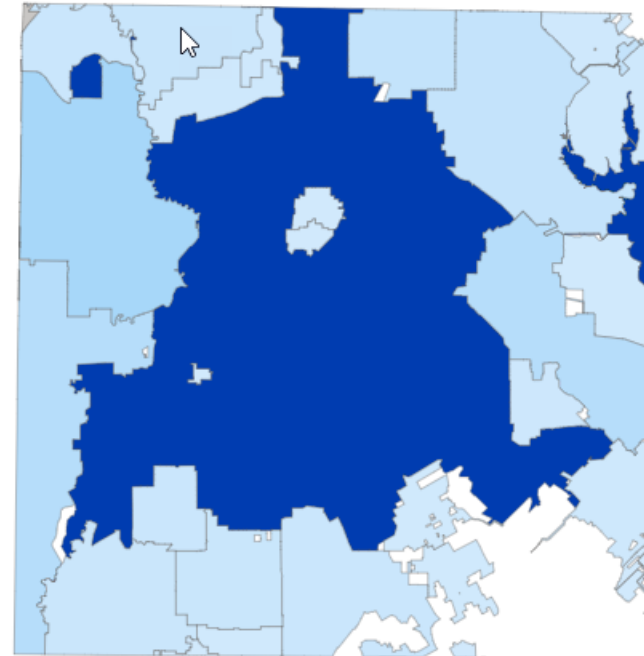
Top 25 Conditions



By City

By Zip Code

Top 25 Conditions by City



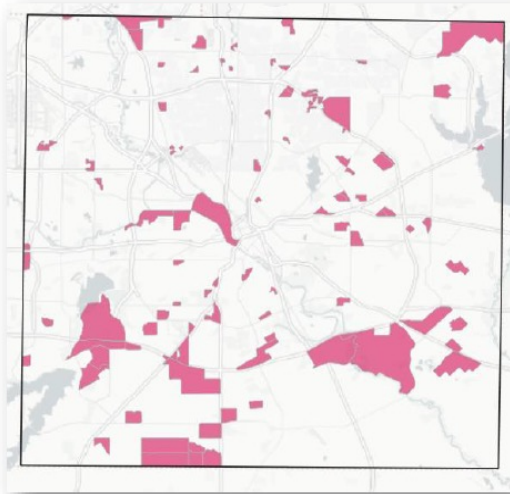
*Note the Top 25 Conditions list will stay the same unless filters for Collection Date or City are applied.

** '7 Days Trailing' refers to the last whole week of data received per the date listed under 'Last Data Refresh'

DCHHS Local Use of Census Block Level Data

Outreach Census Block Groups: Top 25 Vulnerable

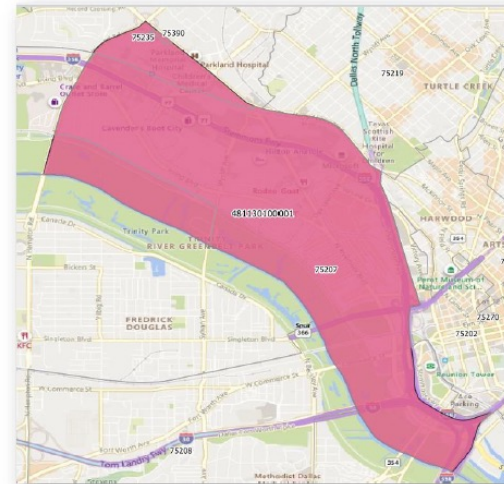
Ranking	Block Group
1	48113010001
2	481130170012
3	481130166221
4	481130137191
5	481130060021
6	481130109023
7	481130126042
8	481130164084
9	481130192061
10	481130166052
11	481130166232
12	481130154016
13	481130193024
14	481130192045
15	481130078114
16	481130170032
17	481130190352
18	481130170043
19	481130122045
20	481130167052
21	481130178044
22	481130166231
23	481130165101
24	481130126041
25	481130108042



Dallas County
 Top 25 Block Groups for Outreach



Outreach Census Block Groups: 48113010001



Total Block Group Population 18+: 7,568
Percentage of Population Not Vaccinated: 49%
Count of Non-Vaccinated: 3,707
Zip codes: 75207, 75247, 75235, 75390

Cross Streets/Major Intersections:
 - Inwood and Harry Hines
 - Harry Hines and Houston St.
 - US 35 and US 30

Points of Interest:
 - Parkland/UTSW Hospitals
 - Stemmons Park
 - Informart
 - Reverchon Park

Apartment Complexes:
 - Avant on Market Center (301 units)
 - Apex Design District (309 units)
 - Camden Design District Apartments (355 units)
 - AMLI Design District (314 units)

Zip Code

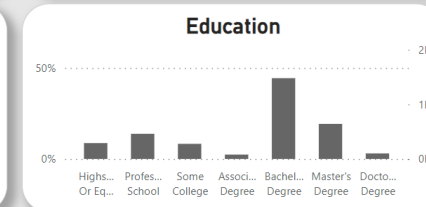
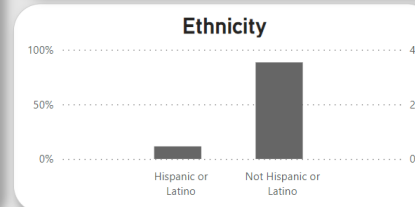
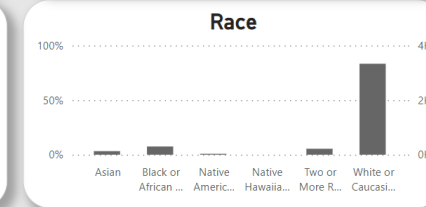
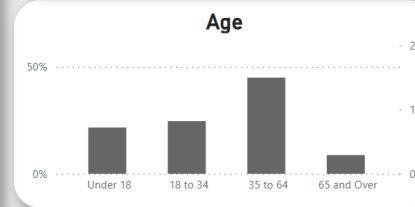
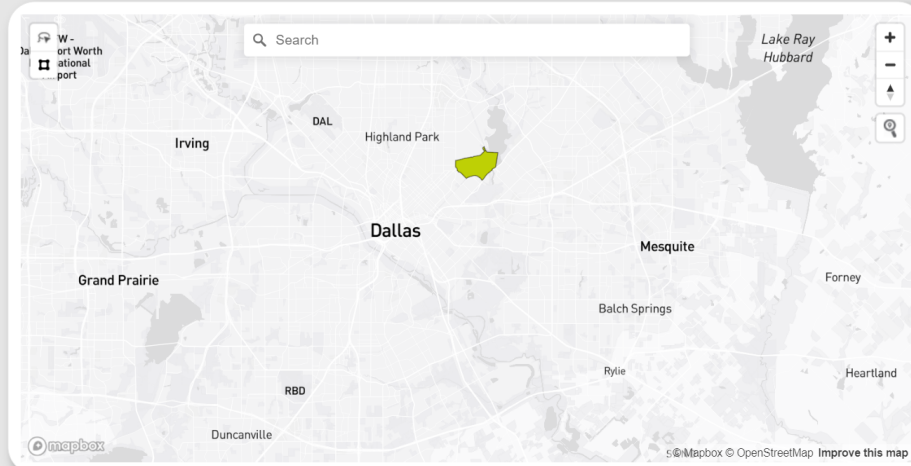
Census Tract

Block Group

Select Geography

48113000100

4081
Population



Community Vulnerability

Very Low

Empowered People		Equitable Communities		Good Health		Household Essentials	
Very Low		Very Low		Very Low		Very Low	
Measure	Vulnerability Level	Measure	Vulnerability Level	Measure	Vulnerability Level	Measure	Vulnerability Level
Walk Score	Moderate	Neighborhood Stability	High	Disease Burden	Very Low	Food Insecurity	Very Low
Connectivity	Very Low	Neighborhood Safety	Moderate	Life Expectancy	Very Low	Health Insurance Coverage	Very Low
Education And Literacy	Very Low	Affordable Housing	Very Low	Disease Burden		Household Structure	Very Low
Households Without Vehicles	Very Low	Clean Air	Very Low	Alcohol Abuse	Very High	Median Household Income	Very Low
Education And Literacy		Green Space Access	Very Low	Cancer	High	Paycheck Predictability	Very Low
Literacy	Very Low	Unemployment	Very Low	Chronic Disease Burden	Very Low		
Education Level	Very Low			Mental Health	Very Low		
				Chronic Disease Burden			
				Asthma	Very Low		
				Chronic Obstructive Pulmonary Disease	Very Low		
				Coronary Heart Disease	Very Low		
				Diabetes	Very Low		
				Kidney Disease	Very Low		

Recent Recognition

HIMSS Davies Award of Excellence
Dallas County Public Health Disease Surveillance and Investigation System
by Dallas County Health and Human Services



Davies Award of Excellence

IDC Smart Cities Awards
2024 North America

Dallas County, TX

has been selected as a finalist for

Public Health and Social Services



DCHHS and Accenture Team Acknowledgements

DCHHS

- Dr. Saad Zaheer
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- Vanessa Gerstner
- Dr. Dongyoung Shin
- Diana Chavelas
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Accenture

- Rachel Corbin
- Raza Syed
- 24 Additional Analysts, Developers and Testers

Thank You!



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