

# Exploring Text and Web – Based Tools to Address Public Health Resource Challenges

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# Michigan coronavirus (COVID-19) cases rise to 110; first death reported

First COVID-19 death reported in Wayne County

## Michigan coronavirus, Detroit

NEWS

Ken Haddad, Digital Content Manager

Published: February 28, 2020 at 9:43 AM

Tags: Coronavirus, Gretchen Whitmer, Michigan, Health, Virus, News, Emergency

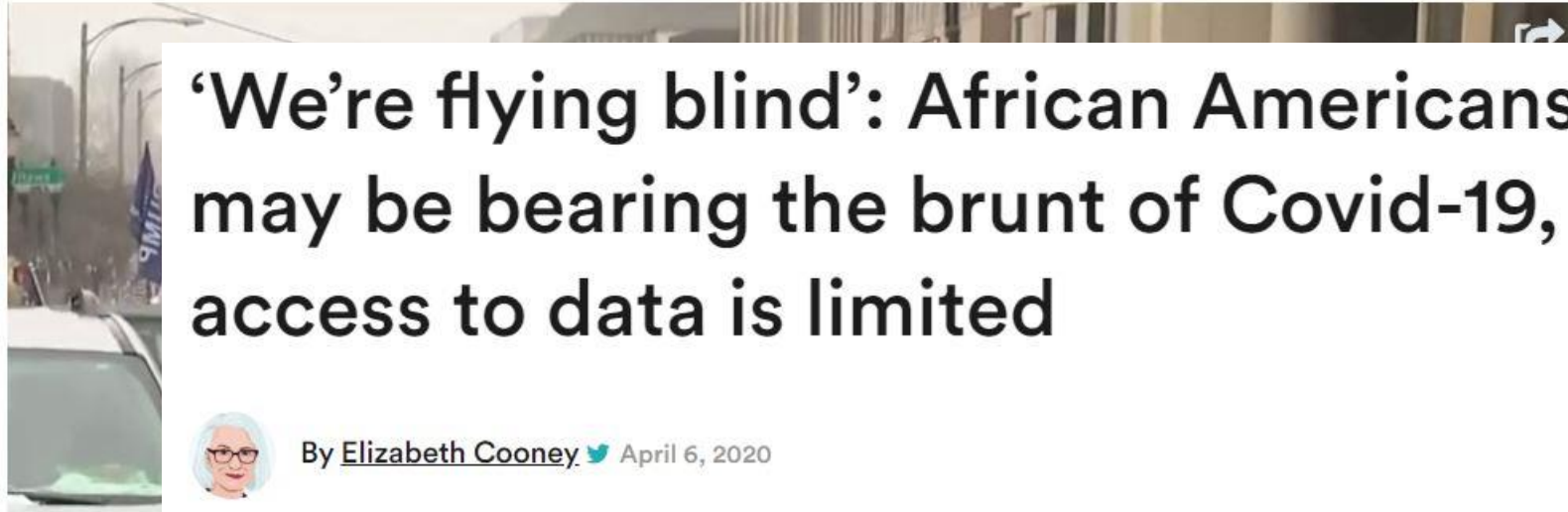
## Michigan issues stay-at-home order amid coronavirus: Here's what it means

More than 1,200 COVID-19 cases confirmed

## Michigan activates state emergency operations center to prepare for coronavirus

State prepares for potential cases

# 'Operation Gridlock' -- Michigan stay-at-home order protested in Lansing



'We're flying blind': African Americans may be bearing the brunt of Covid-19, but access to data is limited



By [Elizabeth Cooney](#)  April 6, 2020

[Reprints](#)



## WHO head warns worst of virus is still ahead

April 20, 2020



response Efforts From a

e of everything':

in New York City struggle

America's pandemic

September 17, 2020

with no symptoms

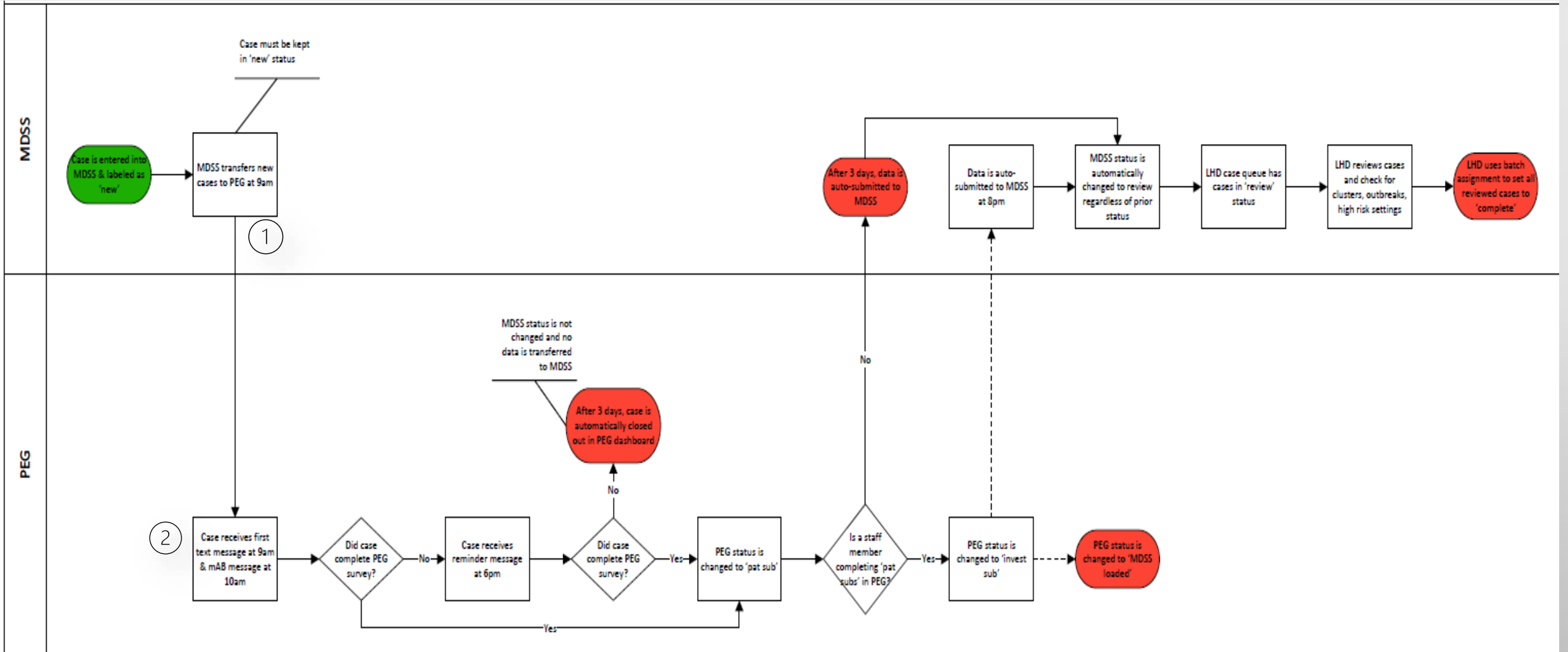
nearly as important as sto

# Public/Private Partnerships

- People.Health (PEG)
  - JotForm
  - Twilio
- Altarum
- Local Health Departments (LHDs)
- State of Michigan – Communicable Disease and HIV & STI Divisions



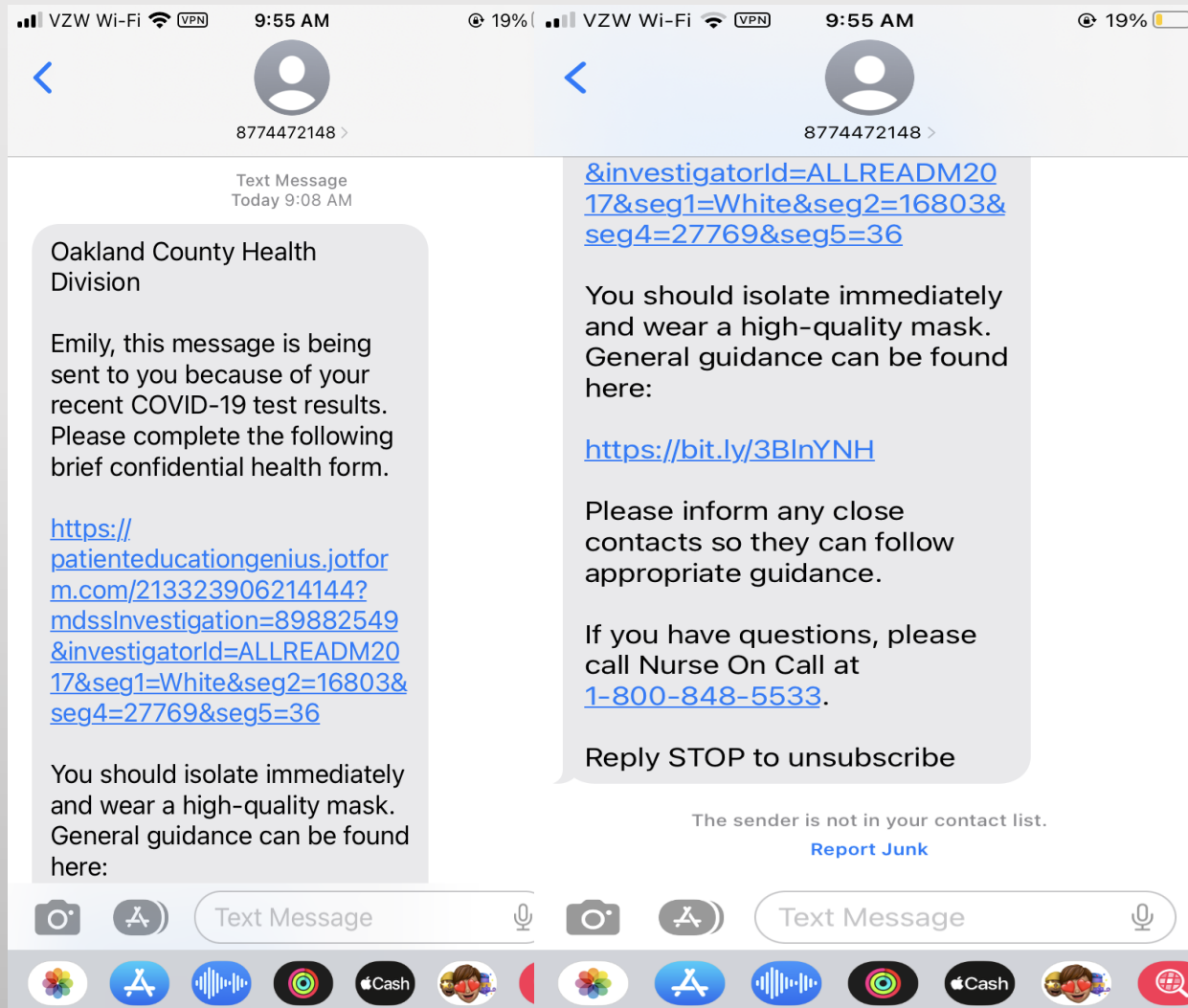
# Automated public health notification & investigation system life cycle



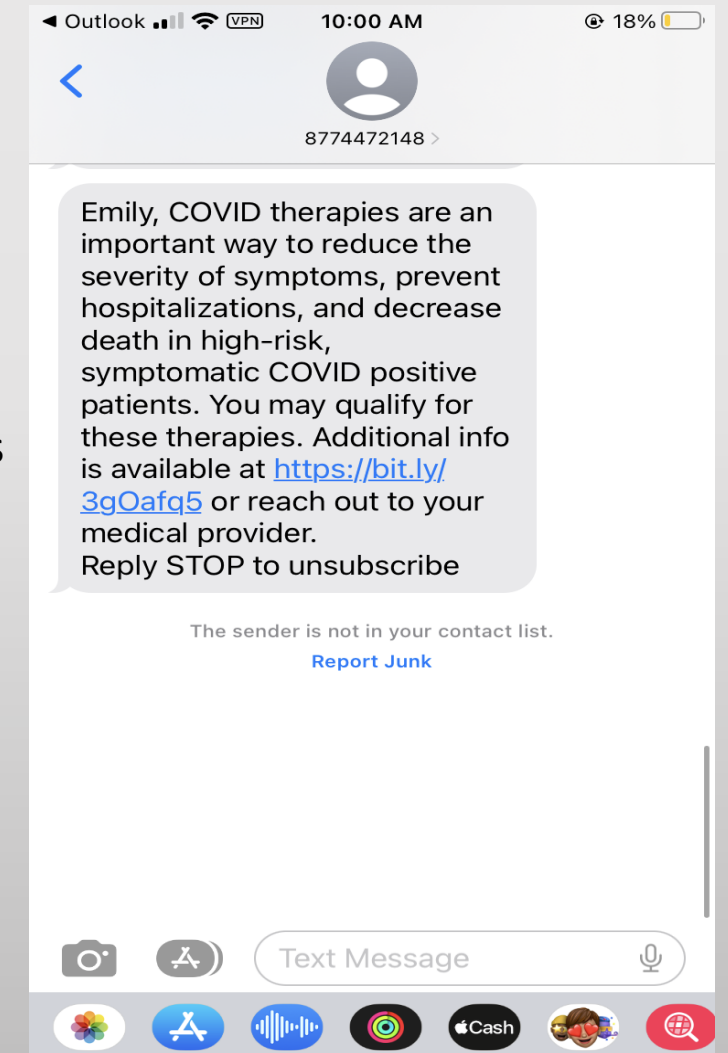


# What does the case-patient see?

## Initial Message




## Therapeutics Message



# Authentication Screen

- Each time you open a form
- Must spell last name exactly like in MDSS

📶 VZW Wi-Fi 📶 VPN 11:46 AM 🌙 🔊 🔋

  
**OAKLAND**  
COUNTY MICHIGAN  
HEALTH DIVISION

This message is being sent as you have recently tested positive for COVID-19 or you were identified as a possible case because of a COVID-19 exposure. After you validate your birthdate we ask that you complete and submit the following form. If you have any questions please contact the health department at 1-800-848-5533. Thank you for your participation.

**Verify Last Name \***

! This field is required.

**Verify Birth Month \***


! This field is required.


**Verify Birth Date \***

🔒 patienteducationgenius.jotform.com

# The Form

2% 1 / 48 Fields Completed.

 English (US) ▾



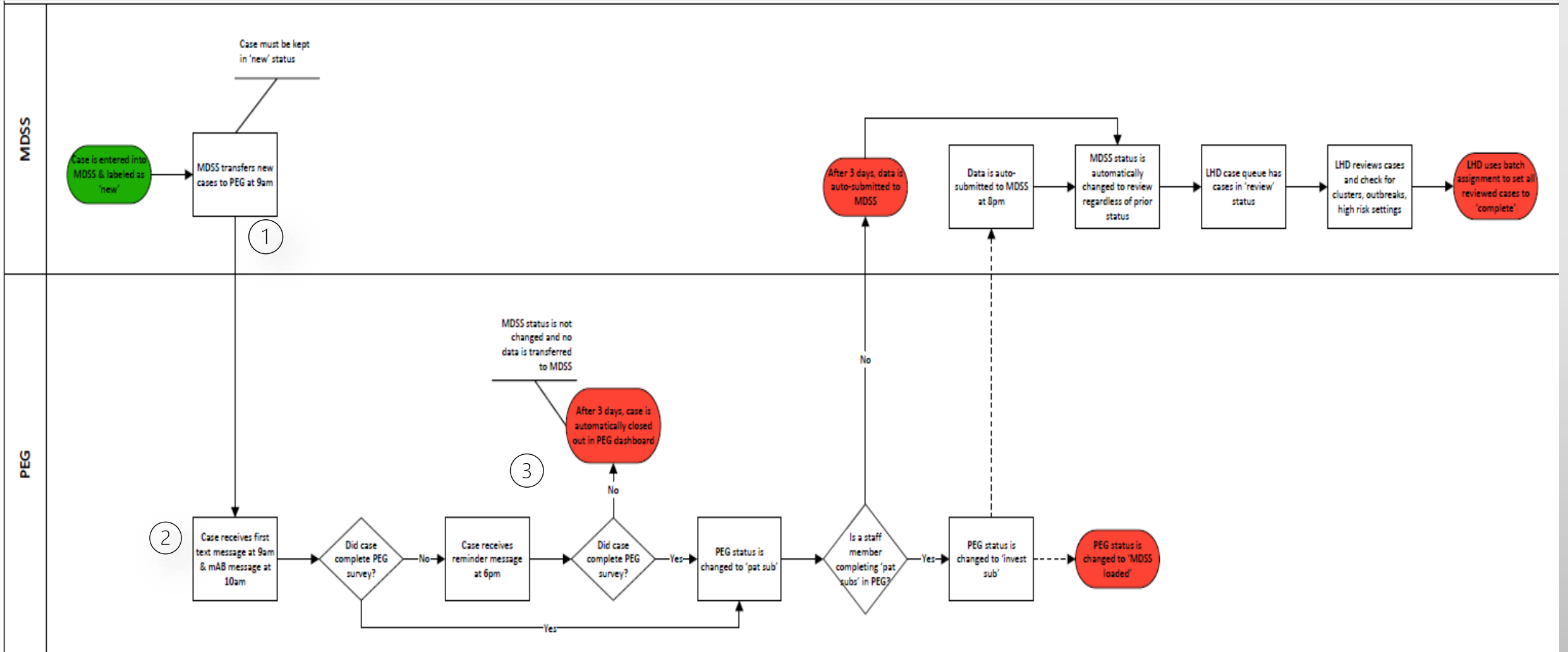
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**COVID-19 Patient Form**

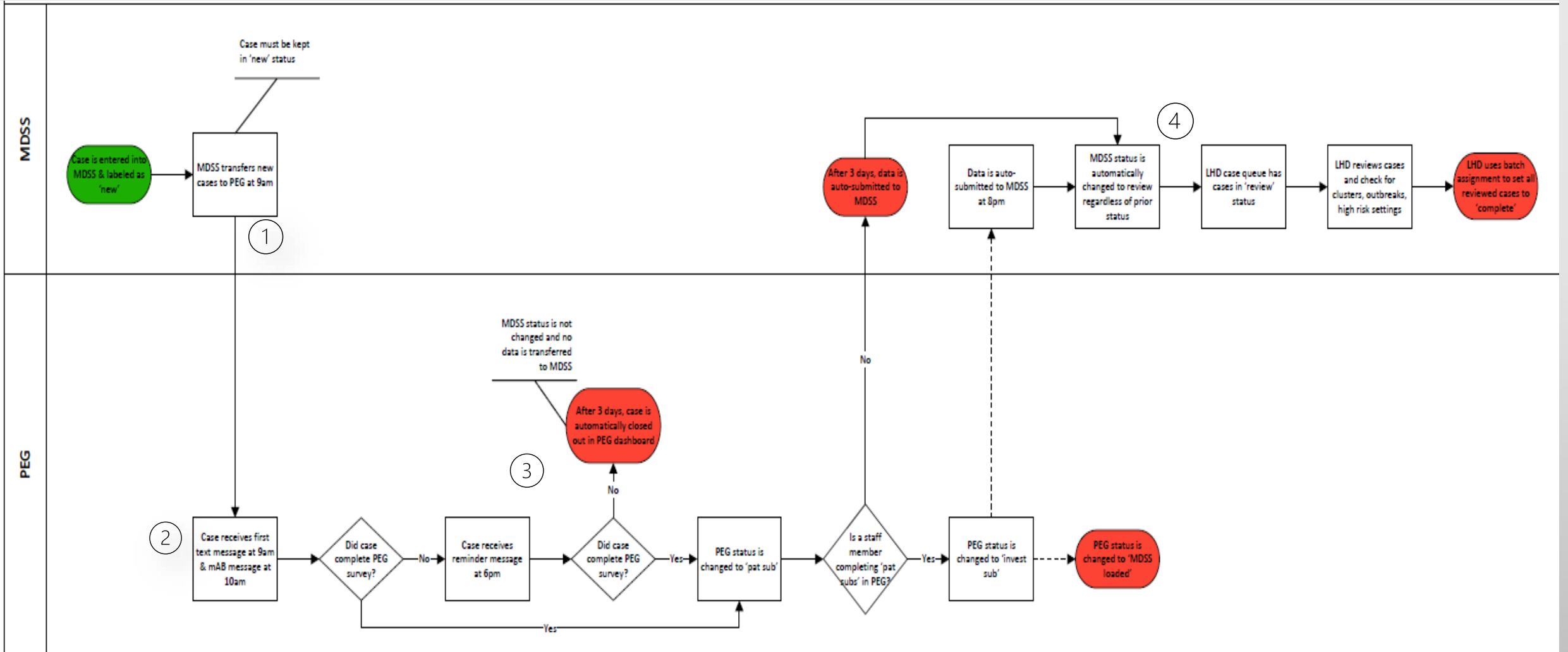
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# Automated public health notification & investigation system life cycle



# Automated public health notification & investigation system life cycle



MDSS ID

Patient Name

Investigator

Form Sent Date

12/18/2022 - 12/24/2022

Apply Filter

Reset



<input type="checkbox"/>	Investigator Name ▾	Patient MDSS ID ▾	Form Sent ▾	Patient ▾	Jurisdiction ▾	Birthdate ▾	Address	Phone	Case Status	🔽
<input type="checkbox"/>	Cathy Armstrong	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	2216 Christy Munich Ann Arbor, MI 48105	[REDACTED]	Incomplete	🔗
<input type="checkbox"/>	Cathy Armstrong	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	2363 Joshua Drive, Lake Ann Arbor, MI 48105	[REDACTED]	Incomplete	🔗
<input type="checkbox"/>	Cathy Armstrong	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	23072 Caldwell Monmouth, MI 48851 Dearborn, MI 48105	[REDACTED]	Incomplete	🔗
<input type="checkbox"/>	Cathy Armstrong	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	1856 Norma Station Cape Canaveral, FL 32925	[REDACTED]	Incomplete	🔗

1

# State of Michigan

2

## Health Department Filter

Health Department

3

## Date Filter

Year

Month

Day

## Total Cases

Total Cases  
348,452

## Total Cases By Gender

Male  
136,732

Female  
208,037

## Total Cases By Arab Ethnicity

Arab  
9,449

Non-Arab  
312,817

## Total Cases By Hispanic Ethnicity

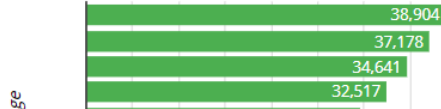
Hispanic  
18,582

Non-Hispanic  
307,040

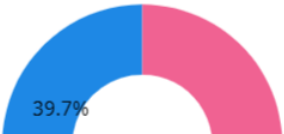
## Total Cases by Race

American Indian/Alaskan Native 2,130	Asian 13,950	Black/African American 39,114	Caucasian 259,723	Hawaiian/Pacific Islander 272	Middle Eastern 467	Multi Racial 7,501
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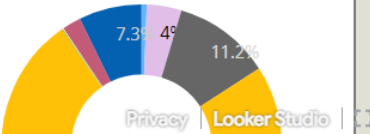
## Form Submissions By Age



## Submissions by Gender



## Submissions by Race

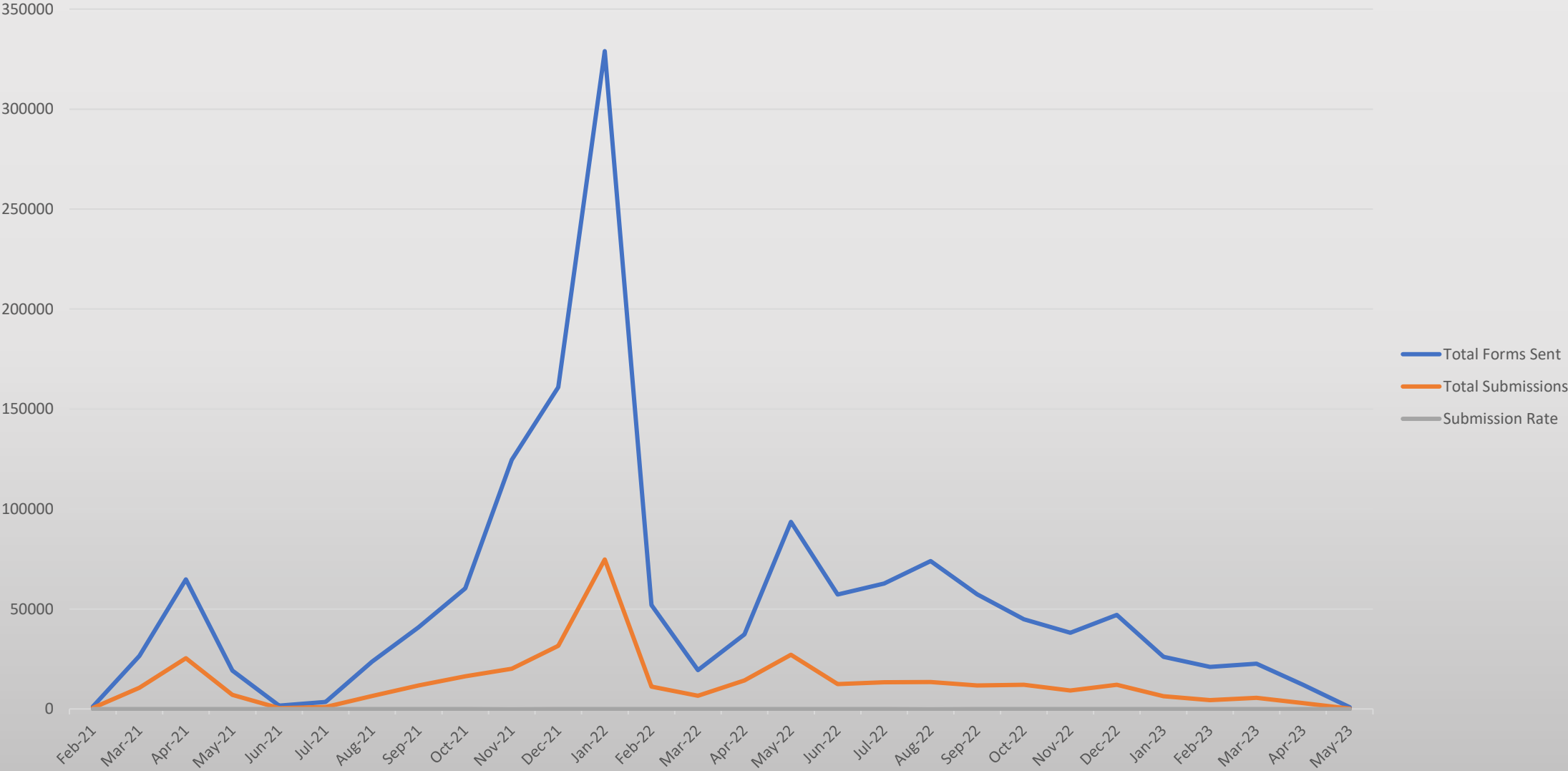


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# Results

- 2,300,106 individual referrals were sent
- 537,209 online investigation surveys were completed
- 1,574,024 messages were transmitted with educational offerings
  - 70,559 links were selected
- 1,392,782 messages providing information on available treatments were delivered within 24 hours of public health notice

Forms Sent vs. Submitted



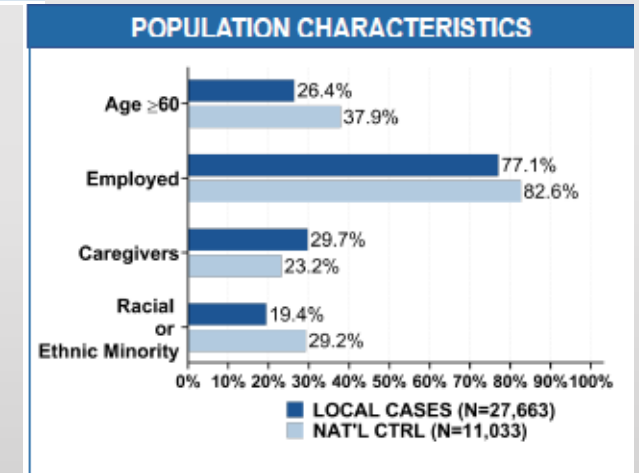


# CDC Study Participation

- 31,851 opened the link
  - 29,982 eligible
- Population in Michigan
  - Younger
  - More likely to be vaccinated
  - More likely to be unemployed

TYPE OF TEST (LOCAL)	
Rapid Test	26%
PCR Test	31%
Both	43%

TRUSTED SOURCES OF INFORMATION (LOCAL)	
CDC	67%
Healthcare provider	66%
State or county health departments	57%



# Text-to Option for self reported case-patients

- For positive at-home cases
- Cases text their LHD code to 1-855-706-1919
  - Ex. “OAKLAND” or “DHD4”
- Receive current guidance and links to resources

Week 1	154
Week 2	234
Week 3	292
Week 4	321
Week 5	335
Week 6	395
Week 8	418
Week 10	448
Week 12	490
Week 15	522
Week 17	539
Week 20	569
Week 21	571
Week 23	586
Week 24	589
Week 26	601
Week 29	612

# Was it a success?

- Collected information
- Provided timely treatment and prevention guidance
- Successfully facilitated future contact between case-patients and Michigan LHDs

# Acknowledgement

- Co-Authors
- People.Health
- LHD's
- Altarum
- COVID Case Investigators

THANK YOU

# What makes it a PEG case?

Case Reporting	Address History	Demographics	Referrer	Lab Reports	Notes	Map	Audit	Person History
Patient [REDACTED] Locked by BUSHIS1 (SMERALDA BUSHI)								
Date Changed	User Name	Jurisdiction	Role	Inv Status	Action Performed			
12/17/2022 10:56:14 AM	[REDACTED]	Statewide	LAB	New	Add Case Electronic Lab			
12/19/2022 08:29:21 AM	[REDACTED]	Statewide	LAB	New	Case Not Merged			
12/19/2022 08:56:07 AM	SUPER USER	Statewide	MDCH-BOE	New	Sent to PEG			
12/19/2022 09:09:55 AM	[REDACTED]	Benzie-Leelanau	LHJ		MCIR QUERY			



PEG



Case receives first  
text message at 9am  
& mAB message at  
10am



