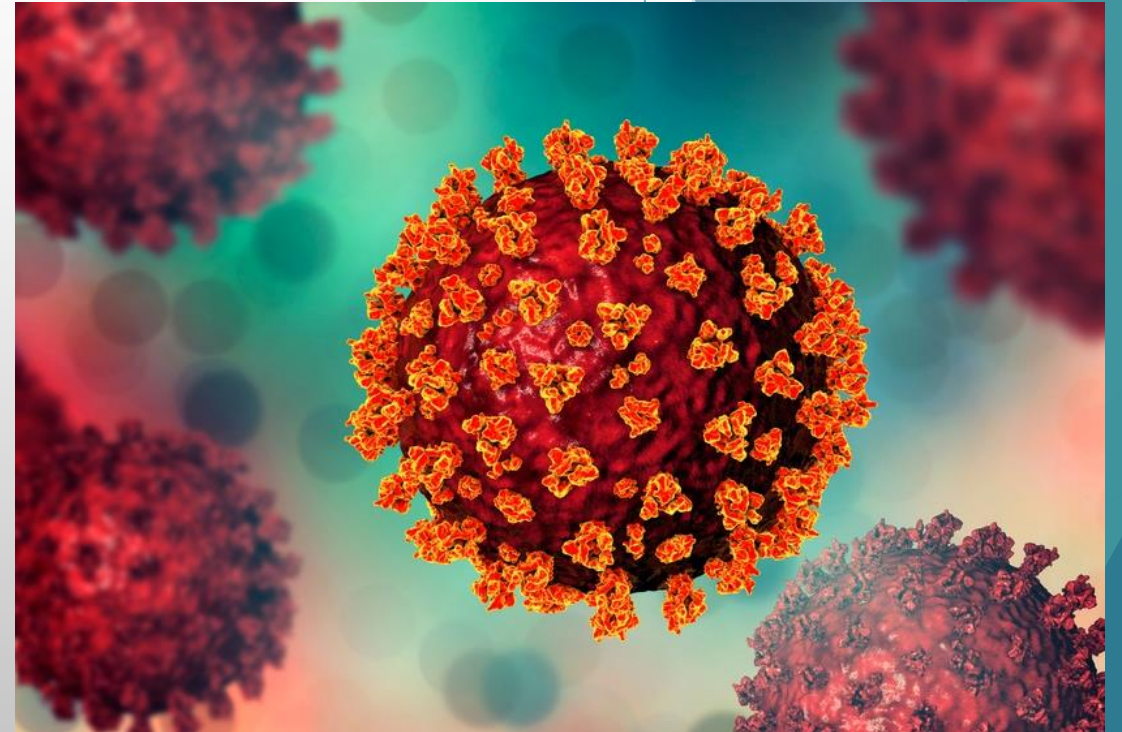


Understanding Long COVID in the Community: A Exploratory Survey Project

Westchester County
Department of Health



Westchester County Department of Health

Westchester
County

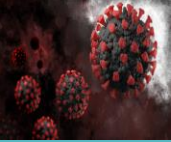
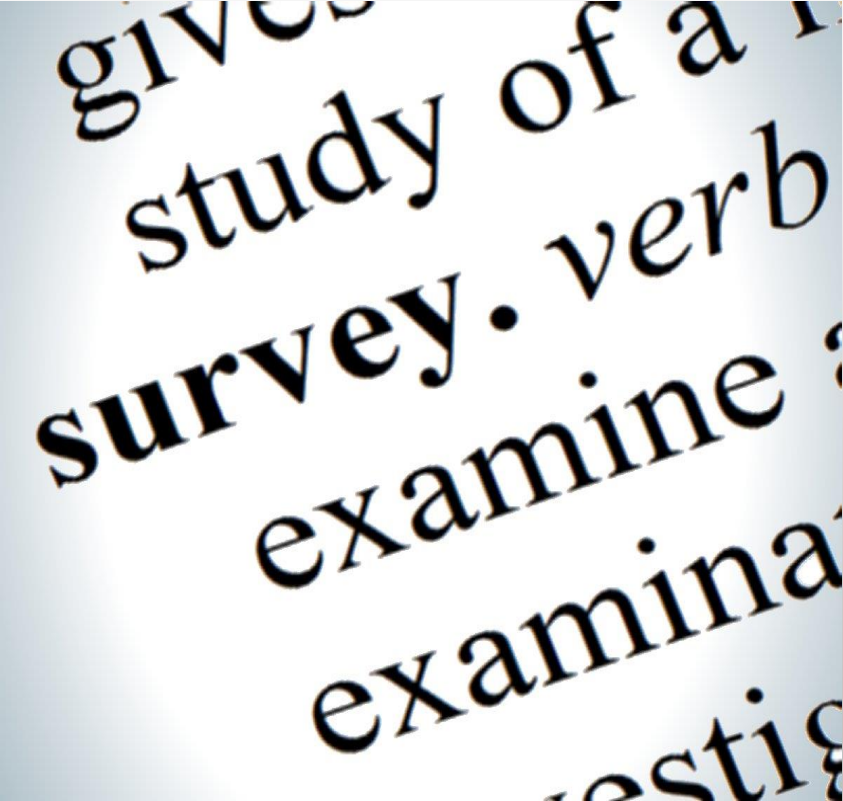
George Latimer, County Executive
Sherlita Amler, MD, Commissioner
Department of Health



Department
of Health

Office of
Minority Health and
Health Disparities
Prevention

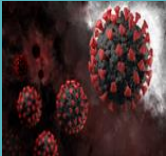
Westchester County Department of Health



DESIGN



DISTRIBUTE



ANALYZE

Learning Objectives:

- ▶ *Upon completion attendees will be able to recognize and restate key considerations in formulating and structuring culturally relevant survey questionnaires to gather data and information for effective public health program planning and outreach. A sample checklist will be provided to guide the steps involved in designing a community survey.*
- ▶ *Upon conclusion attendees will be able to compare and contrast the advantages/limitations of each data collection approach and the importance of diverse channels for maximizing participation rates. Participants will explore various collection methods in the distribution of the long COVID survey to reach and engage underserved communities effectively.*

Project Background

What is long COVID?

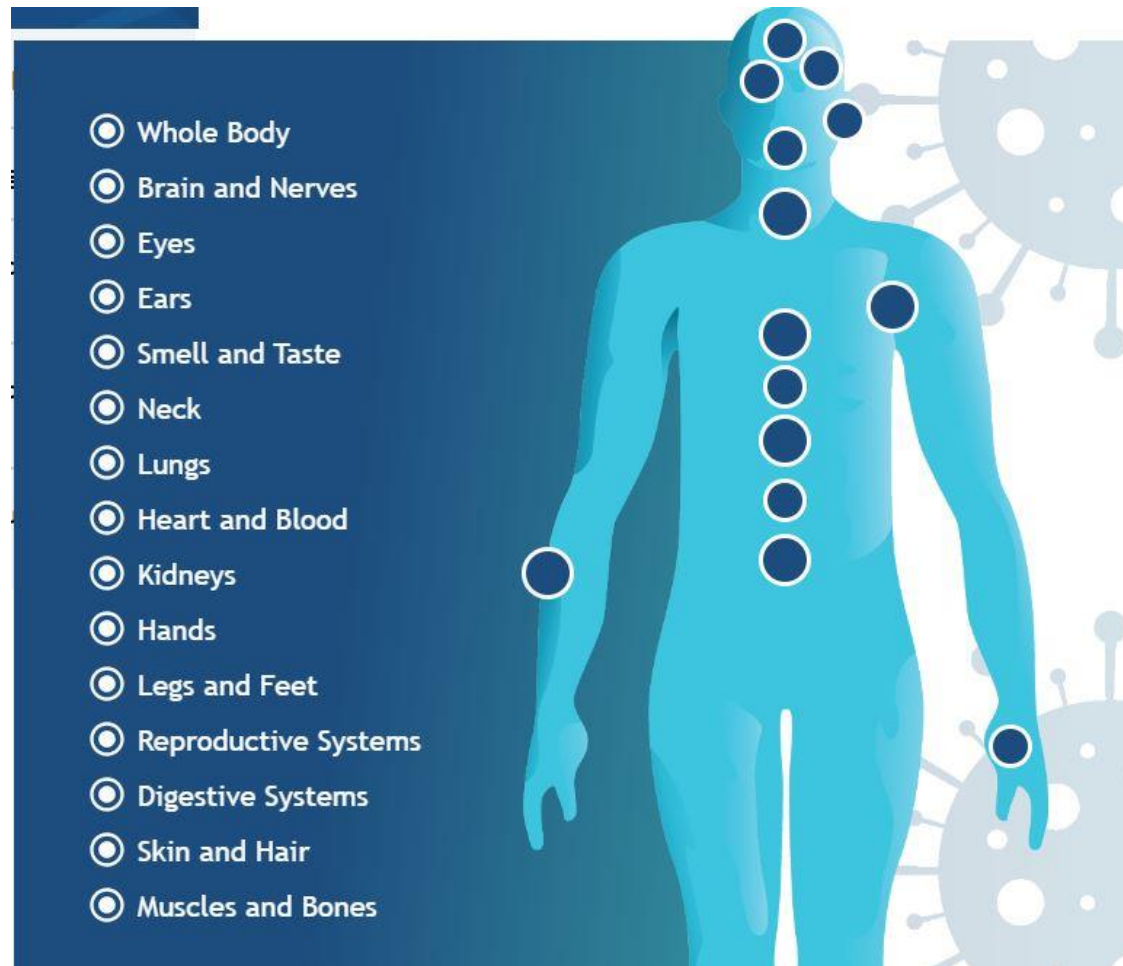
Long COVID, long-haul COVID, post-COVID-19 conditions, chronic COVID, and post-acute sequelae of SARS-CoV-2 (PASC) are all names for the health problems that some people experience within a few months of a COVID-19 diagnosis.

[Long COVID | NIH COVID-19 Research](#)

Definition:

- ▶ Long COVID is broadly defined as signs, symptoms, and conditions that continue or develop after acute COVID-19 infection. This [definition](#) of Long COVID was developed by the Department of Health and Human Services (HHS) in collaboration with CDC and other partners.

Symptoms of Long COVID



What You Need to Know

- ▶ Long COVID can include a wide range of ongoing health problems; these conditions can last weeks, months, or years.
- ▶ Long COVID occurs more often in people who had severe COVID-19 illness, but anyone who has been infected with the virus that causes COVID-19 can experience it.
- ▶ People who are not vaccinated against COVID-19 and become infected may have a higher risk of developing Long COVID compared to people who have been vaccinated.
- ▶ People can be reinfected with SARS-CoV-2, the virus that causes COVID-19, multiple times. Each time a person is infected or reinfected with SARS-CoV-2, they have a risk of developing Long COVID.
- ▶ While most people with Long COVID have evidence of infection or COVID-19 illness, in some cases, a person with Long COVID may not have tested positive for the virus or known they were infected.

CDC and partners are working to understand more about who experiences Long COVID and why, including whether groups disproportionately impacted by COVID-19 are at higher risk.

WHY IS THIS IMPORTANT?

- ▶ Health inequities may also increase the risk of Long COVID for some racial or ethnic minority groups and some people with disabilities.



The RFP Process

- ▶ "A request for proposal, or RFP, is a document that describes a project's needs and asks for proposed solutions from qualified vendors
- ▶ Organizations typically use RFPs when they need outside help to complete a specific project.

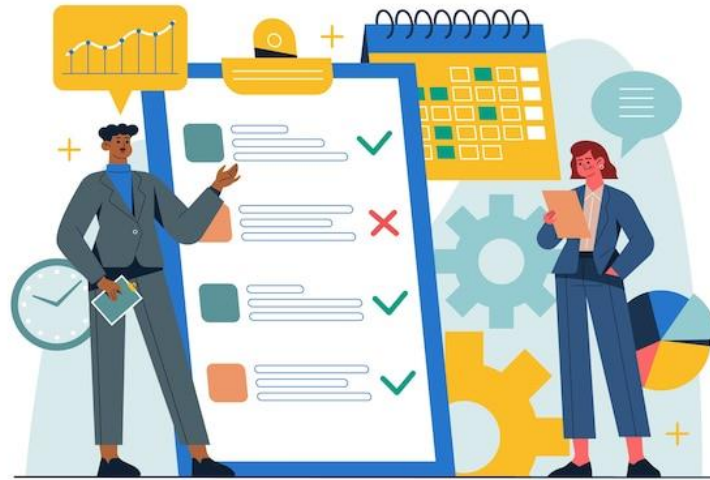


**Department
of Health**

**Office of
Minority Health and
Health Disparities
Prevention**

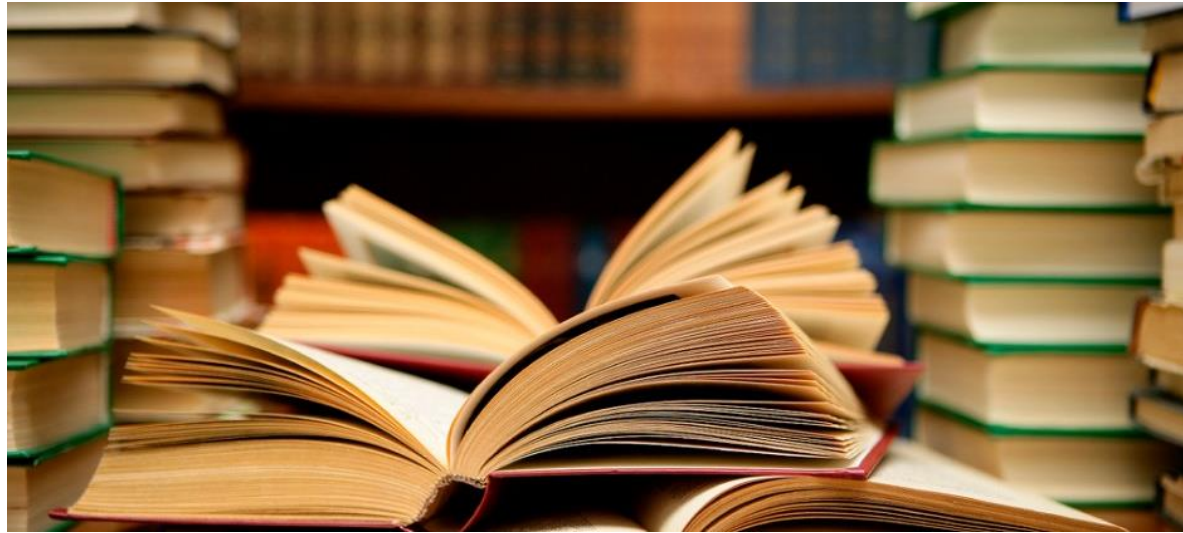
Work Plan Development

- ▶ Step 1: Set goals
- ▶ Step 2: Lay out objectives and deliverables
- ▶ Step 3: List resources
- ▶ Step 4: Identify obstacles
- ▶ Step 5: Create a step-by-step plan
- ▶ Step 6: Execute and evaluate



Work Plan Development

OBJECTIVE	BUDGET CATEGORY/ DELIVERABLE (if applicable)	TASKS	PERFORMANCE MEASURES
<p>1. By June 30, 2023 identify and/or design post COVID survey to distribute in Greenburgh, Mount Kisco, Mount Vernon, New Rochelle, Ossining, Peekskill, Rye, White Plains and Yonkers.</p> <p>1A. Identify study participants from Westchester County Department of Health (WCDH) pre-existing data base of confirmed cases between March 2020 and September 2022.</p>	<ul style="list-style-type: none"> In kind personnel services IRB fees 	<p>A. Research and identify Institution Review Board (IRB) entity to determine exemption criteria or apply for expedited or full IRB to conduct research study</p>	<p>i. IRB process researched and determination made regarding whether exemption applicable or preparation for application of expedited or full IRB.</p>
			<p>ii IRB application completed and submitted (if needed)</p>
			<p>iii. IRB application approved or exemption requirements satisfied</p>
		<p>B. EPI/Clinical team will meet to review and decide on best instrument to use for survey.</p>	<p>i. a clear concise purpose statement will be established</p>
			<p>ii. a clear research question will be established</p>
			<p>iii. Culturally relevant survey with appropriate permission developed and ready for distribution in targeted areas.</p>
		<p>C. Develop methodology for random selection of survey participants to filter participants from WCDH database</p>	<p>i. Established statement for how participants will be selected and randomly assigned.</p>
			<p>ii. Excel file containing filtered data</p>
			<p>iii Established statistics that will be used for analysis</p>



Literature Review on Long COVID

Comparable Surveys

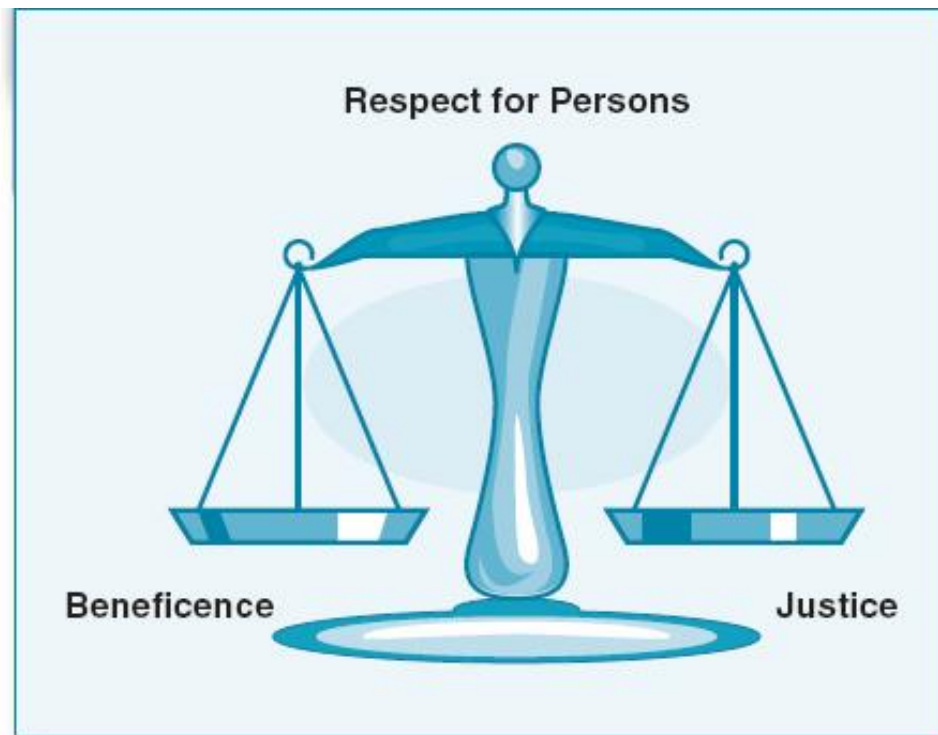
Survey Editing

Multilingual Surveys

Survey Development

“Good judgment comes from experience and experience comes from poor judgment.”
- An Aphorism

Guiding principles (the Belmont Report):



IRB's & CFR's

IRB: Institutional Review Board committees that make sure researchers follow the HHS rules and ethical guidelines as they carry out their studies.



The Common Rule 45CFR46

CFR: code of federal regulations

Administrative law that defines what constitutes “research” as well as defines “human subject”

The Revised Common Rule (2018)

Identifies four types of activities as *not* being "research" as defined in the Rule. In other words, the revised Common Rule does not apply to the following types of activities because they do not meet the regulatory definition of *research*:

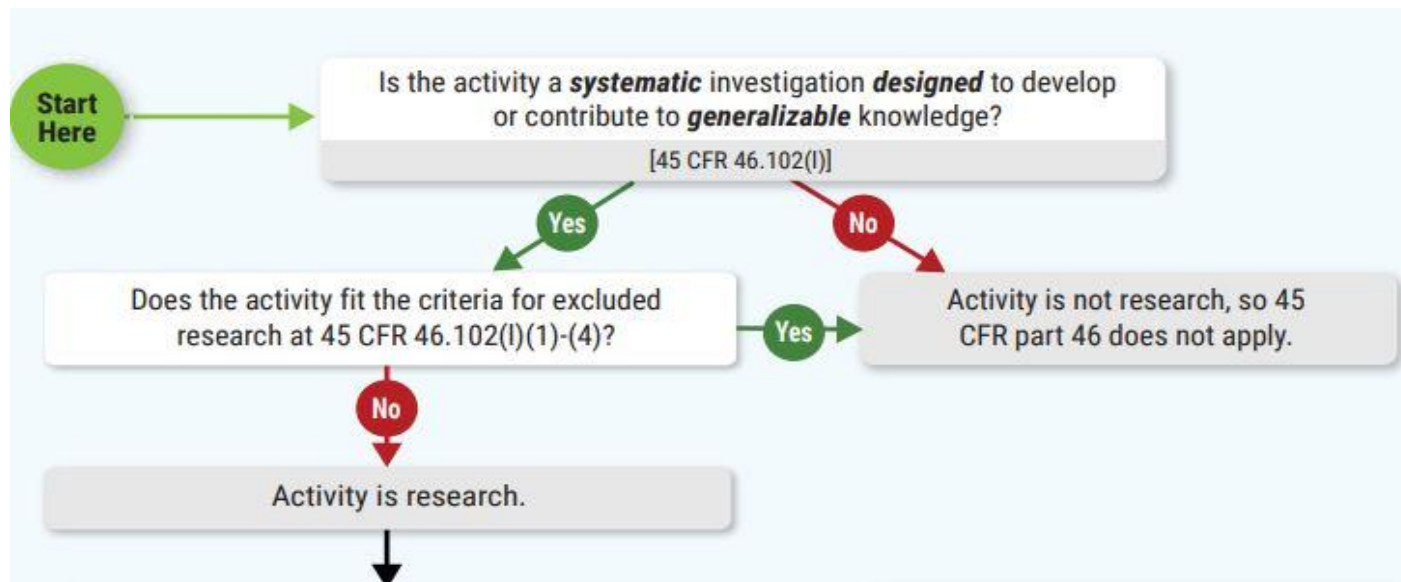
- 1) Certain scholarly and journalistic activities;
- 2) Certain public health surveillance activities;
- 3) Collection and analysis of information, specimens, or records, by or for a criminal justice agency for certain criminal justice or investigative purposes; and,
- 4) Certain authorized operational activities for national security purposes.

EXEMPT OR NO?

Revised Common Rule Categories of Exemption

Category 2: Research involving the use of educational tests, surveys, interviews, or observation.

Revised to allow for collection of potentially sensitive or harmful identifiable information from adults if the IRB makes a determination that *adequate provisions for protecting privacy and maintaining confidentiality are in place.*



Data Management



PRE-EXISTING DATABASE

300,00 (+) Contacts

ID	First Name	Last Name	Job Title	Department	Business Unit	Gender	Ethnicity	Age	Hire Date	Annual Salary	Region	Country	City	Full Date
1	John	Smith	IT Manager	IT	Research & Development	Male	Black	35	08/2000	\$35,000	10%	United States	Seattle	08/15/2001
2	Theodore	Chen	Technical Architect	IT	Manufacturing	Male	Asian	38	11/201997	\$39,570	8%	China	Chongqing	
4	Laura	Anderson	Director	Finance	Specialty Products	Female	Caucasian	38	10/201990	\$30,000	20%	United States	Chicago	
5	Heather	Johnson	Computer Systems Manager	IT	Manufacturing	Female	Caucasian	38	02/201999	\$38,900	7%	United States	Chicago	
6	Justin	Lee	IT Analyst	Finance	Manufacturing	Male	Asian	35	11/081990	\$30,480	8%	United States	Phoenix	
7	Joshua	Gupta	Account Representative	Sales	Corporate	Male	Asian	37	1/201997	\$38,994	8%	China	Chongqing	
8	Rebecca	Evans	Manager	IT	Corporate	Female	Caucasian	37	2/201990	\$18,700	10%	United States	Phoenix	
9	Luke	Martin	Analyst	Finance	Manufacturing	Male	Black	35	5/18/2000	\$0,000	8%	United States	Miami	5/08/2001
10	Justin	Smith	Manager	Accounting	Manufacturing	Male	Caucasian	38	1/25/2000	\$11,027	8%	United States	Austin	
11	Maxine	Miller	IT Analyst	Finance	Specialty Products	Female	Caucasian	34	07/12/2000	\$77,391	8%	United States	Chicago	
12	Debra	Allen	IT Manager	Human Resources	Manufacturing	Female	Asian	38	3/12/2000	\$20,000	10%	United States	Miami	
13	Camila	Roberts	Control Engineer	Engineering	Specialty Products	Female	Caucasian	37	10/22/2001	\$39,951	8%	United States	Seattle	
14	Bill	Jones	Manager	Human Resources	Manufacturing	Male	Caucasian	38	3/24/1999	\$30,000	8%	United States	Austin	
15	Kevin	Ng	IT Manager	Finance	Research & Development	Male	Asian	35	07/18/2001	\$38,700	10%	China	Shanghai	
16	Robert	Yang	IT Analyst	Accounting	Specialty Products	Male	Asian	35	11/201997	\$9,700	8%	United States	Austin	09/18/2001
17	Isabella	Xi	Vice President	Marketing	Research & Development	Female	Asian	42	3/12/2000	\$28,230	20%	United States	Seattle	
18	Debra	Rowell	Director	Finance	Research & Development	Female	Black	45	04/2000	\$75,000	20%	United States	Phoenix	
19	Camila	Oliver	IT Manager	Marketing	Specialty Products	Female	Latin	40	10/201999	\$28,000	10%	United States	Seattle	
20	David	Kerr	Director	IT	Corporate	Male	Caucasian	44	11/01/2001	\$28,500	20%	United States	Columbus	
21	John	Ding	Director	Sales	Research & Development	Male	Asian	45	2/201990	\$38,700	10%	China	Chongqing	
22	John	Alvarado	IT Manager	IT	Manufacturing	Male	Latin	38	1/8/2000	\$38,000	10%	Mexico	Mexico	
23	Steve	Smith	Director	Sales	Manufacturing	Female	Latin	38	6/201991	\$11,000	20%	United States	Miami	
24	Logan	Smith	Director	IT	Research & Development	Male	Latin	35	5/24/2000	\$75,787	20%	Spain	San de Lorenzo	
25	Lawrence	Olson	Analyst	Sales	Specialty Products	Male	Caucasian	37	9/201999	\$8,000	8%	United States	Seattle	
26	Madeline	Walker	Vice President	Sales	Specialty Products	Female	Asian	40	02/2000	\$30,000	10%	China	Chongqing	
27	Jose	Henderson	Director	Human Resources	Specialty Products	Male	Black	42	4/12/2000	\$32,220	20%	United States	Columbus	
28	Alfred	Wright	Senior Engineer	Corporate	Corporate	Female	Latin	38	2/201999	\$8,000	8%	Spain	San de Lorenzo	
29	Wyatt	Chen	Vice President	Engineering	Specialty Products	Male	Asian	40	02/2000	\$38,000	10%	United States	Seattle	
30	Carrie	Lin	Engineering Manager	Engineering	Specialty Products	Female	Asian	44	12/8/1990	\$39,104	10%	China	Beijing	
31	Dylan	Choi	Vice President	IT	Corporate	Male	Asian	40	5/22/2000	\$20,000	20%	China	Beijing	
32	Robert	Olson	Accountant	IT	Research & Development	Male	Asian	38	02/201997	\$38,700	8%	United States	Columbus	

DATA COLLECTION

TARGET DEMOGRAPHIC

9 minority AREAS OF WESTCHESTER County

- Greenburgh
- Mt. Kisco
- Mt. Vernon
- New Rochelle
- Ossining
- Peekskill
- Rye
- White Plains
- Yonkers

2020 Census [\[edit \]](#)

Westchester County Racial Composition^[23]

Race	Num.	Perc.
White (NH)	497,684	49.55%
Black or African American (NH)	131,010	13.04%
Native American (NH)	1,017	0.1%
Asian (NH)	64,907	6.5%
Pacific Islander (NH)	150	.01%
Other/Mixed (NH)	40,355	4.02%
Hispanic or Latino	269,334	26.81%

SURVEY DISTRIBUTION

E-MAILS

COMMUNITY OUTREACH

FLYERS w/ QR CODES

PHONE CALLS

MAILINGS

ENCUESTA DE COVID PERSISTENTE


¡CADA HISTORIA DE COVID PERSISTENTE IMPORTA!

El Departamento de Salud del Condado de Westchester está llevando a cabo una encuesta bilingüe para comprender mejor el impacto del COVID persistente en diversas poblaciones.

DATOS CLAVE

- La encuesta tomará aproximadamente 15 minutos en completarse.
- La encuesta está disponible en línea y en formato impreso.
- Las respuestas individuales se mantendrán anónimas.
- Las encuestas serán aceptadas hasta finales de noviembre

PARA OBTENER MÁS INFORMACIÓN
Correo electrónico: wccares-health@westchestercounty.ny.gov
Página de web: www.westchestergov.com/health

TOME LA ENCUESTA AQUÍ → 

Westchester County
George Latimer, County Executive
Sheriela Ambler, MD, Commissioner
Department of Health



LONG COVID SURVEY


EVERY LONG COVID STORY MATTERS!

The Westchester County Department of Health is conducting a bilingual survey to better understand the impact of Long COVID on diverse populations.

KEY FACTS

- The survey will take about 15 minutes to complete
- The survey is available online and in paper form
- Individual responses will remain anonymous
- Surveys will be accepted through the end of November

FOR MORE INFORMATION
Email: wccares-health@westchestercounty.ny.gov
Website: www.westchestergov.com/health

TAKE THE SURVEY HERE → 

Westchester County
George Latimer, County Executive
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Department of Health



DATA COLLECTION

- ▶ **mixed methods**

- ▶ convenience sampling involves stopping people at random, which means that not everyone has an equal chance of being selected depending on the place, time, or day you are collecting your data.
- ▶ Random sampling or probability sampling is based on random selection. This means that each unit has an equal chance (i.e., equal probability) of being included in the sample.

Convenience Sampling

pros

- ▶ Save time, money, and effort
- ▶ Data is available immediately
- ▶ Limited rules and more freedom
- ▶ Secure a wealth of information
- ▶ Acknowledging shortcomings improves the validity

cons

- ▶ Difficulty replicating results
- ▶ Inaccurate representation
- ▶ Researcher bias
- ▶ Producing False Data

Random Sampling

pros

- ▶ Easy to implement
- ▶ This method is very efficient and can be used to select a sample from a large population quickly.
- ▶ The data collected using simple random is typically representative of the entire population.
- ▶ Each member of the population has an equal chance of being chosen.
- ▶ Free from bias.

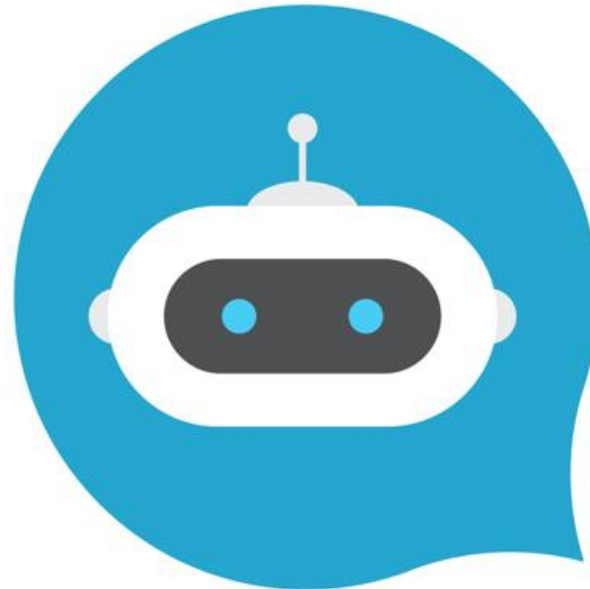
cons

- ▶ There is a slight chance that the sample selected may not represent the population.
- ▶ Minority subgroups within the population may not be present in sample.
- ▶ If the sampling frame is large random sampling may be impractical.
- ▶ Time Consuming.
- ▶ A complete list of the population may not be available.

Bot Management

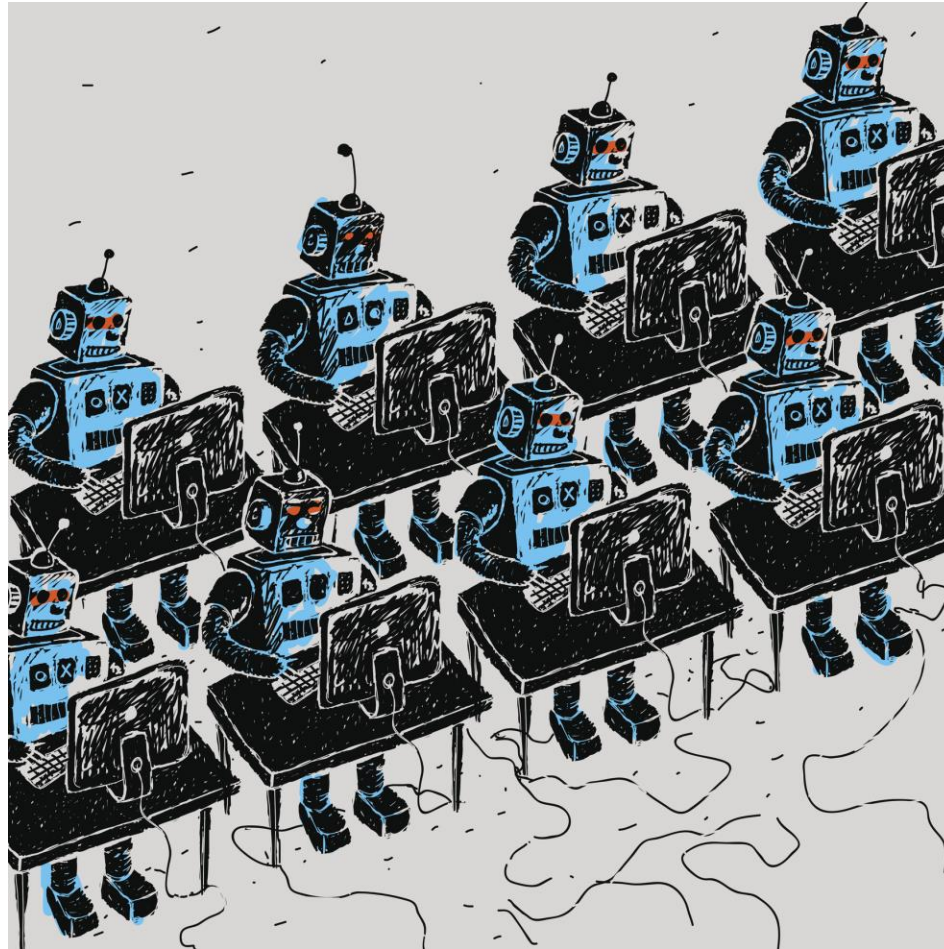
What are bots?

- ▶ In online surveys, when we talk about "bots," we mean scripts or programs that fill in fake value on a survey and keeps submitting it over and over. The aim is to get the promised reward multiple times.



Fields for Identifying Fraudulent Records

- ❖ Timestamps
- ❖ Branching logic and “impossible” fields
- ❖ Attention items
- ❖ Repeated items
- ❖ Open ended questions



Fields for Identifying Fraudulent Records

	A	B	C	D	E	F	G	H	I	J	K
1	Response	Collector ID	Start Date	End Date	IP Address	Email Address	First Name	Last Name	Custom ID	Name (optional)	The electronic gift card will arrive in your inbox. At
2										Open-Ended Response	Open-Ended Response
89	1.18E+11	452718898	2023-10-11 10:09:34	2023-10-11 10:12:44	191.96.227.94					Caddock Mercado	hannahherty587@gmail.com
90	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:44	66.108.209.87					Bhoja Queen	zciuew@gmail.com
91	1.18E+11	452718898	2023-10-11 10:09:34	2023-10-11 10:12:44	64.145.79.106					Dmitry Otto	ferrylmwuxc@gmail.com
92	1.18E+11	452718898	2023-10-11 10:09:34	2023-10-11 10:12:44	151.202.50.250					Pazel Lam	wyattaaron77@gmail.com
93	1.18E+11	452718898	2023-10-11 10:09:34	2023-10-11 10:12:44	98.14.163.86					Loletta Oliphant	CapShauot@gmail.com
94	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:44	108.6.188.234					Bretton Peak	ncebroad@gmail.com
95	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:44	68.161.182.135					Acelin Hutcheson	Bairdxht@gmail.com
96	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:44	68.197.19.100					Felice Muniz	umsgcp@gmail.com
97	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:44	69.124.228.195					Shanese Sims	candicewatt267@gmail.com
98	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:44	24.90.11.241					Ashaunta Early	caiwang2864@gmail.com
99	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:43	47.230.115.118					Natanya Garland	Mildredpsu@gmail.com
100	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:43	47.230.112.52					Christey Shumaker	merr5950@gmail.com
101	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:43	24.46.119.109					Gennara Rousseau	ClayDorisy@gmail.com
102	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:43	156.238.158.203					Treasha Monk	BragErmic@gmail.com
103	1.18E+11	452718898	2023-10-11 10:09:34	2023-10-11 10:12:43	108.15.28.110					Johna Stephens	buckjudy05@gmail.com
104	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:43	100.12.173.42					Jehovah Westfall	spenderwerner@gmail.com
105	1.18E+11	452718898	2023-10-11 10:09:33	2023-10-11 10:12:43	74.101.145.84					Orion Bryson	zthang876@gmail.com

Outsmarting Bots

Long COVID Survey

I. FREQUENCY

* 1. To verify you are not a computer, please identify what you see in the picture below:



Encuesta de COVID Persistente

I. FRECUENCIA

* 1. Para fines de verificación, identifique lo que ve en la imagen a continuación.



Incentives



pros

- ▶ Boosting Response Rates
- ▶ Targeting Hard-to-Reach People
- ▶ Reattempting to Gain Participation
- ▶ Encouraging Response on Lengthy Surveys
- ▶ Building Goodwill

cons

- ▶ Attracting Reward-Seekers
- ▶ Introducing Survey Bias
- ▶ Hurting Your Budget
- ▶ Disappointing Participants
- ▶ Offering Biased Rewards



Data Analysis

Table One: Exploratory Data Analysis

Gender

Woman	1824 (49.9%)
Man	1713 (46.9%)
Non-binary	6 (0.2%)
Transgender Man	4 (0.1%)
Transgender Woman	1 (0.0%)
Missing	107 (2.9%)

Race

Black or African-American	753 (20.6%)
White	2385 (65.3%)
Other (please specify)	4 (0.1%)
Native Hawaiian or Pacific Islander	32 (0.9%)
Asian	16 (0.4%)
American Indian	349 (9.5%)
Two or more races	16 (0.4%)
I prefer not to answer	4 (0.1%)
Missing	96 (2.6%)

Hispanic

No	3337 (91.3%)
Yes	183 (5.0%)
I prefer not to answer	6 (0.2%)
Not sure	27 (0.7%)
Missing	102 (2.8%)

Age

35-54 years old	1882 (51.5%)
65+ years old	18 (0.5%)
18-34 years old	1233 (33.7%)
55-64 years old	433 (11.8%)
Missing	89 (2.4%)

Education

High School graduate/GED	549 (15.0%)
Advanced or professional degree	590 (16.1%)
College graduate	1003 (27.4%)
Less than high school	225 (6.2%)
Some college or technical school	1172 (32.1%)
Missing	116 (3.2%)

Employment

Employed	1950 (53.4%)
Employed part-time	897 (24.5%)
Unemployed	273 (7.5%)
Self-employed	418 (11.4%)
Disabled	8 (0.2%)
Retired	3 (0.1%)
Other (please specify)	2 (0.1%)
Missing	104 (2.8%)

Vaccinated

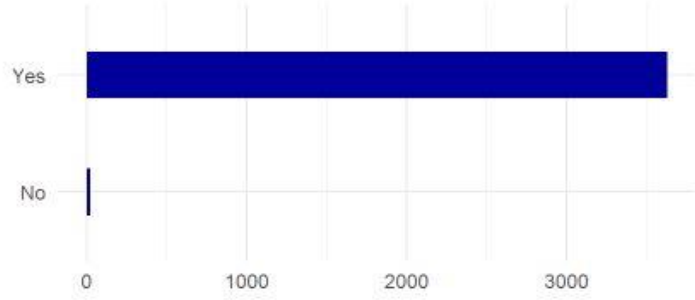
Yes	2881 (78.8%)
No	691 (18.9%)
Missing	83 (2.3%)

Insurance

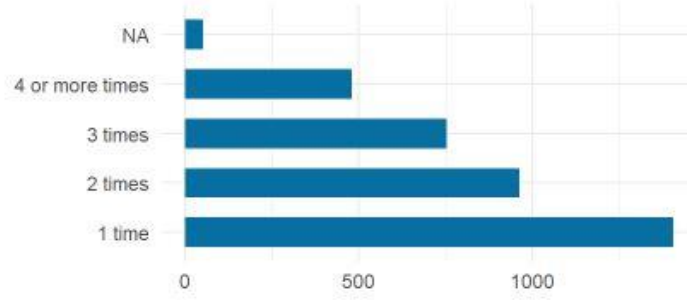
Private or Employer Provided	1164 (31.8%)
Medicare	969 (26.5%)
Uninsured	608 (16.6%)
Medicaid	818 (22.4%)
Missing	96 (2.6%)

Long COVID Experience.

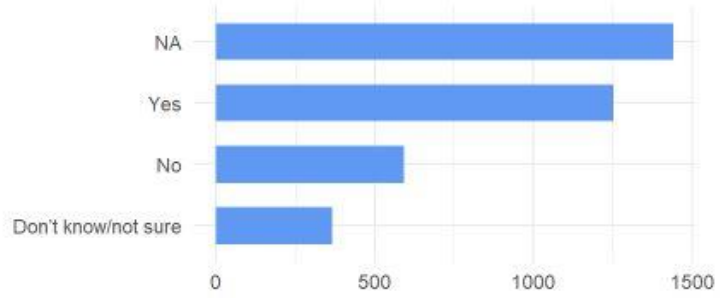
Have you ever had COVID?



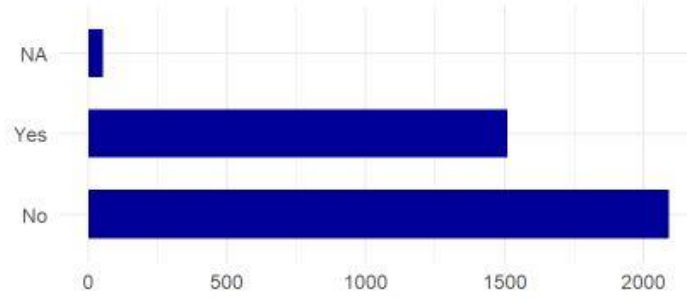
How many times have you gotten COVID?



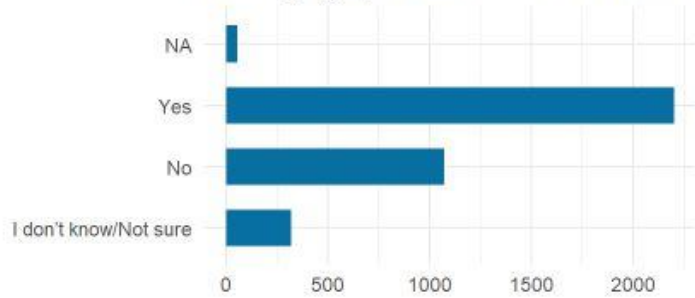
Have you seen a doctor?



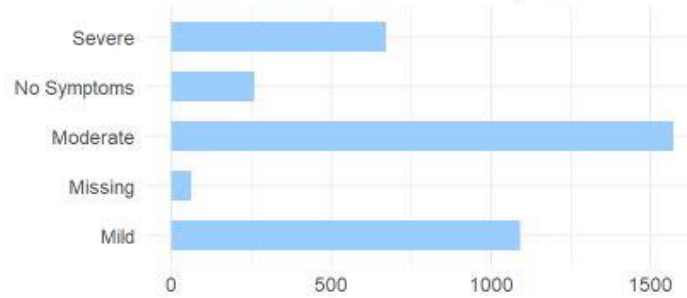
Were you hospitalized?



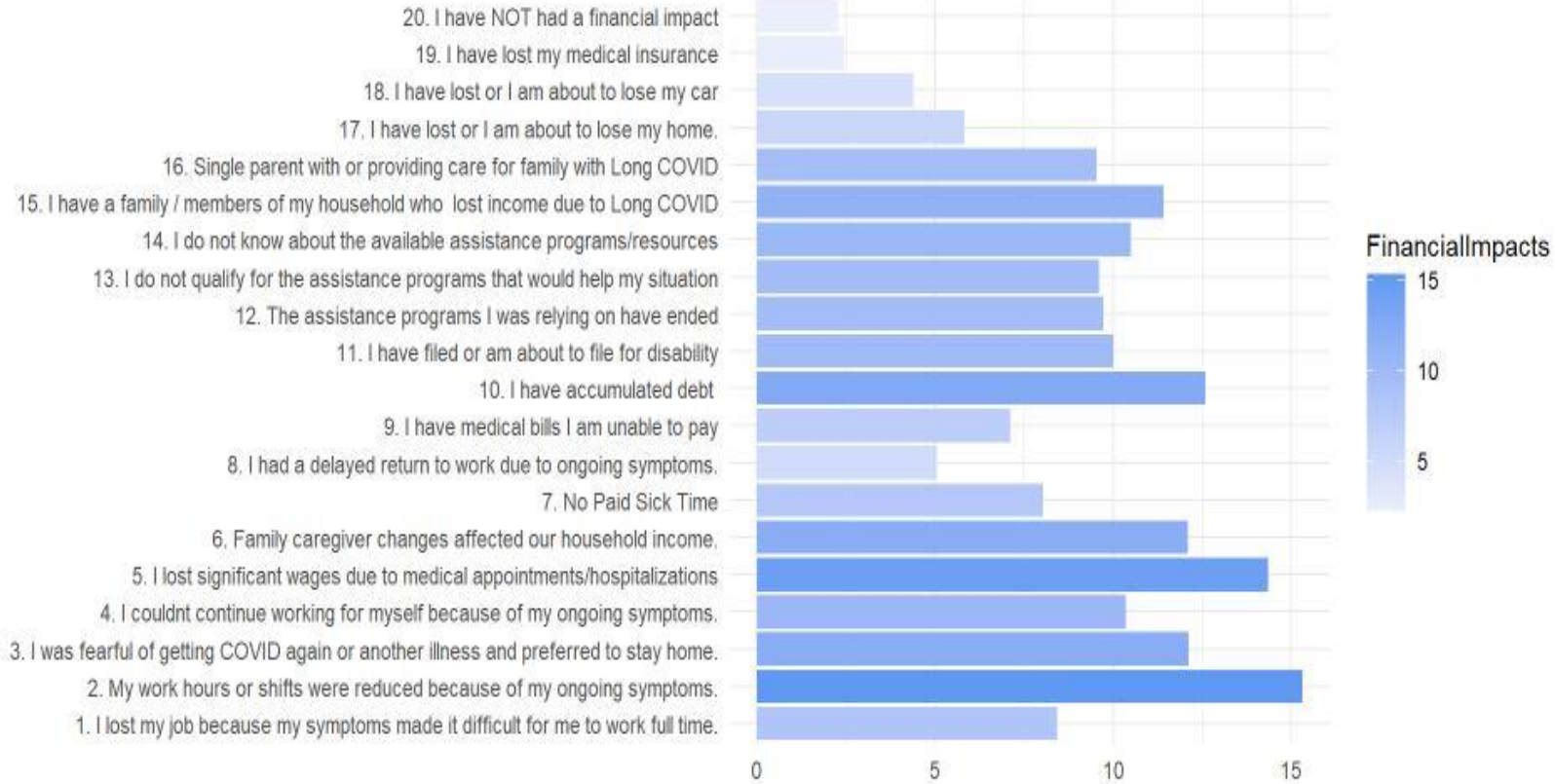
Did any symptoms last over 3 months?



At their worst how bad were your COVID sy

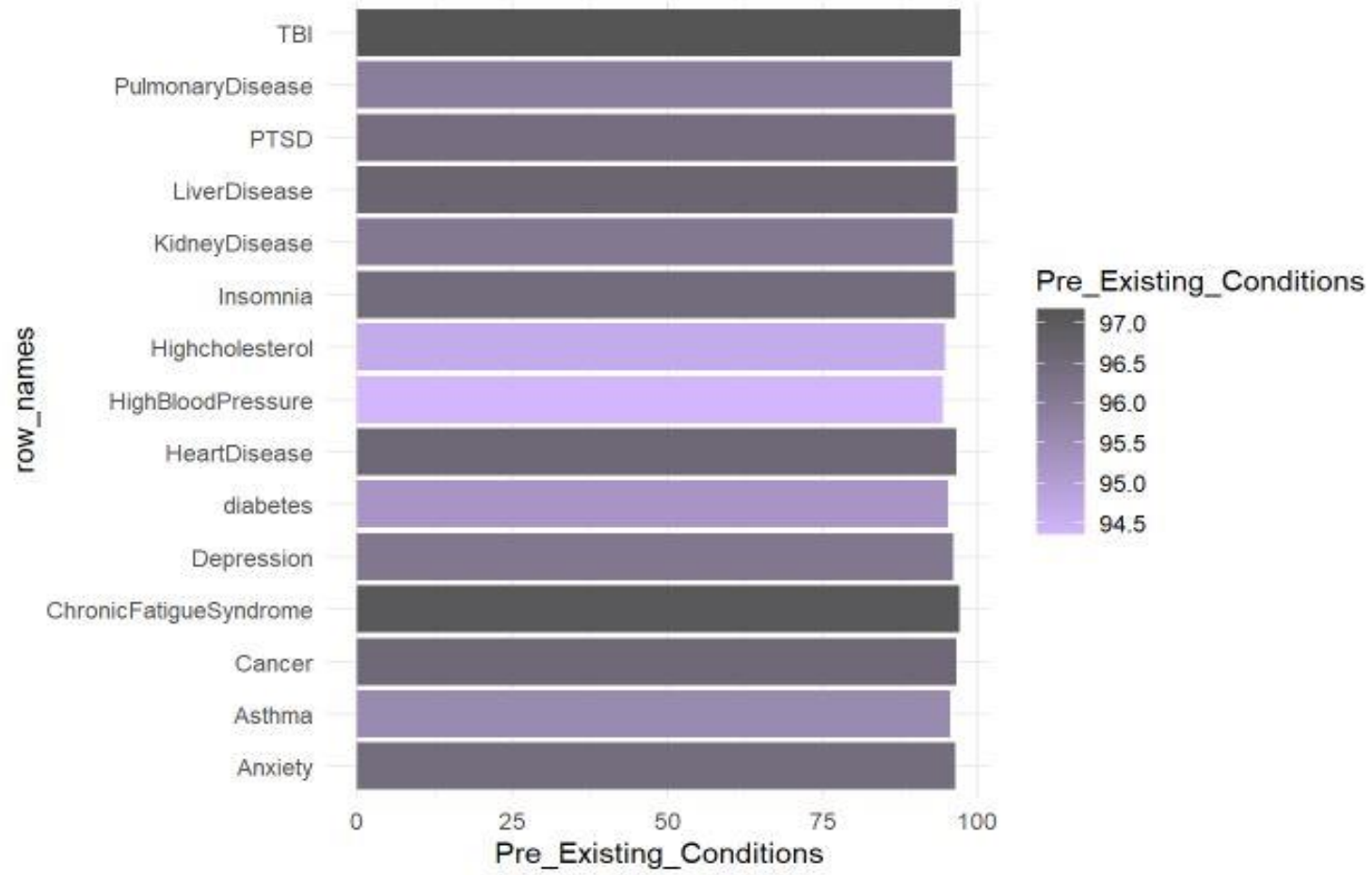


Financial impacts of Long COVID illness (Percentage selecting each condition)



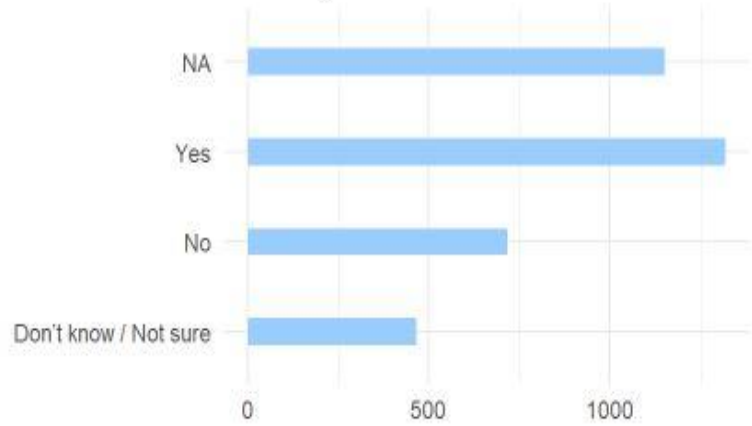
This question was only asked to persons who answered they had long COVID (??).

Pre-Existing Conditions

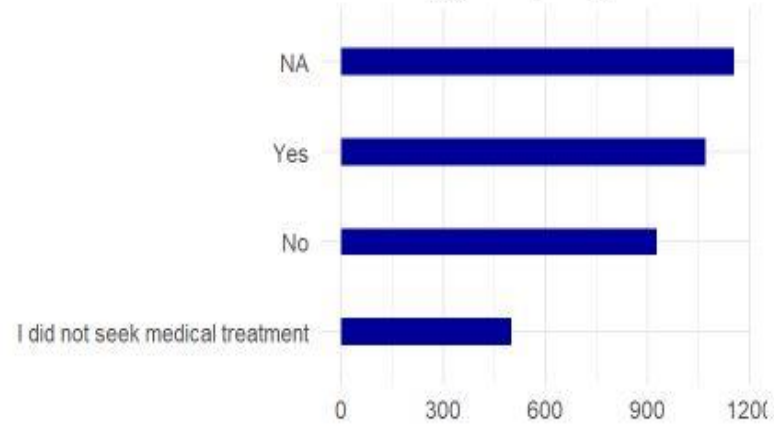


Health Questions

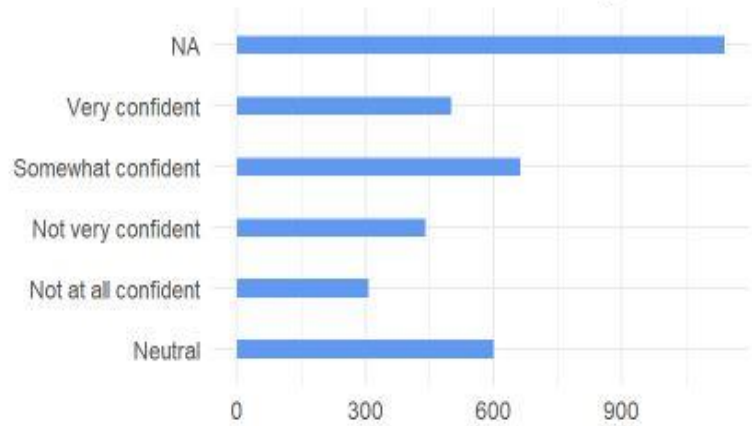
Primary Care Provider



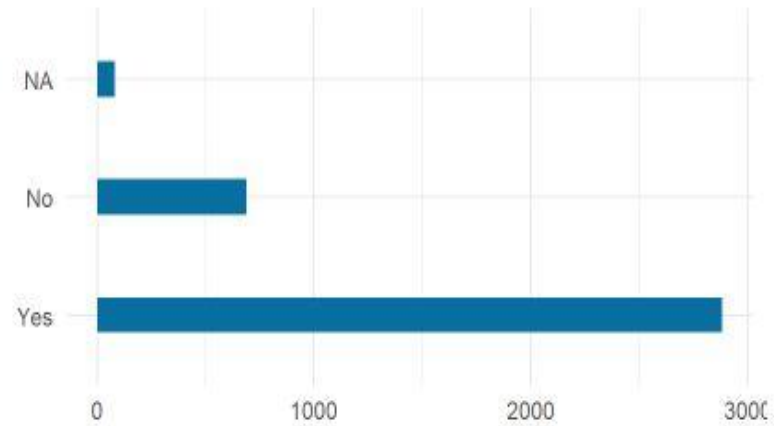
Difficulty getting diagnosed



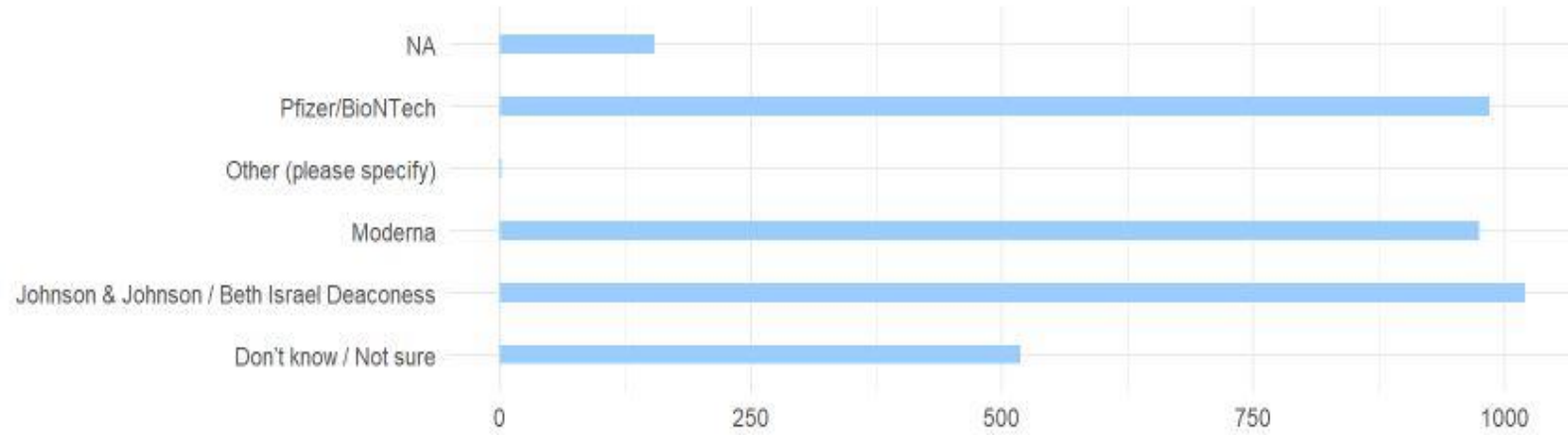
Confidence in doctor LC diagnosis



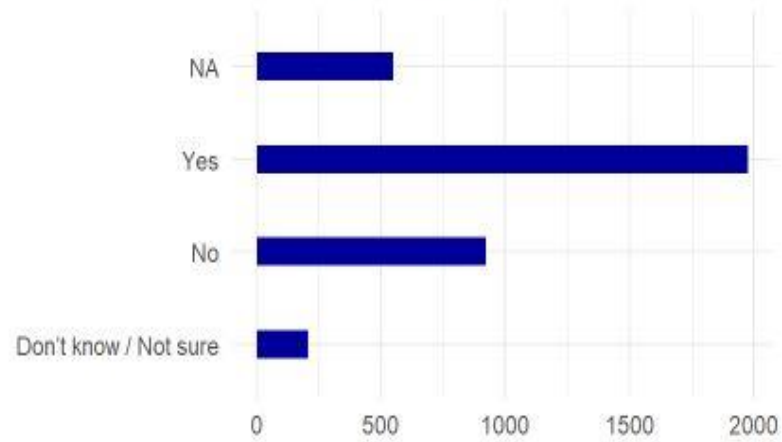
Vaccinated?



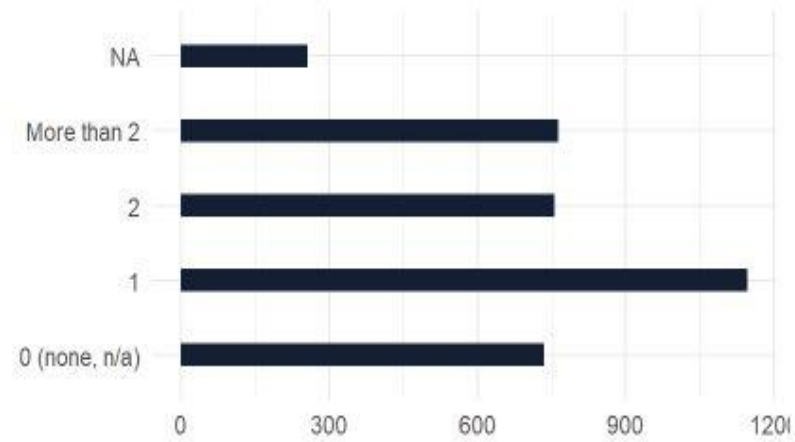
COVID Vaccine Brand?



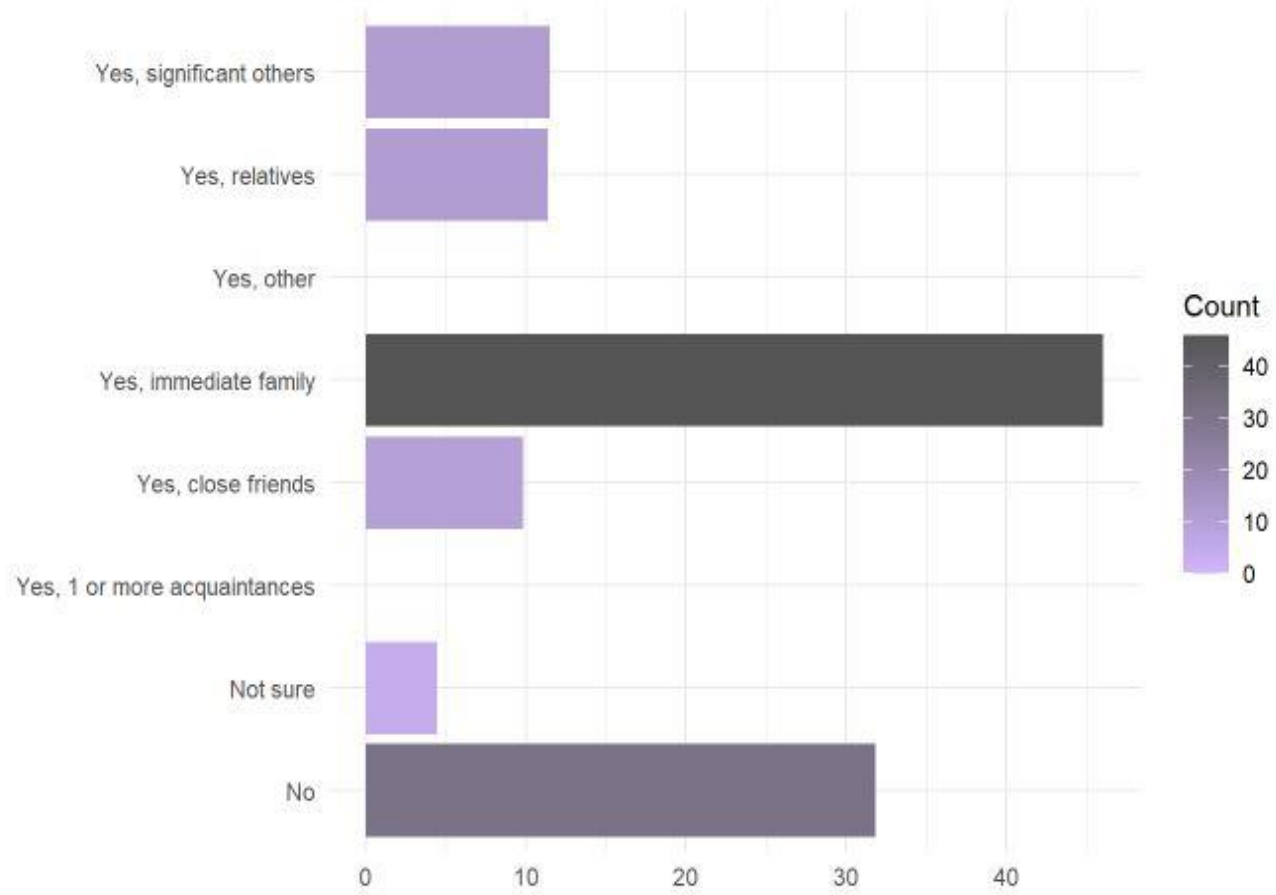
Covid Booster Ever



Number of Boosters



Bereavement Table



ANY
QUESTIONS
?

A blackboard with white chalk text that reads "ANY QUESTIONS?". A small white icon is in the bottom left corner.

Presenters



Karrée-Lyn Gordon, Ed.D, MHS

Yunilda Perez, MPH

**NYSPHC FELLOWSHIP
WESTCHESTER COUNTY DEPARTMENT OF HEALTH**

References:

- ▶ [Long COVID | NIH COVID-19 Research](#)
- ▶ [What is the difference between random sampling and convenience sampling? \(scribbr.com\)](#)
- ▶ [Revised Common Rule Q&As | HHS.gov](#)
- ▶ University of Kansas Lisa Hallberg (2022)

