Vaccine Hesitancy in the Greater Lehigh Valley: Perspectives & Proposals

Executive Summary

OVERVIEW

▸ Conducting quantitative and qualitative research to discover the reasons behind COVID-19 vaccination hesitancy

THE PROBLEM

▸ COVID-19 is still spreading and affecting millions all over the world despite it being almost three years since the outbreak of the pandemic

OUR APPROACH

▸ Used a dataset from St Luke's to create an econometric model that predicts vaccine status based on demographic categories

▸ Discovered the top three zip codes in the Greater Lehigh Valley with the lowest vaccination rates

▸ Focused on specific races/et non and conducted qualitative interviews at local community centers in Easton, PA

▸ Transcribed interviews and searched for common threads connecting vaccine hesitancy justification

SOME PROPOSED SOLUTIONS?

▸ Streamline and focus vaccine information distributed by SLUHN

▸ Improve accessibility to support wider access to obtaining vaccines

▸ Host events that partner with community centers to broaden opportunities to receive vaccines

LOOKING AHEAD TO THE FUTURE?

▸ Engage PCPs and healthcare providers more directly

▸ Enhance and broaden the targeted educational avenues surrounding misconceptions about vaccines

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Meet the Team

Meet the Team: Students

Sidharth Chaggar '23

Sidharth Chaggar is a senior History and Economics double major from London in the UK. Outside of his classes, Sidharth is an EXCEL Scholar researching Imperial Japan with Professor Barclay in the History Department and, a Peer tutor for the Academic Resource Hub. Sidharth is a member of Lafayette's Consulting Group, and the club soccer team. Currently the Vice President of ISA (the International Students Association)

Onab Falak '24

Onab Falak is a junior double majoring in international affairs and government and law from Alexandria, VA. Outside of Technology Clinic, Onab is external chair for the McKelvy Scholars Program, a staff writer for the Lafayette student newspaper, a First-Generation mentor, and a member of Student Government. Onab is also lead coordinator for Kaleidoscope, a social justice peer advocacy group on campus.

Meet the Team: Students

Julia Gesner '24

Julia Gesner is a junior pre-med Neuroscience major from Florham Park, New Jersey. Outside of Technology Clinic, Julia is a certified Emergency Medical Technician, Intro to Psychology Lab TA, Peer Tutor for the Academic Resource Hub, does Neuroscience research with Professor Lisa Gabel, is the Lafayette Campus Manager for the apparel company Fresh Prints and is a member of Alpha Gamma Delta. She is also the current Vice President of Lafayette College's EMS Club and the Pre Health Professions Society.

Shirley Liu '23

Shirley Liu is a senior English major and philosophy minor from Washington, DC. They applied to Technology Clinic because they are passionate about using research to facilitate community empowerment. Outside of classes, they are a managing editor for the Lafayette student newspaper, the captain of the speech team, and co-president of the McKelvy House, a group of scholars who engage in weekly, meaningful discussions.

Meet the Team: Students

Ali Sultan Sikandar '23

Ali Sultan is a senior CS major with Economics minor from Lahore Pakistan. Ali hopes to pursue a career in FinTech when he graduates. On campus, Ali serves on the board of International Student Association, and Muslim Student Association. He is also a Resident Advisor and tutor for introductory Computer Science courses.
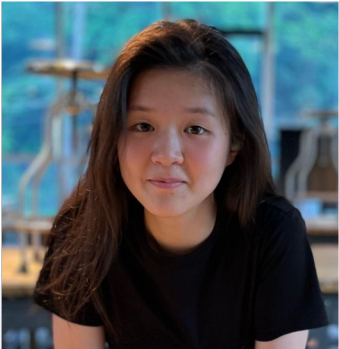
Jiayi (Clara) Ye '23

Jiayi (Clara) Ye is a senior psychology major from Shanghai, China. Outside of Classes, Clara Ye is the Peer Student Mentor under Psychology Department, curation assistant in Art Department, and carrying her honors thesis on neuro-aesthetics. Hoping to pursue a career in public health, she is now starting a company in Shanghai for mental health, psychology, public education, and art therapy services.

Meet the Team: Facilitators

Professor Joaquín Gómez-Miñambres, PhD

Joaquin Gomez-Minambres is Associate Professor of Economics at Lafayette College. He specializes in behavioral and experimental economics. His research focuses on a variety of topics including personnel economics, choice architecture, and food waste. He is originally from Spain and currently lives in Palmer township.

Professor Lawrence Malinconico, PhD

Professor Malinconico is in his 33rd year as a faculty member in the Department of Geology and Environmental Geosciences at Lafayette and is the Director of the Technology Clinic. His research areas involve volcanology, tectonics and geophysics and this has taken him to over 20 different countries. As director of the Lafayette College Technology Clinic and faculty facilitator Professor Malinconico has been involved in over 25 different projects.

Professor Nancy McCreary Waters, PhD

Dr. Nancy Waters is an Associate Professor of Biology and completing her 38th year at the College. Involved with Tech Clinic nearly since inception, she has facilitated for St Luke's, the 2nd Trout Farm project, and assisted ad hoc for a half dozen added Tech Clinics. Her expertise is in ecology, freshwater biology and environmental public health. For the past decade she also has served as the Faculty Health Professions Advisor.

Background

What Is Tech Clinic?

"Lafayette College's Technology Clinic is an interdisciplinary course that allows students to gain practical experiences whilst helping to solve a pressing issue in the local community. The 2022 Tech Clinic team consists of six students from various departments of the College, facilitated by three professors for two consecutive semesters. These students and professors bring a variety of skills, experiences, and perspectives that enable authentic interdisciplinarity."

Our Client and Partner

https://www.prnewswire.com/news-releases/st-lukes-university-health-networks-150th-anniversary-301545260.html

Our Mission

Brainstorm and create strategies to combat vaccine hesitancy in the Lehigh Valley.

First Semester

Vaccine Hesitancy

▸ **Our definition:** The reluctance of people to receive recommended, available, and demonstrably safe vaccines, particularly for COVID-19

▸ **We need to understand:**
  ▹ Whether people are willing to be vaccinated
  ▹ Their rationale for being willing or unwilling to do so

The 5C Model

What is it?

- **Confidence:** Trust in vaccines and the system that delivers them
- **Complacency:** Not perceiving diseases as high risk
- **Constraints:** Structural and psychological barriers
- **Calculation:** Engagement in extensive information searching
- **Collective responsibility:** Willingness to protect others

How to address each C:

- **Low confidence:** Increase trust in vaccines and medical system
- **High complacency:** Emphasize the risk of the disease
- **Constraints:** Remove barriers that are preventing vaccination
- **High calculation:** Address misinformation via trusted sources
- **Low collective responsibility:** Highlight individual benefits of vaccine

Vaccine Hesitancy in the Lehigh Valley

Lehigh County:

- 10.82% vaccine hesitant
- Social Vulnerability Index: 0.63 (high)

Northampton County:

- 9.77% vaccine hesitant
- Social Vulnerability Index: 0.29 (low)

This suggests a focus on Lehigh County.

Race-Dependent Vaccine Profile

% of population with at least one vaccine dose as of 12/07/22

County	% Vaccinated with at least one dose	% White With at Least One Vaccine Dose	% African American With at Least One Vaccine Dose	% Asian/Pacific Islander With at Least One Vaccine Dose	% Native American People With at Least One Vaccine Dose
Northampton County	**77%**	**62.10%**	**47.30%**	**53.50%**	**28%**
Lehigh County	**82.40%**	**61.40%**	**40.40%**	**55.70%**	**15.90%**

Black and African Americans & Vaccine Hesitancy

Reasons

- Historical mistrust of government and pharmaceutical companies
- Low confidence in vaccination
- Social media misinformation

Solutions

- Building trust via one-on-one conversations
- Resource targeting programs
  - Faith and community leaders
  - Culturally grounded interventions
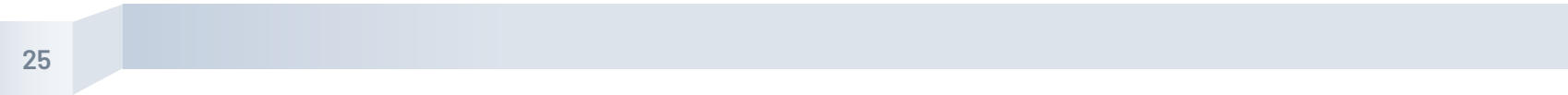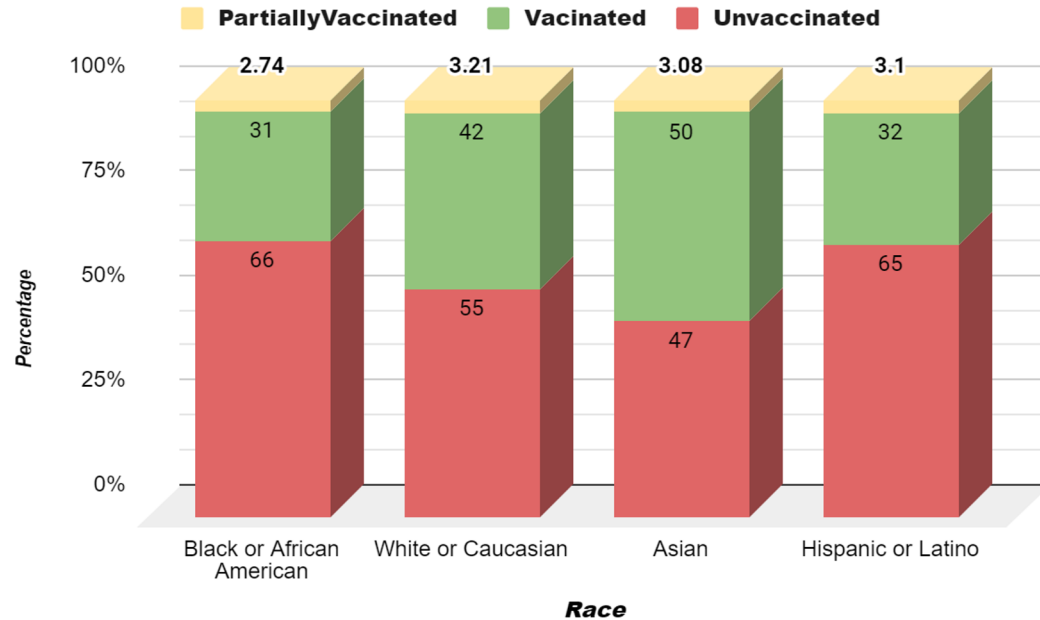
Vaccination ratios amongst different races

Quantitative Approach: SLUHN Data Analysis

Highest Unvaccinated Communities

Highest Vaccinated Communities
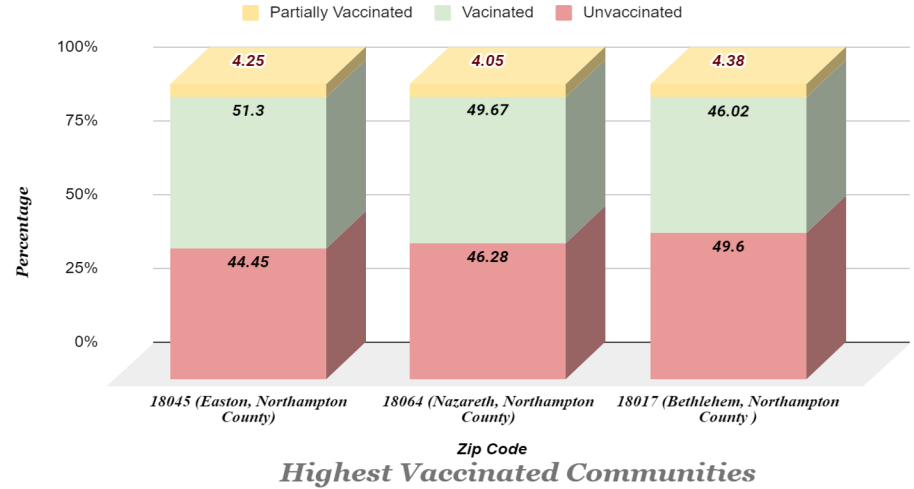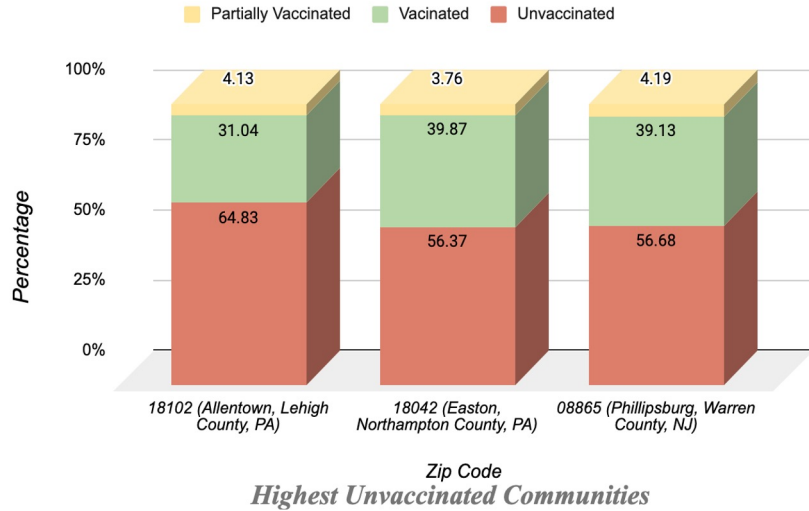
Quantitative Approach: SLUHN Data Analysis

Linear Probability Regression Model based on St Luke's data

Dependent variable: Vaccination	Model 1	Model 2
(Intercept)	0.306* (0.011)	-0.045* (0.005)
Covid (D)	-0.078* (0.002)	-0.037* (0.002)
PCP (D)	0.171* (0.001)	0.15* (0.001)
Age (years)		0.008* (0.0001)
Age^2 (years^2)		-0.000028* (0.000001)
Male (D)		-0.013* (0.001)
Religious (D)		0.021* (0.001)
Area Income ($10,000)		0.0068* (0.0002)
Observations	605,863	599,415

What Affects the Likelihood of Getting Vaccinated?

- A 10 year age cohort increases the likelihood of vaccination by 8%
- But the marginal increase to vaccination status declines with age, shown by the coefficient on Age2
- Religious affiliation enhances the likelihood of vaccination by 2.1%
- Male patients are 1.3% less likely to be vaccinated
- Testing COVID-19 positive within the last year produces a 3.7% likely decline in vaccination
- Having a PCP increases the likelihood of vaccination by 15%
- A $10,000 increase in median household income within a given zip code raises vaccination likelihood by 0.68%
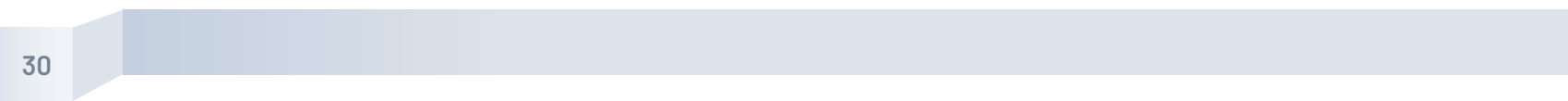
Second Semester

Qualitative Approach: Interview Timeline

Oct 14
Interview Rubric Setup
Semi-structured interview questions:
- Knowledge questions
- "Factors that Impact" questions
- Feedback about Future COVID-19 Vaccine Programs

Conduct Interviews
- Easton Neighborhood Center
- Easton Area Community Center

Oct - Nov

Nov 28
Transcript Analysis
- Interview transcript transcribe
- Transcript Taxonomy

Data Analysis

Dec 2

Our team conducting interviews at the Easton Area Neighborhood Center and the Easton Area Community Center

Easton Area Neighborhood Center Demographics

Racial breakdown

- **Hispanic:** 52.4%
- **Indigenous & Native American:** 0.3%
- **Asian:** 1.4%
- **Black & African American:** 19.8%
- **White:** 25.2%
- **Multi-racial:** 0.4%
- **Pacific Islander:** 0.5%

Geographic breakdown

- **Easton and its immediate suburbs:** 92.4%
- **Bethlehem area:** 2.0%
- **Northampton County:** 4.4%
- **Lehigh County:** 1.2%

Transcription of Qualitative Interviews

Data from Qualitative Interviews

- All interviews were recorded with consent of participants on a device, then transferred to Otter software for transcription of recordings that mapped the entire conversation
- Each resultant transcript was manually inspected and edited to insure accuracy in the interpretation of certain words and phrases
- All interview transcripts were subsequently encoded and analyzed by all team members to identify common trends in the data
- Common characteristics were identified and scored for frequency of use, e.g., "self preservation" "misinformation of vaccine"

Transcript Taxonomy

Procedures

▸ First, we finalized a list of characteristics within all the transcripts. The characteristics that were independently identified by every student and generated were compared, and those that were similar were combined. Those that differed were resolved through discussion and combined into a mutually agreed-upon set of characteristics.

▸ Three groups of two students coded all the transcripts in rotation again according to the identified characteristics. Once all the transcripts were coded, each characteristic was assigned a numerical value depending on the frequency with which it appeared in each transcript. The qualitative responses were thus converted into numeric data and then entered into the quantitative database to examine how and to what extent the interview transcripts reflects the rationale why or why not people got vaccinated.

Common Characteristics Identified

Misinformation of vaccine:
"The vaccine won't work"

Self-preservation:
To protect oneself

Vaccine Mandate:
Required for working

Bad personal experience:
"I've gotten quite sick"

History of getting vaccines:
"I've gotten the flu vaccine before COVID"

Underlying Health Conditions:
Pregnancies

Misinformation of COVID:
"I got COVID already so I have immunity"

Distrust of science:
Didn't test enough, vaccine came out too fast

Positive sentiment:
Satisfied with the way things have happened

Family:
Any motivations related to family

Community:
Any motivations related to the communities

Accessibility:
Language, transportation

Age:
Motivations related to age

Findings

A summary of the interviews
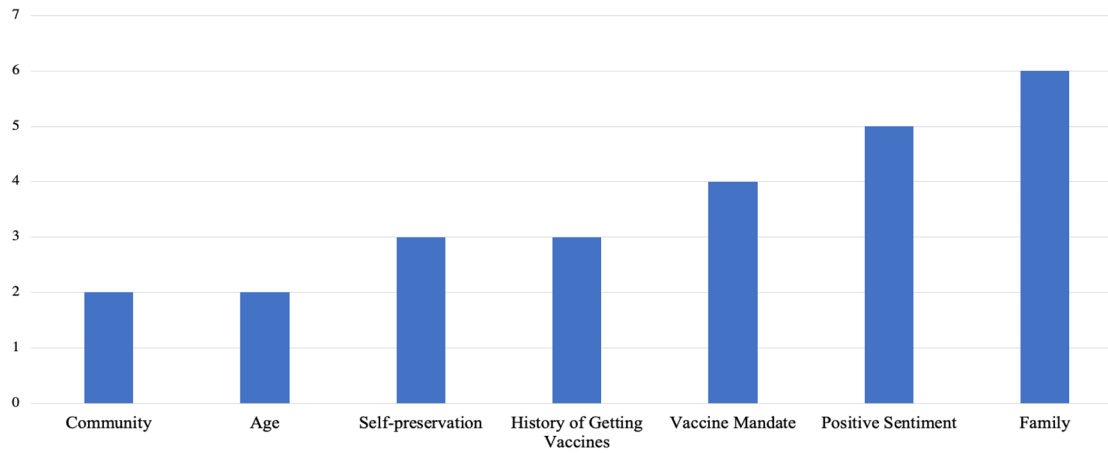
Fig 1. Frequencies of reasoning regarding why the interviewee and the people around them **got a vaccine / booster**
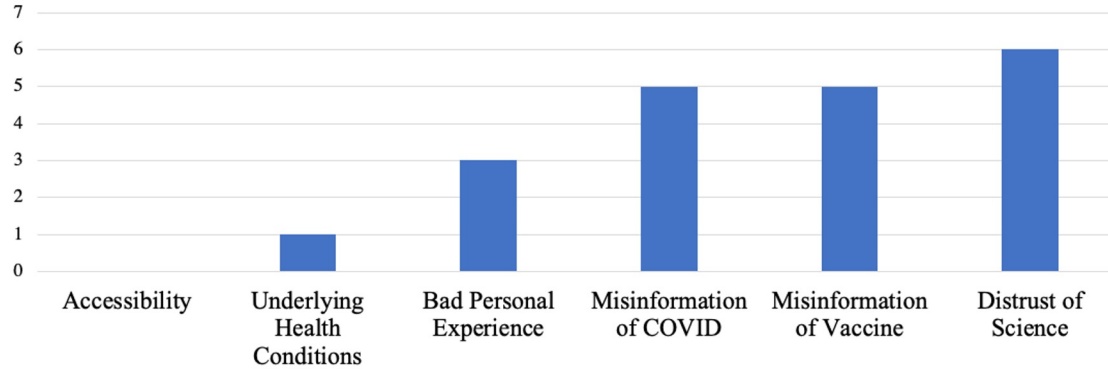
Fig 2. Frequencies of reasoning regarding why the interviewee and the people around them **did not get a vaccine / booster**

Rationale for Refusing Vaccine/Booster

35%
Received a booster

"She had Covid. She won't take it. A lot of people think that it's gonna hurt them more than it can help"

"The vaccine won't work"

"I've gotten quite sick [after vaccination], they took me to hospital"

"I don't think I need it"

"I didn't think it was real"

Rationale for Getting Vaccine/Booster

"If it is going to help me I said I'll take it regardless"

"The family is big ….The children are in the school, it's good for them"

"Being safe"

"I had to because of my job"

"I'm scared of death"

"Stay healthy and live so I can see him grow up"

Recommendations?

Framing of Vaccine Value:

- ▸ Shift away from community benefit to individual benefit

Vaccine Information:

- ▸ Upgrade, streamline and focus pamphlets to improve simplicity and make bilingually accessible

LAFAYETTE

Am I up to date with my COVID-19 vaccine and boosters?

You are **up to date** if you have completed a COVID-19 vaccine primary series and received the most recent booster dose recommended for you by CDC. Visit **tinyurl.com/BoostersRec** to see what booster dose is recommended for you.

What are the updated (bivalent) boosters?

The bivalent boosters protect against **both** the original virus that causes COVID-19 and the Omicron variant BA.4 and BA.5.

How do I get my vaccine or booster?

Visit **vaccines.gov** to schedule your **free** vaccine or booster shot at a location near you. Many locations also offer free masks via the federal mask distribution program.

LAFAYETTE

¿Recibí mi vacuna y dosis de refuerzos contra el COVID-19?

Está al día si completó una serie primaria de vacunas contra el COVID-19 y recibió la dosis de refuerzo más reciente recomendada por CDC. Visite tinyurl.com/BoostersRec para ver qué dosis de refuerzo se recomienda para usted.

¿Qué son los refuerzos actualizados (bivalentes)?

Los refuerzos bivalentes protegen contra el virus original que causa el COVID-19 y las variantes BA.4 y BA.5 de Omicron.

¿Cómo obtengo mi vacuna o refuerzo?

Visite vacunas.gov para programar su vacuna gratuita o refuerzo en un lugar cercano a usted. Muchos lugares también ofrecen máscaras gratis debido al programa federal de distribución de máscaras.

Recommendations?

Accessibility

- Many older interviewees indicated that they relied on others to transport them to vaccine appointments.
  - Palmeri
  - Eldercare Locator

St Luke's in the community

- Easton Area Community Center & Neighbourhood Center
- Easton Area School District
- Engaging with PCP's

Acknowledgements

Before we conclude, the Team wishes to express sincere thanks for those who generously shared time and provided support to us and to this project:

Kira Bub, *Associate Vice President of Marketing and Public Relations at St. Luke's University Health Network*

Samuel Kennedy, *Director of Corporate Communications at St. Luke's University Health Network*

Lisa Campbell, *Associate Director of Easton Area Community Center*

Ross Marcus, *Former Executive Director of the Easton Area Neighborhood Center*

Professor Jennifer Talarico, *Psychology Department Head*

Professor John S. Shaw. III, *Associate Professor of Psychology*

Professor Mann, *Assistant Professor of Psychology*

John Clark, *Geospatial Services Librarian*

Professor Michael Nees, *Chair of the IRB & Associate Professor of Psychology*

The businesses of Downtown Easton

The Easton Area Community Center

The IRB Committee

Appendices

#	Gender	Age	Age Group	ZIP	City	County	State		Language	Ethnicity	Race	Religion	Vacc Status		Status		#
7	Male	33	25-39 Years	18102	Allentown	Lehigh	PA	Y	Spanish	Hispanic or Latino	Other Race	Non-Denominational	Unvacc	N	Activated	No	1
8	Male	14	12-17 Years	18091	Wind Gap	Northampton	PA	N	None Listed	None Listed	None Listed	None Listed	Unvacc	N	Not Activated	No	1
9	Female	88	75+ Years	18040	Easton	Northampton	PA	Y	Bengali	Not Hispanic or Latino or Spanish	Other Race	Muslim	Completed	N	Activated	No	1
10	Male	23	18-24 Years	18052	Whitehall	Lehigh	PA	N	English	Not Hispanic or Latino or Spanish	Other Race	Unknown	Completed	N	Activated	Yes	1
11	Female	36	25-39 Years	18067	Northampton	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	None	Unvacc	N	Activated	Yes	2
12	Female	75	75+ Years	18042	Easton	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Christian	Unvacc	N	Activated	No	3
13	Male	63	50-64 Years	18040	Easton	Northampton	PA	N	English	Not Hispanic or Latino or Spanish	Asian	None	Unvacc	N	Activated	No	1
14	Female	69	65-74 Years	18017	Bethlehem	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Episcopalian	Completed	Y	Activated	No	3
15	Male	71	65-74 Years	8865	Phillipsburg	Warren	NJ	Y	English	Hispanic or Latino	White or Caucasian	None	Completed	N	Activated	No	1
16	Female	66	65-74 Years	18951	Quakertown	Bucks	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	None	Unvacc	N	Not Activated	No	7
17	Male	64	50-64 Years	18015	Bethlehem	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Christian	Completed	N	Not Activated	No	3
18	Male	57	50-64 Years	18054	Green Lane	Montgomery	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Unknown	Unvacc	N	Not Activated	No	3
19	Male	39	25-39 Years	19106	Philadelphia	Philadelphia	PA	N	Unknown	None Listed	None Listed	Unknown	Completed	N	Not Activated	No	1
20	Female	75	75+ Years	18302	East Stroudsburg	Monroe	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Catholic	Completed	N	Activated	No	2
21	Female	87	75+ Years	18951	Quakertown	Bucks	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Patient Refused	Completed	N	Not Activated	No	1
22	Female	64	50-64 Years	18235	Lehighton	Carbon	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Lutheran	Completed	Y	Activated	No	2
23	Female	49	40-49 Years	18954	Richboro	Bucks	PA	N	None Listed	None Listed	None Listed	None Listed	Unvacc	N	Activated	No	1
24	Male	61	50-64 Years	18106	Allentown	Lehigh	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Patient Refused	Partial	N	Not Activated	No	1
25	Female	7	5-11 Years	18058	Kunkletown	Monroe	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Patient Refused	Unvacc	N	Not Activated	No	2
26	Male	90	75+ Years	18104	Allentown	Lehigh	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	None Listed	Unvacc	N	Not Activated	No	1
27	Female	66	65-74 Years	18078	Schnecksville	Lehigh	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Catholic	Unvacc	N	Not Activated	No	1
28	Female	8	5-11 Years	18015	Bethlehem	Northampton	PA	Y	Other	Hispanic or Latino	White or Caucasian	None	Unvacc	N	Activated	No	1
29	Male	35	25-39 Years	18013	Bangor	Northampton	PA	Y	English	None Listed	None Listed	Unknown	Completed	N	Activated	No	1
30	Female	46	40-49 Years	18040	Easton	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	UCC/PRE	Completed	Y	Activated	No	1
31	Female	40	40-49 Years	18017	Bethlehem	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Christian	Unvacc	N	Activated	No	3
32	Female	84	75+ Years	18040	Easton	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Catholic	Completed	N	Activated	No	1
33	Male	40	40-49 Years	18102	Allentown	Lehigh	PA	Y	English	Not Hispanic or Latino or Spanish	Black or African American	Non-Denominational	Unvacc	N	Not Activated	No	1
34	Male	20	18-24 Years	17981	Tremont	Schuylkill	PA	N	English	Not Hispanic or Latino or Spanish	White or Caucasian	Catholic	Completed	N	Not Activated	No	1
35	Male	18	18-24 Years	18951	Quakertown	Bucks	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Christian	Completed	Y	Activated	No	1
36	Female	74	65-74 Years	18038	Danielsville	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	None	Unvacc	N	Not Activated	No	1
37	Male	66	65-74 Years	18072	Pen Argyl	Northampton	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Catholic	Completed	Y	Activated	Yes	1
38	Female	35	25-39 Years	18018	Bethlehem	Lehigh	PA	N	English	Not Hispanic or Latino or Spanish	White or Caucasian	Protestant	Completed	N	Not Activated	No	1
39	Male	9	5-11 Years	18078	Schnecksville	Lehigh	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Christian	Unvacc	N	Not Activated	No	1
40	Female	59	50-64 Years	18017	Bethlehem	Northampton	PA	N	English	Not Hispanic or Latino or Spanish	White or Caucasian	Catholic	Unvacc	N	Activated	No	1
41	Female	12	12-17 Years	18104	Allentown	Lehigh	PA	Y	Spanish	Hispanic or Latino	Patient Refused/Declined to Answer	Patient Refused	Completed	N	Activated	No	1
42	Female	63	50-64 Years	7882	Washington	Warren	NJ	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Non-Denominational	Unvacc	N	Not Activated	No	1
43	Female	41	40-49 Years	18942	Ottsville	Bucks	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	None	Unvacc	N	Activated	No	2
44	Male	60	50-64 Years	7882	Washington	Warren	NJ	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Other	Completed	Y	Activated	No	1
45	Female	38	25-39 Years	18428	Hawley	Pike	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Unknown	Unvacc	N	Not Activated	No	1
46	Male	44	40-49 Years	17983	Valley View	Schuylkill	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	None	Unvacc	N	Not Activated	No	1
47	Male	45	40-49 Years	18301	East Stroudsburg	Monroe	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	Christian	Unvacc	N	Activated	No	1
48	Female	43	40-49 Years	18015	Bethlehem	Northampton	PA	Y	English	Hispanic or Latino	Patient Refused/Declined to Answer	None	Unvacc	N	Activated	No	1
49	Female	36	25-39 Years	18104	Allentown	Lehigh	PA	Y	English	None Listed	None Listed	Unknown	Completed	N	Not Activated	No	1
50	Male	5	5-11 Years	18944	Perkasie	Bucks	PA	Y	English	Not Hispanic or Latino or Spanish	White or Caucasian	None	Completed	N	Not Activated	No	1
51	Female	16	12-17 Years	18018	Bethlehem	Lehigh	PA	N	English	Not Hispanic or Latino or Spanish	White or Caucasian	None Listed	Completed	N	Not Activated	No	1
52	Female	92	75+ Years	17901	Pottsville	Schuylkill	PA	N	English	Not Hispanic or Latino or Spanish	White or Caucasian	Unknown	Completed	N	Not Activated	No	1
53	Female	49	40-49 Years	18229	Jim Thorpe	Carbon	PA	Y	English	Hispanic or Latino	White or Caucasian	None	Unvacc	N	Not Activated	No	1

Appendix B: Qualitative Approach Materials

Uploading interview audio

1. Log onto otter.ai.
   a. Username: liushi@lafayette.edu
   b. Password: TheLafayette22
2. Press "Import" on the top right and upload the audio file you want.
3. It takes a while to process/transcribe so go make a cup of tea or something. You can have Otter notify your desktop once it's finished.

Transcribing

1. Go to the transcript you are transcribing.
2. Press the three buttons on the top right.
3. Click "Export."
   a. File format: clipboard
   b. Checked: "Combine paragraphs of the same speaker," "Remove Otter branding"
   c. Unchecked: "Show speaker names," "Show timestamps," "Combine all paragraphs into one"
4. Now the text is copied to your clipboard. Make a new document in the interview folder of the interview and name it "Interview_[insert number]_transcript." (Ex: Interview_009_transcript). Paste the copied text into the doc.
5. Now, listen through the transcription on Otter and edit the doc as you listen to try and make it as accurate as possible. This process is boring but important. As you transcribe, add who is speaking in a line before the paragraph, like so:

SL:
So our first question is I'm just are you vaccinated? Yes. And do you have any? Have you gotten the booster shots as well? Yes. How many booster shots have you gotten to two? Okay, um, can you tell us a little bit about why you decided to get vaccinated and why you decided to get boosted?

001:
While everybody else was nursing my age? You know, when you get 75, you know? Yeah.

Sample Group Assignments:

Round 1	Sid & Ali	Onab & Shirley	Clara & Julia
	Interview (individual) 1 - 7	Interview (individual) 8 - 14	Interview (individual) 15 - 20

Round 2	Sid & Shirley	Ali & Julia	Onab & Clara
	Interview (individual) 15 - 20	Interview (individual) 8 - 14	Interview (individual) 1 - 7

1. You and a partner will **independently** code each of those transcripts according to ____ (characteristics / word list / theme / word cloud) each round as indicated:
   1. Download the Tech Clinic Qualitative Coding Sheet posted in the shared folder
      a. Reproduce simple frequencies within each coding category.
      b. In addition to assigning each report to a given category within each scheme, you will also indicate the confidence you have in making that assignment on a scale from 1 (low) to 3 (high).

2. Once both partners have completed coding ALL the transcripts, meet to compare your results.
   a. Make a note of how many categories you agree on (you are welcome to discuss your confidence in each rating, but for now, just record whether you agree or disagree on the *category* assignment)
   b. "Resolve disagreements through discussion" - in other words, when you and your partner disagree on a category assignment, discuss your confidence and how you came to your conclusion (e.g., which aspects of the transcript were most influential, was it the presence or absence of a given characteristic that tipped your decision, etc.). One (or both of you) should change your original assignment such that you both agree on the final conclusion (if you cannot agree, mark that record, too, and describe the crux of the disagreement).
   c. **Then and only then for round 2, compare your category assignments to the group that previously has assigned with the same set of transcripts. Did you successfully reproduce their qualitative results? If not, figure out an agreement on the stats.**

3. **Only put the mutually agreed stats on the google sheet.**

4. The Discussion section of the report will be light on the statistical comparisons and heavy on your subjective experience of (re)coding the transcript. Was it easier or harder to produce the qualitative analysis? Did you and your partner mostly agree on your codes? Did the level of agreement depend on the specific coding scheme? What are some difficulties? (take some notes?)

Sample Template:

Date of interview:
Interviewer's name:
Location:
Interviewee's vaccination Status:
Name (may or may not need it):
Gender (may or may not need it):
Age (may or may not need it):
Family Structure (may or may not need it)

(All sample questions in blue)
Orienting Question(s)
- We would like to know the world from your point of view / We would like to know what you know in the way that you know it / We want to understand the meaning of your experience (with covid vaccination / boosters), to feel things as you feel them. Will you be my mentor and help me understand?

Main Question(s)
- Ethnographic Information (What are their relationships with the local community they have attended? What are some important events they will attend in the community? How's their relationship with the people there?)
  o Tell me about your typical day at the community here
  o Tell me about a typical event / gathering with the people here

- Knowledge Questions (What they and their community know about Covid, vaccination and boosters)
  o I'd like to hear your thoughts about vaccination in general.
    ▪ What positive things come to mind when you think about vaccination?
    ▪ What negative things come to mind when you think about vaccination?
  o I'd like to hear your thoughts about Covid vaccination in general.
    ▪ What, if anything, have you heard about the process of how COVID-19 vaccines are being developed?
  o Who do you talk to about vaccines?
  o What do you talk about when you talk about vaccines?
  o Where do you get information about vaccines?

- "Factors that Impact" Questions:
  o How would you describe your friend/family/people in your community attitude about getting the COVID-19 vaccination?
  o If you have received a vaccine, can you describe your experience when you've received a vaccine?
    ▪ What, if any unpleasant experiences have you had getting vaccinated?
  o How easy or difficult would it have been for you to get the vaccine?
  o What challenges do you think there might be to provide COVID-19 vaccine in your community?

Appendix C: Voyant Tools Analysis

[Link to the Voyant Tools corpus](#)

Appendix D: Snapshot of Transcripts

SL:
Um, my first question is, are you vaccinated? Okay, um, do you have reasons for why you're not vaccinated?

007:
I didn't believe

I didn't think it was real.

SL:
Is there like anything like specific like, you don't think it'll work? Or you don't trust it? Or

007:
I didn't think it was gonna do anything.

It was it was stupid.

SL:
Yeah, yeah. Is there anything that could have been fixed about, like about the vaccine that would convince you to take it?

Nothing. What did they like took more time to like, develop it like in a few years or something? Yeah.

007:
Maybe if they wouldn't pressure people.

SL:
Or less pressure to take it. Yeah. Yeah. Like what kind of pressure do you mean?

007:

Like, have you seen like in the beginning, like if you were not vaccinated, you're not supposed to go to restaurants and stores, like that pressure. Yeah. That's kind of weird.

SL:
Yeah. So those are basically I think those are like most of the questions we had, but do you have any other thoughts about vaccination that you want to share? I really just want to hear you and like your thoughts and stuff. Okay. Well, thank you so much for talking to us.

Reviewed and edited transcript of Interview 007

SL
Hey so what's your name?

010
Marvin

SL
Marvin. So you said you got your third booster?

010
Third booster today

SL
That's awesome. So what are your thoughts on vaccination in general?

010
Everyone should take it, get immunized

SL
What's like your motivation for getting vaccinated?

010
Stay healthy for this young man. Stay healthy and live so I can see him grow up right?

SL
Is there anyone in your life who isnt like doesnt want to get vaccinated or is like hesitant to get the vaccination?

010
Yeah his father

SL
Do you know what the reasons are for him to be hesitant?

010

Reviewed and edited transcript of Interview 010

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