

# *ACIC Annual Conference-2022*

## *Vaccines Practice Behavior Among Refugees and Immigrants*



**Pennsylvania Chapter**

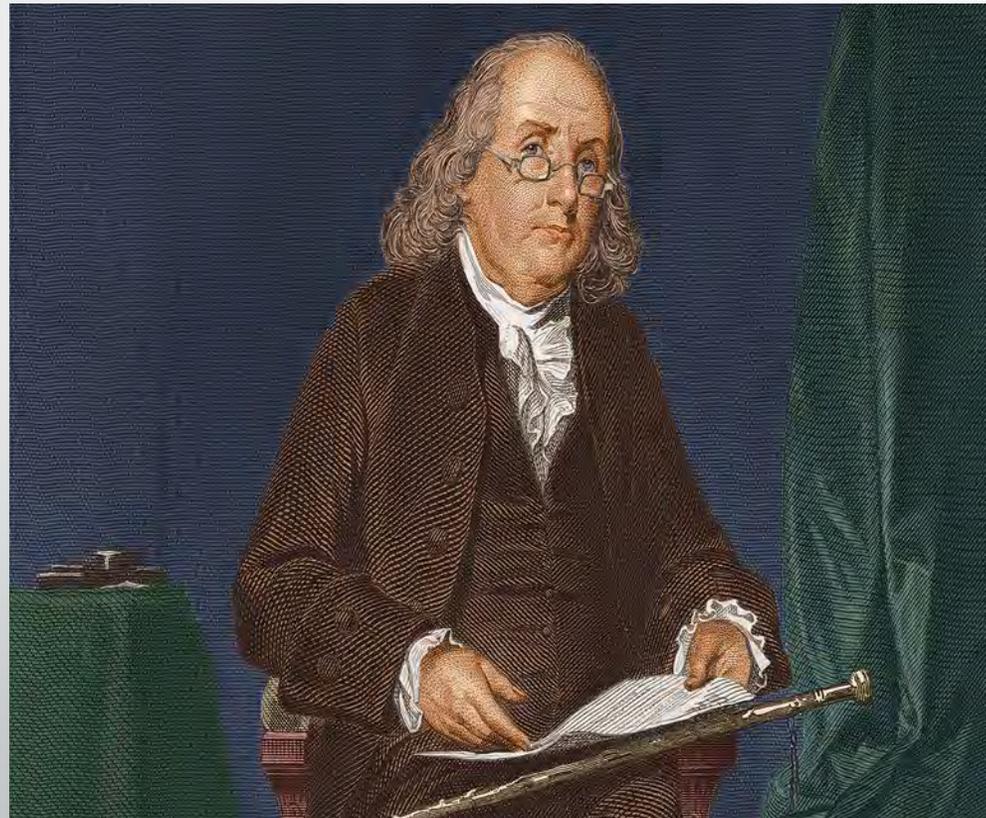
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Benjamin Franklin (in 1735) stated ***“An Ounce of Prevention is worth a Pound of Cure”***



# Objectives

*By the end of the presentation, the attendees will achieve the following:*

- Examine knowledge, beliefs, values and attitudes related to vaccines focusing on Covid-19 and HPV vaccines among diverse refugees and immigrants from Arab Muslims Middle Eastern countries
- Understand the unique sociocultural determinants (including religious) that impact their decisions to vaccinate for Covid-19 and HPV
- Identify the underlying reasons related to paternal hesitancy in vaccinating their children
- Determine the appropriate intervention strategies that focus on promoting HPV & Covid-19 vaccines awareness and uptake among diverse population.



# Concept Definitions



- **Migrant**-Someone who left home for a variety of reasons such as seeking better education, reuniting with family, pursuing specific career, or other personal reasons.
- **Refugees**- Someone who has been forced to flee his/her country because of persecution, war or violence. A refugee has a well-founded fear of maltreatment for reasons of race, religion, nationality, political opinion or membership in a particular social group.
- **Asylee or asylum-seekers** are those who have applied to become a refugee, but their status has not been approved (IOM, 2019).
- **Undocumented** are those who enter the United States without legal status or who entered with a valid visa that is no longer effective (IOM, 2019)
- **The Humanitarian Parole status** - allows an individual who may be ineligible for admission into the United States to be in the United States for a temporary period for urgent humanitarian reasons or significant public benefit.
- **The SIV**- is a special visa that grants permanent residence to people who worked with the U.S. government abroad, or helped military forces. Worked as interpreters, cooks, contractors, etc. Many Iraqi and Afghani people obtained this type of visa.
- **The term "Newcomers"** will be used throughout the presentation to denote foreign-born populations.

# Rationales for Focusing on Refugees and Immigrants

- They come from diverse backgrounds with unique religious and cultural beliefs that may determine their health behavior
- They are hard to reach population due to many barriers such as language, socioeconomic status, social isolation, adjustments, etc.
- Migrant populations generally experience higher burden of vaccine preventable diseases and lower immunization rates (Charania et al., 2019) especially related to HPV (Bhattacharya et al., 2019; Rubens-Augustson et al., 2019; Wong & Sam, 2010)
- Based on the University of Minnesota survey report, foreign born Minnesotans died of Covid-19 twice the rate and at younger ages compared to the U.S.-born Minnesotans (Peters, 2022).
- A study in California that focused on Covid-19 and Latinx/Hispanics population (who accounted for 40% of the total population) found that there was a high prevalence rate of Covid-19 cases (63%), with a low vaccination rate (27%) ( Marquez et al., 2021).
- Locally, compared to other vaccines in 2019 the Allegheny health department (AHD) reported that the recommended vaccinations rate among school age children is much higher than the HPV vaccine (96.3% vs. 30%).

# Rationales for focusing on Refugees and Immigrants (Continued)

- In our previous research, we found that the cervical cancer screening among Arab Muslim women (19 years and older) in Western PA was only 50% (lower than the National average of 67%) (*Salman, 2012*). Another unpublished study using a survey questionnaire during the 3<sup>rd</sup> annual wellness fair in Pittsburgh, revealed that the uptake of HPV vaccine was only 17 (34.7%) for males and females (2018).

# Research Questions

1. What are the knowledge, beliefs, values, and attitudes among refugees and immigrant populations related to vaccine-preventable diseases, and the uptake of HPV (Human papillomavirus) and **Covid-19** vaccines?
2. What are the key determinants that influence vaccine practice behavior among immigrants and refugee populations?
3. What are the main concerns of parents regarding vaccine uptake for their children?
4. Are there adequate, and accessible local resources in place to facilitate vaccines uptake in the community?

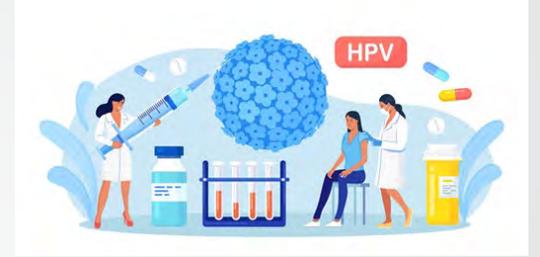
# Methodology

**Design:** A mixed method (MM) approach using both qualitative and quantitative research methods for data collection to answer the research questions.

## **Instruments:**

- a. Qualitative Research-** Focus Groups Interview Guide which includes Semi-Structured Interview Questionnaire (SSIQ)
- b. Quantitative-** Survey Questionnaires link (online form) distributed via email and WhatsApp (mobile devices).
- Inclusion criteria-Self identified foreign born, 18 years of age or older, belong to Muslim faith with Arabic Middle Eastern background (for the qualitative approach). But, the quantitative survey included other Muslim ethnicities. Demographic criteria like marital status, English proficiency, socioeconomic status, and employment were not included in the eligibility criteria.
- Recruitment Sites. Local community in Pittsburgh and surrounding neighborhoods.

# Data Collection and Analysis



## Qualitative

- Five Focus group interviews conducted; Two via Zoom, and Three in person (each focus group consisted of seven participants).
- Data collected in the Arabic and English languages.
- All interviews were video recorded (via Zoom) and audio recorded for in person.
- Length of the interviews 1.15-2 Hours
- Verbatim transcriptions by bilingual speakers
- Data was analyzed through coding, categorizing, and theme generation

# Quantitative Data Collection

- Survey tool designed by the researcher (based on the lit. review) with 38 open and close ended questionnaires.
- Data collection started on April 2022-August 2022 via emails and mobile devices.
- About 91 responses collected, however only 61 used for statistical analysis due to missing data.

# Qualitative & Quantitative approach

- Demographic info obtained in both approaches
- Emerging Themes related to knowledge, providers, religious, and cultural beliefs- used Qualitative approach.
- Key Determinants- education, employment, marital status and income- used Quantitative approach.
- Hesitancy to vaccinate children (both approaches)
- Both approaches are used to verify the findings

# Findings: Qualitative Demographic Characteristics

*Table -1 Demographic Characteristics*

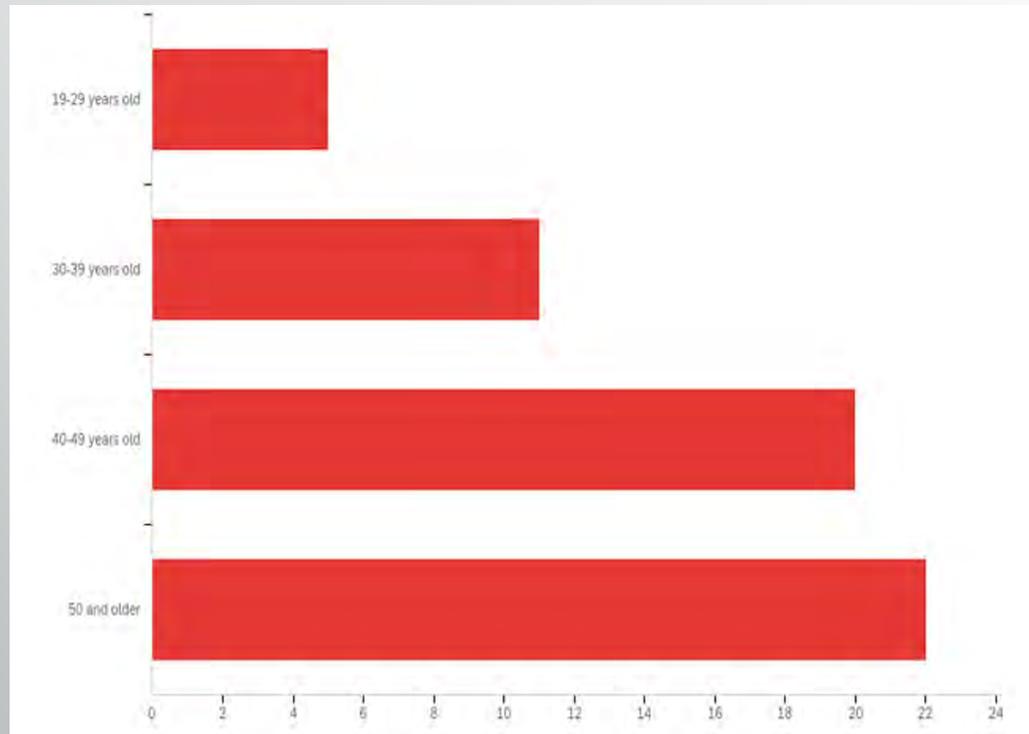
Participants Demographics	Number (total =35)
Gender	
Males	10
Females	25
Age (19-20)	7
(30-39)	6
(40-49)	10
(50 and older)	12
Martial Status	
Signal-	10
Married	23
Divorced	2
Having Children	24 (1-7)
Insurance	
Yes	33
No	2
Employment	
Yes	9
No	26
Years in the U.S	1>-24
Country of Origin	
Iraq	11
Egypt	9
Syria	9
Morocco	3
Jordan	2
Sudan	1
Education Status	
Post graduate	2
College	22
Secondary	6
Elementary	5

- *A total of 35 participants at age 19->50 years, with a total number of 78 children*

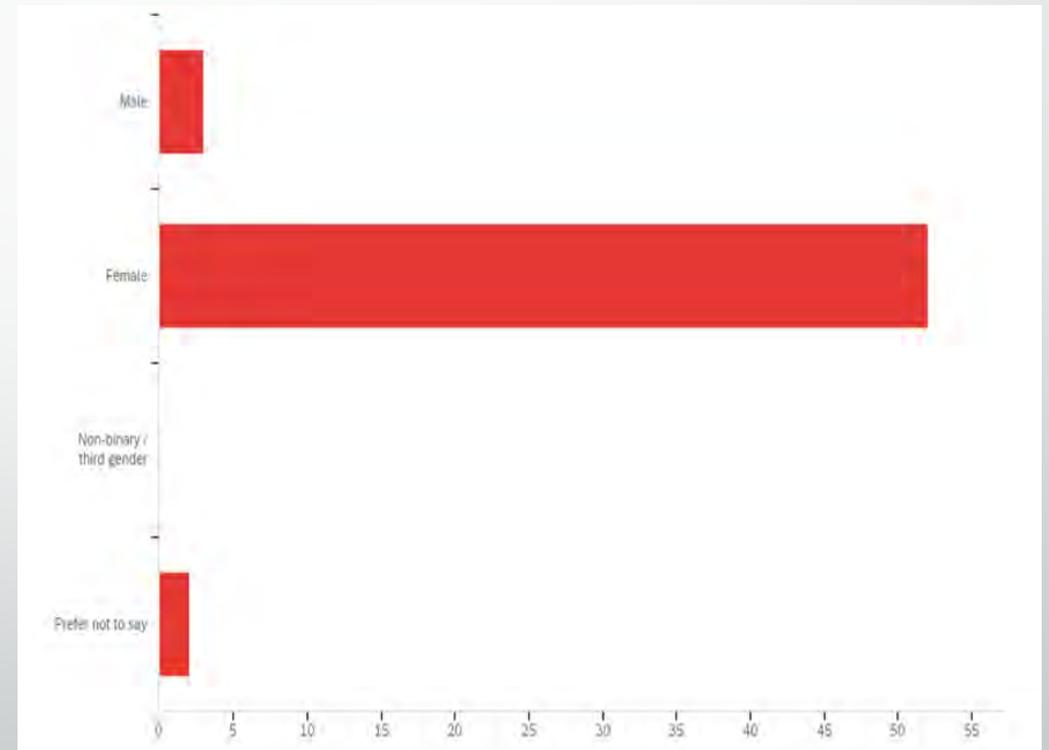
(see Table-1 for details)

# Quantitative Results: Sample Demographics Data

Age in Years

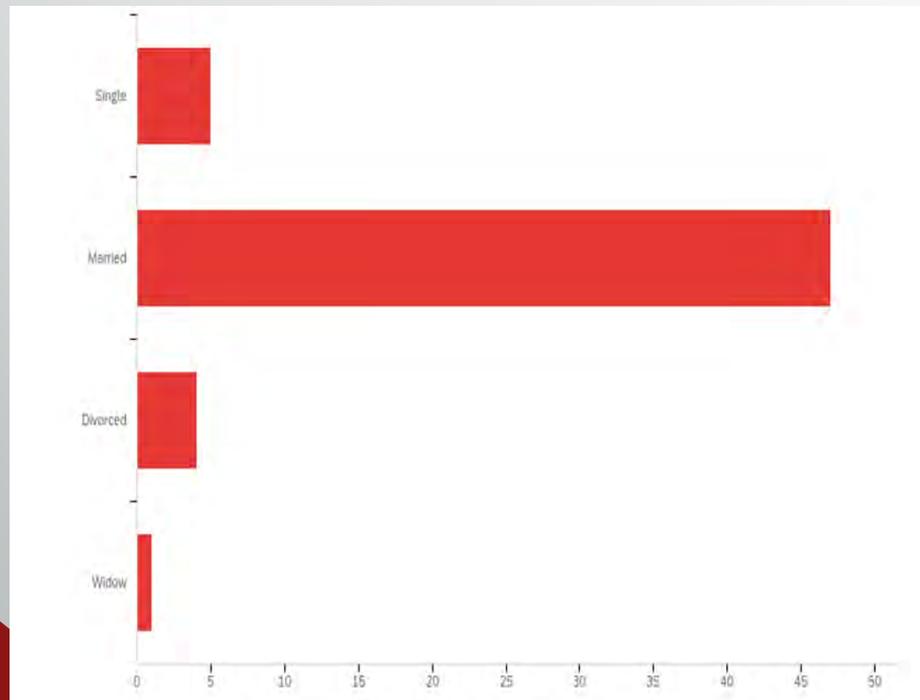


Gender

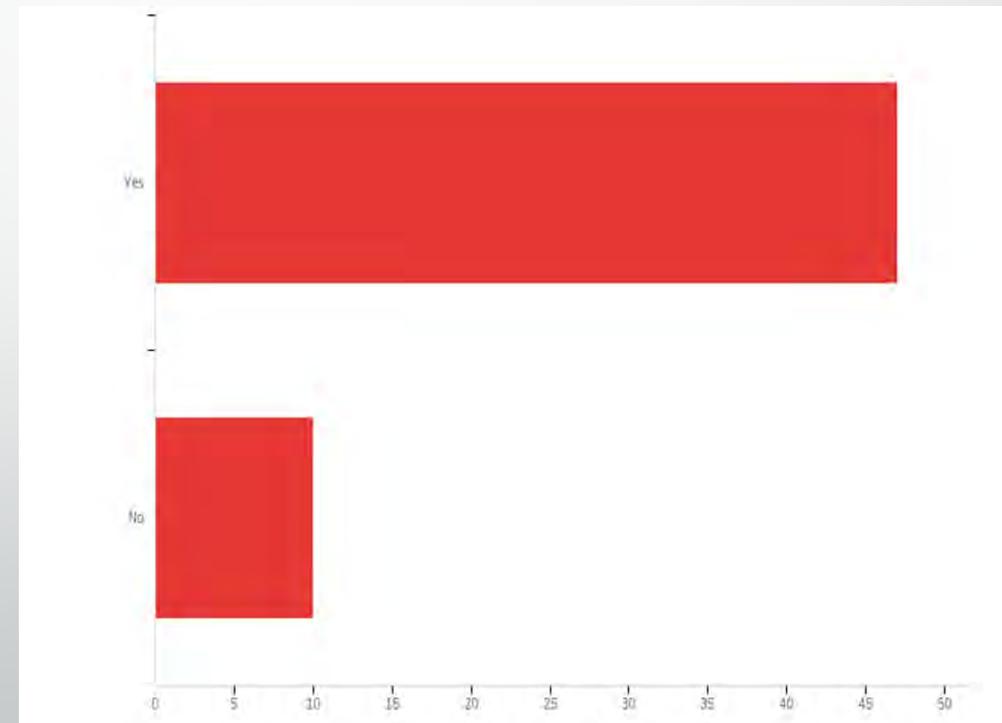


# Sample Demographic Data

## Martial Status



## Having Children



# Emerging Themes

**Themes and subthemes emerged (focused mainly on HPV vaccine) include:**

- 1.** *Lack of knowledge, confusion about the purpose of the HPV vaccine, and recommendations for immunization. Compared to Covid-19 vaccine, everyone had a descent knowledge about it.*
- 2.** *Providers don't explain the the purpose of the vaccines (i.e., providers do not educate or inform clients about why it is given, they may be under the assumption that clients know the reason they receive it).*
- 3.** *Cultural and religious beliefs that prevent conversation related to sexual diseases. The participants believed that there is a low incidence of HPV among Muslims and it is "the least of their worries". They also attributed the lack of information about HPV vaccine in the Muslim community to cultural and religious beliefs which prohibit or discourage talking about STDs in a social conversation. Also, the stigma of practicing sex outside of marriage contributes to the low incidence of cervical cancer related to HPV.*
- 4.** *Religious beliefs related to vaccines i.e., whether vaccine prohibited or permissible in the Islamic faith*
- 5.** **Lack of trust in the Social media.**

**Mixed experiences regarding adequate and accessible resources for vaccines.**

# *1-Knowledge related to HPV and Covid-19 Vaccines*

## *HPV –(About 10% knew some info about HPV vaccine)*

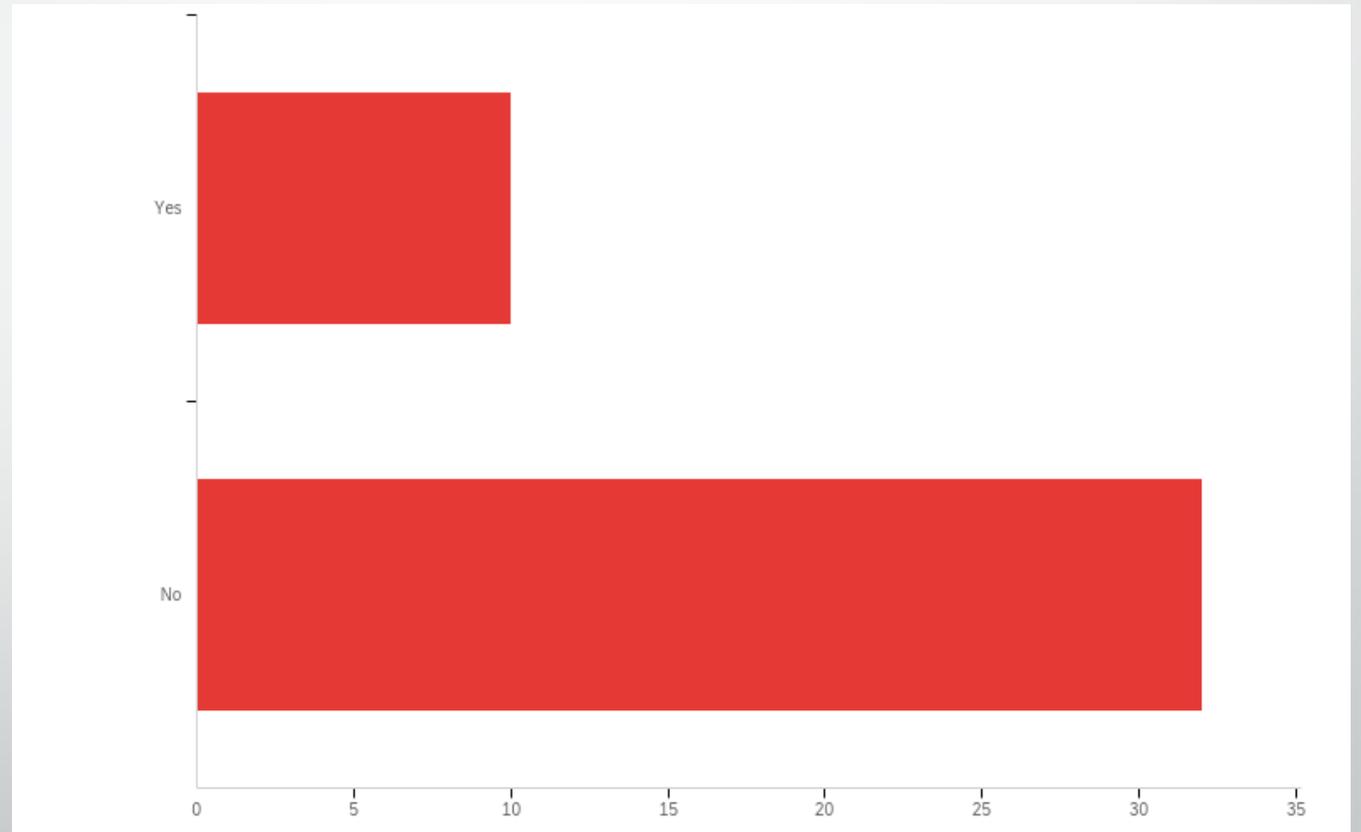
- ***Lack of knowledge-*** Participant response: “I’m not gonna lie, I don’t have much information about other vaccines (meant HPV). It’s my first-time hearing about it.” another participant response “... we haven't heard about it (HPV vaccine) even in the media”
- ***Confusion about the HPV-*** participants quotes: “Is it (HPV) AIDS?” (Is it HPV) Hepatitis”; “the HPV vaccine is given to prevent kids from getting some types of cancers. I am not sure which ones exactly”; “but I am not sure which age exactly.”

## *Covid -19 (everyone knew Covid-19 vaccine)*

- “I think most of us , when it comes to vaccines, we-we’re aware of the COVID vaccine because it's like a pandemic, you know. it's affected everyone”
- “So if you say the word vaccine, immediately someone else thinks Oh they're talking about the COVID vaccine, so I think HPV is... has a tough battle ahead of its own...”

# Have you Vaccinated your Children with HPV?

Yes= (10) 23.8%  
No= (32) 76%  
(N=42)

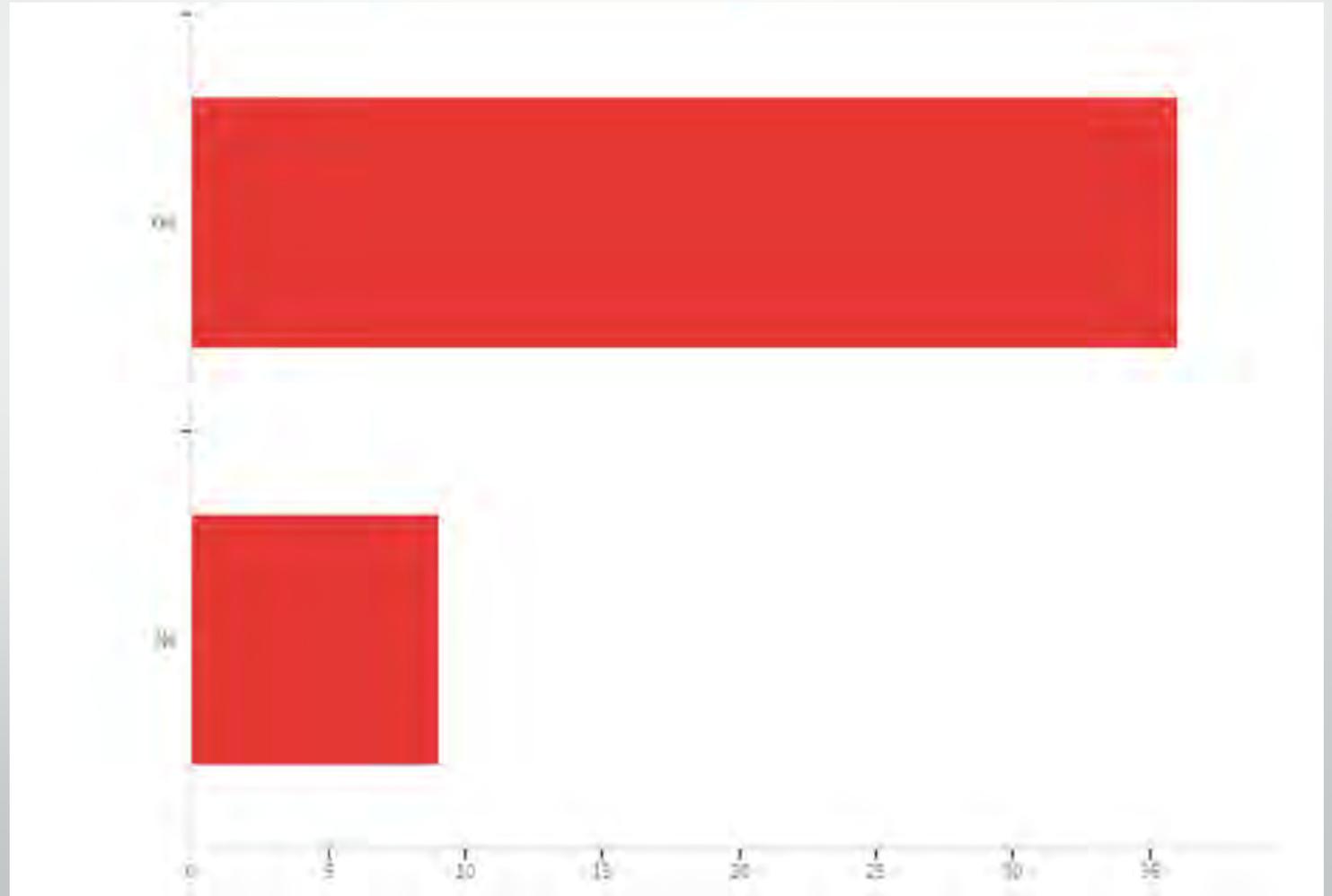


# *Beliefs and Attitudes Towards Vaccines*

- There was a consistency related to the importance of vaccines, the majority of participants (n=33, 95%) agreed that vaccines are important especially when there is a pandemic. *A participant stated that “of course, I do agree that people should get vaccinated. Because even though, media has a very important role to scare people from taking the vaccine, but it is still important to take it during pandemics”.*
- Many participants interviewed (about 80%) believed that *vaccines are good and effective, and 44 (92%) out of 48 stated vaccines are safe.*
- The prevalence of immunization rate for **Covid-19 is about 95.6% among the sample .**
- **36 of 40 (90%) stated that their children up to date on routine immunization but not all parents vaccinated for Covid-19.**

# General Perception of Vaccine Effectiveness and Safety

- Yes=36 (80%)
- No=9 (20%)
- N= 45



# Participants Quotes to Support the Themes

*2. Lack of education by healthcare providers (i.e., providers do not educate or inform clients about the purpose of the vaccine. They may be under the assumption that the clients know why they receive it.*

- *“when you're at your doctor's appointment, I feel like a lot of times they're like ...Oh, you need to take this vaccine, this vaccine, this vaccine. But they never really explained what it is.”*
- *“It's just like Okay, you need to take the flu, you can take the HPV, you need to take whatever”, but they never really take the time to like explain what each one is for. I think they kind of just assume that you know. And that's, not to say like, I don't know, an eight year old would really understand what HPV was whenever he got it. But at the same time, I do think it would maybe stick a little bit more like “Oh, this is to protect myself from, you know, pain down there” or something like that. Then like, maybe it sticks, just so that people are knowledgeable about it.”*

# Participants' Quotes to Support the Themes

3. *Cultural and religious beliefs that prevent conversation related to sexual diseases.*
- Participant (mother) *“We are kind of like refraining from talking about them all the time because of our religion, our cultural barriers, and culture, you know?”*
  - Participant (college student) *“I would have been protected anyways (due to abstinence)”*
  - Participant (college student) *“I also think that, not for like us Muslims (meant the HPV), but like, uh, for the general population in the United States, you know, this is a secular country and in health class they preach abstinence and most-most of the atheists, Christians or non religious people in this country, realistically, are not going to practice that. So I think like, in order to like, be safer and like help the general population of this country, it would be better for them to, you know, really like, teach like about these things and encourage vaccination and, like the risks of this and, rather than just saying like just don't have sex. These-, like most of the people who aren't Muslim and aren't religious in the United States are going to end up doing it anyways, so that's not really an effective method.”*

# Participants' Quotes to Support the Themes Continued

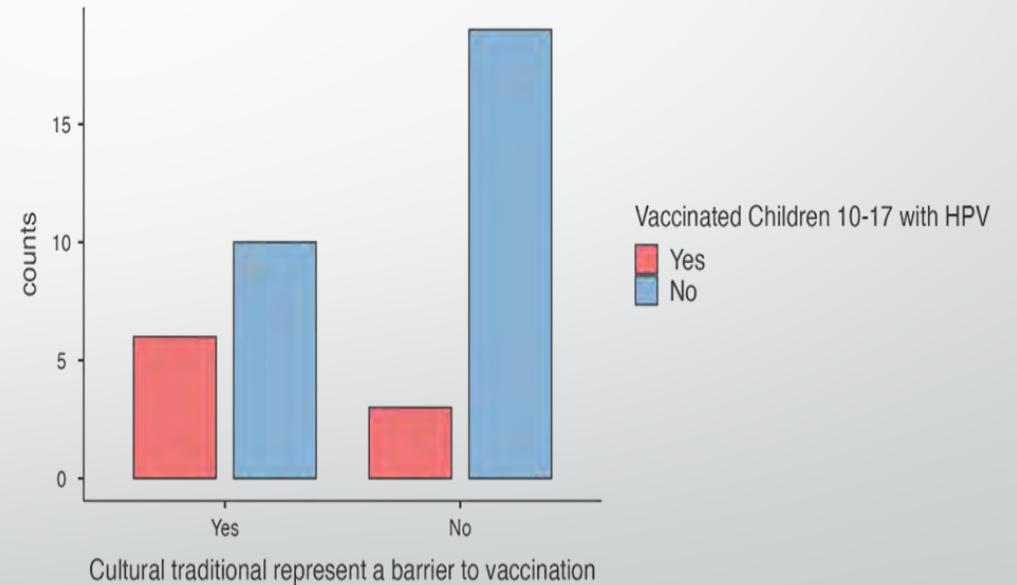
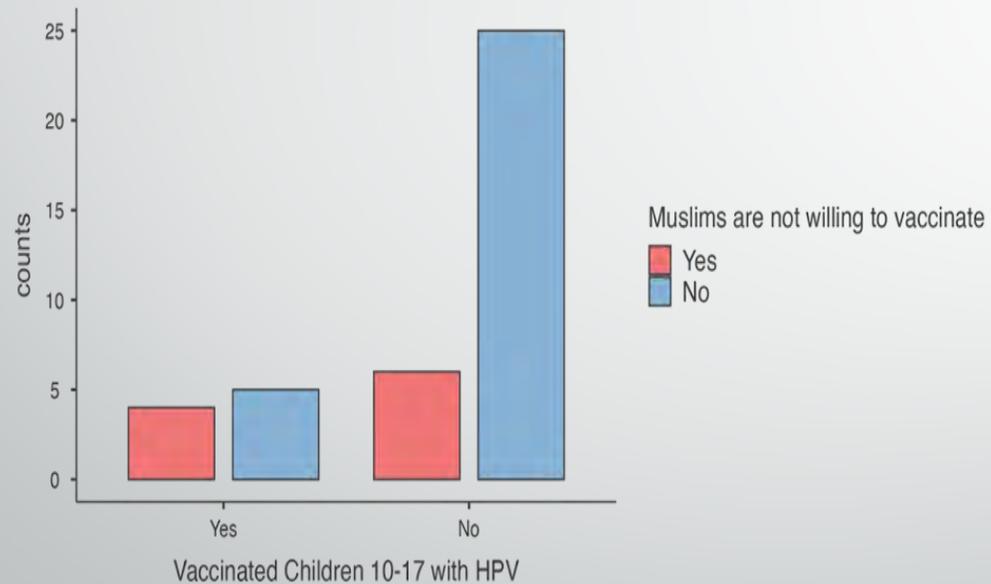
- They believe that HPV doesn't exist in Muslim community and HPV vaccine was *“the least of their worries.”*
- **Participant** (college student) *“I think-I think there are too many issues in the Community, I mean the HPV is probably the least the least concerning issue in the Community for the future generation. Muslim most young Muslims to me, I mean I don't consider this as a major issue because.... Even like for cancer, this is one cancer out of many cancers, this is one disease out of many, many diseases are the two diseases, the disease of the heart the mental illness, the being away from your deen (means religion).?”*

# Participants' Quotes to Support the Themes Continued

## *4-Religious beliefs related to vaccines, is vaccine prohibited or permissible in the Islamic faith?*

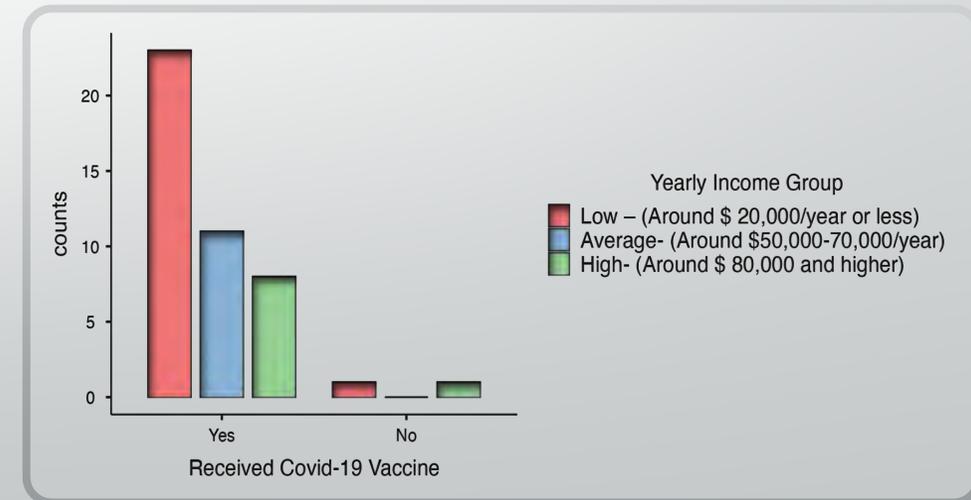
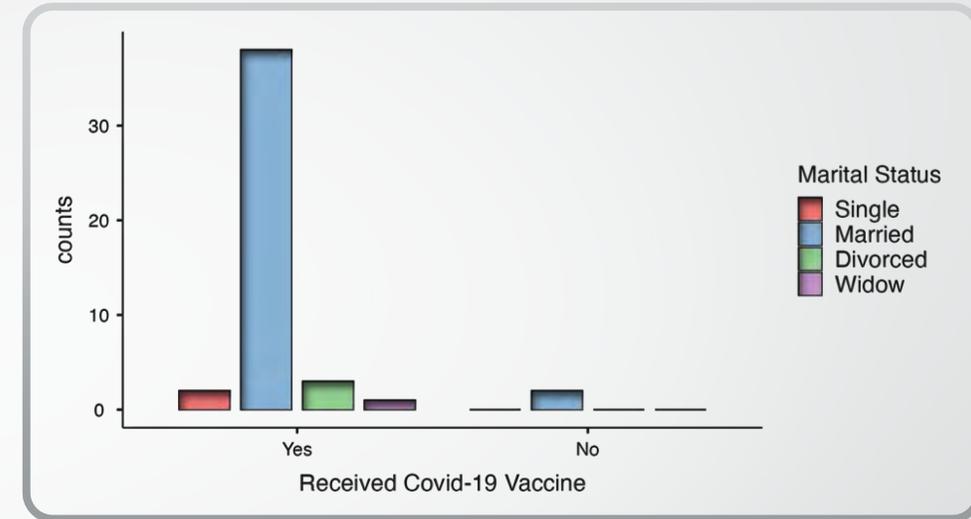
- *“Uh, in Islam, pre-pretty much everything is allowed unless proven to be haram [forbidden in Islam], to my knowledge, vaccines have not been haram [forbidden according to Islamic law]. Like, uh, they haven't been, like, shown to be haram so therefore all kinds of vaccines are halal [permissible according to Islamic law]”.*
- *“....the best measure for you to take so that you can return to Allah on the Day of Judgment in the most, I guess like, preserved form. That's why we don't get tattoos, that's why we don't do this, that's why we don't drink alcoholic products, because we're trying to preserve our bodies. And, culturally speaking, again, I don't think there's anything against getting a vaccine, I just think a lot of people there-it's the same sort of misinformation or sort of-the same sort of, I guess, belief that “Oh I'm young, I don't need it”*
- *“I think there's a saying that says [Arabic], which basically means every disease has a cure. Um, so I think vaccines are part of that and we create vaccine to prevent viruses and diseases. And that's just how I think, you know, vaccines should be viewed.”*

# Religious and Cultural Beliefs Towards HPV- (Muslims not willing to vaccinate)



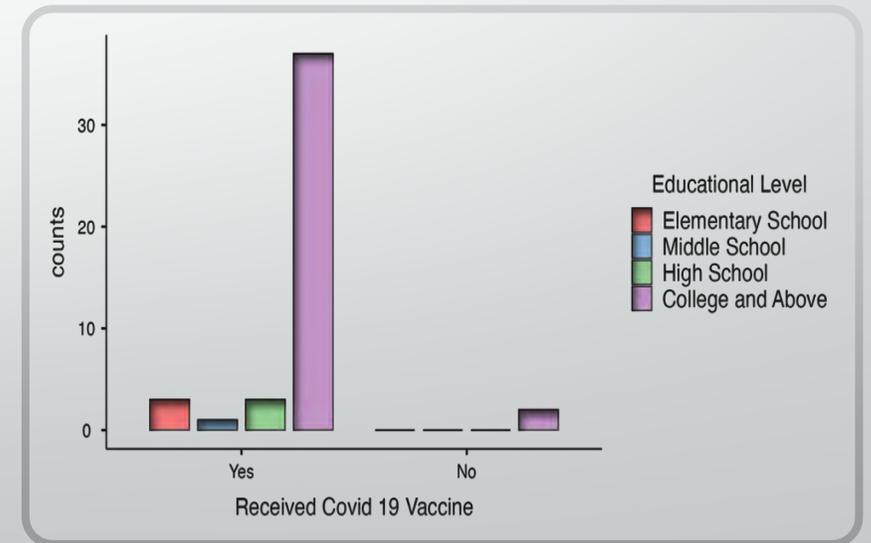
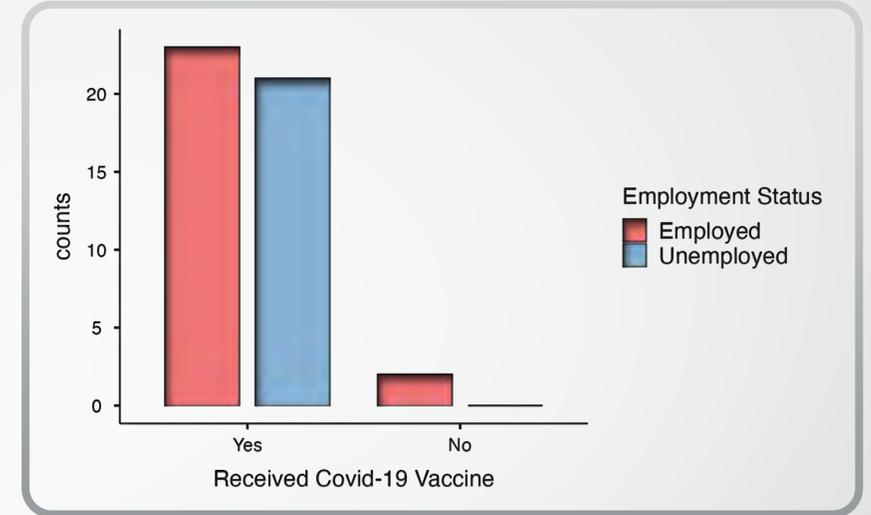
# Key Determinants that Influence Vaccine Practice Behavior

- **Marital Status** (married people are more likely to receive Covid-19 vaccine)
- **Yearly income** (Low income people are more likely to be vaccinated)

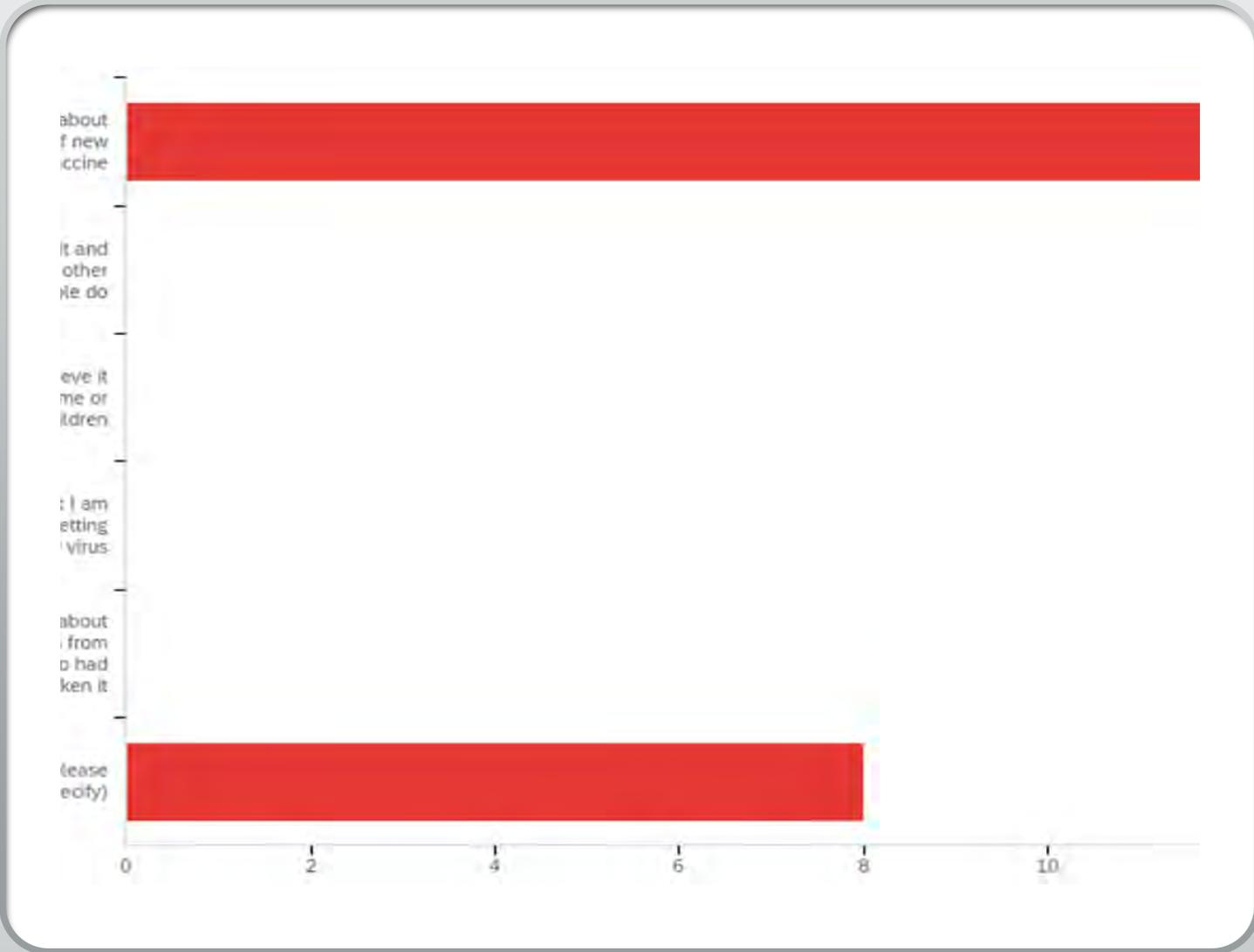


## Key Determinants that Influence Vaccine Practice Behavior (Continued) .

- Employment (employed people are more likely to vaccinate than unemployed)
- Educational Status (college and above are more likely to get the vaccine)



# Vaccine Hesitancy For Covid-19

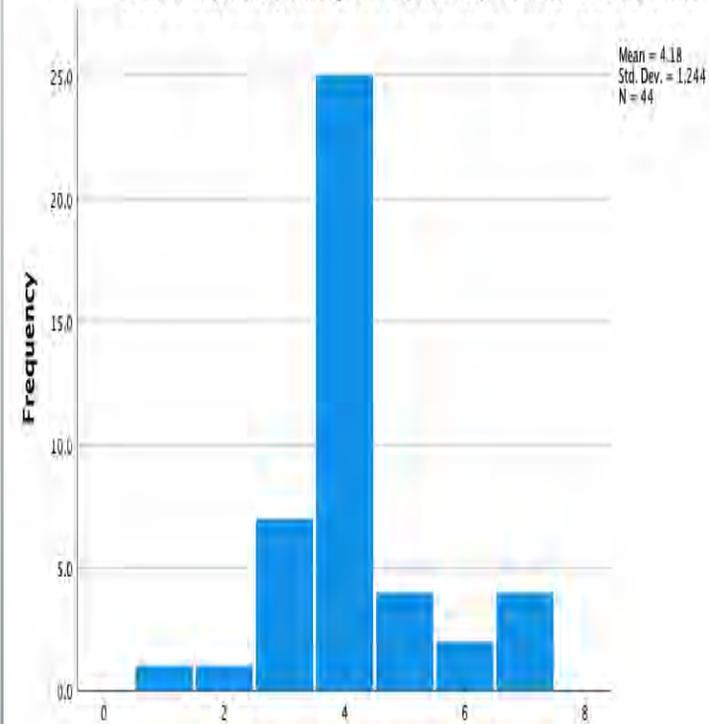


# Most Trustful information Source (consistent results)

Many participants agreed that **health professionals (doctors, pharmacists) were on the top of the list as a trustworthy resources**, followed by the CDC, TV, and local resources (hospitals, faith based organization), **but not Facebook or other social media.**

**25 of 44 (55%) stated health professionals are the most trustful.** The rest is a mix of the other with Facebook at 7 of 44 (16%). The larger issue is **36 of the 44 respondents have college or above.**

Simple Bar of What do you usually consider as the most trustful source for vaccine information? (TV, social media, friends, health providers, websites, or others) - Selected Choice

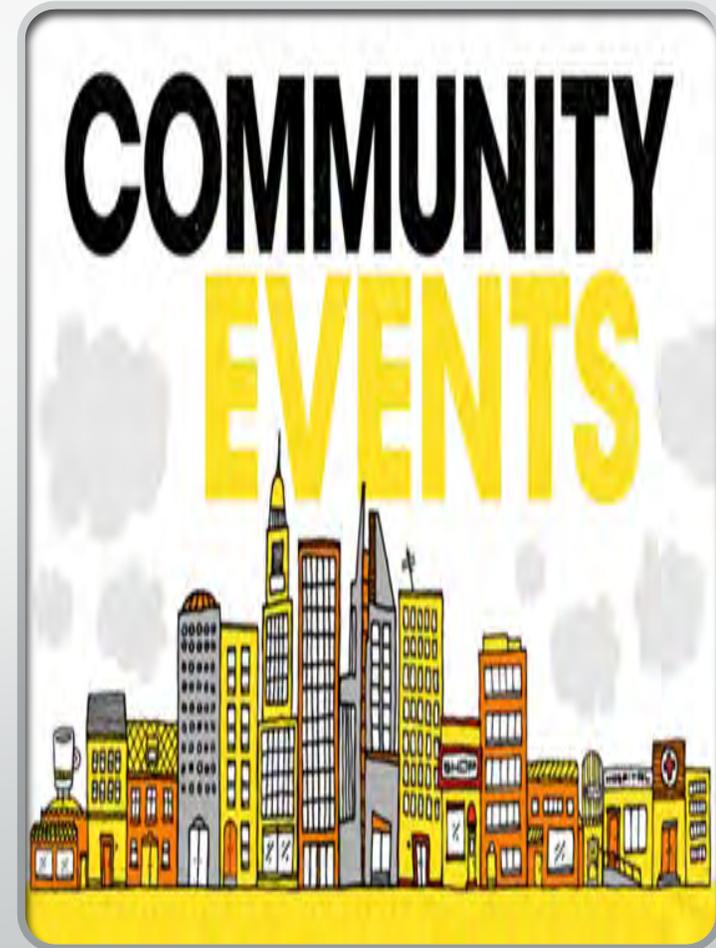


What do you usually consider as the most trustful source for vaccine information? (TV, social media, friends, health providers, websites, or others) - Selected Choice

# Interventions

**The study aims to design community-tailored and culturally appropriate multi-level interventions to promote vaccine awareness among newcomers in the community.**

- Based on the *qualitative study findings*, the PI developed educational materials in Arabic and English in the form of "bookmarks" (to be used in schools), and distributed to community members (parents, and children), and other entities (schools, refugee agencies, etc.). The content included factual info and figures related to the myths about vaccines.
- **Community Event:** The researchers partnered with the Islamic Center of Pittsburgh and scheduled a community event last June (June 25<sup>th</sup> ) titled "*community social event to promote vaccine uptake of COVID-19 and HPV among children and adults*".



# Interventions Continued

1. A keynote speaker (bilingual), MD who is the chair of the Infectious Disease Control at the UPMC to address the importance of prevention, vaccines, trusting the science, etc.
2. A speaker to address the HPV vaccine and the importance of cancer prevention
3. The religious leader (Imam) delivered a presentation to address vaccine from the religious perspectives of the Islamic faith
4. The program partnered with community clinic (Bethany Community Ministries (BCM)) to provide COVID-19 vaccines on site.
5. Distribution of educational materials along with hand sanitizer, masks, mugs, and other incentives.
6. “Ask the health provider” table about vaccines, led by a pharmacist.



# HPV

(Human papillomavirus)

## HPV VIRUS



**4** out of **5**  
will get HPV infection  
in their lifetime

is the leading cause  
of at least 6 types  
of cancer

HPV spreads through  
intimate physical  
contact.

HPV affects  
both men and  
women.

Cancer caused by  
HPV may not have warning  
symptoms or signs until they  
are advanced.



**Preventing** cancer is  
better than treating cancer

## HPV VACCINE

**90%**  
HPV vaccine is 90%  
effective in  
preventing cancers  
caused by HPV virus.



HPV vaccine is most effective  
between ages 9 - 12.

*Preteens have a higher immune response  
to HPV vaccine than older teens.*

Teens (girls and  
boys) should get  
vaccinated



من السرطان .

ع من كل ٥ اشخاص

سيصابون بعدوى فيروس  
الورم الحليمي البشري  
في حياتهم .

ينتشر الفيروس من خلال  
الاتصال الجسدي.



يصيب الفيروس كل  
من الرجال والنساء.

السرطان الناجم عن الفيروس قد لا  
يكون له أعراض أو علامات تحذيرية  
إلا بعد تقدم السرطان



**منع السرطان**  
أفضل من علاج السرطان

## اللقاح

**90%**

اللقاح فعال بنسبة ٩٠% في  
الوقاية من السرطانات التي  
يسببها فيروس الورم  
الحليمي البشري.



HPV



اللقاح أكثر فاعلية  
بين سن ٩ - ١٢ سنة

المراهقون الأصغر سنا لديهم استجابة



# Limitations

1. Small Sample size for quantitative analysis

2. Recruiting males for interviews was difficult

3. Language barrier made it difficult to express beliefs and perceptions

4. Although the interview participant included many Middle Eastern countries but not from all Arabic countries (which is about 22)

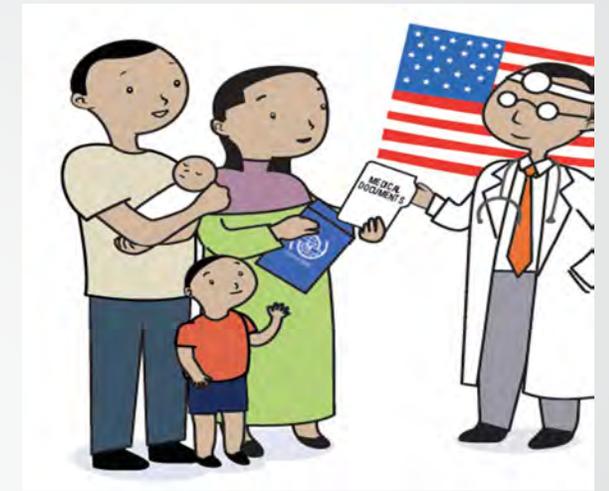
5. Covid -19 restrictions made personal interviews not comfortable for some.

# Future Directions

- Duplicate the study on a larger sample size
- Include more ethnicities in the study
- Conduct the study over a longer time Intervale
- Offer more educational sessions related to vaccines especially HPV and measure its impact.



# Recommendations



- Provide educational materials that culturally congruent with the diverse population
- Educate providers about taking the opportunity to explain the type of vaccine recommended, why it is given, what age, and others
- Have an open conversation with young adolescents and parents about vaccines that prevent STDs
- Organize social events or health fairs and integrate HPV vaccine topics
- Monitor the status of the HPV vaccine among school age children.

# Acknowledgment

***My sincere thanks to:***

- ***The funding resources PAIC and the PA AAP for supporting this study***
- ***Duquesne University for continuous support***
- ***The participants who were committed and shared their knowledge, beliefs, and values related to vaccine***
- ***The Islamic Center of Pittsburgh administration and volunteers who helped tremendously in the community event***
- ***Lastly, my thanks to the BCM for providing the Covid-19 during the event.***



**Pennsylvania Chapter**

INCORPORATED IN PENNSYLVANIA

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®





Thank  
You

*Questions!!!*