

# COVID-19 Vaccination Perceptions and Messaging Formative Evaluation, March 2021



**U.S. ARMY PUBLIC HEALTH CENTER**



Public Health Assessment Division  
Health Promotion and Wellness Directorate

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**PURPOSE:** To provide a summary of the results from the COVID-19 Vaccination Perceptions and Messaging Formative Evaluation conducted with Army Public Health Emergency Officers (PHEO), Assistant PHEOs (APHEO) and other subject matter experts (SME) in March 2021.

**OUTLINE:**

Bottom Line Up Front (BLUF)

Project Overview

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Overarching Findings & Recommendations

Results & Recommendations by Guiding Question

Conclusions & Way Ahead

- **PHEOs, APHEOs and SMEs reported observing COVID-19 vaccine hesitancy** among Medical Treatment Facility (MTF) personnel and broader installation populations.
  - However, the **level of hesitancy observed differed by installation** and it is unclear the degree to which hesitancy may currently be affecting vaccination uptake.
  - **Some installations have begun looking into the demographic data of those vaccinated**, yet MTF staff have struggled to interpret and use this information to increase vaccine uptake.
- **Low perceived threat appears to be a key barrier to COVID-19 vaccine uptake. Lack of trust in currently available vaccines may outweigh concern of contracting COVID-19** for some individuals and be a **key driver of vaccine hesitancy**. Factors, such as being young and healthy, and lack of perceived and actual exposure to COVID-19 also seem to impact decisions to get vaccinated.
- Social norms seem to shape COVID-19 vaccination uptake both negatively and positively. **The attitudes and vaccination uptake of others (particularly leaders and peers) within an individual's social network may also be key drivers of vaccine uptake/hesitancy.**



- **Individuals' motivation for choosing to get a COVID-19 vaccine** included existing, significant touchpoints related to readiness and Army Values.
- Results of this initial evaluation, although not generalizable, suggest **targeting messaging to increase vaccine uptake and opportunities for providing guidance and/or resources to the field, including:**
  - **Segment and prioritize messaging** that targets various audiences on the vaccine hesitancy spectrum, and promotes uptake using the transtheoretical model as a guide.
  - **To mitigate vaccine hesitancy:** Address the perception of higher risk associated with being vaccinated (e.g. lack of trust, misinformation, concern for speed of vaccine approval) compared to the perceptions of lower risks of susceptibility to COVID-19 (e.g. my exposure is low) and the severity of COVID-19 (e.g. it is just like the flu)
  - **To promote vaccine uptake:**
    - **Increase motivation** by promoting positive social norm and educate on potential impact of COVID-19 on readiness
    - **Address identified knowledge gaps** (e.g. locally relevant logistics information ...what, where, when of vaccine availability and eligibility), general education about COVID-19 and COVID-19 vaccines).



# Project Overview

## Background:

- Beginning in December 2020, multiple COVID-19 vaccinations were approved for use and are now available through Emergency Use Authorization (EUA). COVID-19 vaccination is a Senior Leader priority; however, vaccine hesitancy across the Army Enterprise is a concern.
- In March 2021, the U.S. Army Medical Command (MEDCOM) tasked the Army Public Health Center (APHC) to develop messaging to address COVID-19 vaccination hesitancy among Army health care workers.



## Purpose:

- The APHC Public Health Communication Directorate (PHCOM) and COVID-19 Communication Working Group requested support from the APHC Public Health Assessment Division (PHAD) to improve understanding of:
  1. Perceptions, beliefs, attitudes and behaviors related to COVID-19 and COVID-19 vaccination at the Army installation level,
  2. Factors that affect COVID-19 vaccine uptake at the installation level,
  3. Perceptions of two specific COVID-19 vaccine messaging concepts developed by PHCOM for dissemination to Army healthcare workers, and
  4. Awareness of previously-disseminated APHC COVID-19 messaging.
- The project team identified installation PHEOs/APHEOs as an accessible entry point to quickly provide insight into COVID-19 vaccine hesitancy and COVID-19 perceptions among MTF personnel and broader installation populations.



# Design and Methods





Q1

What perceptions, beliefs, attitudes and behaviors exist among MTF staff and the broader installation population about COVID-19 and COVID-19 vaccination?

Q2

What factors (i.e., facilitators/barriers) affect COVID-19 vaccine uptake and hesitancy at the installation level?

Q3

How aware are participants of APHC COVID-19 and COVID-19 vaccine/vaccination messaging?

Q4

What are participant perceptions and suggestions regarding the APHC COVID-19 vaccination messaging concepts?

- **Key Informant Interview Design:**
  - Semi-structured interview guide:
    - COVID-19 and COVID-19 Vaccination Perceptions among MTF personnel and the broader installation
    - Message testing of PHCOM-developed communication products targeting COVID-19 vaccination hesitancy among MTF personnel
  - Sampling:
    - Convenience sample of PHEOs and APHEOs from select CONUS and OCONUS locations with medical centers (MEDCEN)
    - Snowball sampling approach to identify other SMEs at these select locations
- **Data Collection/Analysis Timeline:**
  - 04 - 19 March 2021: Completed 8 interviews with 6 PHEOs, 1 APHEO, and 1 SME across 5 (3 CONUS and 2 OCONUS) locations
  - 22 - 26 March 2021: Rapid coding and directed content analysis of interview notes conducted in pairs



## Coding & Directed Content Analysis:

- **Step 1:** Finalized interview notes by reviewing audio files to ensure note accuracy and completeness. Uploaded finalized notes into NVivo for coding and analysis.
- **Step 2:** Descriptively-coded interview notes in pairs using a primary and secondary coder process.
- **Step 3:** Conducted directed content analysis in pairs and by guiding question using a primary and secondary analytic approach. Analyzed data references from the 8 interviews within and across codes and sub-codes. The primary analyst then identified and defined initial themes.
- **Step 4:** Secondary analysts applied the same analytic approach and then reviewed the findings documented by the primary analyst. The secondary analyst provided feedback on theme refinement and the analyst pairs then met to adjudicate feedback.
- **Step 5:** The project team met to discuss and finalize findings and recommendations (by and across guiding questions).



# Overarching Findings and Recommendations

**Three overarching themes appeared to drive COVID-19 vaccine interest. Associated recommendations from these themes are also presented.**

- **Perceived Threat:**
  - Interviewees reported that being young and healthy, “COVID fatigue”, and lack of COVID-19 exposure seemed to reduce overall perceived threat among MTF personnel and the broader installation population
  - A key challenge for communicating the importance of vaccine uptake according to interviewees was risk of contracting COVID-19 versus risk of, or alternatively trust in, COVID-19 vaccination
- **Social Norms:**
  - Peer groups and leadership perspectives on COVID-19 and COVID-19 vaccination appeared influential on vaccine uptake
- **Motivation:**
  - Interviewees reported an important motivator for getting vaccinated was readiness
    - Being ready to meet mission, avoid missed duty days, and return to normal were consistent messaging suggestions for promoting COVID-19 vaccination

## RECOMMENDATIONS

**Include clear, detailed information regarding the safety of COVID-19 vaccines to reduce perceived threat from the vaccine, while also highlighting the risk of COVID-19, tailored to the target audience.**

**Promote existing social norms to demonstrate peers and leaders opting to get a COVID-19 vaccine.**

**Leverage community protection to promote vaccination in messaging.**

**Consider various channels to engage unit leaders as they may be a key driver to increase vaccine uptake, engender a culture of safety, and promote public health.**

**Leverage readiness and other Army Values in messaging to reach target audiences who may feel low perceived threat of COVID-19 or experience vaccine hesitancy.**

# Results and Recommendations by Guiding Question

# Guiding Question 1

What perceptions, beliefs, attitudes and behaviors exist among MTF staff and the broader installation population about COVID-19 and COVID-19 vaccination?

- MTF and broader installation personnel appeared to have greater concerns about **contracting COVID-19 than the severity of COVID-19 symptoms.**
  - Several interviewees shared that the broader installation populations felt COVID-19 was no more severe than “the flu”
- **MTF personnel appeared more risk averse to contracting COVID-19** than the broader installation population.
  - However, risk aversion varied within the MTF population and appeared to differ based on role and exposure risk
- Interviewees indicated a relationship between **degree of perceived risk of COVID-19 and attitudes toward vaccination.**
  - Those with lower risk perceptions appeared to hold attitudes and beliefs that may be barriers to vaccine uptake

## RECOMMENDATIONS

**Leverage risk rather than severity when promoting COVID-19 vaccination in messaging.**

**Consider messaging that targets groups with lower perceived risk as they may be less interested or likely to get the COVID-19 vaccination without additional prompting.**

**Messaging that promotes readiness and protecting your community and that highlights continuing COVID-19 risk may resonate with those with lower perceived risk.**



- Interviewees described differences in perceived risk of COVID-19 among MTF personnel. These differences related to **job title/role, and exposure risk based on daily duties and duty location, which appear to shape attitudes toward vaccination.**
  - Physicians, and other advanced practice providers, were described as having more concern regarding contracting COVID-19 and experiencing its symptoms. They were also described as having more positive attitudes toward COVID-19 vaccination
  - Those with greater exposure to COVID-19 in their role (e.g., ICU, primary care, COVID-19 clinic) also held greater perceptions of risk
  - **Health techs, nurses, administrative personnel, and support staff** were described as having lower perceived risk of contracting COVID-19, which may act as a barrier to vaccine uptake.
- **Misconceptions surrounding COVID-19 and COVID-19 vaccination** also appear to play a role in individuals' calculating their risk and making decisions about getting vaccinated.

## RECOMMENDATIONS

**Prioritize COVID-19 risk communication and messaging that promotes vaccination among:**

- Health Techs
- Nurses
- Administrative Personnel
- Support Staff
- Other medically adjacent personnel

**Communication strategies should use specific visual cues, such as images of the target groups, and message verbiage to signal to these groups that:**

- They are at risk of contracting COVID-19 because of their exposure in the MTF, thus building on the importance of exposure in increasing risk perceptions
- Vaccination is essential and beneficial for readiness and community protection in the MTF

**Consider messaging that emphasizes creating a culture of safety to promote vaccine uptake.**

## Guiding Question 2

What factors (i.e., facilitators/barriers) affect COVID-19 vaccine uptake and hesitancy at the installation level?

- The following appear to be barriers to COVID-19 vaccine uptake: **information gaps related to when, where, who and how** to receive the vaccine at their installation.
- Negative attitudes toward COVID-19 vaccination from **leaders and peers** seemed to impact how readily installation personnel accepted the vaccine.
- Interviewees also reported that lack of **perceived threat** represented a barrier to vaccine uptake.
  - There is a need to reach young and healthy individuals who may not feel at risk of COVID-19, and may be less interested in getting the vaccine
  - They also noted difficulties with individuals recognizing the risk of COVID-19 versus the lack of trust in the vaccine when speaking with installation personnel
- There seems to be **a spectrum of interest in COVID-19 vaccine uptake**, and interviewees reported focusing their communication and outreach on those who were unsure, but who could become interested in getting the vaccine if they received more information.

## RECOMMENDATIONS

**Share logistical information about COVID-19 vaccination availability by developing materials that provide this information.**

**Incorporate peer and leader voices in messaging to provide information that supports vaccine uptake.**

**Utilize information on COVID-19 risk and reinforce vaccine safety in messaging:**

- To increase perceived threat of COVID-19 and
- To prioritize communication products that address vaccine-hesitant individuals' concerns

- **Social norms around the COVID-19 vaccination play a key role in vaccine uptake.** Leaders and peers speaking positively about vaccination and getting vaccinated appear to increase vaccine interest and uptake.
  - Town halls, group vaccine safety huddles, and face-to-face dialogue seemed helpful to share information, address concerns, and increase vaccine interest
  - Word-of-mouth or seeing friends and family opt to get the vaccine appeared to be a motivator, even for vaccine hesitant individuals
  - A sense of protecting the community from COVID-19 seemed to be a facilitator
- **Readiness and related concepts (e.g. meeting mission, reducing missed duty days, traveling) appeared to be persuasive reasons to MTF personnel and members of the broader installation to consider vaccination,** even those who did not feel a high perceived threat from COVID-19.

## RECOMMENDATIONS

**Develop messaging that highlights leaders and peers choosing to get vaccinated and why, to build on positive social norms.**

**Leverage the Army Values, readiness, and BE.KNOW.DO to promote vaccine uptake.**

**Consider messaging that incorporates the importance of community protection as a reason for getting a COVID-19 vaccine.**

**Utilize readiness concepts, and practical reasons like avoiding missed duty days by getting the COVID-19 vaccine, to reach target audiences who may not be convinced by vaccine information alone.**

- **Vaccine hesitancy typically revolved around trust in the available COVID-19 vaccines.**
  - Particular concerns included how quickly the vaccines were developed and how this relates to vaccine efficacy and safety given approval through EUA
  - There is a need to communicate why the vaccines are trustworthy by providing information such as:
    - Speed of development related to a worldwide effort to create the vaccines
    - That no steps were skipped in testing the vaccines (e.g., trials)
- **Addressing these concerns seriously using clear and consistent messaging**, and incorporating Army-related analogies, may be helpful in:
  - Overcoming vaccine hesitancy due to misunderstanding
  - Increasing perceived threat of COVID-19 by reducing concerns about risk from COVID-19 vaccination

## RECOMMENDATIONS

**Include information that indicates why COVID-19 vaccines approved through EUA are safe, effective, and trustworthy.**

**Consider stating how safe and effective vaccines were produced in a short time frame, highlighting this as a worldwide effort where no safety checks were skipped.**

**Leverage various messaging approaches, such as analogies or reasons why individuals trust the vaccines, to clarify COVID-19 vaccination safety and efficacy.**

## Guiding Question 3

How aware are participants of APHC COVID-19 and COVID-19 vaccine/vaccination messaging?

- Interviewees described being aware of APHC COVID-19 messaging products, with **PHEOs seemingly having the greatest awareness among MTF personnel** due to:
  - Information provided by the Public Health Emergency Program Manager and others directly to PHEOs via email
  - Familiarity with APHC's website; interviewees actively sought out products for download
- Many interviewees **recalled seeing or referenced messaging from other sources, primarily the CDC**, but also DHA and Navy.
  - It appears that CDC messaging may be more widely and frequently disseminated and displayed than messaging from other sources, such as APHC

## RECOMMENDATIONS

**Identify additional active channels to disseminate COVID-19 and related vaccination messaging, as this may increase awareness and use of APHC communication products.**

**Ensure that APHC message products are available for download on the APHC website.**

**Identify ways that APHC COVID-19 vaccination messaging can meet installation personnel information needs, as other agencies might have gaps in their messaging products.**

- Interviewees recalled earlier in the pandemic, more **general APHC COVID-19 messaging.**
- In general, interviewees shared **positive feedback** when they recalled APHC messaging.
  - Example APHC messages they considered high quality included COVID-19 messaging regarding handwashing, covering coughs, and quarantining
  - Some described printing and laminating these messages, and posting them in their MTFs, as a visual reminder for other personnel

## RECOMMENDATIONS

**Focus on specific COVID-19 vaccination information needs in messaging to avoid redundancy of general COVID-19 information.**

**Continue to provide messaging that dispels misinformation and myths about COVID-19 vaccination by:**

- Acknowledging the target audiences' concerns
- Addressing these with clear, factual information

**Continue building upon the positive reception of APHC COVID-19 message products.**



- **There are multiple challenges to meeting COVID-19 information and messaging needs.**
- One barrier suggested by interviewees was lack of **streamlined dissemination**.
  - One interviewee shared that vaccine information was not available as vaccine doses became available, which resulted in knowledge gaps and commander hesitancy to discuss vaccination
- Another identified barrier was **approved locally relevant messaging and information** to address specific target audiences' information needs/gaps.

## RECOMMENDATIONS

**Dissemination is critical to addressing key COVID-19 information and messaging needs.**

**Consider partnering across the Enterprise to identify opportunities to share consistent COVID-19 vaccination information through various channels, including those specific to MTF and installation leadership who may not currently receive APHC COVID-19 messaging.**

**Consider messaging that provides ways for commanders to discuss COVID-19 vaccination and vaccination hesitancy:**

**Identify opportunities to develop:**

- Message products or templates with approved COVID-19 vaccination information that can be tailored locally
- Tip sheets for creating and disseminating local messaging

## Guiding Question 4

What are participant perceptions and suggestions regarding the APHC COVID-19 vaccination messaging concepts?

- The **intent of the messaging clear**, however, there was some confusion surrounding the tagline.
  - “Don’t miss your shot” and the Soldier graphic indicated one should get a vaccine
  - The tagline was a good reminder, but overall would not influence personnel to get the vaccine and the connection to COVID-19 could be referenced for more clear messaging
- Interviewees liked the visuals, yet wanted **more information to identify why** it was important to get the COVID-19 vaccination.
  - Safety and allergic reactions information was useful to address target audience concerns
  - Interviewees liked the Soldier graphic in message concept two, but would prefer if it also included information on the COVID-19 vaccine
  - Additional information, such as why the vaccine was safe, effective, and protective would be convincing to the target audience

## RECOMMENDATIONS

**Ensure message intent is clear to promote COVID-19 vaccination uptake.**

**Include the terms “COVID-19 vaccination” in messaging concepts to be clear that the message is referring to reducing COVID-19 risk.**

**Include information about COVID-19 vaccine safety and rare allergic reactions in messaging as these were well-received by interviewees.**

**Consider messaging that incorporates vaccine efficacy rates and reduction in COVID-19 infections due to vaccine uptake.**



- Interviewees had **trouble** identifying the **target audience**.
  - The word “patients” was the only indicator that identified health care workers as the target audience
  - Many felt that the images and information were relevant to Soldiers and the broader installation as a whole
- Interviewees liked many of the **visuals**, particularly the Soldier **with her sleeve rolled up**.
  - The female graphic resonated because it was reminiscent of “Rosie the Riveter” and highlighted the strong female Soldier
  - For some, the graphic of the syringe also resonated and helped clarify that the message was about COVID-19 vaccination

## RECOMMENDATIONS

**Use visual and verbal messaging cues to clearly indicate the target audience of the message.**

**Consider images, such as health care workers or Soldiers getting vaccinated, to highlight who the information is targeted toward.**

**Leverage images and graphics of people to encourage COVID-19 vaccination as these may resonate across various target audiences.**

- Interviewees found the **messaging trustworthy**.
  - They appreciated the addition of organizational emblems and where to go for more information
  - They felt the information addressed some of the key concerns they have heard from MTF personnel and members of the broader installation
- However, interviewees felt that a **message itself is not sufficient to change people's mind** about receiving the vaccine.
  - This appeared to be particularly true for those who were “on the fence” about getting the COVID-19 vaccine--these individuals were often influenced when they are aware that leadership and others in their community are getting vaccinated
  - Face-to-face dialogue with health care workers and unit leaders has been helpful to improve vaccine uptake

## RECOMMENDATIONS

**Ensure COVID-19 vaccine messages contain information to address concerns about the vaccine.**

**Consider using images or testimonial statements indicating leaders and others in the community are getting vaccinated.**

**Messages should encourage the target audience to talk with health care providers and leaders to get the facts and have their questions concerning COVID-19 vaccination answered.**

**Develop products with talking points to accompany the messaging that leaders can use to discuss COVID-19 vaccination.**

- Interviewees provided **several additional suggested changes** to the message concepts. **These include the following:**
  - **Changes to layout and formatting** may make the concepts easier to read and understand,
  - The text size for some of the key information, such as vaccine safety and side effects, was too small, which may make it difficult for the target audience to read,
  - Bullet points were recommended as a way of communicating key information, and
  - **Incorporating readiness and other Army Values through text and visuals** would make messages more impactful in promoting COVID-19 vaccine uptake.
- Additionally, they suggested **referencing *community* in messaging** as a way to encourage COVID-19 vaccine uptake among various target audiences.

## RECOMMENDATIONS

**Utilize formatting that promotes an easy and quick review of COVID-19 vaccination information.**

**Consider using bulleted lists, call-out boxes, and other layout designs to improve readability.**

**Leverage readiness, including how getting the COVID-19 vaccine relates to being mission ready, in message concepts as this is a significant existing touchpoint for the various target audiences.**

**Promote positive social norms, such as words and images, that convey community acceptance of the COVID-19 vaccine in messages to encourage vaccine uptake.**

# Conclusions and Way Ahead



- Key informant interviews with PHEOs, APHEOs and other SMEs provided initial understanding and visibility of COVID-19 and COVID-19 vaccination perceptions and information needs among MTF personnel and the broader installation population.
  - The evaluation findings and recommendations can inform current and future messaging surrounding COVID-19 vaccination
  - This key informant interview process could be leveraged in future projects and evaluations to provide additional insight
- The COVID-19 Communications Working Group identified a need to identify individuals for continued COVID-19 message testing.
  - Through this initial project, PHAD has identified 2 or 3 individuals that may be a good fit for this
  - If this is still desired, PHAD recommends that the message testing group include individuals that represent target audiences of interest





# Disclosure and Disclaimer



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