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Instilling Confidence in the COVID-19 Vaccine

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KEYWORDS
\begin{itemize}
\item COVID-19
\item Vaccine confidence
\item Social media
\item Social marketing
\item Nurses
\item Trusted messengers
\end{itemize}

KEY POINTS
\begin{itemize}
\item The professional nursing community is active on social media and engages with social media content.
\item Paid advertising was an effective strategy to promote vaccine confidence content and expand reach of the social media campaign.
\item Nurses were more likely to reshare existing content from trusted organizations on their social feed.
\item Consider offering trainings to social media campaign followers to increase their online presence and comfort in posting.
\end{itemize}

The Nurses Make Change Happen media campaign engaged audiences nationally to promote vaccine confidence and get vaccinated through leveraging nurses as micro-influencers. The campaign found success using a softer, nonconfrontational approach to messaging. Posts that used real nurses to encourage rather than demand the target audience to get vaccinated were more well received. Paid ads helped increase channel followers of National Nurse-Led Care Consortium (NNCC) and encouraged resharing of content. Targeted ads were a successful strategy based on cost-per-click (CPC) and the click-through rate (CTR).

BACKGROUND

On March 11, 2020, the World Health Organization declared coronavirus disease 2019 (COVID-19) a global pandemic. From March 2020 through April 2020, infection rates continued to surge around the world and subsequent hospitalizations increased. Despite global stay-at-home orders in place, nurses critical to mitigation of COVID-19, continued care provision.\textsuperscript{1} Nurses played an essential role in COVID-19 response,

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often required to work outside of their scope to meet the needs of their communities. Yet, nurses are often overlooked as critical members of a care team.

On December 14, 2020, the first dose of the Pfizer-Biotech COVID-19 vaccine was administered to Sandra Lindsay, a nurse from Northwell Health in New York. This widely publicized event thrust Lindsay into the media spotlight as a trusted nurse and woman of color. It was a powerful image used to promote confidence in the COVID-19 vaccines. Lindsay, true to the core professional nursing values, accepted the role as trusted messenger and with true altruism chose to trust science.

Despite Lindsay being recognized in July 2021 by President Joe Biden as a “shining example of exemplary civic service,” studies indicate that nurses are often absent from media images and messaging. In 1997, The Woodhull study on nursing and the media illustrated the absence of nurses in media, describing them as health care’s invisible partner. In 2018, Mason and colleagues determined little progress in highlighting nurses in health news stories since the original Woodhull study. The lack of nurse representation in media is a critically missed opportunity for public health. The Gallup poll has rated nurses the most trusted profession since 2002, thus involving trusted messengers in health communications is an effective strategy for influencing health beliefs and behaviors, as suggested in the US Surgeon General’s 2021 report on Combating Health Misinformation. In addition, media images that do exist of nurses frequently represent stereotypical images of vocation that represents white, subservient women. These institutionalized stereotypes have affected nurse recruitment, retention, and indirectly patient care.

INTRODUCTION

Merriam-Webster defines social media as “forms of electronic communication, including website for social networking and microblogging, through which users create online communities to share information, ideas, personal messages, and content such as videos.” The capacity for nurses to self-promote via social media provides the ability to help advance the nursing profession, promote public health initiatives, and indirectly improve health outcomes. Myers notes that media engagement is an important tool to advance public policy, educate, and convene diverse stakeholders for a common agenda to facilitate policy change.

In response to the need to promote COVID-19 vaccine confidence and vaccinations and the opportunity to leverage social media, the NNCC launched the “Nurses Make Change Happen” vaccine confidence social media campaign in June 2021. The campaign sought to address the absence of diverse nurse representation in the media and to challenge the existing stereotypes of nurses, as well as promote the critical role nurses play in health-care delivery, and highlight nurses as trusted messengers to promote COVID-19 vaccine confidence. The social media campaign relaunched in February 2022 with updated strategies following lessons learned from the initial campaign run, through funding from the Centers for Disease Control and Prevention (CDC). The goal of the campaign was to promote vaccine confidence among nurses to increase vaccination rates among both nurses and the communities they serve across the U.S. NNCC’s campaign recognized that there is a direct relationship between education and community building for nurses and the education and confidence building that nurses do for patients.

METHODS

NNCC enlisted the guidance of a nurse-led vaccine confidence advisory committee (VCAC) to guide the concept of the “Nurses Make Change Happen” media
The VCAC consisted of 20 nurses representing all 10 US Health and Human Service regions. This all-female advisory committee represented diverse rural and urban communities, including American Indian, Asian, Black, and White. Additionally, the VCAC nurses held a variety of professional degrees including Doctor of Nurse Practitioner (DNP), Master of Science in Nursing (MSN), Master of Public Health (MPH), and Advanced Practice Registered Nurse (APRN) in health-care settings including academia, public health, primary care, and community health. Together, they worked to create awareness of the barriers around equitable vaccine education and access. Several advisory committee members were featured in campaign ads and engaged throughout the duration of the campaign as microinfluencers. Beyond campaign involvement, advisory committee members served a critical role in guiding NNCC’s broader COVID-19 efforts by identifying vaccine knowledge gaps and informing the development and adaptation of COVID-19 vaccine guidance, tools, and best practices that consider the needs of nurses working in community settings with vulnerable populations.

To further inform our approach, NNCC examined data from CDC’s COVID-19 data tracker, Kaiser Family Foundation’s vaccine monitor, and Johns Hopkin’s state-level data. In addition to these sources, NNCC incorporated findings from unpublished data collection activities, conducted in partnership with the Public Health Management Corporation’s Research and Evaluation Group, which included the following:

1. A national poll of 116 nurses, other health-care providers and administrators to assess public health preparedness and determine trainings and resources needed to improve COVID-19 response and COVID-19 vaccine confidence (May–June 2021).
2. Interviews and focus groups with nurses, care team staff, community health workers, and unvaccinated patients to (1) explore general knowledge and concerns regarding COVID-19 vaccines, (2) assess potential barriers to COVID-19 vaccine accessibility and acceptance, (3) evaluate the role of health-care professionals in talking about and distributing COVID-19 vaccines, and (4) find potential strategies to increase COVID-19 vaccine uptake (June–Sep 2021).

After exploring potential media strategies, NNCC decided on tactics to engage nurse microinfluencers to speak on behalf of NNCC on the importance of COVID-19 vaccines and having discussions with patients, family, or friends who may be vaccine hesitant. This strategy has shown to be effective in delivering other forms of health communication. Promoting the trusted voice of nurses, the “Nurses Make Change Happen” campaign ran from February 2022 through July 2022 and was modeled after the Bonnevie and colleagues study that leveraged social media influencers to improve knowledge and attitudes toward the flu vaccine. Using a combination of paid and organic media ads, NNCC’s campaign engaged nurses as microinfluencers to advance the following 4 objectives: (1) Generate website traffic to a vaccine confidence toolkit for nurses and downloads of social assets on a microsite, (2) Create engagement through shared content, (3) Build awareness of NNCC in the professional nurse community to elevate the role of nurses, and (4) Build COVID-19 vaccine awareness for consumers who are vaccine hesitant or reside in states with low vaccination rates. Progress toward these objectives was measured by the following metrics:

- objective 1: number of website clicks to NNCC (CPC) and number of in-feed kit downloads (cost per download [CPD]);
- objective 2: social posts shared or originated from NNCC content (hashtag, tag tracking), engagements (likes, comments, shares); and
- objectives 3 and 4: brand impressions, number of website clicks, and percent of the audience reached (Table 1).
The campaign tailored vaccine messaging to reach defined target professional and consumer audiences. NNCC worked to further defined audience segments, including nursing professionals, individuals in public health/community roles, vaccine-hesitant individuals, and parents. NNCC identified these audiences and the approximate reach across social media platforms through a combination of (1) selection criteria available through social media account management targeting age groups, industry, educational level, and geographic level and (2) Hashtags or Keywords on what individuals search or include in posts who fit these criteria. For example, NNCC could identify its target parent audience on Twitter by using keywords (suggested from Twitter) on what individuals search or include in posts who are talking about child vaccination, such as “fertility vaccines,” “family vaccine,” “children vaccinated,” “pregnant vaccination,” to name a few. Social media platforms vary in the extent to which audiences can be targeted. After segmenting the audience based on industry, demographics and age, NNCC further narrowed the list by overlaying data for states with under 50% vaccination rates and other key demographics.

The nurse-led vaccine confidence microinfluencer campaign was active across various social media channels including Facebook, Instagram, LinkedIn, and Twitter. The content was defined by 5 message types: addressing vaccine hesitancy, nurse advice, personal nurse story, resources, and promoting the social toolkit. Twenty-nine ads were created to support all audiences, with different channel versions. During the campaign, states that fell into the bottom five states with vaccine rates were included in the media buy. The campaign was expanded to the bottom seven states with additional funding. Overall, the campaign cost a total budget of US$75,000. As part of the campaign strategy, organic content was also created in addition to using paid ads. This included 93 campaign posts, which led to an increase in NNCC followers on Facebook and LinkedIn. Additionally, NNCC launched a new Instagram account during this process resulting in 95 total followers with 315 individuals viewing the NNCC Instagram page during the campaign period.

**DISCUSSION**

The “Nurses Make Change Happen” campaign, which ran in two parts between June 2021 – June 2022, resulted in over 10.8M impressions, 62.4K website clicks, and 17.6K site actions (views of toolkit or campaign landing page). The campaign included targeted messaging to the top seven U.S. states with low COVID-19 vaccine rates in
2022. The first part of NNCC’s campaign, from June 2021 - September 2021, produced over 4.0M impressions and 10.3K website clicks. The second part of NNCC’s campaign, from February 2022 - July 2022, resulted in over 6.7M impressions; 52.1K website clicks; 17.6K site actions (views of toolkit or campaign landing page); and 18 toolkit shares from the microsite (Table 2).

| Campaign Timeframe       | Impressions | Website Clicks | Site Actions | Toolkit Shares |
|--------------------------|-------------|----------------|--------------|----------------|
| Part 1 (June 2021 – September 2021) | 4,025,345   | 10,299         | N/A          | N/A            |
| Part 2 (February 2022 – July 2022)   | 6,781,801   | 52,180         | 17,690       | 18             |

The campaign reached 46% of the nurse professional community on Facebook, 6.6% on Twitter and 3.0% on LinkedIn. The campaign also reached 65% of the vaccine hesitant community on Twitter and 22% on Facebook. Sixty-four percent of the parents’ audience was reached on Twitter and 4.6% on Facebook (Table 3).

| Social Media Platform | Campaign Reach | Audience Size | Audience Reached (%) |
|-----------------------|----------------|---------------|-----------------------|
| Facebook              |                |               |                       |
| Nurse Professional Community | 259,760     | 555,300       | 46.8%                 |
| Public Health Services | 62,608       | 549,700       | 11.4%                 |
| Vaccine Hesitant Individuals | 293,635 | 1,300,000   | 22.6%                 |
| Current and Hopeful Parents | 156,787 | 3,400,000   | 4.6%                  |
| LinkedIn              |                |               |                       |
| Nurse Professional Community | 118,581     | 4,000,000     | 3.0%                  |
| Public Health Services | 42,299       | 610,000       | 6.9%                  |
| Twitter               |                |               |                       |
| Nurse Professional Community | 616,549     | 9,300,000     | 6.6%                  |
| Public Health Services | 139,656      | 214,700       | 65.0%                 |
| Vaccine Hesitant Individuals | 97,572     | 150,200       | 65.0%                 |
| Current and Hopeful Parents | 67,001     | 104,700       | 64.0%                 |

Through back-end data of the social media accounts, NNCC learned more details on demographics of people who viewed particular content. For example, Women ages 25-34 interacted most with the nurse stories. Men of various ages were interested in the campaign’s video content and nurse interviews more than still graphics and showed a heightened interest in messages that dispelled myths around fertility and COVID-19. The back-end data collected was used to further refine the approach to target our defined audience and adjust campaign content and format.

The cost per click (CPC) at US$1.43 was impressive, proving a cost-effective way to reach and engage with the identified audiences. In comparison, the average CPC for health and medical content is US $2.62.\textsuperscript{21} The campaign goal was to drive site traffic. NNCC had a total of 52,180 website clicks with 21% going to the social media toolkit and 79% going to the campaign landing page. On the campaign landing page, a microsite linked to the main NNCC website, approximately 92% of total visitors came from paid media. The nurse story content had the highest CTR at 1.4%,
compared with the next highest category, which were posts on nurse advice at 1.1%. This shows personalized content with real names and faces was driving higher clicks compared with other content shared. Of all the audiences, vaccine-hesitant individuals had the highest CTR at 1.1%, indicating the messages resonated and were clicked on to learn more. The vaccine-hesitant audience was highly active when being targeted on social media. The social media toolkit was designed to encourage content sharing by the nursing community. However, one shortfall NNCC observed is that although ads drove people to the microsite (6.9 K clicks; 3.7 K site views), there was minimal sharing of the social content (18 shares). Although nurses were not as likely to create their own content or share the toolkit, they were highly engaged in viewing and accessing the microsite. Nurses were also more likely to reshare existing NNCC published content on their own social media feeds, demonstrating paid ads can encourage content sharing when posted by a trusted source, in this case, a national nursing membership organization.

Leveraging professional expertise on social media to promote public health initiatives is an emerging area of opportunity. The COVID-19 pandemic demonstrated the opportunities and challenges with rapid dissemination of information and the complexity of ongoing vetting of trusted information and misinformation. Establishing protocols and managing information dissemination among stakeholders may help minimize the spread of misinformation where inaccurate information becomes “fact.” Establishing the need to create clear boundaries between personal and professional persona on social media is an area of further research.

Through the campaign, it was exciting to observe the nurse professional audience engage in social media content and content sharing; however, minimal sharing of the toolkit suggests nurses were not as comfortable creating their own content for social media or perhaps were hesitant to post it to their own personal social media accounts. To support nurses’ ability to elevate their role as trusted health messengers and build their confidence in creating and maintaining an online presence, further training may be necessary. At the launch of NNCC’s “Nurses Make Change Happen” Campaign, NNCC offered a Social Media and Media Training Workshop to promote nurses’ skills and competencies on how to responsibly leverage and manage social media to share vaccine facts, address misinformation, serve as a vaccine ambassador, and navigate social media along with respect to the nursing code of ethics.

The nursing code of ethics, as developed by the American Nurses Association (ANA), is a guide for “carrying out nursing responsibilities in a manner consistent with quality in nursing care and the ethical obligations of the profession.” Trust is critical to the nurse, patient, and community relationship. Compromising this trusted relationship, even unintentionally, may damage the relationships developed among nurses and the communities they serve and the ongoing trust of the nursing profession. It is imperative that nurses always ensure that anything posted or published never undermines a patient treatment or privacy relationship with their communities.

With that in mind, the ANA created a set of principles to guide nurses when using social media, allowing nurses to get the best out of it while safeguarding themselves, the profession, and their patients. Many of the principles are common sense and should be standard practice for anyone experienced in using social media responsibly.

However, as the nursing profession continues to establish a professional presence on social media and promotes the use of social media as a tool to advance public health initiatives, the principles outlined by ANA below provide a helpful guide to responsibly engage with social channels.
1. Nurses must not transmit or place online individually identifiable patient information.
2. Nurses must observe ethically prescribed professional patient–nurse boundaries.
3. Nurses should understand that patients, colleagues, organizations, and employers may view postings.
4. Nurses should take advantage of privacy settings and seek to separate personal and professional information online.
5. Nurses should bring content that could harm a patient’s privacy, rights, or welfare to the attention of appropriate authorities.
6. Nurses should participate in developing organizational policies governing online conduct.\(^24\)

Before the COVID-19 pandemic, the image of nurses in the media was minimal and when present often rife with stereotypes.\(^8,^9\) Social media presents an opportunity for nurses to advance their image and harness media to reframe and promote the nursing profession, advance public health initiatives and indirectly promote improved health outcomes. The need to build confidence in the COVID-19 vaccines was a chance for nurses to be empowered and leverage their role as trusted messengers. As evidenced by the COVID-19 pandemic, the nursing code of ethics must be strictly adhered to so as not to compromise the integrity of the profession. Thus, more trainings are necessary to support health professionals navigate how to responsibly create and maintain an online presence.

**SUMMARY**

Leveraging nurses as micro-influencers, the “Nurses Make Change Happen” campaign engaged audiences nationally to promote vaccine confidence and encourage vaccine uptake. The campaign found success using a softer, nonconfrontational approach to messaging, for example, “talk to a nurse if you are hesitant” instead of “get your vaccine today.” Posts that used real nurses to encourage rather than demand the target audience to get vaccinated were more well received. Paid ads helped increase NNCC’s channel followers and encouraged resharing of content. Targeted ads were a successful strategy based on CPC and the CTR.

Through the campaign, we observed that the larger professional nursing community is active on social media and engages with content, and advertising was a great tactic to even promote additional content (eg, nurse trainings) and engagement with NNCC. Involving nurses from our VCAC proved to be an effective strategy for content and message development that was personal and representative of the audiences to be reached. Posts featuring nurses familiar with vaccine confidence and community engagement had the most success. Individuals are not as likely to personalize and share content, similar to the vaccine toolkit, but more likely to reshare existing content from trusted organizations on their social feed. This is a potential area to improve on in future campaigns by offering trainings to campaign followers to increase their online presence and comfort in posting.

Although we had organic traffic engage with our content, paid media had the most impact in expanding our reach and affecting our metrics. Momentum on Instagram was successful, and we anticipate continuing to publish content there to build a following. Directionally, the paid campaign helped to increase channel followers that will now see our organic content, which is an added earned benefit.

Nurses are recognized as trusted messengers, yet there is an absence of nurse presence in media. The COVID-19 pandemic provided an opportunity to encourage
vaccine confidence and increase uptake through leveraging the trusted voices of nurses through social media. The “Nurses Make Change Happen” social media campaign highlighted an emerging opportunity for nurses to create and promote public policy, have more visibility in media, and maximize their role as trusted messengers in health care.

CLINICS CARE POINTS

- There is an absence of positive nurse images in media.
- The absence of positive images and perpetuated stereotypes has negative consequences on the recruitment and retention of nurses as well as indirectly patient care.
- The COVID-19 pandemic highlighted the critical need of nurses on the front lines of health care.
- Social media was critical to information dissemination, both misinformation and trusted information.
- The racial, ethnic, and professional diversity of nurses as trusted messengers must be represented in media to combat the stereotypical image of the nursing profession.
- Paid media advertising, segmenting audiences, and targeted messaging are effective ways to promote vaccine confidence.

DISCLOSURE

The authors have nothing to disclose.

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