

CASE STUDY:

AUGUST 2023

Data Focused Communication Decisions

Market research, vaccine data, and website analytics were instrumental in shaping North Carolina’s COVID-19 vaccine campaign. NCDHHS used diverse data streams to continuously monitor and adjust outreach tactics in real-time. This comprehensive and data-driven approach allowed for effective resource allocation, contributing to the overall success of the vaccine outreach efforts.

Market research – not message testing

North Carolina’s vaccine communications campaign was built on a foundation of market research that guided our path forward and drove smart, data-focused decisions. It was among the first states—if not the first—to conduct comprehensive, values-based research to understand how people would make decisions about COVID-19 vaccinations. We partnered with Artemis Strategy Group to **research how North Carolinians would make decisions about COVID-19 vaccinations**, not just which messaging resonated.

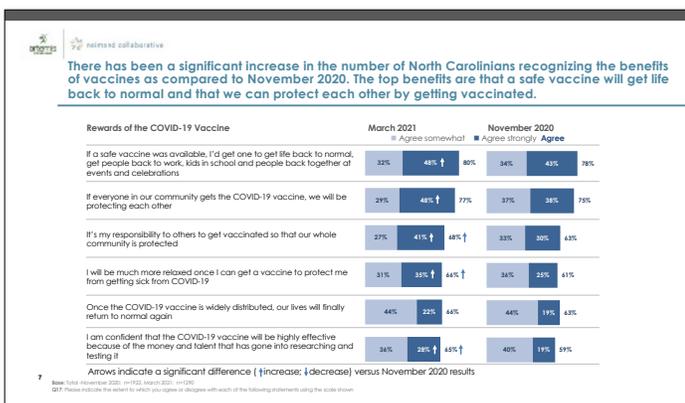
One of the most important findings we learned was that while reasons for vaccine hesitancy differed across demographic groups, the benefits and corresponding messages people identified with vaccination were the same. What mattered most was the messenger. This first part defied the conventional wisdom that segmented messaging would work best. The idea being that the diverse experiences of North Carolinians, particularly among historically marginalized groups, required campaigns tailored for each. With the research in hand, the campaign could focus on a singular life-saving message framework while tailoring the outreach strategies and messengers to the communities that needed it most.



Vaccination data verified the “trusted messenger” approach.

We validated the “trusted messenger” approach with metrics on the ground. We matched our county outreach activities to real-time vaccination data and found statistically significant correlations.

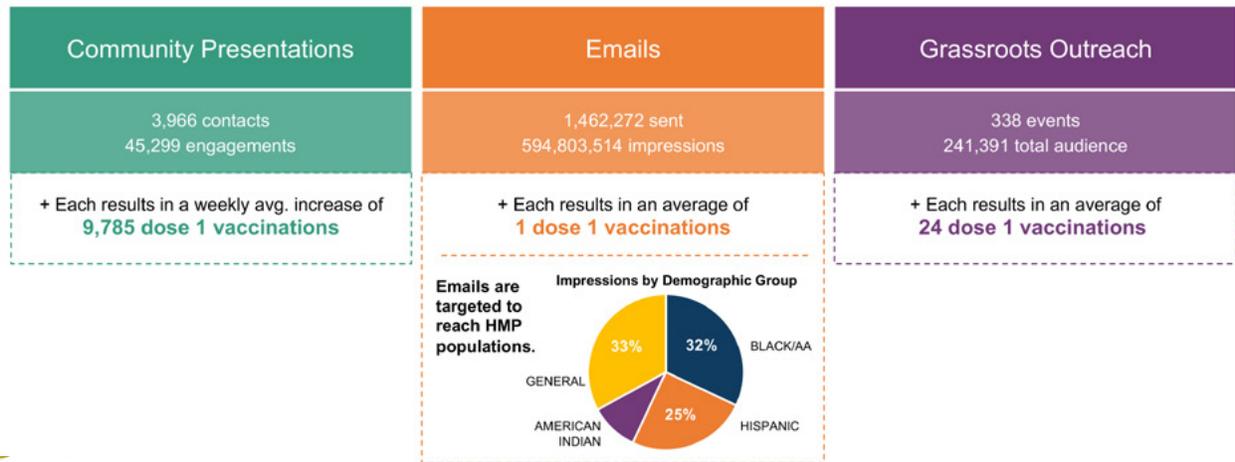
We found that a public information event from a trusted local official or community leader led to a measurable increase in vaccinations in that county. Ad buys, emails, and other traditional outreach also resulted in an increase, but a lower one. (See Figure 1.) The data helped verify that our outreach approach was on the right track. We needed the ad buys and emails as part of the outreach strategy to keep vaccination messages in the ecosystem, but it was insufficient on its own.



PUBLIC MESSAGING BY THE NUMBERS | MEASURING EFFECTIVENESS

To help gauge the first dose vaccinations efforts, the team developed a panel regression analysis controlling for the effects of time, population size, and average income.

The results below are based on communications and vaccine data through May 20th, 2022 and show statistical significance.



(Note: This kind of analysis was only possible until vaccine uptake became too widespread to reliably show correlations. It might not be replicable in a different public health context.)

Our research consistently showed the importance of relationship and trust building—which can't be done effectively with just a traditional email or ad buy. By monitoring effectiveness of our tactics, we were able to make real-time adjustments and ensure we always had the right balance of each reaching communities around the state.

To bolster our ability to reach people, **we trained over 120 medical providers, community leaders and stakeholders to present a "Vaccines 101" (later renamed "COVID Essentials") presentation.** This presentation was given over 325 times across the state, reaching over 200,000 people from the safety of their home computers or phones.

Vaccination data helped direct outreach efforts.

We built dashboards for every county in the state to identify areas that had lower vaccination rates and might benefit from extra resources. In counties with

low uptake, we redoubled efforts to find more trusted partners and hold more community events — as well as increased direct outreach through text messages, robocalls and traditional ad buys. Throughout the pandemic we used data to drive where resources would be allocated, regularly deploying automated calls or targeted paid digital media to the 20 counties with the highest prevalence of COVID-19 infections, sending postcards to the 20 counties with the lowest vaccine uptake and directing out of home advertising like bus ads and gas pump ads to the counties with the lowest booster uptake.

Analytics and usability data made the website easier to use.

We developed six steps of continuous improvement for the website that focused on the user experience and made the COVID-19 website easier to use, more equitable, and better at communicating our messages:

- 1. Monthly one-on-one interviews:** Observation sessions with North Carolinians using the website. Our team followed up each session with improvements to text and usability.
- 2. Google Analytics:** Track what people are seeing and clicking, then rework pages to make it easier to find the most requested information.
- 3. Writing in plain language:** Simplify to a 6th grade reading level (the maximum for half of Americans), and use direct, informal language to deliver important information.
- 4. Focus on what's important:** Stay focused on improving the popular areas to help best serve the most people; retire old pages to reduce the maintenance workload.
- 5. Test the results:** Don't assume changes are improvements. We watched changes in user behavior and conducted targeted surveys to assess whether our changes actually made the site easier to use.
- 6. Include Spanish-language parity:** This should be the normal course of business.



Users helped us redesign and focus the COVID-19 dashboards.

The NCDHHS data team built eleven public COVID-19 dashboards near the start of the pandemic, at great speed and with a variety of filters and drilldown features to sort the voluminous data. The dashboards were essential to public communications and at their peak were seen by **140,000 people a week**.

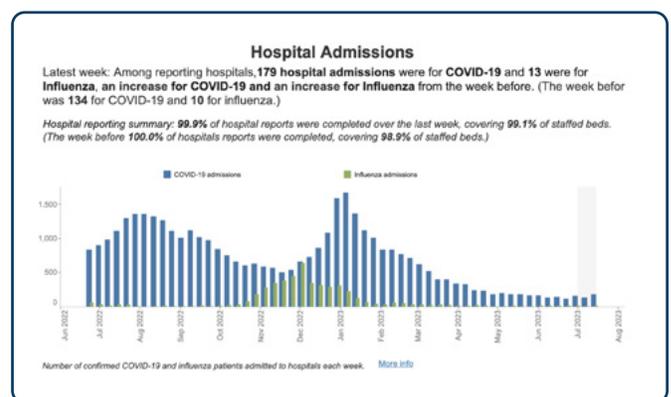
They were also very time-consuming to build, maintain, and update.

We partnered with the data team to re-evaluate the dashboards in 2022. Website analytics revealed that 90% of traffic went to only five of the eleven dashboards, and only one in ten visitors clicked any filter or drilldown. Much of the team's heavy maintenance burden was supporting dashboards, filters, and drilldowns that weren't being used.

We paired this analysis with interviews of North Carolina health officials, journalists, and members of the public about how they used the dashboards. The research revealed that these diverse groups mostly wanted to know the same thing: "How bad is COVID-19 right now, near me?"

Our 2022 redesign of the dashboards focused on the summary dashboard, using it to answer, "How bad is COVID-19 near me?", and de-emphasized and eventually removed other dashboards and features that were time-consuming to maintain. Text was rewritten to a lower grade level and simplified.

The NCDHHS Data Office Director, said of the redesign, "We didn't need to provide every detailed piece of data that we had. We reduced the number of clicks that people had to take to get to the data they were looking for. We didn't need as many filters as we thought we needed. The data teams and even program teams are subject matter experts in their field, but the communications team helps communicate the bigger picture, working together the updates to the dashboard made them more effective and user friendly."



Part of the redesigned summary dashboard, June 2023



UPDATED COVID-19 VACCINES AVAILABLE NOW

If your last COVID vaccine was before September 2022, or if you're 65 or older, you're probably due for an updated dose. [Find a vaccine location near you](#)

Website tracking helped us know what was and wasn't working.

Because we wanted website users to perform a specific action—searching their zip code for a vaccine location—we were able to more closely track what was effective at driving that action. Some examples:

- We discovered that medical centers and county websites were a large driver of zip code searches.
- We discovered that Facebook, Instagram, and website banner ads could be improved at driving zip code searches. We began experimenting and found clearer calls to action that were even more successful.
- Early in the pandemic we learned through error tracking that almost 10% of zip code searches were returning no results. The system couldn't handle common entries like ZIP+4 codes, city names or street addresses. These were easy and quick fixes that cut the error rate in half overnight.

Data also helped tell us what not to do.

- The team wanted to put a large video library onto our website. Analytics and interviews told us that this was not an effective way to use the videos. A PSA that is perfectly suited to broadcast or as an advertisement does not have the same viewership resting on a website library where people come for quick helpful health information.
- Building a self-service “chatbot” to handle visitor inquiries was proposed many times. Analytics revealed a similar site's chatbot was only used by 3% of its users, and it was unclear how helpful it was to them. The team determined that the time

required to build and maintain it was a distraction from efforts that would more reliably help users, such as writing in plain language or observing user behavior.

- We tracked social media sentiment around vaccines for some time before understanding that it wasn't actionable. It did not give us the clear direction on anything we could change to be more effective.
- Our digital team spent time analyzing performance and speed enhancements from the website. It was a good idea, and worth some effort, but didn't result in significantly more clicks or different behavior.

Data made the case for greater vaccine access.

- **Reading level became an important yardstick for writing simply.** (More than half of Americans read below a sixth-grade level). We discovered that many communications were unintentionally being written at a high grade level, sometimes postgraduate. Using [hemingwayapp.com](#), a free tool, NCDHHS worked with us to begin writing to a 6th grade reading level.
- **On the website, we saw that 75% of users were on mobile devices (and 90% of Spanish speakers);** this encouraged us to write simpler, shorter pages. In internal meetings, we often showed the mobile version as the default, rather than desktop.



- **Most of the COVID-19 website was offered in Spanish, not with machine translations but with thoughtful translation and transcreation by native Spanish speakers.** Google designated the site an authority on a variety of Spanish-language topics and directed nearly a million people to the website no matter where they lived. This wasn't SEO or paid placements (though those were done and did contribute some)—this was Google recognizing high quality and easily accessible information. This helped reinforce internally the benefits of providing Spanish language content.



The NCDHHS COVID-19 website was visited over **30 million times** over the course of the pandemic.

Between May 2020 and May 2023

MySpot.nc.gov was visited **16.3 million times**

Vacunatate.nc.gov was visited **1.7 million times**

The vaccine locator was used **4.6 million times**

A screenshot of the vaccine locator interface. On the left is the English version with fields for 'Zip Code', 'Age' (12+ years), and 'Brand (Optional)'. On the right is the Spanish version with fields for 'Código postal', 'Edad' (12 años o más), and 'Marca de vacuna (opcional)'. Both versions have a search button ('Go' or 'Buscar').

The Neimand Collaborative produced a series of case studies capturing best practices and lessons learned in outreach efforts to support COVID-19 vaccination. Case studies address telephone outreach, lessons learned during COVID-19 vaccine communications, data-focused decisions, Spanish-language outreach and community partnerships. All of the case studies can be found at www.neimandcollaborative.com.