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Editor: Linda Chalker-Scott

Bowie, M.¹, Scheyett, A.², Brown, V.³

¹*Grant Management Specialist, University of Georgia, Athens, Georgia, 30602*

²*Professor, University of Georgia School of Social Work / Agricultural Leadership, Education, and Communication, Athens, Georgia, 30602*

³*Evaluation Specialist, University of Georgia, Athens, Georgia, 30602*

Lessons Learned for the Next Pandemic

Abstract

Cooperative Extension played an important role in prevention/vaccine education during the COVID-19 pandemic. Given the likelihood of future pandemics, we must learn from the COVID-19 experience to better prepare Extension for action in the future. This study used listening sessions with Extension agents who were actively working during the COVID-19 crisis to explore the challenges they faced during the pandemic and what lessons we could learn for the future. Extension staff identified the following as important:

- agent education on facts versus misinformation regarding the pandemic;
- acknowledgment of their concerns about the reliability of information;
- clarity of function and reassurance they will not be asked to step beyond their role;
- support in navigating polarizing issues; and
- strong centralized leadership from the state's Extension Office.

Keywords: community education, Cooperative Extension, pandemic, responsive programming, vaccine hesitancy.

Introduction

On March 11, 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a global pandemic. The severity of this pandemic was like nothing seen in over 100 years; as of November 2023, there were almost 772 million confirmed cases and nearly seven million deaths attributed to COVID-19 (WHO, 2023). In the US, there were over 103 million confirmed cases and 1,138,309 deaths (WHO, 2023.). In Georgia, the Department of Public Health (GADPH) reported over 2.4 million confirmed cases and over 36,000 deaths as of March 27, 2024 (GADPH, 2024).

Cooperative Extension and COVID-19 response

The COVID-19 pandemic required rapid community response to prevent and contain the spread of the illness. Cooperative Extension's role in community health education, as outlined in the 2021 National Framework for Health and Well-Being (Burton et al., 2021), meant that it needed to be an essential part of community education strategies. Given the confusion of messages, misinformation, and questioning of the scientific community (Arin et al., 2023; West et al., 2021), Extension's reputation as a trusted community partner (Frantz, 2014; Gutter et al, 2020) made it a credible and powerful voice for COVID-19 prevention education and vaccine education.

To rapidly respond to the COVID-19 pandemic, the United States Department of Agriculture – National Institute of Food and Agriculture (USDA-NIFA) and the Center for Disease Control (CDC) developed a cooperative agreement through the Extension Foundation to create the Extension Collaboration on Immunization Teaching and Engagement (EXCITE). 96 projects and 73 land-grant institutions took on the project goals to “decrease vaccine hesitancy among rural and medically underserved audiences” and “increase knowledge about and acceptability of COVID-19 immunizations among priority populations” (EXCITE Annual Report, 2023).

University of Georgia (UGA) participated in the NIFA initiative; their Extension agents and staff received educational written materials and videos, real-time data, and scientific information to increase their knowledge and build awareness around vaccine development, safety, and availability. Faculty from UGA's College of Pharmacy, the

CDC, and Extension specialists facilitated internal listening sessions which allowed Extension agents and staff time to ask questions and engage in dialogue regarding the challenges they were facing in community education regarding COVID-19. Across Georgia, Extension became an important source of information on COVID-19 and vaccine accessibility and acceptability.

Preparing for the next pandemic

COVID-19 has evolved into an endemic illness and many are calling for a return to “normal times” (Boumans, 2021; Redbird, 2022). However, history has taught us that pandemics have occurred throughout time, and will occur again in the future. In the 21st century, we have repeatedly been faced with the threat of pandemics, and with a call to learn from history and be better prepared for the next pandemic (Gilman, 2010).

The theme “we are not ready for the next pandemic” is recurrent. Articles such as “Inevitable or avoidable: Despite the lessons of history, the world is not yet ready to face the next great plague” (Hunter, 2007) were published as the world faced the threat of H5N1 avian influenza virus. The Harvard Global Health Institute stated “in many ways, we are not ready for the next big pandemic, which is going to come at some point” (Zambon, 2008). After the Ebola virus outbreak in 2014, Bill Gates (2015) decried the fact that we were not ready for the next pandemic, as did Time magazine when another bird flu, H7N9 was identified by the CDC as a threat (Walsh, 2017).

As the COVID-19 pandemic quiets, the same rhetoric returns. Scholars from MIT (Spear and Paragas, 2021), the World Bank (Basu, 2023), and the US General Accounting Office (GAO, 2023), and the World Health Organization (Bradley, 2024) are calling for preparation for the next pandemic and asking that we learn from past mistakes.

How can Extension prepare for the next pandemic?

Much that is being recommended as preparation for the next pandemic is outside the sphere of Extension—an aggressive pipeline of anti-viral vaccines and treatments, increased funding to strengthen health systems, and better monitoring of the appearance and spread of viral illnesses. However, there are several areas where Extension could play an important role in pandemic response and containment. Spear

and Pargas (2021) have suggested that two key characteristics of pandemic preparedness are the ability to quickly activate “problem-solving teams at the local level to create temporary solutions” and the development of “information sharing mechanisms so that a collective understanding can be synthesized and shared quickly.” Cooperative Extension, as a trusted member of local communities, could be a convener of such problem-solving teams and a hub for information sharing.

However, to play these roles, Extension itself must be ready for the next pandemic. This requires a thoughtful examination of the lessons learned through Extension activities in response to the COVID-19 pandemic. This study therefore asked, “What can Extension learn from its efforts at vaccine education during COVID-19 to better prepare for the inevitable next pandemic and to fulfill its mission of increasing health at every stage of life?” The authors used secondary analysis of transcripts from listening sessions with Extension agents and staff, using thematic analysis to identify the challenges Extension agents faced in community education regarding COVID-19 vaccines, and explored ways this kind of community health education could be done more effectively in the future.

Methods

Participants

Extension agents from all program areas (Agriculture and Natural Resources [ANR], Family and Consumer Sciences, and 4-H) were invited to take part in a COVID-19 vaccine listening session held in each of the four Extension districts in Georgia. Participants were provided with lunch as a thank you for being part of the sessions.

Data collection

Each of the four listening sessions began with a brief overview of current COVID-19 vaccine information, followed by open discussion prompted by these questions:

- What are you hearing on a local level related to the COVID-19 vaccine?
- Are you concerned about being a local source of information regarding vaccines?
- What do you need from us to help address client questions and concerns?

The presenter/facilitators included a vaccine expert from UGA's College of Pharmacy, a CDC official who could speak to the latest guidance being issued, an Extension FACS health specialist, and the study's principal investigators (both Doctors of Public Health working as Extension Specialists).

Data analysis

Listening sessions were hand transcribed by at least two of the research team at each session. Transcripts were compared and a final corrected and consolidated transcript was created for each session. A thematic analysis (Joffe, 2011) was completed for the transcripts. Initial coding at the statement level was conducted by one member of the research team not present at the sessions, who then consulted with research team members who attended the listening sessions as a form of member check for trustworthiness of analysis. These initial codes with related content were aggregated into larger codes by the first coder, and again reviewed by the research team. Any disagreements were discussed until consensus was reached. Finally, the research team together organized larger codes with related concepts into overarching themes.

Results

A total of 152 participants attended the sessions, with between 12 and 70 participants in each session. Just over half of the participants were male, and two thirds were white. Half were ANR agents and another third were 4-H agents.

There were 122 initial coded statements, which were then aggregated into 13 larger codes, and finally five themes across the listening sessions. Themes were:

- Fear, rumors, and lack of trust;
- We need consistent, accurate materials;
- Extension is not the expert;
- Caught in the middle of the controversy;
- Government agencies give inconsistent messages.

Larger codes and themes are summarized in Table 1.

Table 1. Larger codes contained within each theme

Fears, rumors, lack of trust	Need accurate consistent materials	Extension is not the expert	Caught In middle of the controversy	Government gives inconsistent messages
Mistrust of vaccine safety	Branded and consistent materials	We are messengers, not experts	Role of religion and politics	Information changes
Mistrust of vaccine development	Multiple formats	Point people back to their medical providers	Damaging relationships with community	People don't trust government
Misinformation about COVID-19	Materials with simple language			
	Accurate and with data based in local information			

Fears, rumors, and lack of trust

In all four listening sessions, Extension agents noted that many in the community did not trust the vaccine or information sources; 39% of all coded statements in the study discussed this topic. One agent reported, “[There is] a lot of mistrust in the community with the vaccine – some specific issues address blood clots/other sides effects. The other thing that has really affected [our] area, some cases where young people have gotten a brain bleed.” Another agent simply stated, “People are overloaded with information and don’t know what to trust.”

Within this theme, nearly 30% of participants’ statements discussed erroneous vaccine information that was generating mistrust in the community. One participant reported that they had heard community members say “people are being injected with a tracker” or “the vaccine will give you COVID.” An agent stated, “When I have conversations about the vaccine they don’t want to get it because of their children, [concerns about] potential fertility issues.” In addition, 19% of agents’ statements reflected community concerns

that the vaccine was “made too fast and doesn’t feel safe.” Finally, 10% of statements reported on communities’ misinformation about COVID-19, including such things as “Your body just needs to fight it off” or that COVID-19 is just “a scam.”

We need consistent, accurate materials

The next most common theme, found in all four listening sessions, was heard in 29% of total coded statements - a desire for consistent, accurate materials about COVID-19 and the vaccine. A real desire was expressed for the University’s state Extension office to develop consistent materials and distribute them to all agents across the state.

Within this theme of a need for consistent materials, 40% of participants’ statements reflected a desire for UGA branded “scripts” or “canned information,” and 34% requested materials in multiple formats such as flyers, graphics, websites, videos, and radio public service announcements. Twenty eight percent requested “simple language” and materials that would serve as “myth-busters” and provide accurate and up-to-date information tailored to their local communities, rather than having to prepare materials themselves.

Extension is not the expert

Participants in all listening sessions expressed concerns about having to act as if they were medical experts; this was heard in 13% of all statements in the study. Within this theme of Extension is not the expert, 65% of statements reflected that the public does not see Extension as medical experts, and that they agreed with this view. There was reluctance to engage in any kind of information sharing or conversation on COVID-19 vaccines because agents were not experts and did not want to speak beyond their knowledge. One agent described their role by saying, “We are messengers, not experts.” Another agent emphasized the need to “be careful not to put us out there as ‘experts’ on this topic.” Over 24% emphasized that the message from Extension should point community members to their medical providers, and not try to answer medical questions, saying things like “The message should be ‘Talk to your doctor.’”

When asked what kind of informational materials on vaccines they would want, one agent bluntly replied “Nothing because we aren’t sending this [informational flyer] because we don’t/can’t answer their questions.”

Caught in the middle of the controversy

Just as many agents were cautious about being seen as an expert on COVID-19 vaccines, many agents were concerned about being caught in the middle of the controversies surrounding the vaccine. This was heard in every listening session, and made up 10% of the total coded statements. One agent said they had “concern about damaging relationships” with others in the community who had strong feelings against the COVID-19 vaccine; this was heard in 64% of the statements within this theme. In addition, 45% expressed reluctance to engage with people on the topic of vaccines because of the “role of politics and religion” in the topic controversy. An agent summarized his reluctance to enter into political conversations, stating “We need to be apolitical and educate vs advocate.” However, not all agents expressed such caution, and one specifically stated, “I don’t think we should avoid sharing information about vaccines for fear of negative comments.”

Government agencies give changing or inconsistent messages

A final theme expressed by participants in all sessions, and that made up 10% of the total study statements was concerns about the changing information coming from government sources such as the CDC or FDA. This was seen as confusing the community and leading to lack of trust. Some agents shared this confusion; in 55% of this theme’s statements they expressed real frustration and distrust of the information they were receiving from government sources. One participant stated, “CDC can’t make up their mind – things just keep changing, they can’t make up their mind. Though we understand this is part of the scientific process, many people do not and find it discrediting to government/CDC/officials,” while another noted how difficult it was to understand what was going on, much less educate others, when there was so much “misinformation from or inconsistency across formerly reputable sources [FDA, CDC]. One participant summed this up by ruefully saying, “The information changes daily.”

This inconsistency was seen as damaging people's trust in the government. Over 35% of statements reflected the belief that people no longer trusted government messages about COVID-19. One agent simply noted that the government was "no longer a reputable source."

Discussion

Extension agents can be a front-line defense during times of health emergencies such as a pandemic. To do this, they must receive a carefully curated strategy that thoughtfully addresses the five essential components outlined below. Reflection on our experience with the COVID-19 pandemic provided us with the following "lessons learned," which can help us be ready for future health crises.

Lessons learned

To be effective and fulfil the mission of Extension as outlined in the National Framework for Health and Wellbeing (Burton et al., 2021) during a health crisis, Extension agents will need:

- Education, so they understand the facts versus misinformation and rumors about the disease, its prevention, vaccination, and treatment. This is needed not simply to dispel myths and provide good information for clients, but for themselves as well. It is crucial to remember that agents are parts of their local communities, hearing the same rumors and sharing many of the same concerns as their neighbors. Providing scientifically-sound education provides both information and reassurance to agents, giving them the tools and emotional clarity to support their communities with research-based information.
- Acknowledgment of the agents' own concerns about information and distrust of government sources. We learned from COVID-19 that scientific understanding of the virus grew and changed with time, leading to an evolving set of messages. Allowing agents to express their frustrations with what can seem like a moving target of information and recommendations will be important, as will reassurance that they will

receive the most up-to-date information available as new information is learned about the illness.

- Clarity of role and reassurance that they will not be asked to step beyond the bounds of their comfort level relative to their role within their local communities. Letting agents know that they will not be asked to do more than they have expertise and capacity to do, that they will get the resources they need to provide education to their communities, and knowing that they will have back up from medical experts at the university will be essential. Agents need to know that they will not be expected to speak alone and without informational supports.
- Support in navigating polarizing issues. The COVID-19 pandemic taught us that political and/or religious polarization occurs during health crises, and that views regarding prevention and treatment of an illness can become highly contentious in a community. Extension agents value the relationships they have built with their local constituents, and for many this is a decades-long process. It will be important to have candid discussions on how to maintain relationships with community members who have very different viewpoints, how to navigate the preferences of local governments, and how to make decisions regarding safety precautions within their own offices when simple things like hand sanitizer, mask wearing, and social distancing become fraught with symbolic meaning.
- Strong centralized leadership from the University's state Extension Office will be essential to ensure that all the above recommendations are carried out nimbly, responsively, and effectively.

Study limitations

As with all research, this study had a number of limitations. Participants in the listening sessions were not randomly selected, rather all Extension staff were expected to attend. The group settings may have inhibited some from speaking their real opinion if it varied from that of the majority, introducing social desirability bias into our findings. Finally, since all notes were anonymized, we could not determine if the same participant made multiple statements or if each statement coded in the initial coding represented a unique participant perspective. Thus, we could only report the percentage of statements

reflecting each theme rather than the percentage of individuals making statements reflecting each theme. Despite these limitations, we believe that this study provides useful insights into what Extension agents will need to respond most effectively to a pandemic in the future.

Conclusions

Extension can be a powerful force in promoting the health of the country. Present across every state as part of the nation's land grant system and a trusted part of the local community, Extension has an established reputation of being an accurate source for practical, research-based solutions to everyday problems. During a health crisis such as we saw with the COVID-19 pandemic and as we will likely see again in the future, Extension can play a pivotal role in protecting the health of the nation. If Extension agents are to operationalize this role, as outlined in the National Framework for Health and Wellbeing (Burton et al., 2021), they will need not only good information and messaging to share with their communities but will need to have their questions, concerns, and anxieties about a pandemic fully addressed and be provided with the tools, resources, and supports they need to function. A pandemic is a crisis, and if we expect Extension agents to respond and protect the health of their communities, we must acknowledge that they are living through the crisis as well, clarify their role expectations, and increase the support provided to them so they can successfully fulfill the health and wellbeing mission of Extension.

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