



Vector-Borne Health Education Materials Evaluation Summary Report September 2024

Acknowledgements

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Disclaimer

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Objectives

The objectives of this project were to evaluate the vector-borne educational materials developed by NCFH in collaboration with the CDC during the previous fiscal year 2022-2023 to assess usability, information comprehension, potential influence on behavior change, and potential dissemination mechanisms of community health workers who interface with and educate landscapers and other outdoor workers. This evaluation project was conducted between April – June 2024.

Participant Recruitment & Methods

We sought to conduct a material evaluation with both outreach workers/community health workers (CHWs), who normally distribute health education materials to outdoor workers, and with immigrant outdoor workers (either landscapers or farmworkers).

The materials that were evaluated included a [six-minute educational video](#) about tick bites and preventing Lyme disease, and [a poster](#) encouraging post-exposure prophylactic treatment following a tick bite to prevent Lyme disease.

To reach CHWs, we reached out to organizations that employ CHWs in states with a higher prevalence of Lyme disease, with a focus on New York, New Jersey, and Virginia. Organizations were identified based on previous interactions with NCFH, and included community-based organizations and health centers. To accommodate their busy schedules, we conducted two



virtual focus groups and two virtual one-on-one interviews with a total of 9 CHW participants from Virginia, New York, and New Jersey during the months of April, May, and June in 2024.

To reach outdoor workers, we partnered with Central Virginia Farmworker Legal Aid Program, an NCFH outreach partner that conducts extensive outreach on public health, occupational health, and legal rights issues among immigrants throughout Virginia. NCFH staff conducted the focus group with a total of 10 outdoor workers (3 women and 7 men) recruited by the partner organization. The focus group was conducted in person in Charlottesville, Virginia.

All focus groups and interviews were recorded and transcribed, and a note taker was present in addition to a facilitator/interviewer. NCFH research staff then conducted a thematic analysis, according to two key topics from the focus group guides 1) knowledge of Lyme disease and 2) evaluation of the materials. Key themes were identified first by NCFH's qualitative research coordinator and were then discussed with the NCFH research manager and research director.

Overall Knowledge of Lyme Disease

Outdoor worker knowledge of ticks and Lyme disease were dependent on the lived experience of each outdoor worker. Some had never experienced ticks, whereas others had encountered ticks multiple times and had knowledge of how to remove ticks from their body. Regardless of previous exposure to ticks, the majority of outdoor workers were not aware of Lyme disease. CHWs were aware of ticks, but some were unaware of the symptoms and effects of Lyme disease. Both community health workers and outdoor workers had questions during discussions about ticks and Lyme disease such as if other tick species carried Lyme or other diseases, treatments for Lyme disease, and timing for treatment.

"I don't know if there's like any other medicines that prevent Lyme disease and... I know you don't want to cluster up a whole poster with 20 different medications." (CHW)

"¿Tienes que acudir de inmediatamente, pues a la clínica más cercana que pueda estar, verdad? ¿Porque si no te atiendes de inmediatamente, o sea, puede empeorar, verdad."// "You have to go immediately to the nearest clinic you can find, right, because if you don't go immediately, it could get worse, right? (Outdoor worker)

"Cuando uno le pica la garrapata, uno tiene que tomar amoxicilina antibioticos." //
"When you get a tick bite, you have to take amoxicillin antibiotics." (Outdoor worker)

“Porque hay una garrapata que está como Güerita Pequeñita y no sé si sea un poquito más venenosa que la negra.”// “Because there is a tick that is like smaller and paler and I don't know if it is a little bit more poisonous than the black one.” (Outdoor worker)

Need for Employer Education on Ticks and Lyme Disease

Outdoor workers and CHWs alike believed that employers should have tick and Lyme disease safety information on hand. CHWs were asked if employers in their area would be receptive to tick and Lyme disease education. Most community health workers believed that employers would be receptive, as long as the information was delivered with the key message focused on preventing absenteeism. When asked if they believed that employers should have educational information about ticks and Lyme disease available, outdoor workers strongly affirmed that employers should have this information posted and accessible.

“Sí creo que sea importante que lo tengan esta información, si esto importa.”//“Yes I believe it is important that they have this information, yes this matters.” (Outdoor worker)

Effectiveness and Impact of Educational Materials

Video:

- Outdoor workers and CHWs provided positive feedback about the educational video developed by NCFH, in collaboration with CDC. A common positive highlight from participants was how descriptive and informational the video was. CHWs specifically praised how the information was organic and realistic to the way in which outdoor workers access health information.

“Follows the cycle... of how our population normally gains access to information, and so it was really real for me. And so it made sense and it was kind of sort of not like a promo where you make up the information but more so a natural process. So it was very encouraging.” (CHW)

- Both outdoor workers and CHWs had few comments regarding changes to the video, with the general feedback being extremely positive. One CHW participant noted the importance of the use of bug spray and advised repeating the importance of using bug spray. (Note: The use of bug spray is repeated twice in the video.) Outdoor workers did not have specific feedback on how to change the video, stating that the video was informative and gave detailed information.



- CHWs asked for shorter, “bite-sized” videos as they found shorter videos to be easier to share and for outdoor workers’ attention. (*Note: These have already been created by NCFH through the form of edited social media clips of the video.*)
- CHWs noted how pairing the video with a distribution of personal tick removal kits would be an effective way to combine education with behavior change.

“Maybe if we had tick removal kits, you know, hand those out as well to the field workers. I think that would go a long way too.” (CHW)

Poster:

- CHWs described the poster as effective for distribution due to it being in print. They also expressed positive feedback regarding the usage of a QR code as a way to convey more information such as frequently asked questions and procedures.
- Overall, both CHWs and outdoor workers noted how flyers and videos serve different purposes for communication. Outdoor workers stated generally how they find both materials important with one worker noting how the video allows one to understand the steps of prevention whereas the poster spreads awareness of tick bites. CHWs noted how flyers or posters are best for fast and easy distribution and the usage of a QR code with more detailed information and links would be most effective to increase awareness and prevention of Lyme disease.
- While outdoor workers gave no recommendations on changes to the poster in discussions, CHWs had several comments for revisions on the poster, namely on providing more information, such as what medications treat tick bites, who is at risk, and more information regarding timing of seeking care after a tick bite. One CHW stated that the hyperlink was unnecessary due to the QR code, making the hyperlink redundant.
- Other CHWs noted the importance of considering color blindness in the target population, generally design mechanisms for color blindness accessibility increase contrast in the product and choose colors other than red and green which are the colors most commonly impacted by color blindness.

“It's the colors of the font and you guys just be mindful of those with color blindness.” (CHW)

Both materials:

- Both outdoor workers and CHWs believed the poster increased awareness while the video gave specific instructions and education on the topic as a whole. For future materials that are limited by space or time, it is best to separate information by topic such as awareness, prevention, removal, and post-bite treatment. CHWs noted the need for more awareness of how ticks can also bite non-working household members, including women, children, and pets, as long as they have had contact with outdoor areas that include tall grass and bushes.

“Si fuera posible escuchar de que esta garrapata puede picar a hombres y a mujeres, que aunque hay menos mujeres en el campo, pero igual hay ellas, no, yo por lo menos siempre pienso, hay a los hombres les pica la garrapata porque andan, no sé por qué ellos los pican a nosotras no, verdad? Pero es una percepción errónea. Entonces tal vez decir a hombres y a mujeres.”// “If it were possible to hear that this tick can bite both men and women, although there are fewer women in the field, but there are still women, no, at least I always think, men get bitten by the tick because they are outside, I don't know why they get bitten and we don't, right? But it is a wrong perception. So maybe say men and women.” (CHW)

- CHWs noted how the most common materials for distribution are printed materials and videos due to how information is generally shared either: in person or posted throughout the community in social gathering or work spaces.

“Just printable PDF material, primarily videos. Those are the two most popular.” (CHW)

- Participants were asked to choose which of the materials was most useful, but all outdoor workers and CHWs overwhelmingly stated that both were important due to the need for education on tick prevention, removal, and aftercare. Some CHWs chose the poster due to its physical nature, though the majority did not state a preference and stated that both materials were useful for different situations.

“A flyer most definitely because that's something tangible. That's something that they can take with them, and that's something that they can read again if they need some help because they might not have it.” (CHW)

“You can reach more learners in that [video] mechanism” (CHW)

“Para mí los dos, los dos son importante.”// “For me both of them, both of them are important.” (Outdoor worker)



“A mí me gustó todo. ¿O sea, como explican todo, no? Sí es importante saber y así se te basa uno a todo.”// “I liked everything. I mean, the way they explain everything, no? Yes, it's important to know and that way you are grounded in everything.” (Outdoor worker)