

Cranky Uncle Vaccine

Co-creating the Crankiverse: Regionally tailoring Cranky Uncle Vaccine to fight misinformation and drive vaccination

To learn how Cranky Uncle Vaccine leverages cutting-edge science to protect against misinformation, with positive results – read the first installment in our case study series [here](#).

Cranky uncles live in every community in every region around the world, eager to share their science-denying opinions with anyone who will listen. When they share or actively use the most common tricks of misinformation and disinformation, it can erode public trust in vaccines and the health systems and people delivering them. In turn, vaccine confidence and uptake can decrease.

The [Cranky Uncle Vaccine game](#)—played on a phone, tablet, computer or entirely offline—has the potential to enter every community in every region around the world. Through his stubborn behavior, Cranky Uncle helps players develop critical-thinking and trick-identifying skills. This game powerfully [combines three critical, science-backed techniques](#)—active inoculation, gamification, and humor—to combat vaccine misinformation and drive vaccine confidence and generate demand for vaccination.

While cranky uncles may be universal, and so are the skills we all need to be protected against the misinformation we all face, localization is still essential. In this post, we cover why tailoring for context is so critical, how we engaged in co-design to enable this localization, and the different versions of Cranky Uncle Vaccine we developed. Join us on our travels around the world and through our development process.

Cranky Uncle Vaccine hits the road: Traveling and tailoring for trustworthiness

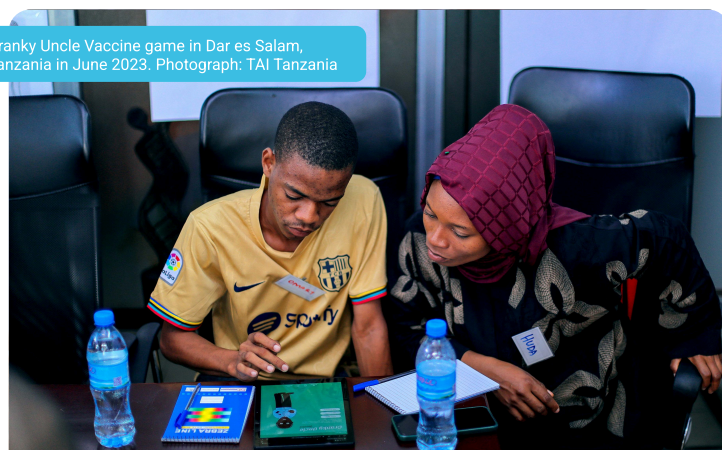
In 2022, our team—UNICEF, the Sabin Vaccine Institute (Sabin), Irimi Company, and John and Wendy Cook—embarked on an ambitious journey to develop Cranky Uncle Vaccine. While the game addresses universal challenges, in each context we visited, we [tailored the characters, script, and examples of disinformation tricks to improve acceptability, engagement, skill-building, and ultimately, vaccine uptake](#).

Evidence shows that tailoring for context is an integral Social Behavioral Change Communication principle, so it was essential that people relate to the different character constructs and understand the language used so they could appropriately trust and learn from different characters. “Cultural beliefs, values, and norms influence perceptions of health and medicine, and not everyone has the same level of health or language literacy”, says Kate Hopkins of Sabin. “Tailoring vaccine messages to take account of those differences from one audience to another promotes better understanding and acceptance.”

Unlike other games designed to inoculate players against misinformation, *Cranky Uncle Vaccine* recognizes the importance of adaptation to the different regions in which it will be deployed. And while it was clear that localization would be crucial, it was not clear at the outset where the comprehension and relatability concerns might fall in different regions.

By entering with a learning mindset and involving regional experts and end-users in the design of a tool that is ultimately for them, the Cranky Uncle Vaccine team ensured whether and how components of the game fit the region. “*Its user-centric design is a key element in its success*,” says Chelsey Lepage of Irimi. “*Involving end users from different communities and countries in the co-design process has helped create an app that truly resonates and equips them with new knowledge and skills to combat misinformation.*”

Cranky Uncle Vaccine game in Dar es Salaam, Tanzania in June 2023. Photograph: TAI Tanzania



We sought to explore and answer key questions, such as whether people understand the arsenal of tricks used by disinformers, whether people recognized and related to the different characters, and whether the vocabulary, language and colloquialisms used by the characters was appropriate. Each of these points represented a possible point to localize Cranky Uncle Vaccine. To understand where we need to adapt and tailor, we organized co-creation sessions in multiple countries in East and West Africa and South Asia. In each setting, we led participatory exercises with potential target audience groups : (1) youth, (2) parents and child caregivers, (3) medical students, and (4) community health workers. Below, we share some of the changes we made to respond to and incorporate their feedback and ideas.

Cranky Uncle Vaccine game in Dar es Salaam, Tanzania in June 2023. Photograph: TAI Tanzania



Cranky Uncle gets a foil: Introducing a health worker character

At the beginning of script development, it was important to include facts about vaccines in the game as well as explanations of misinformation tricks. A key addition to Cranky Uncle Vaccine was a new main character—a Health Care Worker—who provides factual vaccination information and counters Cranky Uncle's misinformation. "As we were writing the script to explain the fallacies and misinformation techniques, it became clear that we needed to better communicate vaccine facts as well," says Wendy Cook, lead content creator of the game. "Cranky Uncle wasn't the right character to be talking about vaccine facts. We needed a character who was trustworthy, calm, and kind as a counter to Cranky Uncle's crankiness. The Health Care Worker could be customized during the co-design process to be a nurse, doctor or health worker - depending on the region the game was being developed for."

Co-design sessions in Kenya opted for a nurse, while participants in Uganda chose a community health worker (CHW), and in Pakistan a Lady Health Worker (a specific type of CHW) was chosen. We also included clear explainer screens introducing and distinguishing the roles and tactics of the two main characters: trustworthy facts explained in a calm and empathic way from the Health Care Worker, and Cranky Uncle with his false information and tricks.

Cranky Uncle dresses the part: Making sure uncle is serious—but not too serious

Making sure characters are understandable and relatable is about more than just adapting them to reflect local audiences and cultures. For example, getting the cranky uncle character right was no easy feat - in fact he tricked some participants in early focus group discussions into believing what he was saying! In the initial prototype, he was wearing a t-shirt, but in early consultations with local partners, we decided to put him in a suit, intended to show that he took himself seriously. However, when we got to Uganda people took our well-dressed, suit-wearing Cranky Uncle a little too seriously, thinking he was a character to be believed. This misunderstanding of the cranky uncle character and its potential risks of leading to confusion around vaccine misinformation was a clear demonstration of the importance of co-design and testing the game in local contexts.

"Trust is essential for vaccine acceptance, so we asked participants in each region to identify the most-trusted sources of health information" says Elisha Maghiya, SBC Digital Engagement Specialist at UNICEF Tanzania. "In Tanzania, participants selected a nurse to share facts on vaccination and make the Cranky Uncle Vaccine game more locally relevant and credible."

Cranky Uncle talks to the people: Making sure uncle is clearly understood

On our travels with Cranky Uncle, we also learned important lessons about what he could (and could not) say and how he needed to say it. This is far more nuanced than running the text through Google Translate! Overall, we lowered the [Flesch-Kincaid reading level](#) of the text; this included changes such as replacing "logical fallacies" with "tricks" and "big pharmaceutical companies" with "big drug companies."

In addition, we learned that some of our examples and colloquial expressions needed to be localized. For example, to illustrate the way Cranky Uncle uses false cause tricks, young Rwandans advised changing the saying "eating fish gives you gills" to "eating goat will make you grow a beard."

We also integrated the respect for alternative healers and health practices of many cultures, particularly in the African countries we visited, where alternative or natural remedies are important. We adapted the game to ensure these topics were treated with sensitivity and nuance, for example by presenting vaccines alongside holistic or natural approaches. And we took a similar approach to other potentially sensitive cultural or political issues, avoiding using religious claims as examples of fallacy for instance.

Driven by insights from co-design workshops (captured in detail in our [recently published paper](#) in the Journal of Health Communication), we tailored a prototype into a fit-for-context Cranky Uncle Vaccine game to combat misinformation in East Africa, Ghana, and Pakistan. "As we move to new regions and countries with Cranky Uncle Vaccine, our initial work co-designing context specific versions of the game has given us insights on how localised versions work for countries and regions.

This gives us more opportunity to scale up the use of Cranky Uncle Vaccine" says Surangani Abeyesekera, Social and Behaviour Change Specialist with UNICEF Headquarters Demand for Immunization team.

Stay tuned for our next post which will highlight just how we used this rigorous, multi-country research to assess the potential impact of this novel behavior-change intervention.



Cranky Uncle Vaccine game in Dar es Salaam, Tanzania in June 2023. Photograph: TAI Tanzania

¹ Hopkins, K. L., Lepage, C., Cook, W., Thomson, A., Abeyesekera, S., Knobler, S., Boehman, N., Thompson, B., Waiswa, P., Ssanyu, J. N., Kabwizamu, L., Wamalwa, B., Aura, C., Rukundo, J. C., & Cook, J. (2023). Co-designing a mobile-based game to improve misinformation resistance and vaccine knowledge in Uganda, Kenya, and Rwanda. *Journal of Health Communication*, 49(60), 49-60. <https://doi.org/10.1080/10810730.2023.2231377>