



Cranky Uncle Vaccine

Seriously cranky: the uncle we all have helps build the skills we all need to resist misinformation

Cranky Uncle Vaccine leverages cutting-edge science to protect against misinformation, with positive results

This post is the first installment of a 5-part case study, sharing our journey from challenge and co-design to global scale-up of Cranky Uncle Vaccine, a novel behavior-change intervention. In this post, we will dive deep into the challenge of misinformation and how we are working to address it; our next post will demonstrate how Cranky Uncle Vaccine got stronger through collaborations with young people, parents and healthcare workers in East and West Africa and South Asia. Cranky Uncle Vaccine is a game—played on a phone, tablet, computer or entirely offline—that leverages active inoculation and humor to build skills to resist misinformation.

Serious trouble: In designing and delivering programs to improve individual and societal wellbeing, we must increasingly contend with how disinformation erodes public trust and can lead to unhealthy behaviors.

As you may have experienced in your daily life, online and offline, there's more information—including more low-quality information—circulating than ever before. It's also spreading and changing faster than ever before. What you are experiencing as an individual is real: evidence shows that everyone is experiencing it to some degree. Some people are experiencing it more deeply, as they are being intentionally and systematically misled by misinformation.

**It's exhausting.
It's also dangerous.**

"As an organization that works to protect the rights of every child, we are acutely aware of the risks disinformation poses to vaccination and other programs," says Surani Abeysekera from UNICEF. "Whether you are trying to vaccinate children, keep adolescents in school, or end gender-based violence, misinformation and disinformation can disrupt those efforts."

Why? While vaccine misinformation, perhaps surprisingly, constitutes less than 10% of global online content on vaccination (at least in English and Spanish), it can have a disproportionate impact on people's ability to find reliable information, it may reach more vaccine hesitant people, and can be psychologically 'sticky.' Misinformation can undermine trust in public health authorities and has been shown to influence people to question vaccination and adopt other unhealthy behaviors. Misinformation may also impede other pro-social and pro-environmental behaviors.

"Disinformation is now an existential threat to the public health programs which have brought such incredible gains in human health and wellbeing," said Dr Angus Thomson of Irimi. "Key to countering this challenge is an important distinction between mis- and dis-information. Misinformation is unintentional falsehoods that can confuse and confound, but disinformation is intentional falsehoods, created by bad actors and characterized by deceitful tactics and malicious intentions. By helping people see how they are being manipulated, we can help them build resistance."



The authors of disinformation use a common set of tricks to get people's attention and entice engagement. "Across different science topics, we see the same set of misleading techniques," said Dr. John Cook from the University of Melbourne. "Our research has found that helping people identify deceitful tactics builds immunity to disinformation. Importantly, people can learn to spot the same techniques across multiple topics."

Unless you are one of those people for whom polluting the information environment is pleasurable and/or lucrative: disinformation is your problem. Low-quality information harms people and discourages changes we need to see in the world, such as vaccinating themselves or their children, keeping kids in school, encouraging expectant parents to seek antenatal care, or fostering pro-environmental behaviors. It's not the only challenge to change but it is a prevalent, pernicious one.

**In the face of this challenge,
you may think we need a superhero.**

**But what we need—and have
—is a Cranky Uncle.**

**Cranky Uncle
Vaccine**

*No, no he doesn't!



Serious skills through serious games: Working with Cranky Uncle Vaccine, we can foster effective protection against low-quality information by offering an interactive game rooted in the emerging science.

Let's look at the science of neutralizing disinformation as a barrier to positive behaviors. Back in the early 1960s, psychologists demonstrated that we can 'inoculate' people against false and misleading information, in a similar way to how a vaccine protects us from microbes. If people are exposed to a weakened form of misinformation, they can build up their 'cognitive immunity' against disinformation. More specifically, these psychologists showed that if people receive a carefully crafted (1) warning of the threat of being misled and (2) an explanation of the tactics used by misinformers, they can better distinguish, then act on, true versus false information.

The next step is to bring this promising approach out of the lab and into the real-world, at scale. Enter Cranky Uncle Vaccine! Cranky Uncle Vaccine, a serious game—one that draws on rigorous science and is fun to play—can build the protective skills of critical thinking, information literacy, and discernment. Serious games are well-suited to skill-building, as they combine learning strategies and knowledge with game elements to build competency as well as knowledge.

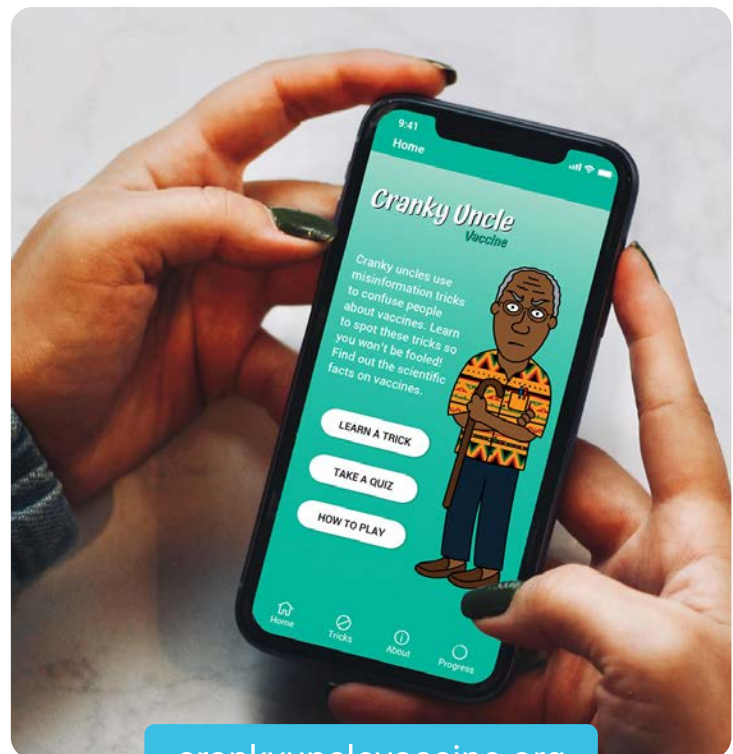
Our—and now your—Cranky Uncle is the product of creative, science-based problem-solving by the team of UNICEF, Sabin Vaccine Institute, Irimi, and misinformation expert, Dr. John Cook. Cranky Uncle Vaccine draws on science to build skills—at scale—to protect people from harmful and misleading information.

Perhaps you have a science-denying family member who is all too eager to share their contrarian opinions with anyone who will listen. In this game, which can be played on a phone, tablet, laptop or entirely offline, players meet and are mentored by a 'cranky uncle' who teaches them his disinformation 'tricks.' By getting inside the mindset of a 'cranky uncle', players build the critical-thinking and trick-spotting skills that allow them to appropriately recognize and discern false information from facts across a variety of topics.

In addition to the science of inoculation theory and the power of gamification, Cranky Uncle Vaccine draws on additional research to be effective. This includes making sure the 'inoculation' is active; this is the difference between a one-way presentation (passive) and a two-way interaction in which you get feedback. The latter makes it more likely that lessons will stick. In addition, there is scientific evidence behind the use of humor to make lessons more memorable and to be discussed outside of the game.

"UNICEF took a leading role in supporting countries to counter health misinformation, in particular vaccine-related disinformation, during the COVID-19 pandemic and even way before that. Cranky Uncle is an exciting solution to misinformation. It builds resistance to misinformation in individuals, and is engaging, scalable, and customizable," says Surani. Three science-backed techniques—active inoculation, gamification, and humor—add up to one Cranky Uncle. This unique blend of science is now being deployed in the real world, engaging users to protect themselves against disinformation and behave in ways that benefit themselves and their communities.

Stay tuned for our next post, in which we will discuss co-designing Cranky Uncle for specific contexts.



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