0:10
Welcome to everybody, to the first Berkeley public Health Alumni Association, Peaho, for short Professional development.
0:18
Webinar of the year. My name is Alice Chu, and I'm the co-president of PHAA. PHAA consists of 12 board of director volunteers who promote diversity and scholarship events and networking and professional development for current students and alumni and if
0:38
You are interested in receiving more information about our events. Please sign up at the URL site below.
0:47
Today's upskilling. Webinar was spearheaded by our executive and professional development subcommittees to continue the school's mission of developing public health change makers.
1:01
So misinformation and disinformation are timely topics as evidenced by the impact of social media and networks and the Internet on educating the public on dangerous prevent to tactics and treatments covid and resisting vaccinations so regardless of what topic evidence based health
1:23
Education is necessary for patient activation in terms of managing what's health and also individuals.
1:31
Decision-making health. But how can we combat and misinformation, whether it comes from Aunt Jenny or our colleagues?
1:39
So what we have here today is Dr. Sarah Gordon and Professor D. Skills, who are part of the C-suite executive team of Critica, Inc.
1:50
It is a nonprofit organization whose mission is to improve the public understanding of scientific consensus, counteract misstatements about health and science, and promote the use of scientific evidence and public policy, making.
2:08
And we will hear from these experts on the basis of misinformation. How would it influences people? And what are some practical approaches to counteract as public health?
2:20
In terms of logistics. Q. And a will occur in 2 parts after session, one, and after session 2.
2:29
Please type your questions into the Q. And a box below. My colleague, Dr. Annie Chang, who leads the Professional Development Committee, will be moderating the questions Sarah and David.
2:42
Thank you so much for sharing your evening with us over to you.

2:49

Thank you so much for having us. I'm gonna go ahead and share my screen and get started

2:57

So hopefully, everyone can see this slide show. Great thanks for the thumbs up.

3:04

So we're here to talk to you today about the more than misinformed, improving public health information environments.

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So I will. We will get to who we are, a little bit in a minute, and a little bit more about Critica.

3:16

But I wanted to just comment on the title here. What we're really trying to do today is talk about the way that misinformation has been traditionally conceived.

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In the field, and some of the new ways based on our extensive research and experience with misinformation, that we feel that this concept needs to be thought about to really help us get a better handle on what to do about it.

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So all of this sort of necessary statements. At the beginning we have no conflicts of interest to report.

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Dave has been a consultant for the Us. Office of the Surgeon General, and our work has been generously supported by the Robert Wood.

3:53

Johnson Foundation, and the views here do not necessarily reflect those of the foundation.

4:00

We have an amazing team of people with us at Critica, as well as a number of collaborators.

4:06

They're not all listed here across many institutions, and coming from all parts of the country as well as internationally now, and so I we just wanted to list some of them here and acknowledge that there are many people who went into thinking about some of these ideas.

4:22

So here's a little bit about what we're going to cover today. I'm going to very briefly define misinformation.

4:28

There are different definitions out there and there's often some confusion about the difference between misinformation and disinformation.

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So I'll just go into that briefly, just to give us, you know, the a common definition for what we're talking about, and then I'm gonna talk a little bit about how health communication has changed and a lot of you will I'm sure recognize.

4:51

What I'm talking about immediately, but some of the ways that social media has has contributed to the changes in health communication, some of the ways the pandemic has contributed to a change in health communication and some of the ways that that we feel that you know as public health practitioners as I

5:08

Am one of them are not always keeping up with some of these changes, and then we're going to present an idea about an environmental model of information and talk about exposure to misinformation.

5:22

What that means. Looking at this from sort of an environmental health point of view, and why that model will help us get a better.

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Both of better handle on what's going on. With misinformation. But a much better feeling, for where and when we should intervene

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And then Dave especially, will talk about what we have conceptualized as a way of addressing unhealthy information environments in a holistic way.

5:49

And he'll talk a lot about criticas intervention which is to train people we call infidemiologists, which is a nice company of information and epidemiologists.

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And and we're training a new cohort of them now.

6:02

And so Dave will give you a lot more details about how that works. So before I go into some of that content. As I said, I wanted to just give you a brief definition of some of the forms of information that is not correct.

6:16

So here, you see that it's really an event diagram. And this is important. To notice that there are overlaps.

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If, for example, between misinformation and disinformation, a lot of the time, because misinformation is defined as something that's false or misleading, where the intention is not really meant to be harmful, so somebody may accidentally share incorrect information but

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They're not intentionally trying to harm anyone or spread things that are that are outright lies, whereas disinformation is is deliberately manipulated.

6:48

False content. Where again, the intention is to actually deceive, and the problem here is that intentionality is very difficult to actually understand or ascertain.

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At any given moment. So we don't always know when we see incorrect information on the Internet, whether it is in reality misinformation or disinformation.

7:05

So that's just important to keep in mind that solutions to issues around.

7:11

Misinformation have to take disinformation into account, as well, and vice versa, because there is actually a good deal of overlap or just.
7:23
We don't have enough knowledge to figure out where these things are coming from. Sometimes, and then there is also mal information, which is sort of a more extreme version of harassment, hate, speech, language that is extremely sort of fighting language, or something that is is meant to be incredibly harmful.
7:44
So I will leave you. With a quote from a book by Harry Frankfurt that's called on.
7:51
I'll say Bs here, because I don't want to offend anyone. So these Bs are seek to convey a certain impression of themselves without being concerned about whether anything at all is true.
8:03
They quietly change the rules governing their end of the conversation, so that claims about truth and falsity are irrelevant.
8:10
So in this quote, you're seeing that people make are making statements, but they're not concerned necessarily about trade or not.
8:17
Truth, and we've I've seen this come up a lot in the literature that human beings are not sort of made to look for accuracy, but they want to look for something that is meaningful to them.
8:25
So this is not necessarily people's priority when they share on the Internet, and sometimes it's a bad. Intention, and sometimes there's really no motive that we can discern
8:40
So with that being said, what is sort of the official working definition of health misinformation that we have right now.
8:48
So health information is false, inaccurate, misleading information on health concerns, and so it has to be based on the information that we have at the moment.
9:02
And that's important. Because obviously with something like COVID-19, there were a lot of things that may have been inaccurate in it to a degree that were shared early on that were sort of corrected later, because we just didn't know everything about the pandemic that wouldn't have
9:16
Been misinformation. It has to be based on what we know at the time, whether that information is false in accurate and misleading, and I did want to point out here.
9:26
I'm actually working on a new book on medical mistrust and conspiracy theories. And I've done dozens of interviews with people who either themselves are distrustful of the medical system and the health care system, or have family members and close friends who are.

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And I've heard many, many stories about people who have literally died from being really extreme about misinformation and really falling into a lot of misinformed beliefs about health and medicine, which I'm sure I don't have to tell you.

9:58

But the idea here is that it's consequential. It has real health outcome, meaning, and that, you know there are real consequences in the real world to misinformation.

10:12

So, I'll pause here a little bit from the content, and talk a little bit about critica, and and I'll also let Dave talk a little bit about his path to getting interested in this area of medical misinformation.

10:25

So Critica sort of started with a book that I published with my father actually in 2,016, called denying to the Grave.

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And in that book we looked at the psychological reasons behind science, denial, and at the time, so remember, I started writing to spoken about 2,013. That's 10 years ago. At the time I was really really interested in the anti-vaccine movement, especially around childhood vaccines, and got very interested in what the psychological and social predispositions were behind believing some of these ideas, because one thing I really noticed right away was that a lot of the people

11:01

who believe these ideas were not uneducated or didn't have any access at all to good information. But there was some other motivator that was causing them not to sort of be able to accept the evidence and so that's what this book was really about.

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But it also went into some of potential ideas for ways that we could mitigate. Some of the the science, denial, and misinformation, and at the time in around 2,017 people started asking me, What are you going to actually do about this?

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And so we decided to found Critica at that time, and you heard a little bit about the mission. We want to improve understanding of scientific consensus counteract misinformation about science and health, and increase the use of scientific evidence in public policy making.

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And that's really across various areas, including things like energy and climate.

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We've been really focused on covid vaccine misinformation. And now reproductive health as well. In the past several years, and we are looking at other areas where we see a lot of misinformation cropping up, especially around things like long covid and anticipating new vaccines like the malaria vaccine.

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So we also publish regularly on the site. And we do trainings which I'll talk about in a minute for organizations that are interested in learning more about how they can counteract misinformation in their in their sphere of of whatever they work on within science so we've

12:36
Trained people in various areas, not just the health sciences. And maybe I'll let Dave talk about a little bit about his path here

12:46
Sure, just briefly. So I I'm my background is in medicine. I'm an eternal medicine physician, but also a sociologist.

12:54
But I I experimented with kind of different ways to to reach the public, and I had studied a little bit of what social scientists would call contested illnesses during my sociology degree, but I had an opportunity while I was a resident to do some electives in medical journalism that I

13:15
Did with W. Bar and Post Residency. I was a briefly, a special correspondent with Wbr. Which is in pra affiliate in Boston, where I did some reporting about Lyme disease, and a stark divide, and, Sarah, if you want to bring up some of the other kind of reporting that I did and so, I I looked at this both in Boston and

13:35
Got a small grant to to do some reporting on on the the manifestation of of a controversy around Lyme disease in France as well, and really started to see some of the dynamics of how misinformation works, and how it leads to polarization

13:53
Even around specific diseases, because fundamentally, there is an international concerns on what lyme disease is and how to treat it.

14:04
There's a PIN number of uncertainty around certain aspects of the disease, especially whether or not people can have symptoms after treatment, and within that uncertainty there, the there's a community of people who I know identify as suffering from what they would call chronic lyme

14:21
Disease. And they seek care from what they describe as Lyme literate physicians, and that has led to polarization about about what types of treatment with people seeking out very specific types of treatment.

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And and this type of phenomenon is one that I I I've started to see in a number of different areas as well so this, this is the pathway that led me to miss information.

14:44
And it's something that we're continuing to follow as as we're currently even writing grants about trying to look at long Covid under a similar framework.

14:52
So that's that's my pathway to studying this information Thanks, too. So, as I mentioned a minute ago, we we do trainings.

15:02
We've done several for the Navajo nation, for the General Society of General Internal Medicine, and for the American Physical Society.

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Among others, we've done some trainings for the world. Health organization and a few other bodies, as well, and I will say, for the so David will explain a little bit more about how we train our infidemiologists, and what the methods are there.
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But we do train organizations on sort of a a more shorter basis to learn some of the techniques that we train our infidemiologists on in terms of using usually motivational interviewing to have conversations with people who are hesitant or resistant to certain
15:41
Scientific ideas or ideas in health. And so with the American Physical Society. Just take one example. They actually, after training with us, launched a whole privilegeing science, misinformation, and and building trust in science.
15:50
Sort of chatter of their organization that has a number of trainings. Other trainings under it, and as a whole, initiative.
16:00
And we've done several trainings with them, and we know that their members are actively using even casually, in their daily lives.
16:12
A lot of the methodologies that we've taught them, and finding success there. So that's just sort of a an example of some of the the work that we do outside of the everyday research that we're doing.
16:24
So I wanted to talk a little bit about sort of the way that, as I said, the way that health communication has changed over the years.
16:33
So this is a network map of Twitter conversations from people talking about vaccines and a specific state bill actually, in California, that was in 2,015.
16:45
I'm sure some of you remember about the ending, the personal belief, exemption to to the childhood vaccination requirements.
16:53
And so we see clusters of different interest groups in this map. So each bubble is a twitter user, and the size has to do with how many followers and how influential they are.
17:05
And the connections between them has to do with how much they are talking to each other. So you see, you might see that some of the colors are overlapping and sort of running into each other.
17:16
So I'll tell you what they are. The orange is the autism community, the pink is the anti-vaccine community. The blue is kind of a smaller cluster of medical freedom movement, and the teal is the tea party.
17:30
And then all the way over to the right, in the sort of darker brain, is the pro vaccine public health community.
17:38

And so what? What? This? The reason why I wanted to show you this map is because we can see there's this sort of networked communication.
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There are a lot of groups that are communicating back and forth with each other already about these topics and the public health community is there.
17:52
But they're not really involved. Entrenched in these conversations, and they're still sort of on the side of what's going on with these conversations.
17:58
And so this has a lot to do with social media. Of course we're looking at Twitter and the way in which these networks have sort of built up over time and in some ways left the rest of us behind.
18:12
And so I'll I'll show you a little bit more schematically what I'm talking about.
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So message, based help, communication is what we're kind of all what we all learn. I think, in public health school, about how to and and how we think that things really proceed when we have information to get to the public about a health issue.
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So it starts with scientists who are studying whatever the issue is, maybe it's COVID-19 they're studying the disease.
18:40
And once they have findings that those go to Scientific advisory panels, and they go to scientific journals and pre-prints where things are published, peer-reviewed and published, and then public health practitioner which is all of us most of us this is
18:56
where we come in to really take those scientific findings and think about translating them to the public, and how we're actually going to use those to create guidelines and information for public use and health care workers and clinicians come in at this point as well, and then sometimes you know, there's also another
19:15
intermediary here, actually very often, there's another intermediary here which is the media and journalists who come in here, and they take the information either directly from science and and and scientists and people at universities, or from clinicians and public health workers and they you know, translate that really eventually for
19:34
the public. So this is a very linear model of how health communication happens, and it's this message based idea, which is that the message sort of stays intact and goes down this line.
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And eventually it gets to the public. And there's sort of no interruption.
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And of course that's not what really happens anymore. We have in the middle this networked health communication, which is sort of a happening everywhere all across social media.
20:04

And everyone else. Everyone is sort of around surrounding these networks and interacting with them back and forth. But there's no sort of linearity here. There's no idea that the message comes from one source, and then it's sort of passed down the line until it gets to the public instead.

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You know, really, what we have is that things have a great opportunity to get distorted and changed in this process, because there's so much back and forth among you know, many, many people who there are a lot of other ideas they have, or motives.

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They might have as we talked about earlier, to change the information. This is sort of what we're dealing with now versus what we think we're dealing with, which is what I just showed

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So I did want to before I get into talking about sort of the environmental health perspective.

20:57
I did want to, I I would feel bad if I never talked about psychology, because this is really this is really my my first foray into this topic, and I think it's still really important for everyone to understand sort of what are the psychological predispositions that bring people to a point where they're more

21:14
likely to believe in misinformation, and where they're more likely to deny scientific evidence.

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And so you can definitely, you know. Look at my book. If you want a full discourses on this topic.

21:26
But it really comes down to a few. You know, these major topics which I put on the slide here.

21:33
So one is complexity and uncertainty. So we're dealing in a situation. In health, where, as you know, there's a lot of complexity, and there's a lot of uncertainty.

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COVID-19 is obviously a prime example, but it happens in every field and at all time at all points in time. Across the development of an illness, or you know, a new epidemic, or whatever public health problem you can think of.

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There's often complexity and uncertainty, and people are fundamentally uncomfortable with that they've come to expect that science scientists and health practitioners will give them a 100% certainty.

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And obviously, we're not. We can't do that. So we always saying, Oh, we're 95%, 90%, etc. Certainty.

22:16
And people think that that means that we don't know or that we can't promise them something. And so they they start to lose a little bit of trust, and they get frustrated. So

there's a huge disconnect there between the way science works and how it never gives us an 100% answer, and what public expectations are about, how science should give them answers.
22:35
Then there's risk perception which I'm sure you know all of you have heard is completely skewed, and and really a psychological phenomenon. But we tend to treat it when we communicate risk as if it's a sort of straightforward.
22:49
You know that people have sort of calculators in their mind where they can look at risk very straightforwardly.
22:55
But really, what what happens is that people overestimate small risks. Then they underestimate large risk often, and they also are much more afraid of things that seem familiar like a plane crash, because they've heard they've seen it in the news, and they can imagine it.
23:12
And they're less worried about right or less risk perceptive of things that really are. You know, sort of everyday occurrences, but are but maybe big risk like getting into a car accident.
23:22
So risk perception as a concept is not straightforward for people, and also, you know, everything that we talk about in health and medicine is really a trade off as a risk benefit.
23:32
There's very, you know. There most of the things that we try to get people to think about have to be a trade-off, and that's very hard to introduce in a palatable way, especially when people's risk perception is so skewed, and then there's group membership.
23:44
This was the point that was really important in in the book, because a lot of the discussion about science denial was very individually based and about, you know, some of these concepts like risk perception.
23:58
And and confirmation bias that occur within the end. But what we really have to understand is that these these conversations are happening in large groups and often online and it's easier to join groups online than than offline.
24:12
So they're more they're more common. And so once you're in a group, you're ability to sort of think about risk and other and really assess evidence is confront because you think that the group has sort of decided all of these things already, and that you don't have to look into
24:29
It, and so then that becomes a real open door for people to fall into more misinformation. And then I, as I just mentioned, confirmation by A, is still really important.
24:39

The idea that you look for things that you already believe in, and you sort of dismiss things that you don't believe in and there's also this thing called the continued Influence effect, which is, when people have misinformation.
24:45
That's corrected, but they still believe the misinformation, like they see that there're that it's wrong, but they they don't.
25:00
They still continue to use the misinformation, and their sort of thoughts and decision making, and there's a lot that we don't understand about why that happens.
25:08
But some of it has to just do with the fact that sometimes the story, the misinformation story that we're told is a little bit more palatable than when somebody says it's not due to that.
25:20
But we don't know what it's due to. So vaccines are not causing autism, but we don't know what causes autism.
25:26
That's very difficult, because you haven't provided an alternative explanation. And so that creates a sort of a hole in the person's thinking, and they're psychologically inclined to keep believing the thing that gives them a fuller story and then there's just a lot of unknowns.
25:42
In the psychological predisposition research. So there's a lot we still don't understand about how people process health information, how they make decisions why they don't accept retractions of misinformation.
25:52
Like I just talked about and there's a lot of there's still a lot of debate in the literature about how all of these things interact.
26:02
So still, something that we're also looking into, but definitely important to keep in mind the psychological part of this.
26:11
Now, it's harder sometimes to intervene on some of these things, because they're so entrenched. And so we do want to talk about another framework that focuses less on psychology and more on sort of environmental factors.
26:25
So we like to look at misinformation coming from an environmental health approach. So if you'll just bear with me, I'll sort of explain to you the analogy a little bit.
26:34
So all of you know what what environmental health is, and that hopefully, and that you know, there are sort of these 3 main concepts within environmental help.
26:45
That explains sort of what put someone at risk for really developing a disease. And so predisposition, exposure, and access to mitigators.
26:51
Now this is a vast oversimplification, but these are sort of the the main.

26:59
The mainstays of what we like to think about. So, for example, a child's risk of getting asthma.
27:05
Is a function of their individual immunological predisposition. Various social determinants of health, allostatic load their exposure to pollution and toxins, and then, whether they have access to mitigators.
27:20
So if things like, do they have access to good health care? Do they have access to parks trees, you know, green spaces.
27:28
So those 3 things are. Also again, there's this lack of linearity here, where these things interact with each other. And so the exposure and the predisposition can interact.
27:37
And one, you know, sort of goes the other, and back and forth.
27:43
So if we look at this in the Miss information space. So keeping these 3 elements in mind, then we get sort of a different set of questions.
27:53
And considerations than we had before, so when we're looking at exposure, how much exposure does a person have to toxic misinformation?
27:59
But we have to first define what toxic misinformation is, which is sometimes difficult.
28:07
But how big is the exposure? Just like with environmental toxins, so that matters.
28:13
If you see it once or twice, the misinformation. Maybe that's okay. But if you're in an environment where misinformation is everywhere, it's really saturated with misinformation.
28:23
Then that's a big exposure, and that might be a different scenario. So we may not need to or want to intervene, when there's just a few things floating around.
28:33
But we may want to find the environment where there's tons of misinformation going to a certain group of people all the time. And then we want to. We may want to focus on that.
28:43
And also it gets determined by media diet, which, by the way, is not totally self chosen. There's kind of like a choice architecture there where people have access to certain news sources and don't have access to others.
28:53
Based on their Internet access, and whether or not local media sources have died out where they live, which is a big problem now.
29:04
So again, not, you know, not totally unconstrained by the actual environment. News, choices, social media use. So not just if they're on social media.

29:13
And what platforms they use. But how much social media matters to them! There are people who are on social media a lot, but they don't really care that much about it.
29:22
But then there are people who really depend on it for their social communication and for their their sense of identity, and some ways, and so that person is maybe more at risk than someone who you know when they see something on social media in one of their groups.
29:36
Of believing it. Then somebody who's sort of like oh, I don't really care about social media. I just go on here because I'm bored. So that's important as well.
29:44
And then what's one's predisposition to finding misinformation credible? So that's a lot of the things that I already talked about.
29:51
The psychological predisposition. There's a lot of debate in the literature, and I just wrote an article about this actually about, are there certain characteristics that make people more prone to misinformation or believing in misinformation and some studies find educated people and some
30:08
Studies find uneducated people, women, men, old, young, liberal conservative. It sort of goes back and forth, which one, you know. I think the one that is more consistent is that people over age 65 have a tendency to share more misinformation.
30:22
We don't. I? I don't think we really know if they believe it more, but they may share it more. But other than that, you know, it's it's not very clear sort of if there are certain demographics to who has a tendency to believe misinformation.
30:33
But it's important to understand the common psychological factors that I just discussed, because that can.
30:44
You know, those are sort of some of the predispositions to believing misinformation, and also other so social factors like being very isolated in some cases in in America, in certain places, sort of losing losing employment or aspects of identity that are particularly important to a person
31:04
Introducing. Can predispose them to being more sort of prone to misinformation
31:10
One thing. Sorry. Sorry. I'm hearing some background noise here. Where you're doing it.
31:27
Mitch. Okay. Okay? And then, of course, access to mitigators. So this is really, this is just as important in in misinformation environments as it is in asthma as in the asthma. And this is where the real structural questions are relevant.
31:33

So, how much access does someone have to a health care professional that they have time to talk to, and that they actually trust to be able to get, you know answers to actual questions?
31:46
How do they trust medical professions and public health officials that there are some populations that trust medical doctors and public health professionals more and others that trust them less.
32:01
Oh bye. So that's that's important to understand as well do they have access to a Broadway array of media sources, or are they limited?
32:08
Some of the factors that I just best earlier, like Internet access local media, public media sources.
32:16
Account. No, the availability of those things are are in part important for understanding whether people have access to mitigators.
32:25
Okay. Sorry. Process and package, because followers that are just
32:32
Okay, so these again, as I said earlier, these elements work together in our constantly influencing each other so again, there's no linearity in anything that we're talking about today.
32:43
If you remember nothing else, from the presentation that's that we said. Everything influences everything else and kind of this cycle and it's, you know, in that sort of part of the complexity.
32:55
So why do we want to take an environmental health approach? We're better. Does this give us? Well.
33:02
It does allow us to sort of help us see that we can't completely eliminate misinformation on the Internet.
33:09
And that's where this comic comes in. I saw something wrong on the Internet. I have to fix it, you know, if we, if we thought that that was our job, we would be Comp. I mean we we wouldn't be able to sleep.
33:19
We wouldn't be able to do anything else. It would be impossible and overwhelming. And so we have to come to a place where we have a system that allows us to identify what are the most consequential sort of nodules of misinformation.
33:29
And where are they happening? And where is? Where's the?
33:37
Where are the people most at risk, so that we know where to intervene with the most efficacy versus trying to just neutralize every single piece of misinformation that's on the Internet cause.

33:47
That is not a sustainable path. And so the example here would be like, for example, lead, you know, lead is toxic in certain circumstances, so if you ingest, lead as a 2 year old, that's much different from rubbing a block of lead on your skin.
34:05
Thank you. You. As an elderly person, so you know it matter again.
34:17
But It matters sort of what the context is, and then, you know, this is the same thing we tend not to think about the medium of misinformation enough where it's different if it's a video or an image or a text, it's probably different, but we we don't think about that context, enough.
34:26
We tend to treat all misinformation equally. So, thinking about the context dependency, and really focusing our interventions as part of the benefit of using this approach.
34:37
And then there are sort of certain epidemiological con concepts that are important here. So thinking about trust, and how that differs from community to community, and trust in the public health professionals and and the medical system, and then exposure to certain news sources.
34:59
Again, there are sort of clusters of people who have better exp have better access to to, you know, local and public news, or better news sources than other people do, and so, having a more systematic approach to that is also important.
35:13
And probably the most important thing here which you know last last. But not least in this list is, you know, equity, because all misinformation is not created equal.
35:26
And for one thing, people are. Some people are targeted. So certain groups, like a lot of black and Latinx groups in the Us get targeted by disinformation peddlers.
35:38
And so that creates an exposure that might not exist for other people. There are also information deserts just like, especially sort of in the age of the death of local news.
35:48
Where people there are people who do don't have access to to what's happening day to day in their local communities, and even a little bit, you know, more broadly than that.
35:59
And they don't have good access to healthy information. And so it's the same as how some people don't have good access to healthy food options that didn't affordable criteria.
36:11
So your ability to question misinformation is then obviously confronted by your lack of exposure to high quality information. So the environment. Therefore, matters very much in terms of whether you come to be able to, you know.
36:27

Look at this in a more subject, objective way. And then I would just put a few examples here of times and places in the in the history of public health, with food, regulation, water, safety, antibiotics, and vaccines.

36:45

So certain technologies and things that we've developed that have helped us be able to work in the more preventive manner. So instead of just sort of like drinking from the fireholes all day, where we're constantly responding to like, there's another crisis.

36:58

There's another crisis, and we can't get ahead of it. When we have these tools, we can, and what partially happened with the COVID-19 pandemic was that the infodemic came came right on the heels of it, and we had no tools.

37:12

We really weren't prepared to deal with that, and we had not been able to get in front of the situation by which working on the bills during the information environments to be able to withstand this deluge of information and misinformation, and so that's what we need to get that's what we

37:27

Really need to do, because, you know, come the next crisis. We don't want to obviously be in the situation again.

37:34

So what does that look like? So for one thing, you know, we try. We do think that certain regulations for social media are important.

37:44

So working on algorithms and and reducing algorithm. Is algorithmic approaches that help people basically brainwash themselves with the Internet trying to avoid echo chambers.

37:55

And also there's a really important place for building media and digital literacy. But, as I said, that needs to happen continuously outside of when there's a crisis and not just in the moment when something that won't work, when something is already going wrong, and then we need to focus on marginalized populations like I was just saying because they have first of all have historical reasons.

38:13

To distrust the public health and medical professions, and we have to make sure that that just trust is not being sort of leveraged to further so more distrust, which is what happens with some of this disinformation.

38:29

Peddling, so these all make for the beginnings of healthier information. Environments, but misinformation and disinformation will never be gone, no matter what else we do so we still have to intervene.

38:42

And so this is where our infidemiology interventions come in. But before I turn it over to Dave, I just wanted to to see if there were any questions on this part of the presentation

39:00

Right. I've I've been answering a few in the chat that have come up Some of the ones that I've been asked have been I essentially one was asking around about the.

39:11
There's a long history, of misinformation being spread in around climate change and tobacco, and so kind of how we incorporate that into our model.
39:21
And I mentioned how a lot of the evidence that that a around kind of interventions to do with misinformation, including inoculation, rebuttals appealing to scientific consensus, trusted sources, especially in group sources, kind of has has has come a lot from the climate change
39:39
Literature less on the tobacco. Climate change has been an active area of misinformation. Studies for a long time
39:46
Tobacco has been an area that's been studied in terms of motivational interviewing. So when you go into that, that is one area where it's been effective and a few other areas of like sort of behavior change in public health as well, I would say the other the other area that gets that a lot of the literature that we look at comes from is political misinformation and
40:07
Disinformation. So sometimes we do have to be cautious because the the issues involved there in the psychological problems are a little bit different. And there's a lot there's more identity you know, sort of pop issues in in politics than in health.
40:24
But there's a lot of crossover, and so that the political scientists have done some really excellent work on as well on misinformation and disinformation.
40:34
There's another question about how various different types of literacy, like media literacy, helpful, or see science literacy. Some some even talk about digital literacy intersects with predispositions.
40:47
Hey, Sarah, is that something you'd want to tackle Yeah, so I can make sort of one comment on that. I think that you know there's it's interesting.
40:53
There's a lot. There's a big move toward in corporating digital literacy, in teaching like high school kids and middle school kids.
41:06
Because obviously we wanted people to learn early sort of how to deal with understanding of the sources output, etc.
41:14
But one of the problems that we confront here, and that we think that should be and we're trying to work on making this more part of the education environment is again that there isn't enough awareness among educators about some of the barriers that people might have to actually accept accepting
41:33
This, accepting these teachings. So I think that that's part of the work that still needs to be done. Because without sort of, and again, that comes to sort of understanding what

are your students, information, environments, and what are other things are influencing them?

41:42

And what what are they entrenched in? I think that's part of the part of the equation here to sort of figure out.

41:55

How do we really instill some of these practices in them that in a way that's going to sort of stick

42:04

Do you have anything to add to that No! Oh, that sounds good!

42:10

There's a lot of excellent questions here. I a another one that I'd like to take. And I. I think we might be able to dress some of the during the talk, or even kind of after the second half of the talk as well.

42:24

But someone asked, why must the definition of misinformation be limited to what is known at the time? Damage can still be done, even with the best info we have at the moment, such as further covid statements on foamites, and I think we all think about the public health discussion around masks at the early part of the pandemic

42:42

Yeah, yeah, do you wanna do? Yeah. You, I, I, I would. The thing that I would first mention is, there is a lot of debate about how to define misinformation, because it's so context-dependent.

43:02

Right. I think this folds into our argument, because I find this somewhat similar to to trying to define toxin, because I what is the toxin depends highly on context. I don't know if any of you are clinicians, but I often say that I admit a number of people to the hospital with with a low sodium, because they drank too much water. Water.

43:15

Is? Is it literally part, part, part, and parcel to life, but in very high doses it could be toxic, and so one of the things that we have to recognize when we're dealing with misinformation is that whether or not even truthful statements taken out of context, and put in certain environments can

43:34

Actually, be highly detrimental and toxic. And so we need to understand the contextual factors and that's why it's not always fruitful to be looking very specifically at at a message.

43:44

Right is this sentence, misinformation is somewhat like asking, is water a toxin? Right. And it's like, well, it depends and so I think we need to be focusing less on on the definition.

43:55

And any specific bit of of misinformation more on the content. So I don't know if you have anything to add to that

44:02

Not. Really. I think that's great. I mean, I think there's a whole. There's a whole. discussion about how to communicate when there might be.
44:10
There might be more information later. That contradicts what you're saying, and that's really relevant to a epidemic situation. So that's kind of a separate topic. But I think what you said is that about the context is important.
44:24
Alright! So there's some excellent questions in the chat, and we'll definitely either answer them. But via text, or while we hopefully in the second part of the presentation, we'll be able to answer some, and we'll we'll definitely take more questions at the end I'll share my screen.
44:42
What I'm gonna be talking about is is responses. And one thing I will say at the start of this is relatively speaking, there's very few.
44:51
There's much, much more research on essentially the surveillance of misinformation what is misinformation and in very kind of micro studies on on what might be done to address very specific bits of misinformation.
45:06
But when we're thinking about this overall response that I think a lot of public health practitioners are facing. And some people in the questions mentioned. We're dealing with a lot of vaccine hesitancy and rural areas like this is a situation.
45:17
But how do we respond to this situation? We're not trying to respond to one specific bit of misinformation that's what I'd like to get into.
45:24
Now. So I'd like to bring up this article that was recently published in the New England Journal of Medicine, Catalyst, Britain, by a number of people who worked for the New York City Department of Public Health during the the Pandemic at the very Start and also responding to the
45:38
Infidemic of anti vaccine misinformation, and I want to specifically point out the title that they argue that combating misinformation is a core function of public health.
45:48
I highly recommend this article because they detail a number of different aspects, including surveillance. I community oriented responses, especially kind of bilateral kind of a feedback mechanism between the Public Health Department and the community so they can understand what misinformation is circulating and respond to it as quickly as possible.
46:04
And then just trying to iterate on that using essentially plan-du study acts cycles. It's. I think it's one of the best examples that we have so far of trying in real time to develop a system and combat misinformation
46:19
Hey? If we don't see your screen. I just wanted you to know that Oh, thank you! I don't know why. That's the case. There we go. Let me. Sorry about that.

46:35
Thank you. So this was that public health article that I was mentioning other initiatives have been the the Nih Community Engagement Alliance, the seal program against COVID-19 disparities.

46:49
This is a program that was developed in 21 different states that aims to bring together communication professionals a public health, professional and experts as well as partnering with community-based organizations specifically to try to address knowledge gaps and misinformation about COVID-19 vaccines and their

47:12
Losing them. Goal is essentially to provide accurate information. 2. To provide educational tools, to host events in the community, to answer any questions and listen, engage and partner with the community, to be able to respond quickly to any misinformation, circulating so this is another excellent example of community-based methods, to

47:32
Try to address, not just any specific bit of misinformation, but the the larger overall. You know, sense of mistrust, kind of some of the underlying reasons for why misinformation might be able to take hold within a community

47:47
That's important. Another example is the it's some of you guys might be aware of that. This is our shot program, which is, has also kind of manifested in Spanish, is by.

47:58
There's also the impact that Illinois medical professionals call action collaborative team, which is a group out of Illinois.

48:06
All of these groups are made up of health care professionals, and what these groups have essentially tried to do is is they're trying to say that vaccines are in our lane as health care professionals and leverage.

48:18
The the trust that the vast majority of Americans say that they have in health care professionals, and use that expertise and authority to encourage people in online settings to to get vaccinated, and the beauty of this is it was a there was a very kind of grounds well of support among

48:39
Physicians and other clinicians that were interested in trying to address misinformation. To create this movement as well as impact in Illinois.

48:46
I kind of did this as well, and their local communities, and push back in online areas like Facebook, Twitter, Instagram, to try to address missing information about vaccines and try to build vaccine confidence in these different examples.

49:05
New York City, the seal program and some of these provider based programs. There are some limitations. And I do want to emphasize that these are rare examples of interventions to try to address this problem.

49:13

So I I would say these limitations are small in comparison to the the overall benefit that they're trying to bring, even just by trying to iterate in this space one of the challenges that we face is there's the burnout is very easy to come by because there's a a bit of a

49:36
whack-a-mole, feeling that we have. You can imagine if what it might have been like to be an epidemiologist in the early 17 hundreds, where there was constant outbreaks of cholera smallpox diphtheria, whooping cough in any number of

49:49
Epidemic diseases, very much would have felt like a whack-a-mole approach. We're in a similar situation right now with misinformation, is I.

49:55
You know, the environment is so toxic that we're constantly facing kind of surges of infidemics all the time that for public health professionals becomes a serious challenge.

50:10
They're also trying to move from that unidirectional model of communication that Sarah described early in this presentation kind of top down from scientists and experts and public health professionals essentially down to the public in this hierarchical model of communication very message focused and trying to

50:27
Create a much faster buy-directional communication, which I think is absolutely an impressive on that that initial kind of very message focused top-down model, but still doesn't quite match the architecture of our information.

50:36
Environments where information consumers have become information producers in a networked information environment where everyone's talking to each other bidirectional communication is an improvement.

50:52
But we're not yet quite commensurate with the structure of our information environments. There's also because of these 2 things, it raises questions of sustainability.

51:01
This New York City Department of Public Health doesn't quite have the same response pattern to addressing this information now that they did during the pandemic, simply because the funds required to sustain that are very challenging the seal team program is fantastic.

51:16
But I constantly hear things back and forth about whether or not the Nih is going to be able to maintain funding for these programs.

51:22
Vaccine. And this is our shot in the impact program. Wonderful ground swells of a lot of kind of enthusiasm support. But we're essentially entirely volunteer based. And so the the that ground swell fell off very quickly, raising questions about how sustainable it such peer support networks might be.

51:43
There's also a a a a little bit on kind of the knowledge deficit model, which is, Sarah pointed out, another knowledge deficit is only one component of this.

51:51

And so the seal teams, for example, do an excellent job of finding out what concerns and what questions communities have. But it's more challenging in situations where people are trying to make decisions under uncertainty, and we don't yet really have a robust model for helping to guide people make decisions under uncertainty.

52:04

These programs that I described are fantastic when we have knowledge that that we that scientists have some consensus, that we're able to provide expert knowledge and consensus and guidelines, and then those can be communicated in community appropriate ways.

52:26

But when there's a lot of uncertainty, it's much more challenging. There's also a challenge with the fact that a lot of these programs are focusing on what public health professionals you may have heard of described as the movable middle.

52:37

These are the people that we feel can be swayed. But there's a sizable chunk somewhere between you, one, sixth, and one fifth of the population that essentially say they won't take a covid vaccine under any circumstances, and on any issue.

52:50

There's this really immovable skeptic group, and a lot of these models that we're talking about just essentially, almost write that group off of.

52:59

Say, well, let's we'll get more bang for a buck on the movable middle, and we're not quite sure what to do about this. Now again. I don't want to criticize these other I think there's a lot of work that can be done.

53:09

And these groups have done a lot of fantastic work to lay the groundwork for where we need to go in this space.

53:16

But but these are some things that I think we need to be thinking about as we go forward. So as we talk about this, our goal is to try to maximize exposure to healthy information.

53:27

So what are some ways to do? That one is adjustment of algorithms. And I'll talk about how Google has been trying to do that.

53:33

Then there's screening for information environments at at the point of care, like we do for other social determinants of health. And I'll mention this as well. We can also start thinking about risk stratification, both by stratifying which populations are most at risk for finding misinformation credible, and then also what are the virulent pathogens that are out there what is the misinformation that's most likely to

53:58

go viral, or most likely to be psychologically sticky. Finally, I'm gonna talk about the intervention that we've been developing with infidemiologists.

54:07

So I'm some of you might not have heard of this, but this is one of few times that you'll hear someone giving a webinar to recommend that you take out your phone and go to Youtube. But if you do, and you search for a health topic like diabetes, you may notice that this, the the search results that come up are prioritized, and they actually have figured out a mechanism to prioritize credible health sources.

54:26

No, Google didn't decide what the credible health sources were.

54:35

But what they did is they knew that this was a problem so reached out. The National Academies of Medicine, who worked with the World Health Organization to convene a committee to describe what are the principles of highly credible organizations working in in this space, so that they can be prioritized.

54:56

And so you'll see on Youtube, in the Youtube app that they prioritize information from hospitals, from clinics, sources that we all would agree kind of meet the principles that you could find on the National Academy of website, National Academy of Medicine website so this is an important step to make sure that when

55:13

someone searching for something. The first results that come up aren't necessarily an AD aren't necessarily the things that are going to get the most engagement.

55:22

But are the things that are actually going to lead to a healthier information? Environment. There's also things that we can do to screen for information environments at the point of care, even having a I'm not necessarily saying kind of clinicians need to do this.

55:31

But just like we screen for food, insecurity, just like we screen for housing insecurity. We can screen. For where do you get your health information? We can ask questions like, how do you decide who or what is trustworthy?

55:49

And how do you sort, between good or bound information and people who somewhat screen positive of either, not having trusted sources?

55:57

We're not really being able to identify what trusted sources are. Can, can then have some degree of an intervention, so that we can talk about kind of and understand what their pre predisposition is, what toxic exposures they might have to misinformation, and what access they might have or not have to quality health information and these are, people that we might prioritize

56:17

To come back to clinic to give them access, at least to a trusted source. So there! I do think there's things that we can do at the point of care to be screening for a essentially low integrity, information environments and and start to begin the process of building robust information environments at least by bringing people back to clinics, so they have access to trusted experts this is some of

56:42

The work that we did. On this we wrote an opinion piece about this next click to talk a little bit about some of what we can do to to stratify and risk stratified populations, because we often take census data and think about risk stratification based on very typical categories we often think

57:02
About. You know, marginalized, underrepresented groups, usually based on some of some of these census categories that you see here.

57:09
But so this example that I pull from Sergo ventures is what they did when they were looking at covid vaccine hesitancy, they did what they called psycho behavioral segmentation, and they found that if if you if you actually do surveys and try to understand where people

57:25
Are. Then you can understand that people spread out along a spectrum of vaccine hesitancy from enthusiasts all the way to the covid skeptics, and they found ways that they could focus on the folks in the middle middle the persuadable 43% that they

57:40
say no, I will say that there's not a consensus. On what type of psycho behavioral segmentation we need to do.

57:47
There is an emerging consensus that we need to do. Psycho behavioral segmentation. So I think that's a really important point.

57:53
That we can't just rely on traditional census categories. But we need to be thinking about which populations circle behaviorally are along the spectrum, and might need more intervention

58:07
There's other things that we can do to assess the risk based on specific types of misinformation. So our colleagues at the University of Pennsylvania have developed a category system.

58:16
That for which they can code claims about infectious diseases. They developed a 10 category system for anti vaccine claims about the Covid Covid vaccines and they did a lot of work on this.

58:26
And I won't go into the details of all of these specific categories. But I'm using this as an example of through all of this research that they did.

58:36
They found that the categories of information that rose to the top were issues about vaccine safety in particular issues, about vaccines that were when it whenever it talked about fertility, or if it talked about changing someone's genetics.

58:47
So once we start to know kind of what pieces misinformation are the most virulent we can start to try to address those.

58:56

There's also certain mediums. Right? I think we can all remember that the plandemic documentary that came out, and how that really kind of caught fire, because it seemed to kind of just you know, even the the title of it was so.
59:11
But we can start to identify what might make certain pieces of misinformation a little bit more psychologically sticky, or have greater chance of going viral.
59:20
And these are things that we should be based on risk analysis, trying to focus our efforts, our our attention and our resources.
59:28
So our work at Critic has been focusing on infidemiologists that we perceive as first-responders to the infidemic an infidemiologist.
59:36
We see is akin to an epidemiologist, because if I'm going to epidemiologist, respond to epidemics, infidemiologists, response to infidemics, and they do that using a number of the different techniques that you see at the bottom of your
59:48
Screen motivational interviewing, inoculation, using personal narratives, community trusted sources as evidence-based rebuttals, reinforcing self-efficacy and repetition of high quality, information the a lot of the the evidence basis for this came from a working to try to address climate change
1:00:07
Work, from Political Science, on Political Misinformation, and the way are infidemiologists. Work is they come from the communities in which they intervene.
1:00:16
They're seeing what conversations happen in online spaces. They see sometimes the vitriol and the anger, and they're engaging with empathy, using evidence-based communication techniques to try to engage people in particular ways based on motivational interviewing principles, not necessarily to try to twist their arm or reach a conclusion or even convince them to
1:00:37
get vaccinated. But really the goal is to improve information environments and try to help people move along the stages of change, even from some people who are pre-contemplative, moving them to contemplative, moving, contemplative people, closer to action this is the goal.
1:00:52
Of the interactions that we're trying to have so infredemiologists. We argue our field epidemiologists for infidemic response, and, like field epidemiologists.
1:01:03
If you think of the Eis officers at the Centers for Disease control, they are part-time. They are community embedded. So these are people that we want to be existing within communities to know their communities really well, to know the values, the perspectives, the identities of those communities be able to speak to those.
1:01:21
And they do that using a technique that we call community oriented motivational interview. She'll go into a little bit more detail about shortly.

1:01:29
We also see that infidemiologists need to be connected both vertically within the public health system. This is that bi-directional communication that I was talking about, that the seal teams have the New York City Department of Public Health had.
1:01:42
But we also find that infidemiologists need to be horizontally connected in the sense that an infidemiologist to one community needs to be connected to infidemiologists and other communities so that they can share best practices and they can share information about what is spreading in their
1:01:56
Community, or what techniques, or what rebuttal techniques, or what discussion techniques seem to work best in their community, so that people might be able to adapt those techniques to the community that they live in.
1:02:08
We also see this a little bit in the Cpr model, in the sense that 50 years ago only physicians really knew. Cpr. Now you know everyone that works at my son's daycare.
1:02:15
No cpr, I sincerely hope that they never have to use it, but the goal is that we have enough people trained throughout our our society so that we're able to call upon these skills as necessary.
1:02:29
And so not necessarily. Everyone needs the the kind of the gold plated training that we do for our infidemiologists that takes a number of hours.
1:02:38
But there's a number of different trainings that we can do essentially, a Bls type of training to to try to spread the word about infidemiology, so that people know at least the basic tenants of it who can be infredemiologists health care workers absolutely can be in pediologists specialist
1:02:56
societies like Berkeley alumni absolutely can be infredemiologists, trusted community leaders. We see as as key playing a key role as infidemiologists. And any of you, I think, have the potential to be infidemiologists as well
1:03:12
So community oriented, motivational interviewing. What does that look like when we're trying to practice that in online settings and for people who are more interested in the details of this, I refer you to the paper at the bottom that we recently published in computers in human behavior but our focus is on a
1:03:27
Community's Internet information environment. We're not necessarily just trying to, you know, play whack-a-mole with every bit of misinformation.
1:03:33
That's on the Internet. That's not our goal. We're trying to understand what misinformation is circulating in a particular community and based on that have thresholds for intervening. Sometimes that's at the level of a specific bit of misinformation.
1:03:48

But more often that's a little bit. That's a little bit of what are current themes that keep coming up. Is it safety? Is it distrust? And these are the things that we're trying to to to address, to get at the underlying issue rather than the specific bit of misinformation?
1:04:05
Our focus is on the whole community, not just on the movable middle. One of the things that we try to do is we try to step back and by looking at the bigger picture, what's the underlying concern?
1:04:16
And we think about and have our infidemiologists reflect on what are, what are the underlying values of the community what are the ways that we can talk about this, that are commensurate with the values of the community so that we can have a way?
1:04:28
That isn't just speaking to the movable middle, because if you only speak to the moveable middle, there's a decent chance that you might actually further alienate those skeptics that are on the side.
1:04:40
So are there ways that we can speak to the whole community as a whole. These are techniques that have been developed through adapting motivational interviewing, to groups, to couples.
1:04:50
So these are techniques that we're trying to bring into our adaptation of motivational interviewing one of the ways that we do.
1:04:57
This is by activating bystanders because we're not the only people in these environments. We draw from some of the literature on hate, speech, and counter speech, to try to figure out ways, to activate a number of the that the silent people that are just observers online and bring them into the conversation.
1:05:16
But because we can't control what they say. One of the things that we have to be very careful about is trying to reframe any information that bystanders or other people bring into the conversation according to the community's identity and their values.
1:05:26
So, for example, when people say, like I don't want to get vaccines, because you know, that takes away my freedom.
1:05:36
We can start talking about. Well, it I actually think that you know the vaccines gave us our freedom right one of the vaccines was one of the most important things to help us try to get to an endemic stage of this pandemic so reframing information switch it doesn't conflict
1:05:52
With our values. But it's actually commensurate with our values is something that we train our infidemiologists to do.
1:05:59
And finally the infidemiologists, recognizing that there's a lot of uncertainty in any decision that we're making, even in situations where there's scientific consensus,

there's always some question that can come up where there's a lot of uncertainty where we have to have
1:06:13
Thresholds, for how we weighed kind of the risk to an individual versus the benefit to a community and making decisions amidst that uncertainty is value-based.
1:06:24
And so it needs to come from the community. So our infidemiologists who come from this community can talk about how they made some of these decisions and how they weighed some of these risks that are very late very community and value embedded so our goal is to try to think about this this architecture
1:06:41
Of networked health communication. And think about how infidemiologists could fit at the center of it, because ultimately the goal is to take the network bottle that we saw here and try to take that mat Madagascar like Island of public health professionals in green over on the side and bring
1:06:58
them into the center of this network, so that they could be part of the conversation. So with that, Sarah. I don't know if you'd like to mention a little bit about kind of what we offer for our trainings.
1:07:11
Yeah. So like, I said before we do trainings. But we also do technical assistance for, say, health departments or organizations that are dealing with overwhelmed or overwhelming information environments that sort of includes the ability to diagnose what's going on in the information environment
1:07:31
Using some of the principles we discussed tonight, as well as to provide training for people to practice the infidemiology, intervention.
1:07:37
You know in the case that that's the best situation or other strategies that we can also train on that are, you know, evidence-based strategies to fight misinformation.
1:07:51
So that is something that we author offer, especially to health departments, but to other organizations as well
1:08:00
And for clinicians, we cause. Yeah. So helping with implementing better behavior change methods. That's a big part of our work that we didn't get to talk about a lot tonight.
1:08:08
And also dealing with misinformation at the point of care, to the extent that the physician has time to do that that's really important as well
1:08:23
And with that, thank you very much. Just want to leave you with the Public Health message which says in Arabic, an ounce of prevention is worth a pound of cure, which I think hopefully resonates with a lot of public health professionals, and with that i'll stop sharing
1:08:38

my screen, and we'll we're happy to discuss some questions Do you have time for for me to ask Dave a few more questions?

1:08:48

Sure. Yeah. Okay. So there were a couple of questions about the social media companies and how they should be involved with this.

1:08:57

And also there was an interesting question about the the layoffs, and you know how that might affect any work they may have already been doing around moderation and algorithms and etc.,

1:09:11

It's a little bit of a black box in the sense that there's a lot of discussion right now about content moderation by social media companies. They all have policies. I, anyone that's interested in this I recommend.

1:09:24

There's a fantastic report by the Stanford Internet Observatory that looks at memes and magnets and talks.

1:09:33

I I'll see if I can. I find the link, and perhaps we can. We can send it out, but it it talks about. What are the different policies that social media companies have with respect to aspects of misinformation, taking down hate, speech, different things like that.

1:09:45

And how consistent they are at actually taking it down and they tend to be pretty inconsistent.

1:09:51

Number one and number 2. They're absolutely atrocious in languages that are not English, and so we're talking about the misinformation problem in English.

1:10:02

And I think we're only scratching the surface because there's actually a lot of things that the social media companies are doing in English. And I don't think we're really seeing just how bad it is in a lot of other languages

1:10:15

Great points. Another kind of techie question, how might the rise of Chat gpt influence the spread of misinformation versus factual information?

1:10:25

I mean my only response to that is generally just fear about what's gonna happen. But I don't know if you have more insight

1:10:34

I my thought is so. I talked to an AI expert on this, and the way he described it is that the part of the problem is that chat Gpt hallucinates facts when it doesn't know something. It doesn't say it.

1:10:44

And it just makes it up. That's clearly a problem. I, AI. Is trying to get better at that. The other thing that I would say part of the challenge of why is misinformation a problem now, where it wasn't 30 years ago? Right?

1:10:59

It's it's always existed. But why did we not care about it? 30 years ago, and suddenly, it's a big issue now is the speed and the scale at which it travels, and the challenge that I see with Chat Gpt is it's not really gonna change.

1:11:11
The th the speed, because the speed is driven by the Internet. But it's gonna change the scale because the ability to produce misinformation.

1:11:20
We at low cost has just gone up dramatically. So that's what has been most concerned

1:11:29
Let's see, there might be no question Yeah, maybe we should try interrogating chat.

1:11:37
Gpt, that's a good point about Miss health information and see what happens.

1:11:43
I I've done a little bit of that, and it it it does. It has a lot of the evidence based, but things related to inoculation and rebuttal and climate change.

1:11:51
But when it doesn't know something, it just makes it up, and the challenge of that is, you really have to be an expert to know when it's just making something up versus when it's when it really is kind of drawing from the evidence.

1:12:03
I find it. I find it kind of scary sometimes Yeah. There was one more question I wanted to mention about sort of how trust is developed over many experiences.

1:12:15
Not just one transaction. So, and that's true that a lot of covid messages were sort of like one message.

1:12:22
And then you had no one to interact with. So that's partially why we like to d our interventions at our conversation. But we also recognize that you know. Sometimes there's a need for more than one conversation.

1:12:35
And so, you know, we definitely wanna look into ways to continue that past an initial encounter.

1:12:43
But definitely having the conversation is better than the one way communication for trust building

1:12:53
So I think those were the main questions that we haven't already answered or I see you're typing. In some responses, Dave. So

1:13:03
I want to think David, Sarah. This was a very I opening, and very thought provoking kind of paradigm to think about misinformation, because, you know, previously it was just like this is coming from social media.

1:13:21
It's coming from a certain population. It's coming from, you know, a certain political party potentially.

1:13:28

But now you know, we're stepping back and taking looking at as an as an environment exposure, looking at determinants of health.
1:13:38
You know the environmental aspects and contact. So that's very helpful, especially for, like public health professionals and clinicians like myself, to look at this frame and and approach it in that frame and reassessing like?
1:13:55
Oh, where do you get your information? You know you know you know. What are you know and do you have any questions, or rather than coming at it from like your?
1:14:07
That's false, you know. This is like sciences, you know, founded by evidence, and having it a debate that may not realize the context of where patients get it.
1:14:20
For me so, and I do appreciate the community model that you mentioned, because the lived experience and the pyramid work, and where people get information usually it's through a trusted source.
1:14:35
So, if we influence the trusted source and start from a community based model rather than you know, these outsiders, doctors, you know, these scientists.
1:14:41
They're not from here, but giving them a more community based participatory approach.
1:14:51
I find out really how helpful, because an HIV, especially in marginalized communities, a lot of the stigma and miss information about HIV when I did to the body and treat access to treatment.
1:15:06
You know a lot of the paradigms and shifts were, you know, grounded in the community, the community addressing the misinformation.
1:15:17
So I really appreciate your your, your time, and your amazing way to frame how we should approach misinformation in the future.
1:15:30
Thanks for having us great to be here Thank you. Thank you. And for the audience we're gonna have the this webinar, you know, recorded available on Youtube.
1:15:42
If you want to share it with your colleagues, or rewatch it again, they'll be ready for caption, and if you have any further questions, please do let our Public Health Alumni Association know we'll try to you know communicate with the speakers for follow-up Alice.
1:16:01
Do you have any closing remarks? Oh, thank you so much, and we hope we we hope our audience have some key takeaways that we could use immediately
1:16:14
Thank you. Thank you. Thank you. Everyone. Thank you.