HEALTH

When It Comes To Vaccines And Autism, Why Is It Hard To Refute Misinformation?

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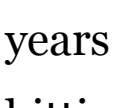

SHANKAR VEDANTAM

For years scientists have said that there is no link between vaccines and autism. There are still many people who are reluctant to vaccinate. But, one woman has changed her mind about vaccines.

RACHEL MARTIN, HOST:

Scientists have said over and over for years that there is no link between vaccines and autism. But there are still a lot of people who are reluctant to vaccinate themselves and their children because they believe there's a risk, which leads to a question - why is it so hard to refute misinformation? NPR's Shankar Vedantam has the story.

SHANKAR VEDANTAM, BYLINE: In 2012, when Maranda Dynda was pregnant, her midwife told her a story that she couldn't get out of her head. The midwife said that years earlier, something bad happened after she vaccinated her son - he stopped hitting his milestones. One minute he was fine, she said, and the next, he was autistic. She said the light had left his eyes. So the midwife decided not to vaccinate her other

children.

MARANDA DYNDA: And she very much implored me to do the same and to look into it. So I did.

(SOUNDBITE OF MUSIC)

VEDANTAM: Dynda started on Google. It led her to Facebook groups.

DYNDA: It's very easy to find them. So yeah, if you - even if you just Google, you know, support groups for parents who don't vaccinate, you will find a lot.

VEDANTAM: The moms in these groups echoed Dynda's midwife.

DYNDA: And they welcomed me with open arms and immediately were just practically bombarding me with information, telling me, your midwife's right. This is why you shouldn't vaccinate. This is why I don't vaccinate. This is what happened to my child who I did vaccinate versus my child who I didn't vaccinate - things like that.

VEDANTAM: Everyone was caring and attentive. They didn't just talk about vaccines; they talked about regular mom stuff, things that Dynda found hard to talk about with anyone else.

DYNDA: Diapers and birth plans and hospitals and midwives and breast pumps and stuff like that.

VEDANTAM: Dynda trusted them.

DYNDA: To me, it seemed so clear. It seemed like I had just found this secret information that only some people come across, and I thought, why would I not use this information?

VEDANTAM: What Dynda was experiencing was something researchers call social trust.

CAILIN O'CONNOR: Social trust is a really important aspect in understanding how people form beliefs.

VEDANTAM: Cailin O'Connor is a philosopher and mathematician at the University of California, Irvine. She studies how social networks spread information and how they shape our core beliefs.

O'CONNOR: No other animal has this ability to sort of transfer ideas and knowledge dependably from person to person, over generation after generation.

VEDANTAM: Now, you might think, I don't just accept what people tell me; I look for proof - not so, O'Connor says.

O'CONNOR: Ninety-nine percent of the things you believe, probably you have no direct evidence of yourself. You have to trust other people to find those things out, get the evidence and tell it to you.

(SOUNDBITE OF MUSIC)

VEDANTAM: This power that others have to put useful information in our heads comes with a downside.

O'CONNOR: When you open a door for true beliefs to spread from person to person, you also open the door for false beliefs to spread from person to person. So it's this kind of double-sided coin.

VEDANTAM: In December 2012, Dynda's daughter was born. She named her Ramona, after the song by Bob Dylan.

(SOUNDBITE OF SONG, "TO RAMONA")

BOB DYLAN: (Singing) Ramona, come closer. Shut softly your watery eyes.

DYNDA: Ramona, as a newborn, she was very active. She was very bright. She was a great baby, honestly. She was a wonderful baby.

VEDANTAM: When the doctors said it was time to vaccinate Ramona, Dynda was ready. She had a script she had been practicing in her head for months.

DYNDA: And I said, no, thank you. I have decided that I do not want to vaccinate. Thank you very much.

VEDANTAM: Occasionally, she encountered information that conflicted with her decision - a pamphlet at the doctor's office, a website.

DYNDA: I just very quickly went, that's not true; I don't agree with that. And I moved on.

VEDANTAM: And that leads us to another thing about deeply held beliefs - once they form, we defend them. Tali Sharot is a cognitive neuroscientist at University College London. She studies the phenomenon of confirmation bias.

TALI SHAROT: Confirmation bias is our tendency to take in any kind of data that confirms our prior convictions and to disregard data that does not conform to what we already believe.

VEDANTAM: Sharot put this idea to the test in a research study a few years ago. She presented statements to two kinds of people - those who believe that climate change was real and those who did not. She found that for both groups, when the statement confirmed what people already thought, this strengthened their beliefs. But when it challenged their views...

SHAROT: When we see data that doesn't conform to what we believe, what we do is we try to distance ourselves from it. We say, well, that data is not credible, right?

VEDANTAM: As we move through the world, quickly sifting through news headlines and the flow of information on social media, confirmation bias gives us a feeling of stability.

SHAROT: However, it also means that it's really hard to change false beliefs. So if

someone holds a belief very strongly, but it is a false belief, it's very hard to change it with data.

VEDANTAM: So to recap - we tend to accept information from people we trust, and once we do, we are resistant to changing our minds.

(SOUNDBITE OF MUSIC)

VEDANTAM: Two years after saying no to vaccines for her daughter, Maranda Dynda began to have doubts about those moms on Facebook.

DYNDA: I started to slowly but surely question in the opposite direction, and I found other stories online from moms who didn't vaccinate and then started to.

VEDANTAM: She became immersed in new groups online, and she began to Google again. But this time, she realized that science had not shown a link between vaccines and autism. She got her daughter vaccinated and has never looked back.

DYNDA: Once I did start vaccinating Ramona, nothing happened. She was fine. She was and still is bright, happy, brilliant and healthy.

VEDANTAM: Most of us think we arrive at our beliefs through logic and reason. Sharot and O'Connor's work suggests that there are forces that may matter even more - our feelings, our social networks and our relationships with other people.

Shankar Vedantam, NPR News.

(SOUNDBITE OF RAMTIN ARABLOUEI COMPOSITION)

MARTIN: You can hear more about how people share information both true and false on Shankar's podcast. It is called Hidden Brain.

(SOUNDBITE OF RAMTIN ARABLOUEI COMPOSITION)

further information.

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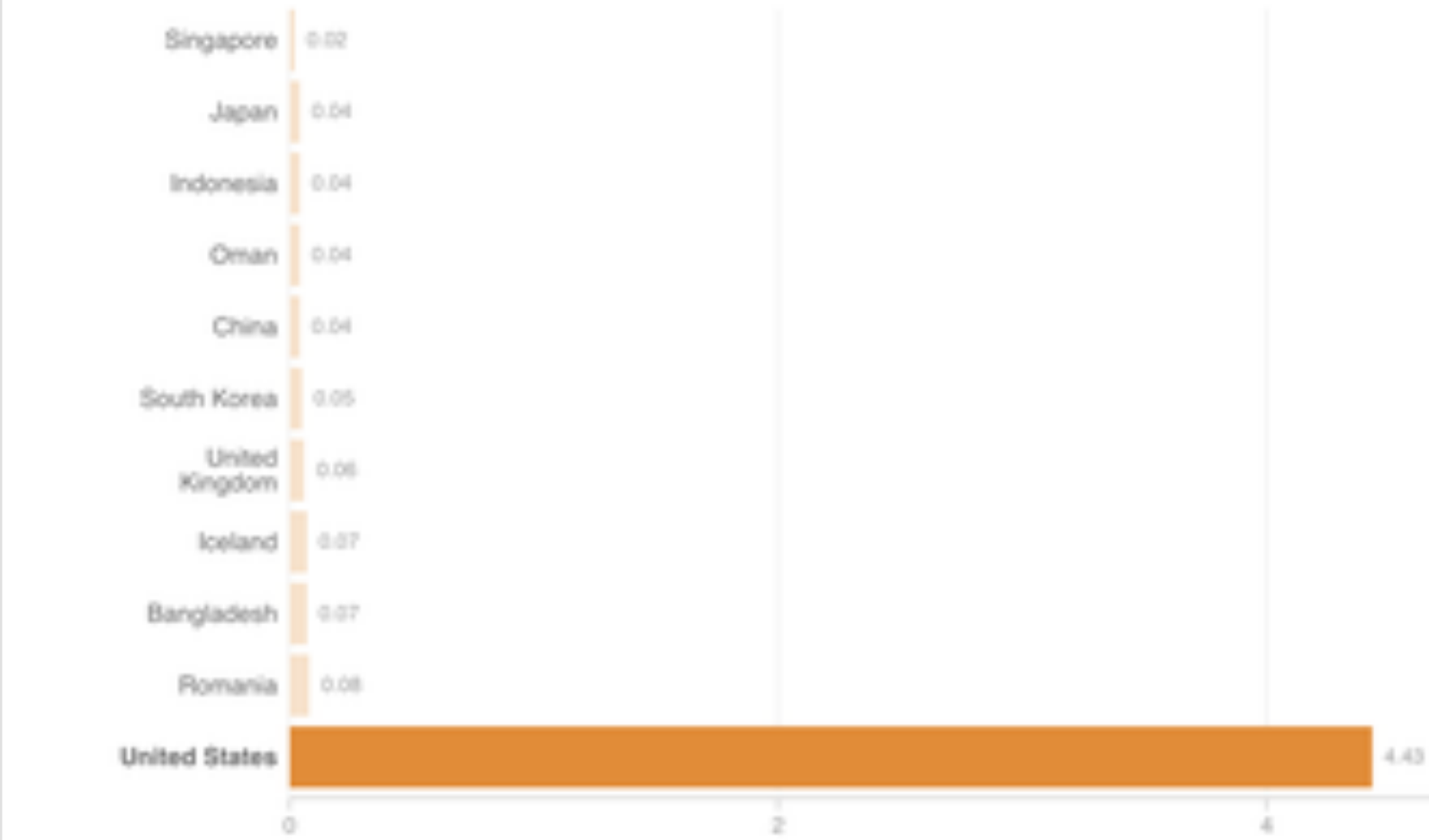

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