

False Claims Tying COVID-19 Vaccine to Infertility Drive Doubts Among Women on Telegram

Telegram's lax content moderation and encrypted chats make it a convenient platform for the spread of misinformation

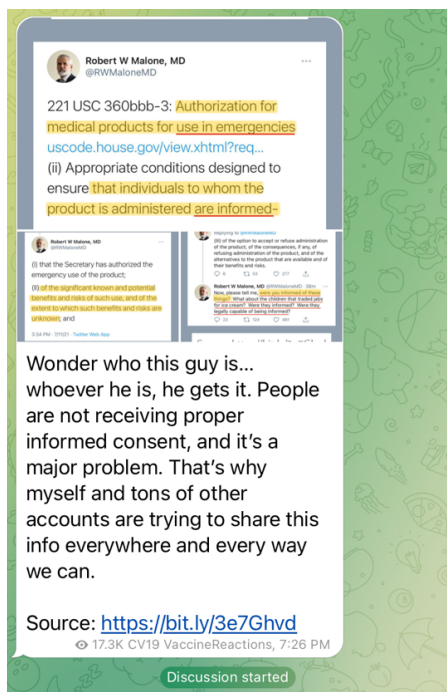
By Nico Picciuto

Nadia Georgiou, a 39-year-old therapist and yoga teacher in Oregon, is not against all vaccines, according to a blog post on her website titled “Body Sovereignty: My Body My Choice.” But she is reluctant to get the shot for coronavirus.

“Question everything,” she tells her readers. “A ‘doctor’ or authority figure does not have the final say in your ability to recover. Unless you choose to hand that power away.”

Georgiou confided that she would decline the COVID-19 vaccine because of research she’d come across online—that the shot could trigger an immune reaction that attacks the placenta, potentially leading to miscarriage and infertility. She comments regularly on Telegram’s CV19 Vaccine Reactions channel, a bastion for anti-vaccination messaging with nearly 25,000 subscribers.

“Wonder who this guy is,” reads one post by the channel’s administrator, referring to Robert W. Malone, the self-proclaimed inventor of mRNA technology who has become an outspoken critic of the Biden administration’s vaccination efforts.



A post on Telegram's CV19 Vaccine Reactions channel that was viewed more than 17,000 times.

“Malone is the inventor of the mRNA tech used in the vacks,” says one comment by someone with the username Marjer Rie. “Of course he gets it.”

“The most knowledgeable person on mRNA injections,” another post reads. “Dr. Malone is blowing this all up!”

“It pains me slightly that you had to state this,” Georgiou jokes.

Only one user posts a comment stating that it is Katalin Karikó and Drew Weissman who are more commonly credited with laying the groundwork for mRNA vaccines. But the correction goes unacknowledged; a cartoon of Trump wearing a Superman costume takes its place.

As the rollout of the coronavirus vaccine continues across the United States, women of childbearing age have emerged as an unexpected barrier to efforts to curb the pandemic by achieving herd immunity. Officials have encountered reticence among other groups, including some Black and Hispanic adults and those who believe the pandemic is a scam. But the hesitancy of women in their 20s and 30s, particularly around misinformation spread on Telegram, has been higher than anticipated.

“It’s really concerning,” said Dr. Amen Sergew, a pulmonologist at National Jewish Health in Colorado who served in hospitals around the tri-state area during the height of the pandemic. “These misinformation campaigns have been successful in figuring out the worst things that people fear—that the vaccine could cause genetic manipulation, for example, or fear of fertility complications—and radicalizing people around those myths.”

Women’s concerns come amid the rising menace posed by the delta variant and as the Biden administration reached its goal of administering at least one dose of a coronavirus vaccine to 70 percent of American adults about a [month late](#), as states have been offering several incentives—ranging from [giving away guns](#) to [million-dollar lotteries](#)—to spur those on the fence into action.

Only [54 percent](#) of Americans between 18 and 24 have received at least one vaccine dose and 44 percent are fully vaccinated, according to Mayo Clinic’s vaccine tracker. Vaccination rates are particularly low for young mothers under 25 years old, with less than 6 percent of pregnant women between 18 and 24 identified in the Centers for Disease Control and Prevention’s [Vaccine Safety Datalink](#) reporting that they are fully vaccinated.

The infertility rumor is one of several reasons some women remain hesitant, Dr. Sergew says, with others having more general fears about a vaccine that was approved in short order and the fact that early trials did not look at pregnant or lactating women, leading to what they see as mixed messages from public health officials.

“Some will say, ‘I heard it impacts your fertility down the line,’ but most of the time people don’t get into the science of it but more the unknown of it,” said Dr. Sergew.

The World Health Organization says only those who have a considerable risk of contracting the virus or of having a severe case should be immunized for COVID-19. The Royal College of Obstetricians and Gynecologists in the United Kingdom has said there is no reason for women of

childbearing age to be concerned about taking the shot, although they don't recommend routine use of the vaccine in pregnant women.

In the United States, the Centers for Disease Control and Prevention have taken a different stance, saying women who are pregnant or plan to have a child should consult their doctors before getting vaccinated.

“All of this contributes to vaccine hesitancy,” said Kolina Koltai, a misinformation and vaccine researcher at the University of Washington. “I think it speaks to an even larger issue regarding the way we think about science and healthcare and how we decide what to trust, because ultimately making the decision to vaccinate or not vaccinate is a community health decision. It goes beyond your own personal wellbeing.”

The infertility narrative is especially potent on Telegram, researchers say. “Infertility rumors are something that surface all the time—they existed pre COVID-19,” said Amelia Jamison, a qualitative researcher and doctoral student at Johns Hopkins University who has studied the spread of anti-vaccination messaging online. “And they have been repurposed with every vaccine. You see a bunch with the HPV vaccine; you see a bunch with the influenza vaccine.”

Two different kinds of infertility messaging around vaccines have been widespread on social media and other information platforms, Jamison says. These are patterns that circulated long before the pandemic but apply to COVID-19 vaccine misinformation.

“First, there are the infertility myths that are based on a kernel of science that has been warped and twisted. [We] see some of that in today's rumors about spike proteins or something about the science of mRNA and the placenta.” This is one of several reasons Georgiou cites for declining the shot on her blog.

The second version concerns outright conspiracy theories about how vaccines are “part of a population control plan or this big global conspiracy.” Both forms of misinformation are dangerous, Jamison says, but the pandemic created an easy opening for science-based, anti-vaccination messaging to spread into the mainstream. “Now it's reaching wider and wider audiences.”

The goal, she says, should be “to focus on the movable middle”—those who are still grappling with the science and up in the air about whether they should get the shot—“and try to minimize the impact of the most radical on others.”

But that can be easier said than done. Telegram, like other popular messaging apps, has facilitated the rapid spread of misinformation about the vaccine and the infertility rumor on any number of channels, experts say. Its content moderation is lenient and scattershot, and it includes several features for mass communication, encrypted chats and file sharing.

Following the Capitol insurrection in early January, the Dubai-based platform announced that it had surpassed 500 million active users globally. Telegram's downloads in the United States in

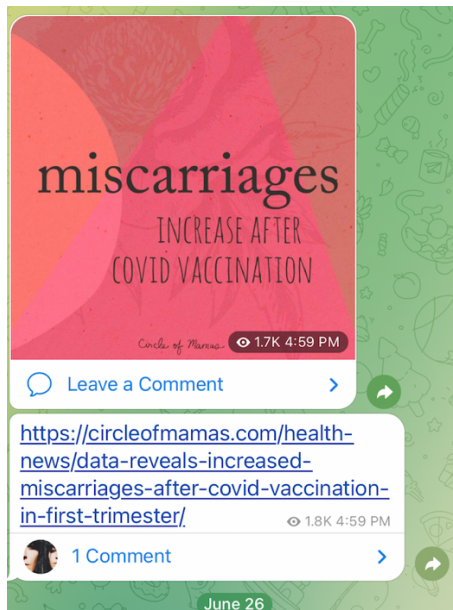
the first weeks of this year were more than 700 percent higher than they were for the same period in 2020, according to data from app measurement firm Sensor Tower.

Telegram has three main components. Channels—like CV19 Vaccine Reactions and Circleofmamas, a 3,000-plus group that trumpets misleading claims about the vaccine to women of childbearing age—are mostly one-way broadcasts that an unlimited number of people can follow. The app also has public and private groups where up to 200,000 people can communicate. Groups on Signal can't exceed 1,000 subscribers, for comparison; WhatsApp at 256.

The third component that Telegram is known for is called Secret Chats, where people can have one-on-one conversations that are end-to-end encrypted, meaning that relevant authorities or hackers wouldn't be able to see the content of these messages.

"Miscarriages increase after covid vaccination," reads one Circleofmamas message from late June. "Data reveals increased miscarriages after covid vaccination in first trimester."

The message links to a blog post that is a good example of Jamison's first version of misinformation: It draws on real research and misinterprets the results or overlooks other evidence that would otherwise dispute the author's claims. The last portion of the page is devoted to young people who they say have died after taking the vaccine.



A post from Telegram's Circleofmamas channel from June that was viewed more than 1,800 times.

The author of the blog post also makes a series of calculations based on table 4 within a preliminary [study](#) released in the New England Journal of Medicine. But the estimates are based on only a portion of the total number of pregnant women who took part in the study, according to a comprehensive [fact check](#) of the data conducted by Reuters.

“It’s a tricky thing when it comes to how deeply tied vaccine hesitancy can be to real legitimate issues within healthcare and medicine, and even with vaccines, but they end up getting coopted and used toward conspiratorial ideas,” said Koltai.

In the end, the risk of false or misleading claims running amok on platforms like Telegram can have harmful and far-reaching consequences, Koltai says. “It’s not as simple as being pro- or anti-vaccine, even though we tend to think of it as a dichotomy. It’s actually incredibly nuanced, where there’s the people who are like, ‘I’ve heard something, but I’m not sure if the risk of a vaccine is worth it.’ And then there are the more disturbing elements.”

As for Nadia Georgiou, it’s unclear whether she will change her mind about the coronavirus vaccine. “If my conclusions from my own research are incorrect in the future and none of my concerns come to pass, then I would consider changing my mind and receiving this intervention,” she tells readers of her blog.

She doesn’t say what it would take to convince her. But at least one person on Telegram is keeping an open mind.