

## BOOK REVIEWS

# Vaccine hesitancy: Don't blame the public

ADAM C URATO

**Maya Goldenberg, *Vaccine Hesitancy: Public Trust, Expertise, and the War on Science (Science, Values, and the Public)*, University of Pittsburgh Press; 1st edition, 2021 March 9; 264 pgs, \$45(hardcover) \$ 41.90 (Kindle), ISBN-10: 0822946556**

As a Maternal-Foetal Medicine specialist, I take care of high-risk pregnant women every day in the United States. Nowadays, several times each day in my office, I am asked about the Covid-19 vaccine by these patients. In my discussions with these women and their partners, many of them show real concerns about vaccines. It is understandable that pregnant women would proceed with caution with a new vaccine. However, my discussions with these families reveal something much broader: a general concern about vaccines and other recommended public health approaches.

Why is there so much uncertainty regarding vaccines among large segments of the public? Maya Goldenberg takes on this very issue in her timely new book *Vaccine Hesitancy*. She lays out the most common explanations: the war on science, the rejection of expertise, and that public ignorance is to blame. But then she makes a convincing and well-referenced argument that these explanations, which mostly place focus and blame on the public, are not the main reason we see so much vaccine hesitancy. Rather, she focuses on the issue of low public trust in Medicine. (With the term "Medicine," I am referring to public health institutions, hospitals, physicians, researchers, experts, drug companies, device makers and other groups that could be said to represent the "medical establishment.") Her explanation of vaccine hesitancy does not point the finger at the public but rather at the medical establishment itself.

Goldenberg's book is essential because identifying the reasons behind vaccine hesitancy is crucial in order to address the issue. The typical approach is to see the public as being at fault. If the public is at fault, approaches like education, censorship of misinformation, shaming, and vaccine mandates might be potential solutions. These efforts focus on getting an unwieldy and ignorant public to change its ways. However, if the issue is public trust in Medicine, then the onus falls upon the medical establishment to ask itself why it has lost the public's trust in such a dramatic and spectacular fashion over the past few decades.

And the public's loss of trust in Medicine has been dramatic. A recent poll published in May 2021 from the Harvard School of Public Health (1) confirmed what I hear every day from the patients in my clinic: nearly half of Americans do not trust the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), or other major public health institutions (2).

So why is there such a lack of trust? Goldenberg focuses on three main explanations for the lack of trust: social media, medical racism, and commercialisation of biomedical science. She seems to weight them somewhat equally in her book. However, from my standpoint, and from what I hear from patients, the third reason (corporate influence) is by far the most important. Simply put, the public has lost trust in medicine because medicine is now seen to have been corrupted by corporate cash.

The most influential drug companies are huge multinational publicly-traded corporations. And despite what messages they may put in television advertisements or what their public spokespeople say, the main goal of these companies is not improved health and well-being of the public. The primary goal of a corporation is to maximise profits and financial return to shareholders (3). This is what corporations seek to do. This is what actually happens in practice. This is how corporations behave. They aren't charities. They aren't public health agencies. These companies have a laser-like focus on profits.

Now, this is not at all to say that employees of those companies or executives at those companies do not care about the public's health. As individuals, as human beings in society, they may care a great deal. But in their roles as corporate employees, they have a fiduciary responsibility to shareholders to single-mindedly focus on profits.

Author: **Adam C Urato** (aurato@bidmc.harvard.edu), Maternal-Foetal Medicine Consultant Attending Physician, MetroWest Medical Center, Framingham, MA 01702 USA; and Beth Israel Deaconess Medical Center, Boston, MA 02215 USA.

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To illustrate this point, time and again over the past decades we have seen drug companies and device makers hiding data and behaving in other ways that placed corporate profits over the public good. This was seen with stark clarity in the case of the opioid crisis (4). But the list of other examples is quite long and includes Vioxx (5), Study 329, in which data was hidden that showed increased suicides in children treated with antidepressants (6), the Zyprexa controversy, in which the health risks of a schizophrenia drug were concealed (7), and a long list of others.

One of the biggest threats to Pharma profits would be independent medical experts, public health institutions, and professional medical societies which might recommend against use of their drugs and vaccines. In this scenario, the drugs might not get approved and if they did, they might not sell because trusted medical voices could steer the public away.

So the crucial question here is: how does Pharma avoid the serious threat to profits that strong independent voices in Medicine would represent? The answer is that Pharma has effectively circumvented this scenario by pouring money into Medicine. Pharma funds the experts (which it has turned into “key opinion leaders”) (8), funds the public health institutions (like the CDC and the FDA), and funds the professional medical societies. The medical establishment has, in many respects, been taken over by the drug industry. This has led to medical policies and practices that put corporate profits above the public interest. And the public has lost trust in this rigged system.

Take the CDC as an example (and one could make a similar argument regarding the FDA.) The idea that the CDC is an independent body free from corporate influence is simply untrue. The pharmaceutical industry has been pouring money into the CDC Foundation for years and the donors include AstraZeneca, Johnson and Johnson, and Pfizer (9). The purpose of this corporate cash is to push the CDC’s recommendations in a direction that will increase profits for these companies. The CDC and the companies themselves may protest that the donations are merely intended to help support the CDC in its mission to improve public health. But the simple truth is that corporations are not allowed to just arbitrarily use shareholder dollars for public health goals. If the donations to the CDC were not in some way helping improve profits and shareholder returns, these companies would not be making them.

And Pharma’s influence goes beyond funding the CDC Foundation. There is also a revolving door in place at the CDC (as well as the FDA). When Julie Geberding stepped down as Director of the CDC, she immediately went to work for Merck to “lead the company’s \$5 billion global vaccine business.” News organisations have documented “a web of close ties between the agency [CDC] and the companies that make vaccines.”(10). It is worth noting that the two principal FDA reviewers who originally approved Purdue’s oxycodone

application both took positions at Purdue after leaving the agency (4).

If the central problem behind vaccine hesitancy (and the central reason for the public’s lack of trust in Medicine) are the corporate ties, then why doesn’t Medicine just sever those ties? The answer to that question is that such a move would cause huge financial losses for the main power centres in the equation (Medicine and Pharma). Medicine would lose all of the Pharma dollars. For the drug companies themselves, losing these financial relationships would dramatically weaken their influence and control. This loss of influence would eventually result in less favourable recommendations and guidelines and a significant hit to corporate profits.

Goldenberg has correctly identified the real issue with vaccine hesitancy. And this is how her book makes an essential contribution to our understanding. The main driver of vaccine hesitancy is not public ignorance. In fact, it’s actually the public’s knowledge and insight into how the ties between Medicine and Pharma work that is fueling the mistrust. Yet, the bottom line of all of this is that Medicine and Pharma have no real interest in addressing the actual cause behind the public’s vaccine hesitancy. This is why these entities would much rather focus on blaming the public. They don’t focus on the problem of industry influence because they don’t have a solution.

The problem, with respect to the Covid-19 pandemic, is that now much of the public doesn’t trust the CDC, the FDA, or the entire medical system at all. Who would trust a system that is so heavily industry-funded, whose primary goal is Wall Street profits? The public wants major public health institutions that are free from Pharma influence.

However, there is a bright side to this, as the public’s mistrust actually offers us hope. Such mistrust is a crucial step towards trying to reform the system. Goldenberg’s book helps us take another step in that right direction so that Medicine can eventually stand as a strong and independent voice for public health and the public good—free from the corrupting influence of corporate cash.

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## Infertility and the excruciating pursuit of motherhood

URMILA G

**Rohini S Rajagopal, *What's a Lemon Squeezer Doing in My Vagina?* Haryana: Penguin Random House; 2021. Rs. 399, 288pgs, ISBN: 9780143452003**

*What's a Lemon Squeezer Doing in My Vagina?* is a memoir of Rohini S Rajagopal's excruciating five-year long fight with infertility and her journey to motherhood. After several failed attempts at natural conception and many negative home pregnancy tests, the author and her husband Ranjith visit a fertility centre in Bangalore. Rajagopal delivers a graphic description of the physical and emotional unpleasantness of her infertility treatment and also gives a vivid account of her experiences with the assisted reproductive technologies (ARTs) such as the intrauterine insemination (IUIs), in-vitro fertilisation (IVF) and intracytoplasmic sperm injection (ICSI). Intrauterine Insemination (IUI) is facilitated by directly injecting a man's sperm into the woman's uterus around the time the eggs emerge from the ovaries. In in-vitro fertilisation (IVF), the eggs are retrieved from the female body and carefully fertilised in a laboratory using sperm to create an embryo which will then be transferred to the uterus. In the more advanced intracytoplasmic sperm injection (ICSI) a single selected sperm is directly injected into the retrieved egg, leading to fertilisation. And as with IVF, the fertilised

embryo is then transferred to the woman's uterus. The "lemon squeezer" in the title of the memoir represents the arduous path Rohini Rajagopal had to take; the invasion of her body by medical tools, fertility drugs, hormonal treatments, medical tests, and minor surgeries, which she endured over the years to successfully conceive. These procedures lead to unavoidable anxieties concerning their outcome, where Ranjith, her husband, becomes a mere spectator to her journey, unable to help with the medical functionalities of the treatment. He experiences and manages his own anxieties separately to Rajagopal.

In addition to the medical and biological aspects, the memoir reveals the intrinsic social and cultural factors associated with infertility. The author also delves into the guilt and shame she had to bear after failing to conceive "naturally". Through the author's life we see how the biomedical correlation of ageing and female reproduction affects the quality of a married woman's social life. She fears that her fertility and reproductive capabilities will become the subject of conversations at family gatherings, and that she will face unanswerable frustrating questions from relatives. The phrase, "ticking of the biological clock" would be all too familiar to women of reproductive age in a country like India. Similarly relatable would be the insecurity that Rajagopal experiences, seeing other women effortlessly break into the "exclusive club" of pregnancy.

Crucially, the final chapter of *What's a Lemon Squeezer Doing in My Vagina?* is titled "Why Want Children?" This is a question some of the readers might also ask after going through the intensity of Rajagopal's medical and financial hardships before she can conceive. Indeed, the author does not have a clear answer to it. However, she does not claim that being a mother or experiencing all the "gore and grime" of infertility is the single greatest achievement of her life. In fact, she admits to having bought into the various prevalent myths about the significance of motherhood and she addresses the effect it has had on her. This is a major

Author: **Urmila G** ([urmila.g@learner.manipal.edu](mailto:urmila.g@learner.manipal.edu)), PhD Scholar, Manipal Centre for Humanities, Manipal Academy of Higher Education (MAHE), Aleevoor Road, Manipal, Karnataka, 576 104 INDIA

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