

Medical Communications and Writing for Patients

Dear all,

I've been told that you know you're getting old when time speeds up. This year has been terrifying in that regard and I feel that January was a heartbeat ago!

Due to my clearly (rapidly!) advancing age, I have become more diligent about vaccinations for COVID and the flu. Therefore, I was fascinated by the retrospective article I'm delighted to share with you today from Yannick Borkens. Yannick explains that although effective vaccines were available in record time

during the COVID pandemic, they were not universally accepted, leading to many unnecessary deaths. This unwillingness to be vaccinated led to some countries becoming creative about how to convince people to take the vaccines. Some of these creative ideas are mentioned in this article, and will certainly give you food for thought!

As 2024 draws to a close, I hope that it has been a good year for you all, and that you and your loved ones remain healthy and happy. Enjoy

SECTION EDITOR



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the upcoming Christmas break – may you dodge the snowballs, and may Santa be kind.

See you in 2025!

Bestest,
Lisa

Encouraging vaccination through clever and abstruse incentives

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Abstract

The COVID-19 pandemic kept the world on tenterhooks for several years beginning in 2019. Well over 7 million people had died worldwide by 2023. Although the WHO ended the health emergency in 2023, the dangers of COVID-19 and future pandemics remain. Thanks to modern science, effective vaccines against COVID-19 were available and ready for use in record time. However, the willingness to vaccinate was limited. For this reason, some countries came up with various and sometimes abstruse ideas to increase the willingness of their population to be vaccinated during this difficult time and to get people excited about vaccination. Some of these ideas are presented in this article.

Introduction

In late 2019, a new, unknown form of pneumonia emerged in China. A novel coronavirus was quickly identified as the cause – 2019-nCoV.¹ The origin of this coronavirus was, and still is, controversial. For example, the night markets of Wuhan, China, are seen as the source, where the virus is thought to have jumped from its animal host to humans.² Quickly, the new coronavirus, classified as SARS-CoV-2, spread across the planet. The COVID-19 pandemic has been called the worst environmental disaster of the 21st century.³ More than 7 million people had died from COVID-19 worldwide by 2023. However, thanks to modern science, there was an early response to the threat. New vaccines against COVID-19 were developed in record time. These included, for the first time, so-called mRNA vaccines. But not everyone reacted positively to these developments. Many countries struggled with low vaccination uptake, especially at the beginning of the vaccination campaigns. To get people to vaccinate, different countries developed different strategies, mostly based on various premiums and gifts.

Vaccines against SARS-CoV-2

Many different vaccines against SARS-CoV-2 are now available. These are protein-, vector-, and mRNA-based. Especially the mRNA vaccines are

interesting. After all, these are the first approvals of these vaccines ever. The two mRNA vaccines that are being used are Comirnaty® from BioNTech and Pfizer, as well as Spikevax® from Moderna. Both have similar mechanisms of action: During vaccination, the mRNA of a surface protein is introduced into the cell. In this way the mRNA is translated and the resulting protein, a spike protein, is presented to the immune system.⁴ Figure 1 schematically shows the methodology behind mRNA vaccination. Besides these mRNA vaccines, the vaccine Vaxzevria® is probably the best known in my native Germany. Vaxzevria® is a vector vaccine consisting of “envelopes” of harmless adenoviruses. Vaxzevria®, also known as ChAdOx1, was developed by the Swedish company AstraZeneca and the British University of Oxford. However, due to various problems, for example IgG titers that were too low or also unexplained side effects, the vaccine was unable to hold its own against its mRNA competitors.^{5,6}

Unfortunately, conspiracy theories and fake news become an elementary part of the pandemic. As an emotional topic, vaccination plays an important role in these conspiracy theories and medical as well as scientific fake news, especially about the mRNA vaccines, remains commonplace. For example, many people have been critical of the speed of development.⁷ These

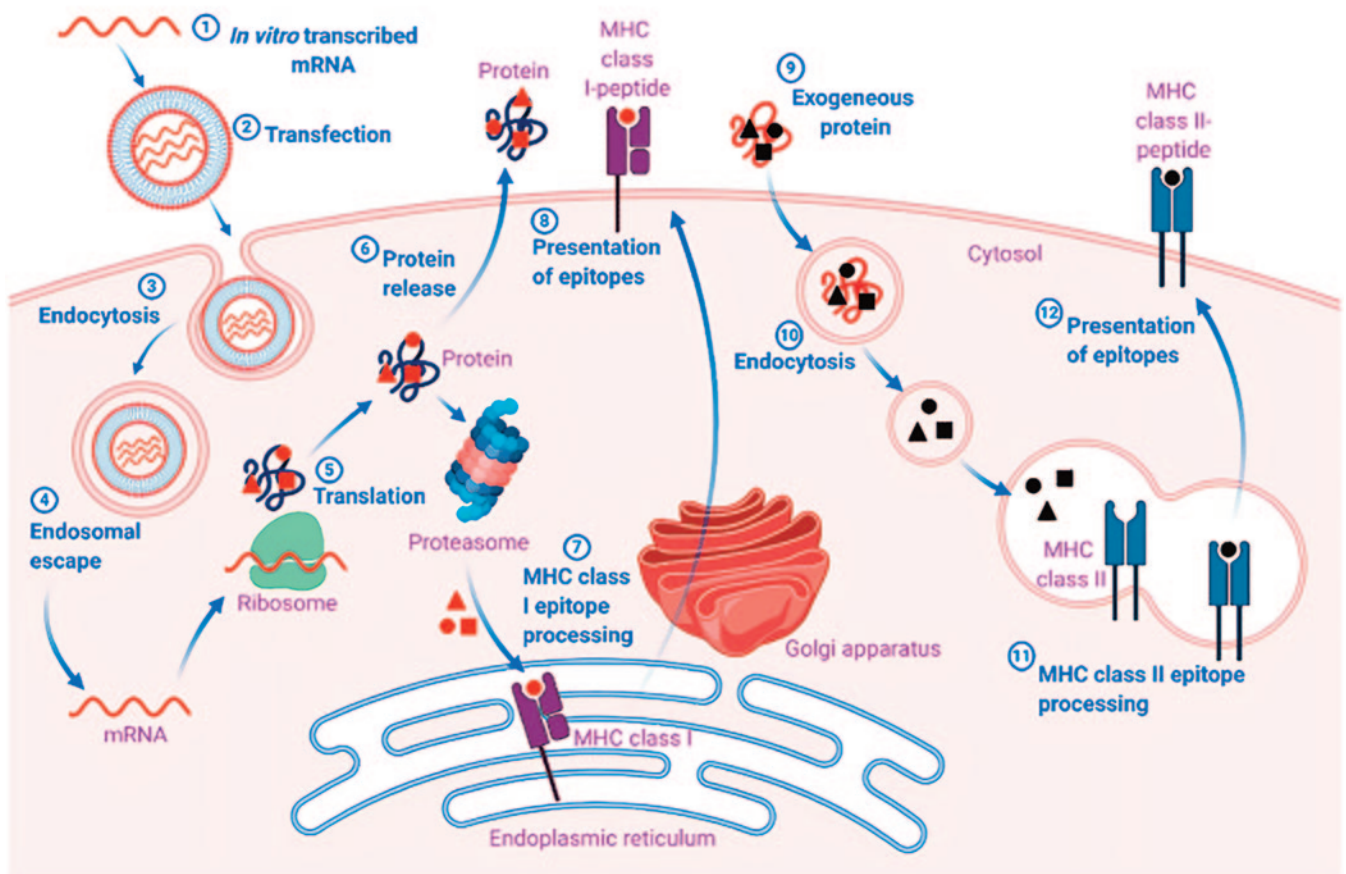


Figure 1. The schematic shows the principle of action of mRNA vaccines.

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conspiracy theories not only influenced vaccination readiness. The tone became harsher and well-known figures such as the Federal Health Minister of Germany Prof. Karl Lauterbach or Prof. Christian Drosten, Head of Virology at the Charité in Berlin, increasingly faced insults and threats. But also, physicians in private practice who offer COVID-19 vaccinations in their practices continue to be threatened by conspiracy theorists.⁸

At the beginning of the pandemic, this also affected the willingness of the population to be

vaccinated against COVID-19. Experts were and still are certain that an end to any pandemic is only possible with good vaccination coverage and a high level of herd protection. COVID-19 is just one example. (The eradication of smallpox in the late 1970s can also be cited here.)⁹ However, this rate was not reached by many countries for a long time with COVID-19. In some cases, it is still too low today. For this reason, some countries developed various measures in the early stages of the pandemic to increase the vaccination rate within the population. These measures often

included gifts, such as tickets to events, or simply money. Some authorities developed very abstruse ideas and incentives. Some of these abstruse ideas are described in this article. Readers will learn not only what the US did to increase its vaccination rate, but also about countries in which living animals were given as gifts for vaccination.

Vaccines incentives

Education, joints, and millions in profits in the US

If you followed the news in mid-2021, you got the impression that the US would be a leader in offering premiums for COVID-19 vaccination. In fact, the country developed several policies to increase vaccination readiness. For example, several states created a vaccination lottery in which people could participate. The prerequisite: vaccination against SARS-CoV-2. In Ohio in 2021, a woman won \$1 million through the lottery. But money was not always raffled off. Many states, for example New York, also raffled off scholarships and thus entire courses of study at universities. (The US has relatively high tuition fees by comparison with other countries. Consequently, these measures were very popular).

Table 1. Different vaccination rates of countries mentioned in this article. As of March 13, 2023.¹⁵

	First Vaccination	Fully Vaccinated
Austria	7,143,825 (78%)	7,052,237.5 (77%)
Bangladesh	160,053,000 (93%)	144,564,000 (84%)
Germany	66,042,074.28 (78%)	64,348,687.76 (76%)
Indonesia	208,125,000 (75%)	177,600,000 (64%)
Thailand	58,794,000 (82%)	55,209,000 (77%)
United States of America	267,931,916 (80%)	227,742,128.6 (68%)
World	5,904,000,000 (72%)	5,494,000,000 (67%)



Figure 2. In Neustadt am Rübenberge, Lower Saxony, vaccinations were advertised with free bratwursts.

Dominic Herbst, member of Bündnis 90/Die Grünen and mayor of the town, personally stood at the grill and handed the coveted food to those willing to be vaccinated.

Photo: Moritz Frankenberg/dpa.

Other incentives, however, went in a completely different direction. For example, the state of Washington, where recreational use of marijuana has been legal since 2012, came up with the idea of rewarding people with joints in a programme called *Joints for Jabs*. All people who were vaccinated by July 12, 2021, and were over 21, were eligible. Before then, inoculated people in Washington were already allowed to help themselves to free drinks at brewpubs, wineries, and restaurants. The state of New Jersey also enticed people with free beer.

The US is also known for its sports culture. Major events such as the Super Bowl are not only relevant advertising platforms, but also enjoy great popularity outside the US. It is therefore not surprising that such events also played a major role in vaccination premiums. On the one hand, free tickets were raffled off. However, there were also offers directly at the stadiums. People who wanted to get vaccinated at the stadiums were allowed to attend the event for free. Among the providers were Major League Baseball, the National Basketball Association, the National Hockey League, and race car league NASCAR.

Bratwurst in Germany

In Germany, the *Impfbratwurst* (vaccination bratwurst) gained some notoriety, not least among contrarians and other opponents of

vaccination. The latter continue to make fun of this measure on the internet. In fact, some German cities launched campaigns handing out free bratwurst to vaccinated people. Among the cities that distributed bratwursts were Dresden, Neustadt am Rübenberge, Wattenscheid, Augsburg, and Hannover. Originally, the idea came from the southern Thuringian town of Sonneberg. The Thuringian Bratwurst is considered a national dish and is also known beyond the state's borders. In some cases, customers were also served by prominent politicians, for example, in Neustadt am Rübenberge. Here, the mayor, Dominic Herbst, served customers personally (see Figure 2). But Germany did not only advertise with food.

As in the US, sporting events were used for inoculation. As the national sport, soccer played a crucial role here. The Hannoversche Sportverein von 1896 e.V., better known as Hannover 96, gave out 1000 free tickets to people who got vaccinated. The FC Carl Zeiss Jena also promoted vaccinations. In addition, vaccination buses and mobile teams were positioned at stadiums. One company in Jena had a different idea. To get its employees to vaccinate, it offered a vaccination bonus of up to 5,000 euros. The entrepreneur told the *Kreiszeitung* that the total cost (vaccination of all 550 employees) would amount to €2.7 million.

When looking at incentives in Germany, the

impression is that culture and custom play an important role in many incentives. This was also evident in Bochum. There, vaccinations were held at the Christmas market in the winter of 2021. The rush was so great that not all those willing to be vaccinated could be accommodated. The Munich television station Pro Sieben considered another action. On November 24, 2021, a team vaccinated people as part of the programme *Zervakis & Opdenhövel. Live.* in front of the cameras. The action took place between 7 pm and 11 pm on the Pro-Sieben-Sat.1 premises in Unterföhring, in the district of Munich. Other incentives consisted, for example, of driving services with luxury cars that took people to get vaccinated. A hotel in Hamburg tried to increase the vaccination rate in this way.

Did the incentives work? As of April 8, 2023, 62.2% of the German population was fully vaccinated. On April 8, 2023, the *Bundesgesundheitsministerium* (German's Federal Ministry of Health) stopped recording vaccination rates. While the rate of the first vaccinated, i.e., those who received their first vaccination, was higher in the US, the rate of the fully vaccinated was higher in Germany as of DATE. This is only 67.2% in the US. Table 1 provides more information about different vaccination rates across countries.



Figure 3. In Lower Saxony, shepherds arranged their sheep and goats into a giant syringe

Around 700 animals were involved in the action. Photo: Philipp Schulze/alliance/dpa.

Chickens, goats, and a cow – Where there are live animals for vaccination

In Lower Saxony, shepherds had a particularly funny idea. To promote vaccination, they had their sheep and goats form a giant syringe. About 700 animals were involved in the action. In the end, the syringe was 100 metres tall. The initiator of the action was the shepherd Hanspeter Etzold, who wanted to make his contribution to the fight against the pandemic in this way. The finished syringe is shown in Figure 3. In other countries, animals played an even more important role in increasing vaccination preparedness. While countries in the West advertised with cash incentives and the like, Asian countries distributed live animals. On Java, one of Indonesia's largest island with a population of 141 million, animals were given away to vaccinated people. Among other things, chickens and goats were raffled off. Thailand also used animals to promote vaccination. In the rural district of Mae Chaem, which is located in the west of Chiang Mai province (northwest Thailand), cows were often auctioned off in exchange for vaccination during the pandemic. Every week, a cow was raffled off among those who had been vaccinated. With a value of the equivalent of \$261 (\$1 equals about 34 Baht), this was a huge motivator. \$261 is a lot of money in Thailand, especially during the pandemic, when tourism to Thailand was greatly reduced.

SEX SELLS – Even in a pandemic

The phrase "Sex Sells" originally comes from the advertising industry. The aim of this method is to achieve emotional arousal through sexual stimuli – for example, scantily clad women. As early as 1871, the Pearl Tobacco company advertised its goods with partially unclothed women. Even today, advertising with sexual stimuli plays an important role within the advertising industry. However, the general validity of the effectiveness of Sex Sells is empirically doubtful. Recent work in particular raises strong doubts.^{10,11}

However, despite these doubts, some resorted to this concept regarding Covid inoculation. A brothel in Vienna made headlines in late 2021 when it set up a vaccination centre on its premises. Interested parties could not only get vaccinated there, but also received a brothel voucher for €40. Other brothels adopted the idea. In early 2022, for example, establishments on the famous Herbertstraße in Hamburg's Kiez district offered a so-called *Love Booster*. Almost 120 vaccine doses were successfully delivered in the process. The action in Hamburg is part of the *Sexy Aufstand Reeperbahn* art project. The aim of the project is to make the work as well as the hygiene standards of prostitutes and sex workers in Germany visible. Like other industries, brothels and independent sex workers suffered from economic losses, especially at the beginning of the pandemic. In the *Sexy Aufstand Reeperbahn*

campaign, brothels collaborated with various artists, IG St. Pauli und Hafenmeile e.V., and the Corona Test Center on St. Pauli. Demonstrations by prostitutes and sex workers in Germany took place under the slogan #sexyaufstandreeprebahn. The protests were accompanied by various art actions and vaccination campaigns.

Countries outside of Europe also adopted this concept. One example was the largest brothel in Bangladesh, located in Daulatdia in the west of the country, employing 1900 prostitutes. The aim of the campaign was also to increase the vaccination rate among prostitutes, who were particularly at risk. (Bangladesh is one of the few Muslim countries where prostitution is legal.)

A slightly different (dis)incentive: paying for vaccination

Cash incentives have already been described in this article. However, there were also the considerations to make COVID-19 health measures (vaccinations and COVID-19 tests in particular) chargeable.

First, regarding tests, the idea was that people who had not been vaccinated against SARS-CoV-2 should pay for these tests independently and should not receive them for free (paid by the health authorities). For those who had been vaccinated, on the other hand, the tests should be free. These considerations were discussed by some authors in different publications. They

assumed that people would be more willing to receive a vaccination if that could save them from spending money for the tests. In this way, the authors of the associated studies hoped for an increased vaccination rate as well as an increased acceptance of vaccinations in general. However, it must be noted that the transfer of costs from the general public to the individual hits poorer people particularly hard. It can be assumed that such measures tend to reduce, rather than improve, acceptance of vaccinations among such people. Studies showed, that people with a higher income are more willing to pay for testing than those with lower incomes. Willing to pay is higher among men than women. The level of empathy also plays a role in the decision. Interestingly, willing to pay for tests is higher among people who show high levels of empathy than among people with lower levels.¹²

In addition to the idea of paid tests, there was, of course, the push to charge for vaccination itself. These included models where high-income individuals paid independently while low-income individuals got vaccinated for free. Willingness to pay for vaccine doses is closely related to income and education level. People with high income and high education level show higher willingness than people with lower income and educational level. Having already undergone COVID-19 infection also has an impact on willingness to pay.¹³

The general push to charge for vaccines received much criticism in the scientific community. Unlike the examples described in this paper, which were rewards, paid vaccinations and paid tests, functioned more as punishment. This decreased the willingness to vaccinate. For these reasons, paid-for vaccination services are counterproductive.

Conclusion

Medicine itself has always been an emotional topic. This, of course, also includes vaccinations. Even with the very first vaccination (invented for smallpox in 1796) there were opponents of it. The arguments of these first vaccination opponents were very similar to today's arguments, for example, that having the disease provides more robust immunological protection. Vaccination opponents, as well as the general distrust of vaccinations, have become an increasing problem in our society. An important factor for successful vaccines, as well as vaccination campaigns, is trust. For this reason, vaccination incentives such as the one described in this article are also viewed critically by quite a few. The overarching discussion is not only about possible rewards for vaccination, but also about the introduction of

compulsory vaccination or the return of certain freedoms such as restaurant or cinemas visits to vaccinated persons. It was precisely these so-called vaccination privileges and the discussion around them that played a role in the political discourse during the initial phase of the vaccination campaigns. Even if the topic in this article and the mentioned rewards amuse, the factor of loss of trust should not be disregarded. In the future, we should consider whether these rewards are the right form of incentive, or whether comprehensive education in the field of medicine and vaccines is not a better alternative. On the other hand, however, it is also questionable how far education goes and how receptive people are to it. The debate about vaccinations and vaccines will likely continue through coming pandemics.

Disclosures and conflicts of interest

The author declares no conflicts of interest.

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