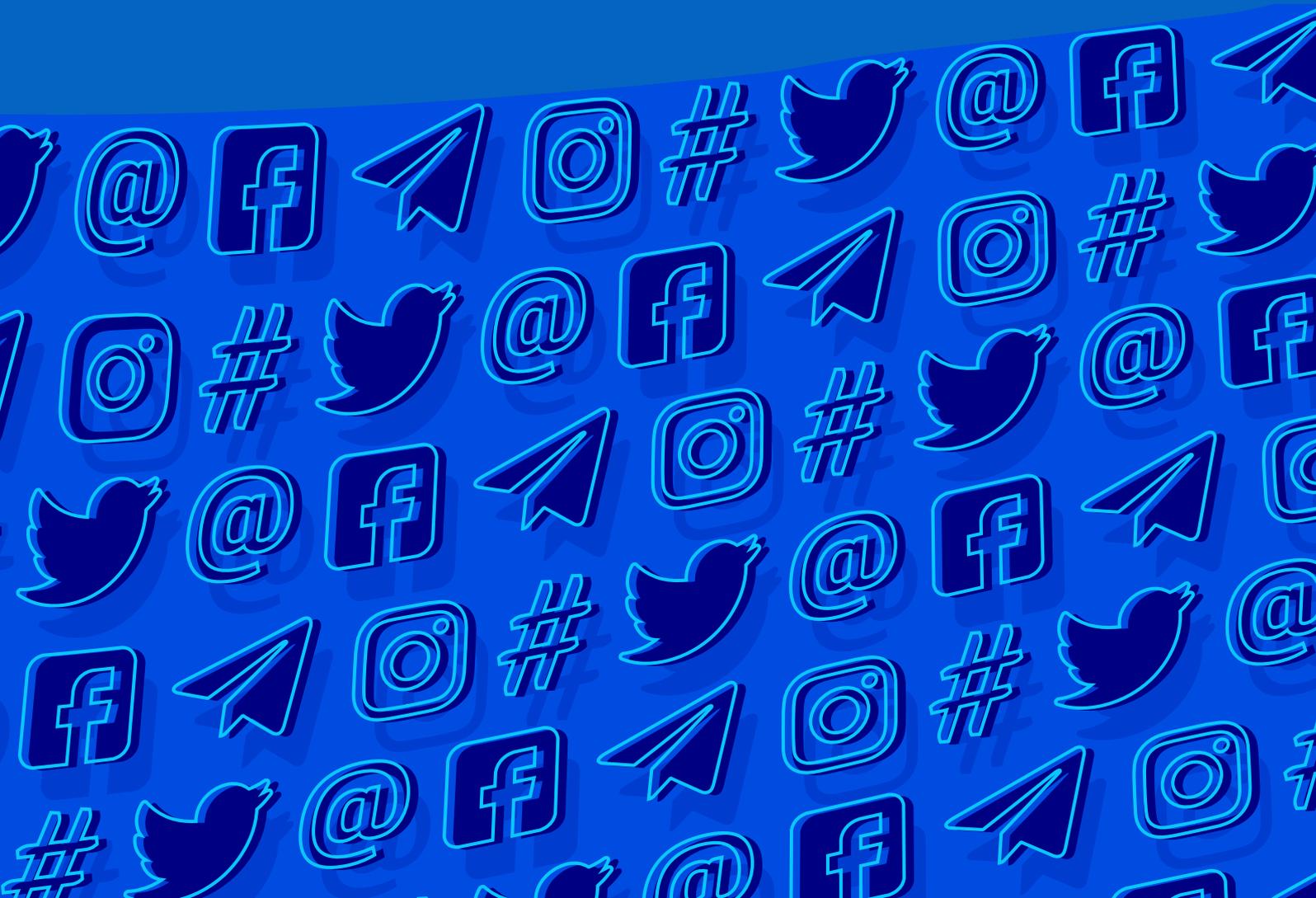


The Digital Pandemic

Life course immunisation
in an era of fake news



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Executive summary

Since the first use of a smallpox vaccine in the 1790s, other vaccines have been developed and used to prevent diseases, helping to save countless lives. Nonetheless, for as long as vaccines and vaccination have existed, there has been some resentment and distrust towards them. Throughout their history, vaccines have been met with resistance from individuals and groups who have deliberately tried to undermine their purpose. The aims of the first 'anti-vaccine' actors over 200 years ago are similar to that of the people who are anti-vaccine today: both are distrusting, have their doubts, and wish to share false and misleading information about vaccines and vaccination with the public.

A key difference in 2022, however, is the speed and scale in which false information and 'fake news' on vaccination can be shared with people. The advent of the World Wide Web in the 1990s and social media in the 2000s has enabled fake news authors and actors to reach a global audience and share anti-vaccine information more quickly. While the content and goals of old and new movements may be similar, social media platforms and the Internet have helped to accelerate fake news today.

With anti-vaccine sentiment and fake news on the rise since the onset of the COVID-19 pandemic, action must be taken today to prevent false information from impacting vaccination programmes in the future. Since 2019, the 147 leading anti-vaccine social media accounts have gained over 10 million new followers,¹ demonstrating the appeal that fake news on vaccination is having on many people.

To combat anti-vaccine information in Europe, charities, social media companies and policy makers must work together and implement policy solutions that:

Relay information

Preventing malicious information on vaccination is imperative. Governments and policy makers must relay relevant, impartial, and informative communication on vaccination before fake news can take hold. They should work cross-sector with different delivery partners to ensure top-level information is disseminated in local communities by relevant messengers.

Reduce fake news

Reducing the creation and spread of fake news requires systemic and cultural changes to ensure that the current and next generation is confident and clear on the benefits of life course immunisation. Learning environments should be at the heart of reducing false information, with schools and educational institutions educating people on how to spot fake news on vaccination.

Remove disinformation

Eradicating fake news is an immense challenge, but one which should be the aim of European governments and social media companies alike. Both parties must work together to ensure that there is greater transparency on how fake news authors operate, as well as greater penalties for the platforms that permit the spread of vaccine disinformation.

Vaccines and vaccination have provided many social, economic and health benefits since their inception. As one of the best forms of prevention, they have helped millions of people to remain in good health, keeping severe disease and mortality

at bay. However, the ever-growing pace at which false information can spread and infect people's minds shows that vaccination is not free from harm. Over time, we must do more to ensure that the digital pandemic of fake news does not continue to disrupt and undermine the amazing value of vaccines and vaccination.

Introduction

Since the dawn of the World Wide Web in 1991, the speed at which people have been able to communicate has accelerated dramatically. The emergence of social media platforms in the 2000s has acted as a catalyst, further speeding up people's engagement with each other. As a result, the world has been brought closer together and remains more connected. During the beginning of the COVID-19 pandemic, this proved vital – businesses moved online, friends and families stayed connected, and people were able to feel closer at a time when they were told to stay apart.

However, the Internet and social media have also enabled individuals to act maliciously. This has been seen through the emergence of a parallel 'infodemic' during COVID-19 – too much information, including false or misleading information, has emerged in digital and physical environments during the disease outbreak.² While the spread of false and misleading information is not novel, it has become a much bigger issue during this pandemic than in previous public health crises. A lot of fake news seen today is centred around anti-vaccine sentiment and comes in many shapes and sizes.

Often rooted in mistrust and anti-institutional rhetoric, fake news has been able to take hold on different social media platforms. Though sometimes shared unintentionally, deliberate attempts to spread disinformation on vaccination are done so with the end goals of attracting people's attention, causing doubt in the public mind, and eventually making profit. While COVID-19 vaccine uptake has been generally positive in Europe, pockets of society remain unvaccinated, with fake news potentially acting as a barrier and discouraging people from getting their vaccines.

About this report

This report attempts to understand the main characteristics of false information on vaccination, its impact on vaccination programmes in Europe (including, but not exclusively, COVID-19), and what can be done at different policy-making levels to counteract and discourage the spread of disinformation.

To achieve this, we have spoken to experts across Europe, including family doctors, paediatricians, researchers, and charity leaders. Interviews with these stakeholders have helped to inform our research and to make a detailed assessment of the impact of false and misleading information on vaccination.

Finally, we make a series of recommendations for European civil society groups, healthcare professionals (HCPs), social media companies and policy makers on what can be done to reduce the spread and impact of fake news.

Key definitions and distinctions

During our conversations, it was evident that 'fake news' comes in different forms with different intentions. It is often difficult to define the intent of those who share anti-vaccine information; sometimes it is less deliberate, and other times it is done with malicious intent. As such, two definitions must be made:

Misinformation

False information that was not created with the intention of hurting others, often started by someone who genuinely wants to understand a topic and cares about keeping other people safe and well. It is then shared by others who believe they are sharing good information, but they are not.³

Disinformation

Unlike misinformation, this is false information created with the intention of profiting from it or causing harm, to a person, a group of people, an organisation, or even a country. Disinformation often serves an agenda and can be dangerous,⁴ leading to harmful behaviours (such as avoiding disease measures).

Terms such as 'fake news' and 'false information' are used interchangeably in this report to refer to *misinformation* and/or *disinformation*.

Fake news – what is it, and how does it impact vaccination?

“For as long as there have been vaccines, people have been speculating about them, putting out false or misleading narratives about vaccines and what they do.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

For as long as there has been vaccination, there has been hesitancy and opposition towards vaccines. The advent of the first smallpox vaccine by Edward Jenner in the 1790s goes to show just how long vaccines have been around, but during this period, scepticism has emerged and grown. Unlike during Jenner’s time, however, the speed at which anti-vaccine sentiment can spread is now much faster. It is now harder to stop and counteract false and misleading information, increasing the likelihood of it harming vaccination programmes. In the modern world where information can be sent and received at the click of a button, vaccines and vaccination are coming under strain from false information which undermines their important role.

What exactly is fake news?

The Cambridge Dictionary defines fake news as:

“False stories that appear to be news, spread on the internet or using other media, usually created to influence political views or as a joke.”⁵

However, fake news is more nuanced than a single definition. As highlighted in the introduction, fake news can be either unintentional or deliberate, being spread as misinformation or disinformation respectively. Vaccination fake news often comes in different shapes and sizes with multiple narratives and viewpoints. Given the long history of vaccination, there is an equally long history of anti-vaccination movements and fake news too.

History of vaccination, anti-vaccine sentiment and fake news

- 1796** Edward Jenner inoculates 8-year-old James Phipps with the first experimental smallpox vaccine.⁶
-
- 1802** British caricaturist, James Gillray, produces a cartoon titled *The cow-pock, or-The wonderful effects of the new inoculation!* which depicts people having negative side effects from the new smallpox vaccine.⁷ Given its false illustration of the effects of the vaccine – with people growing cow-like limbs – this can be regarded as one of the earliest forms of fake news.
-
- 1840** The British government passes the first Vaccination Act, establishing public vaccination services through Poor Law guardians in workhouses.⁸ Vaccines are optional but are offered for free at workhouses; the government encountered resistance because workhouses were seen as places of destitution.⁹
-
- 1853** The British government passes the second Vaccination Act, which made it compulsory for all children born after 1 August 1853 to be vaccinated against smallpox during their first 3 months of life. Parents who failed to get their children vaccinated would be subject to a fine.¹⁰ According to some historians, this caused the beginning of the anti-vaccination movement, with many people believing that the government had no business telling them how to manage their health.¹¹
-
- 1907** Mandate exemptions are introduced in the US and UK. The British government began granting exemptions for the smallpox vaccine to most people who requested them, reducing the argument of the anti-vaccination movement.¹²
-
- 1974** Mass media reports in the UK emerge over the diphtheria-tetanus-pertussis (DTP) vaccine due to concerns that it caused neurological injury to children who received it. This led to a sharp decline in public acceptance of DTP during the mid-1970s and mistrust soon spread in Europe, Japan, the US, and Australia.^{13, 14}
-
- 1998** Andrew Wakefield produces a study claiming that there is a link between children who receive the mumps, measles, and rubella (MMR) vaccine and autism. While the study is redacted and debunked, vaccine scepticism and refusal to vaccinate children against MMR follow, in part due to excessive media coverage of the study.¹⁵ Measles outbreaks occur in Europe, the US, and Australia afterwards, marking the beginning of the MMR vaccination scarcity throughout the world.^{16, 17}
-
- 2009** Facebook, Twitter and YouTube are in their infancy having been established several years earlier. The H1N1 influenza pandemic is the first pandemic to occur in the age of social media, and false information about the virus and vaccination begin to emerge online. On Twitter, misinformation regarding the safety and efficacy of H1N1 vaccines begins to spread.¹⁸ In countries such as Italy, vaccination uptake is low partly because of false rumours being spread on the Internet.¹⁹

2020 Over a decade after the beginning of social media, the world faces a new pandemic: COVID-19. The development and rollout of the first novel vaccines in December 2020 is seen as a success but encounters anti-vaccine sentiment. During the initial stages, anti-vaccine social media users try to distort messages with narratives on side effects and death.²⁰ Subsequent conspiracy theories, anti-government narratives, and arguments over freedom of choice emerge on platforms such as Twitter.²¹ Anti-vaccine conspiracy theory groups even use offline tactics such as placing stickers in public places to spread disinformation.²²

Throughout history, whenever a new vaccine has been introduced, it has been met with anti-vaccine sentiment. While not all false information has been shared with malicious intent, individuals and groups have emerged to intentionally disrupt vaccination campaigns by spreading disinformation. This has become easier since the popularisation of the Internet during the 2000s, which has offered an unprecedented opportunity for anti-vaccination activists to diffuse their messages to a much wider audience and recruit new members.²³ In many instances, anti-vaccination websites and accounts appeal to people searching for vaccine information that reinforces their views to avoid vaccination for themselves or their children.²⁴

Anti-vaccine information and life course immunisation

As seen in the timeline above, false information and narratives on vaccines can be seen across different vaccination programmes. This includes childhood vaccination programmes, human papillomavirus (HPV) vaccines in adolescents, influenza (flu) vaccines, pneumococcal vaccines, and routine vaccinations for at-risk populations and older adults. COVID-19 vaccination has also come under strain, with research suggesting that exposure to misinformation can decrease the likelihood of someone getting a COVID-19 vaccine by 6.2%.²⁵ False information about vaccination can thus be seen as a life course issue, affecting multiple programmes across different ages and stages.

Childhood vaccination

“The false link between MMR and autism has been a big one for a couple of decades now and it’s still something that we see on social media quite a bit.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

Anti-vaccine campaigns have been particularly prominent in childhood vaccinations, such as DTP and MMR. In addition to claims such as vaccines giving children autism, other common misconceptions have fuelled misinformation and disinformation on childhood vaccination, like:

- Natural immunity is better than vaccination
- Too many immunisations overload the immune system
- Vaccines contain harmful ingredients
- Many diseases are now uncommon
- There are alternatives to vaccines²⁶

HPV vaccination

“The HPV campaign totally collapsed in Romania in 2008, and this was actually the start of the anti-vaccine movement in the country. The campaign was poorly managed by the government, with no communication at all, and a lot of mistakes were made over the years.”

(Dr Sandra Alexiu, Bucharest-Ilfov Family Physicians Association)

The HPV vaccination programme in Europe has been challenged by false information. In Denmark, for example, a sharp decline in uptake was caused by the broadcast of a controversial TV documentary on potential vaccine side effects.²⁷ Studies have suggested that a decline in uptake coincided with media coverage with negative content and an increase in Google searches for ‘HPV side effects’.²⁸ After the documentary was aired in 2015, similar declines were seen in countries such as Ireland, where rates went from 87% to 51%.²⁹ False narratives on HPV vaccination have thus had consequences on uptake in some parts of Europe.

Routine vaccination in at-risk groups

Other routine immunisations also face challenges. In France, one study suggested that patients with immune deficiencies who held unfavourable opinions towards flu and pneumococcal vaccination did so partly because of arguments they had seen in the media or read on the Internet (24% of respondents).³⁰ This shows that despite being more at risk from severe disease, some people in at-risk groups may be susceptible to misleading vaccine information online and in the media.

Adult immunisation

Recent research has shown that older adults are also more likely to be sceptical towards flu and COVID-19 vaccination than younger people due to having more exposure to, and engagement with, misinformation on social media.³¹ People aged 50-64 have suggested that the issues they have with flu vaccination relate to aspects like bodily autonomy and flu being a “mild illness” whilst quoting misinformation.³² This is unsurprising, given that older adults are more likely to share fake news on social media than younger people.³³

These findings imply that fake news has the potential to reduce confidence and cause uncertainty in all vaccinations throughout a person’s life. Understanding the characteristics of fake news and the motivations of its authors is crucial to recognise why and how it is formulated, and what makes it appealing to some individuals.

Vaccination fake news – the key characteristics

“The objective of the authors of disinformation is not to make people believe a new truth. They just want people to doubt the actual truth.”

(Dr Angus Thomson, Irimi)

The intention – mis- and dis- information

As pointed out at the beginning of this report, there are clear distinctions between the intentions of the types of information being put out there for people to look at. The stakeholders we spoke to also clarified this during our discussions, making disclaimers about the types of information being broadcasted and the motives of the authors:

“Misinformation is false information. It’s confusing. It confounds the online conversations in which people find themselves when they’re looking for vaccine information. But disinformation is deliberately produced. It’s carefully engineered misinformation, engineered to catch people’s attention, to generate outrage, to have them share and propagate.”

(Dr Angus Thomson, Irimi)

“Fake news’ often means things that are kind of intentionally, verifiably, demonstrably false. With a lot of the misinformation we see around vaccines today, that is not always clear. Sometimes it’s unclear whether someone intended to mislead people, or whether they’re unknowingly spreading information that’s incorrect...sometimes people are speculating in the absence of information...Not everything fits within this definition of ‘fake news’ – something that’s intentionally, demonstrably false and being put out there to mislead people. There’s plenty of stuff that does fit into that category, but not all of it.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

In general, misinformation can be understood as something that’s less deliberate. Misinformation could be false information shared by someone who believes it is true because the information seems to have value, but this is not done to deliberately mislead people. Disinformation, on the other hand, is information shared by someone who wants to disrupt a vaccination campaign and undermine a person’s genuine hesitations. Disinformation is malicious and dangerous, often taking a targeted approach and formulated by a small group of individuals.

The message – what does fake news say and look like?

Although misinformation may be less intentional and based on rumours or speculation about vaccination, disinformation is often rooted in false narratives such as conspiracy theories, anti-institutional rhetoric and alternative health solutions.

Conspiracy theories

Conspiracy theories in particular play a key role in shaping fake news narratives and have grown in strength and appeal during the COVID-19 pandemic:

“The pandemic has been a game changer in terms of the narratives and the conspiracy theories that are dominant or prevalent within vaccine-sceptical or anti-vaccination communities.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

Baseless theories relating to vaccines causing harm and being experimental were seen as intrinsic elements of the fake news that has been circulating throughout the COVID-19 pandemic:

“On Twitter, there are some clear words related to fake news, like ‘microchips’ and ‘5G’. Usually, any Tweets that contain these words are negative and are related to fake news.”

(Dr Francisco Gimenez, Balmis Institute of Vaccines)

“There was the African ‘guinea pig’ conspiracy which started in Comoros, moved to Madagascar and then moved throughout all of Francophone Africa. And it mutated as it spread from country to country.”

(Dr Angus Thomson, Irimi)

Theories such as these will often be created and perpetuated by authors who intentionally want to spread disinformation. However, as pointed out above, conspiracy theories have the potential to evolve and could easily spread throughout communities as unintentional misinformation. In either scenario, the legitimacy and confidence in vaccination can be damaged.

Anti-institutional rhetoric

Conspiracy theories usually contain granules of anti-government and anti-institutional sentiment, which has increased due to a lack of trust in politicians and people’s negative feelings towards the way they have handled the pandemic. This has been the case, particularly in places such as Eastern Europe, where there has been a much lower uptake of COVID-19 vaccines.³⁴ One stakeholder from Romania attributed this to anti-government sentiment and people deciding to believe fake news over communication from the authorities:

“There is huge trust in the family doctors, but lower trust in the authorities. So, because of this, the population said, ‘I don’t trust this [COVID-19] vaccine; we don’t want you to do experiments on us.’ and all these kinds of conspiracy theories. These connected very well with the people because the authorities didn’t do anything to explain that the rumours are fake.”

(Dr Sandra Alexiu, Bucharest-Ilfov Family Physicians Association)

This is also the case for other vaccination programmes too, with failure of government action resulting in resentment towards other vaccinations too:

“People don’t trust the authorities, and the authorities don’t do anything. This is the main problem. Every survey shows that this is the main problem, not only for COVID-19, but it’s a problem for MMR and HPV.”

(Dr Sandra Alexiu, Bucharest-Ilfov Family Physicians Association)

Similar narratives have been seen in Italy, where scepticism on vaccination has formulated out of resentment towards pharmaceutical companies and those who manufacture vaccines. Like in Romania, communication from the government and national authorities has sometimes failed due to a lack of trust, with anti-institutional fake news becoming more appealing to people who disregard authority:

“In Italy, some citizens believe that Big Pharma is influencing our political institutions and political decisions. In Italy and other European countries during the pandemic, there has been a huge problem related to institutional communication. Institutions couldn’t communicate properly during the crisis. They asked their citizens to trust them, but over the years, they haven’t been able to build that confidence. So, during ‘war time’, they cannot expect people to trust them. And I think that this vision of political institutions that are controlled by economic interests has become more common during the pandemic, especially in people who already had doubts regarding vaccines.”

(Eliana Fattorini, Project Science Technology and Society – STSTN)

Anti-institutional rhetoric is also not exclusive to left- or right-wing groups, with stakeholders suggesting fake news can be attributed across the political spectrum:

“You get those sorts of libertarian, right-wing mindsets when people like the government telling them what to do, and don’t trust people who make vaccines. But you also have green movements, in the corners of the environmentalist section, or even further left with anarchist groups, and they meet in this intersection...where they just don’t trust anyone...It’s a sort of a hyper-individualistic view of the world.”

(Gary Finnegan, Vaccines Today)

“Studies have found a correlation between political worldview or ideology and vaccine hesitancy...people who are less trustful of politicians or medical experts, for a variety of reasons, tend to be more sceptical or hesitant about vaccines. These political factors rooted in populist distrust of elites can often play a role.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

Without unequivocal communication on vaccination and health prevention from government officials, some people may look for alternative answers to the crises caused by the pandemic. With political distrust and anti-government sentiment rising in recent years too, authors of fake news have been able to galvanise people around these narratives. They have used them to blame politicians for the pandemic, and thus COVID-19 vaccines and other vaccination programmes.

Alternative health solutions

With conspiracy theories and distrust undermining vaccinations and causing uncertainty in some populations, people may look for alternative solutions to vaccination. Again, this has increased during the pandemic with an overabundance of information circulating online, with some fake news authors capitalising on this by offering alternative medicines during all the uncertainty:

“COVID-19 has been a growth opportunity for these [anti-vaccine] actors, and some of whom run businesses. That’s because COVID-19 is one of those moments where everyone’s in some state of anxiety over their health. Everyone’s in some state of ignorance over how to manage this new health risk, and what decisions to make for themselves...alternative health businesses are able to step into that void.”

(Callum Hood, Center for Countering Digital Hate)

“We’ve had to deal with the anti-vaccine movement and all these ideas of using self-treatments. There are a lot of recipes and prescriptions that are all over the internet; ‘I have done this, it worked great for me, why don’t you try it?’

There's a lot of vitamins and supplements that have absolutely no effect on COVID-19, but people pay a huge amount of money for them."

(Dr Sandra Alexiu, Bucharest-Ilfov Family Physicians Association)

Like conspiracy theories and anti-institutional rhetoric, messages around alternative medicine offer quick answers to people with uncertainties. In this sense, they are populist, as pointed out by a stakeholder:

"They [anti-vaccine authors] go, 'Forget about the doctors, we know you've had a bad experience, we know they're asking for lots of money. Instead, we've got this supplement that will sort you out for a fraction of the cost.' And that is a very popular message. It's what some people have called 'medical populism', or 'health populism'."

(Callum Hood, Center for Countering Digital Hate)

Health populism can be seen as an alternative to mainstream health measures. In the context of anti-vaccine fake news, it aims to disregard vaccination in a similar way that conspiracy theories do, playing on the genuine questions and hesitations that some people may have.

The target – which people are fake news authors trying to reach?

Given the personal nature of the message and what it is trying to say, a key element of vaccination fake news is the target individual. With some people feeling hesitant about vaccines, our stakeholders suggested that the decision to get vaccinated is not always black and white. Instead, it can be understood more like a spectrum than a 'yes/no' decision:

"Most people just get vaccinated and don't ask questions. But some people might ask some questions; people who are more actively involved in their own health decisions. It doesn't mean they're hesitant, it just means they've got questions. Then some people have real questions, and they're not going to get vaccinated unless those questions are answered. And some people are not going to get vaccinated unless you're able to really convince them. There are also a few people who will never get vaccinated, who not only will never get vaccinated, but they try to get other people to never get vaccinated as well."

(Dr Angus Thomson, Irimi)

"Where we're seeing low uptake, there are probably two different types of people. One will be those who feel very strongly against vaccination, and however they've come to reach that decision, there's probably not much we can do to change their views on vaccination. But this is actually quite a small group. The other group – which is much bigger – is those who are a little bit more hesitant, or maybe just have some questions that they would like answered...and it's okay to have questions...if you have questions about vaccines and want to understand more about how they work, that doesn't mean to say you have anti-vaccine views."

(Dr Doug Brown, British Society for Immunology)

Based on where a person sits on that spectrum then depends on how likely they are to get vaccinated or engage with false information. For most people, vaccination is an easy choice, and they will choose to get vaccinated or have their children immunised. In most Western European countries, this reflects in the recent uptake of COVID-19 vaccines which is around 90% for adults.³⁵ Despite setbacks due to fake

news, childhood vaccination is also high in most European countries,³⁶ suggesting a large majority of parents are comfortable with the idea of immunisation.

However, around 10% of people may be more reluctant, suggesting that the decision is not always clear-cut. Some people may be more hesitant, while an even smaller minority of people may be sceptical or refuse vaccination. For example, Eurobarometer data suggests that 5% of Europeans are hesitant about COVID-19 vaccination.³⁷ As such, we can understand the decision to get vaccinated as a spectrum split into different categories with estimated population percentages:

The vaccination decision spectrum

Refusal	Scepticism	Hesitancy	Acceptance
<i>'Refusers' – 2% of people</i>	<i>'Sceptics' – 3% of people</i>	<i>'Questioners' – 5% of people</i>	<i>'Accepters' – 90% of people</i>
A small group of people who will never get vaccinated. These people will engage with disinformation by spreading false narratives about vaccines and vaccination, such as conspiracy theories. They do this deliberately to undermine vaccination campaigns, such as COVID-19 and MMR.	Like people who refuse vaccination, vaccine sceptics will question their purpose and may choose not to get vaccinated. However, some might be persuaded over time. Most will share fake news believing it is true, suggesting that there is less malicious intent, unlike refusers.	People who have genuine questions or concerns with vaccination and would like more answers before they choose to get vaccinated. Questioners are more vulnerable to false information and may not distinguish the difference between facts and fake news.	The vast majority of the public who will get vaccinated without asking any questions. Accepters are happy to take the advice of medical professionals and will get vaccinated as they see it is the right thing to do. They will listen to officials and can distinguish fact from fiction.

One stakeholder also suggested that those who refuse vaccination or are more sceptical of them only make up a small proportion of the population, while most people are willing:

“I think that when we talk about the general population, fake news doesn't influence vaccine decision-making; most people choose to get vaccinated based on the advice of their doctors. However, some groups – **maybe 5% of the population** – are anti-establishment, anti-government; anti-everything. They use fake news to enhance their opposition to vaccines. People hold extreme positions on vaccination, which become more extreme than before. I think fake news influences these kinds of people, but not the general population; most of the time, the general population trust their medical doctors and gets vaccinated.”

(Dr Francisco Gimenez, Balmis Institute of Vaccines)

Others also suggested that most people will rely on trustworthy sources of information rather than social media, where false information is more likely to circulate:

“Fake news has been very limited in Italy in the context of the COVID-19 pandemic. According to analysis of Observa Science in Society Monitor data, **only 4% of Italians believe that social media is a trustworthy source of**

information. So contrary to widespread concern, social media – at least in the Italian case – has played a minor role in information about COVID-19 vaccines, and the pandemic in general.”

(Eliana Fattorini, Project Science Technology and Society – STSTN)

While fake news and disinformation can be associated with a small minority of people in most instances, it still has the potential to do damage if it spreads into the wider population.

Targeting marginalised and underserved populations

Our stakeholders suggested that ethnic minority groups and other marginalised populations are more likely to be the target of anti-vaccine fake news, with authors deliberately framing narratives around these audiences to spread disinformation within their communities. Given the abhorrent nature of past healthcare scandals, such as the Tuskegee Experiment,³⁸ trust towards HCPs and authorities has understandably been tarnished in ethnic minority groups. Fake news authors capitalise on this:

“Bad actors can try and exploit people by crafting narratives that appeal to scepticism or distrust. For example, in the early stages of the [COVID-19] pandemic, the Nation of Islam – a Black nationalist organisation in the US – was quite active in spreading misinformation and conspiracy theories around COVID-19 to African American audiences online...trying to exploit the historical or cultural trust deficit.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

“The general theme is that they [authors] will play on historical medical injustice, to sort of speak to a minority audience and to speak to their own particular anxieties.”

(Callum Hood, Center for Countering Digital Hate)

How disinformation and misinformation can spread within marginalised communities is also a concern, with messaging services such as WhatsApp usually being the main form of communication and a potential platform for false information:

“In the UK, what we’re seeing is lower uptake in Black, Asian and minority ethnic communities, Eastern European communities, and some religious communities as well. This often stems from distrust ‘in the system’, as we’ve seen with some of the data. I wouldn’t be surprised if some of the non-factual information that’s been shared online, particularly on WhatsApp, has had a negative impact on uptake in those particular communities.”

(Dr Doug Brown, British Society for Immunology)

In most cases, fake news will fail to resonate with people and not have an impact on someone’s decision to get vaccinated. However, in more hesitant populations and groups with understandable grievances towards authoritative figures and HCPs, fake news has the potential to encapsulate people and shift the paradigm so that more people start to accept false information.

The appeal – why does vaccination fake news ‘stick’ and what makes it believable?

While false information on vaccination can vary in terms of its message, it always seems to follow a similar pattern and structure to try and appeal to a wider audience of people. The authors of disinformation have adopted specific tactics to ensure that their viewpoints are heard by as many people in as many places as possible. From conversations with stakeholders, it seems like fake news is appealing because:

- It's emotional – it taps into people's feelings and casts doubt
- It's simplistic – everyone can understand it
- It's comforting – it feels believable in an uncertain world

The emotional appeal of fake news

Disinformation tries to cast doubt on vaccination and manipulate people's feelings, especially those who are more hesitant. This can be achieved through different narratives – be it conspiracy theories, anti-government rhetoric, or personal health message. Whatever the message is, authors will try to appeal to a person's emotions by cleverly altering the truth, attempting to incite scepticism, fear, and outrage towards the vaccination in question:

“There's almost always some kernel of truth in a misinformation or disinformation narrative. That's just smart disinformation engineering – you start with something that sounds vaguely feasible, vaguely possible, and then you build out the outrage-generating content around that.”

(Dr Angus Thomson, Irimi)

“The advantage of the fake news is that it's often emotionally triggering – it's exciting and it's simple. Whereas the sort of dull, boring, ‘Here's how clinical trials work’ is a bit of a hard sell.”

(Gary Finnegan, Vaccines Today)

The simplicity of fake news

Apart from its emotionally triggering characteristics, fake news is also simple. It isn't designed to be complicated, as its intended audience is often trying to find information in a crowded and fast-paced environment: on the Internet or social media. The authors of fake news thus use narratives that are digestible and easy to understand, without having to try and create something new and complex:

“It's the same argument, it's always the same: it's about ‘mercury in the vaccine’, or ‘the lack of efficacy’, or ‘someone is trying to introduce something strange into the body’, or that ‘the government are trying to control us.’ It's always the same arguments.”

(Dr Francisco Gimenez, Balmis Institute of Vaccines)

“The simplicity of misinformation is its main appeal – it's just so easy, and that's what makes it sticky.”

(Gary Finnegan, Vaccines Today)

The comfort of fake news

In an uncertain world where the COVID-19 pandemic has caused social, political, and economic disruption, feeling informed and up to date is important to feel more certain. The authors of fake news have recognised this throughout the pandemic, making their narratives sound believable and recognisable. Authors offering alternative medicines and remedies for COVID-19 have attempted to fill the void of uncertainty in people's minds:

“COVID-19 has been a growth opportunity for [anti-vaccine] actors...that's because COVID-19 is one of those moments where everyone's in some state of anxiety over their health. Everyone's in some state of ignorance over how to manage this new health risk, and what decisions to make for themselves... alternative health businesses, they're able to step into that void...for a good duration of the pandemic, scientists could only offer, understandably so, sort-of accurate answers that reflected their own uncertainty over COVID-19.”

(Callum Hood, Center for Countering Digital Hate)

Similarly, conspiracy theorists will exploit these anxieties and produce narratives that can remedy people's concerns:

“People believe conspiracy theories because they give them a level of certainty in an uncertain world; a world that they feel like they don't understand; a world which is generating anxiety and concern. Believing in a conspiracy theory actually helps them find an anchor within that uncertainty and that anxiety.”

(Dr Angus Thomson, Irimi)

The goal – why do people spread disinformation?

Recognising the motivations of the authors of disinformation is important to get to the heart of the issue and to stop it in its tracks. From the discussions we had with stakeholders, it can be understood that the authors of disinformation often use social media to generate income by capitalising on the platforms' algorithms. The non-financial motivations are more difficult to distinguish, but we believe that authors of disinformation have a genuine desire to disrupt vaccination campaigns due to underlying personal feelings of mistrust in science and the medical world. One stakeholder suggested that the motivations of fake news authors' can be broken down into three areas:

“Disinformation is not just being randomly developed; there are clear underlying, malign, malicious motives. And the way I always put it is that disinformation is created to either **monetise, polarise or politicise.**”

(Dr Angus Thomson, Irimi)

These three areas help to compartmentalise the motivations of fake news authors and were regarded as some of the key factors by other stakeholders too.

Monetisation

Monetisation relates to the ability of disinformation authors to make money through the social media platforms where they share fake news. Thanks to the algorithms on these sites proactively promoting fake news images, articles, and websites, this has become achievable:

“Social media algorithms focus on getting people's attention no matter what they were presented with, rather than presenting them with things that

seem to be coherent with their interests that had been detected...they don't care about your interests, they just want your attention. The algorithms are the other problem – they drive this attention economy and operate through outrage...The objective is to get people's attention to drive them to their [fake news authors'] sites, and to have them share it so that they build up traffic to their sites. And that then pays either through advertising or through products that they sell. They apply social media marketing strategies to get people's attention, to get them to click through, land on their site to maybe share it, and hopefully to make a donation or buy something [like an alternative medicine product]."

(Dr Angus Thomson, Irimi)

"We know from various sources...that Facebook amended its algorithms to value emotive interactions and controversy over other metrics in a bid to increase engagement.^a You've got websites that exploit that by putting incendiary images and headlines on supposed articles, and then they monetise that by turning clicks into money via...programmatic advertising that they put on their websites. The basic economic model of this has been clear for some time."

(Callum Hood, Center for Countering Digital Hate)

While there are clear intentions by authors of vaccine disinformation to share fake news to make money, this is being easily facilitated by social media platforms. The primary goal of gaining financial rewards from fake news is thus being achieved with little resistance and only requires authors to produce content that looks appealing. The rest is done by technology.

Polarisation

Aside from wanting to make money, vaccine disinformation authors may choose to espouse false narratives simply to polarise opinions and disrupt vaccination campaigns. State-sponsored actors may seek to influence larger areas of the population to destabilise vaccination and wider society in general:

"State actors want to polarise conversations because that undermines the fabric of our liberal democratic societies."

(Dr Angus Thomson, Irimi)

"Another category will be state-sponsored disinformation around vaccines which might seek to exploit perceived divisions or anxieties within particular communities...research has looked at foreign disinformation campaigns around vaccines, ones using social media bots, which found that they weren't intervening on one or other side of the debate; they were intervening on both to sow division."

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

State-sponsored vaccination disinformation has become more prominent in recent years, with campaigns increasingly using anti-vaccine comments to undermine public health and reduce confidence and participation in democratic societies.³⁹ Countries such as Russia have been held responsible for these campaigns, with

^a In September 2021, *The Wall Street Journal* (WSJ) published *The Facebook Files* showcasing findings from an internal document leak from a former Facebook (now Meta) employee. In its findings, WSJ highlighted that Facebook's algorithm changes in 2018 favoured content which incited anger and outrage, including misinformation. [Click here to find out more.](#)

a preponderance of anti-vaccination disinformation originating from within the country or via informally associated pseudo-state actors.⁴⁰ Disinformation can thus stem from macro-level actors aiming to undermine whole country populations and their vaccination campaigns; fake news isn't solely one individual looking to influence another individual with hesitations or concerns.

Politicisation

With anti-institutional rhetoric forming a large part of the narrative around vaccination disinformation, a key element driving the motivations of fake news authors is the politicisation of vaccines. Although vaccination is one of the best forms of health prevention, authors of fake news regard it as one of the best forms of "control". Anti-government and anti-authoritarian beliefs appear to justify a lot of the fake news content seen online, with the COVID-19 pandemic helping to propel these arguments due to the ongoing measures taken by governments worldwide to stop the spread of the virus during the initial stages.

The pandemic has also helped to accelerate anti-vaccine fake news due to the politicisation of health by politicians themselves. In many instances, a lack of clear communication or conviction by some political actors has helped their agendas as well as the agendas of disinformation authors. This lack of political ownership during the pandemic was raised by stakeholders, with some stakeholders suggesting too much airtime was given to anti-vaccination persons:

"We've seen politicising of [vaccination] throughout COVID-19. Politicians in the US were not necessarily concerned about COVID-19 vaccination – they were using it as a way of getting attention to push other parts of their agenda."

(Dr Angus Thomson, Irimi)

"There were a lot of anti-vaccine doctors who never had access to television or the media until the pandemic. But suddenly, they appeared in every television debate; they became very public. The politicians in Romania didn't penalise them for spreading fake news, and all these doctors who had anti-vaccine ideas were on primetime television with big audiences watching at home."

(Dr Sandra Alexiu, Bucharest-Ilfov Family Physicians Association)

Essentially, anti-vaccine authors and commentators have filled the void created by political stakeholders who have not effectively dealt with the infodemic seen during COVID-19. Those espousing fake news have capitalised on the overabundance of information and lack of clarity, using their political ideals to perpetuate disinformation and to capture the minds of those with genuine fears and concerns about vaccination.

The opportunities – how can we stop fake news?

“We need to be very creative and targeted in how we engage with the public to remind them about the value of vaccines and how amazing they are.”

(Dr Doug Brown, British Society for Immunology)

Fake news on vaccination is a cause for concern in Europe and beyond. While it may only be produced and espoused by a small number of people, its ability to spread online to a larger audience is a cause for concern. Even though most people may not be affected by fake news, there is still the potential for misinformation and disinformation to disrupt vaccination programmes and reduce uptake in small pockets of society. Ensuring everyone has uninterrupted and equitable access to vaccination without being dissuaded by false and inaccurate information is vital.

From the conversations we had with our stakeholders, we recognise there is a fundamental need for policy makers, private companies, and civil society to take action against fake news. This will require many top-level, structural changes through increased political will, but also more self-awareness at a grassroots level through increased engagement. From the conversations had with stakeholders, we need to reduce fake news and increase positive messaging on vaccination by:

- 1. Improving communication:** At present, correct and effective vaccination communication is not reaching everyone, with fake news sometimes filling the void caused by lacklustre messaging. Ensuring vaccination communication is clear, consistent, and unequivocal is vital, and it must be confidently reaffirmed by top-level policy makers and HCPs. Communication strategies must also include those less involved in the political decision-making who have the right local knowledge and expertise, such as family doctors and physicians.
- 2. Increasing education:** Since the COVID-19 pandemic, people’s understanding of vaccines and vaccination may have increased, but there is still less awareness of the potential dangers of fake news. To prepare for future health emergencies, we need to make sure people feel educated and empowered about the information they’re receiving and to ensure that they can differentiate between fact and fiction. Educating young and older people is crucial to make the current and next generations think more critically about communication on vaccination and the importance of immunology and medical science.
- 3. Seeking better transparency:** Social media platforms are responsible for a large majority of the vaccination fake news being shared today. While some improvements have been made to usability and the detection of potentially false or misleading information, there is still a lack of transparency around the operational aspects of many platforms. Increasing openness on how social media sites function and holding these companies to account is crucial to ensure people are fully aware of what they are seeing online, how it has been generated, and why it is appearing on an individual’s feed or profile.

Improving communication – getting the messaging right on vaccination

One of the most important recommendations raised by stakeholders was the need to improve communication. They suggested that vaccination communication needed enhancing through:

- Clear top-level information
- Better investment and design
- Targeted communication
- Greater collaboration
- Signposting

Clear top-level information

During the COVID-19 pandemic and vaccination rollout, governments have ramped up communication to inform citizens and increase awareness. However, inconsistent messaging has weakened and tainted communication on COVID-19 vaccines. This also has the potential to damage confidence and trust in other programmes. Ensuring consistent and trustworthy messaging from top-level individuals, such as HCPs, public health bodies and politicians, is critical. Stakeholders recognised the importance of taking ownership of vaccination communication and being able to confidently engage with citizens and prevent fake news from reaching people beforehand:

“Public health officials must present the information very clearly, remain consistent in what they describe, and be as accurate as possible. It’s really damaging to the public health officials if they’re caught saying two rather different things at different points in time – that creates doubts.”

(Callum Hood, Center for Countering Digital Hate)

“One of the key things that we must do is ensure that there’s enough of the information that people need, that it’s addressing their concerns and questions, that it’s relevant, and that it’s accessible so that it actually serves to help people make their decision.”

(Dr Angus Thomson, Irimi)

“If you impose vaccines without information, it’s going to be very bad, because people are going to believe the fake news rather than the information that they don’t receive. The most important thing is to give the information in advance rather than the fake news getting there first...to prevent the use of fake news by the general population.”

(Dr Francisco Gimenez, Balmis Institute of Vaccines)

Those at the top have an important role to play in delivering vaccination communication that is easy to recognise and understand. Policy makers and HCPs need to be clear with what they are saying too for people to trust their communication.

Better investment and design

Vaccination communication needs to receive proper investment to ensure it has an impact and sends the right message. It also needs to be intricately designed and tested so that it resonates with citizens and is cost-effective:

“I think that institutions should pay more attention to...investing resources into creating and boosting confidence in vaccines, creating good science communication, good risk communication, a communication that speaks to people about the low risks related to vaccination, regarding the uncertainties related to the scientific process.”

(Eliana Fattorini, Project Science Technology and Society – STSTN)

“Vaccine communication needs to be tested for both efficacy because we know that a lot of it doesn’t really work, and for safety, because we know that some of it, particularly in hesitant people, backfires. Content that’s been designed through a behavioural science lens and a digital marketing lens...testing it against other content, different message framing, messengers, looks, formats etc. to see what works before we actually develop the campaigns.”

(Dr Angus Thomson, Irimi)

Investment in vaccination must come with financial support for the communication campaigns that accompany them. This information must have the individual in mind and reflect their needs to address the hesitations and concerns which may be preventing them from taking the vaccine. Policy makers need to work with manufacturers to ensure vaccines are being positively promoted with messages that people can get behind.

Targeted communication

Policy makers and HCPs also need to work with grassroots organisations to ensure communication is more accurately targeted at local populations and specific communities. With some people more hesitant of vaccination and thus more susceptible to fake news, effective communication requires tailored messaging that is delivered by community leaders and figures who are relatable and trusted. Stakeholders agreed that vaccination communication needs to be dispersed at a local level:

“We need to step up and have a much better engagement with those individuals and with those communities to understand their concerns – engage with them, understand their questions, discuss those questions with them. I think that is the most powerful way we can counteract any inaccurate information or fake news that might be circulating within those communities.”

(Dr Doug Brown, British Society for Immunology)

“I think that implementing targeted and more transparent and responsible strategy of communication can help people better understand the research and production of vaccines, as well as vaccination policy.”

(Eliana Fattorini, Project Science Technology and Society – STSTN)

With so much information being shared and government communication campaigns attempting to reach a wide audience, messages can get lost in the noise and fail to resonate with specific populations.

Community engagement approaches to encourage COVID-19 vaccination

The British Society for Immunology (BSI) have helped to encourage better uptake of COVID-19 vaccines by training local community leaders to deliver vaccine messages. The BSI provided them with the tools to have effective conversations about COVID-19 vaccines with friends, family, colleagues, and contacts, thus helping to drive vaccine uptake among specific populations within a local setting – in this instance, the London Borough of Bexley.⁴¹

Getting to the heart of a community and sharing information with people in a local environment will help to encourage individuals to make more informed choices about vaccination. If fake news is more readily available than effective communication from people that they know and trust, this may influence their decision to not get vaccinated.

Greater collaboration

In addition to working with local organisations and community leaders, public health bodies and policy makers should consider collaborating with those who are patient-facing and understand the needs and concerns of vaccine recipients. This should be incorporated into the top-level communication strategies of governments, as pointed out by one stakeholder:

“I think that the policy makers should have more contact with people who are practically involved...the ECDC, for example, involves biologists, microbiologists, and epidemiologists, which is normal. But these doctors are working in an office; they are not facing patients. We [doctors] should be advising our policy makers because we are practically involved with patients. The pandemic has shown us that the most important element is communication. When creating policies for vaccination, they should include family doctors who are engaged with patients and understand their concerns with vaccination.”

(Dr Sandra Alexiu, Bucharest-Ilfov Family Physicians Association)

Communication *between* different organisations is also crucial:

“I think better communication is needed between all the stakeholders involved: government, social media companies, researchers, public health professionals, to really have some clarity and shared understanding around what’s actually happening at the moment. This will enable us to develop more evidence-based solutions.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

Those at the top making policies on vaccination communication need to consider a wider range of stakeholders to ensure the messaging is accurate and well-informed. Working together, rather than in silos, will enable different actors to convey vaccination more effectively across the whole of society, reducing the power and appeal of the authors of fake news.

Signposting

Finally, vaccination communication needs to be signposted better so people can engage with it and become more informed in the process. In many ways, this can be achieved effectively through social media and other online resources. Ensuring that

the correct information is being presented to people and that it's accessible and easy to find is key:

"I think that we need to improve the source of information that we give to the general population, using social media, using websites; websites dedicated to vaccines, which should include all the information about all vaccines that are commercialised."

(Dr Francisco Gimenez, Balmis Institute of Vaccines)

One resource which does this well is Team Halo:

"Team Halo is a really good resource...they use TikTok, with younger scientists who speak the language and understand the medium, but they understand the science...they're credible and they're cool enough."

(Gary Finnegan, Vaccines Today)

Team Halo

Team Halo is a part of the *United Nations Verified* initiative and consists of a group of scientists and healthcare professionals from around the world who seek to address COVID-19 vaccine concerns and misinformation. It is free to use, and questions about the COVID-19 virus or vaccine can be asked to the scientists using TikTok or Twitter.⁴²

Information is only as good as it claims to be if it is easy to find and engaging. During the COVID-19 pandemic, governments have invested heavily in online platforms and interactive updates on the vaccination rollout – this should be applied to other programmes, with information in dedicated places for people to read and understand. Social media – despite harbouring fake news – can be a force for good too.

Improving education – teaching present and future generations about vaccination

Ensuring people are better educated about vaccination is vital. Given that fake news narratives are simplistic and easy to understand, it becomes harder to justify vaccination and the science behind them when misinformation and disinformation are circulating. The COVID-19 pandemic has increased awareness and understanding about vaccine-preventable diseases and vaccination, but it has also demonstrated the dangers of false information and people not being able to recognise fact from fiction.

Continued education on vaccination should become a key focus for policy makers and public health bodies: educating younger people in learning environments, as well as using public awareness campaigns to keep adults informed, will ensure that present and future generations are more engaged in vaccination and can separate fake news from reality.

In educational settings, stakeholders suggested that teaching young people about vaccination and how to spot fake news is key to improving awareness:

"We started some years ago with a programme of going into schools and trying to give information to children about vaccines. I must say that it was very useful because children and adolescents are very interested in vaccines and information on vaccine-preventable diseases. I think we should work more

with schools and colleges, trying to give them more information because the children are the future.”

(Dr Francisco Gimenez, Balmis Institute of Vaccines)

“We need to intervene before people are exposed to fake news or misinformation. There’s potentially more that can be done in schools, classrooms, and universities, to equip people with the kind of critical skills that they need to be able to navigate a world in which there’s a huge amount of information out there.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

Finland was raised as an example of good practice when it comes to improving education on vaccination and critical awareness about fake news:

“In Finland, in their national school curriculum, they have a critical thinking course. And Finland is now known as the country the most resistant to misinformation.”

(Dr Angus Thomson, Irimi)

Finland and teaching children about fake news

In 2016, Finland introduced a new curriculum which included a renewed focus on information literacy and critical thinking throughout different school subjects. Children are now taught how to spot fake news from a young age and learn about the differences between misinformation and disinformation.⁴³ In 2018, Finland was ranked number one in Europe on the Media Literacy Index.⁴⁴

Educating adult populations is also crucial to help them identify fake news and make sure that they engage with the right information. Public awareness campaigns and using ‘gamification’ is one solution which could help to increase people’s understanding more proactively. Games teaching people about fake news could help populations to recognise what false information looks like and the detrimental impact it can have if thought to be true:

“These games work by helping people to identify the deceitful tactics that have been used by the disinformation authors. So, we’re basically showing people how they’ve been fooled. No one likes to be fooled. Once you see that you’ve been fooled, you’re less likely to let it happen. It seems to work quite well.”

(Dr Angus Thomson, Irimi)

Video games to fight fake news: Cranky Uncle

The *Cranky Uncle* game uses cartoons and critical thinking to fight misinformation. The game was developed by Monash University scientist, John Cook, in collaboration with creative agency Goodbeast. The game is available on Apple and Android phones and can also be played in an online browser.⁴⁵

Equipping all generations with the right tools and skillsets to spot and dissuade fake news is imperative. Just as vaccination is a powerful tool in preventing severe disease, education is a powerful tool to invigorate people’s knowledge and inoculate them against fake news. Effective education campaigns should parallel vaccination programmes to empower people with knowledge about the importance of immunisation, as well as the dangers and risks of vaccination fake news too.

Better transparency – being open and honest about the level and formation of fake news

To reduce fake news online with the aim of eradicating it, we need better transparency from social media companies on how much false information exists and why it has been permitted on their platforms. Holding companies to account and showcasing the severity of the problem will help to inform policy makers and social media users. This will enable policy makers to take swifter action against social media platforms and incentivise the public to look out for fake news. One stakeholder raised the notion of more transparency to help social media users and to create a better picture of the problem:

“I think a basic thing that will be helpful would be just some more transparency from social media companies around...how their algorithms work, in terms of what content is presented or promoted to different groups of people...you and I can go on to the same social media sites, and we'll see different things because the algorithm looks at our behaviour, what our interests are, and so on, and then it determines what content we see. We need to know more about how that works because it's very 'black box'. We also need more transparency around how content policies are being enforced.”

(Ed Pertwee, London School of Hygiene and Tropical Medicine)

In addition to more understanding of how social media works, better tracking and monitoring of vaccination fake news, as well as real-time alerts, was suggested as one way of keeping tabs on the issue:

“It's important to be able to track in real-time to see how they're moving within a country but also across communities in the country, and also within an online community and across communities online – it's in both real and virtual communities that it spreads through.”

(Dr Angus Thomson, Irimi)

“We should tackle these kinds of [fake news] arguments in the social media world. As I said before, they're not influencing the general population, but we should have alerts about these kinds of things because we need to tackle these misconceptions.”

(Dr Francisco Gimenez, Balmis Institute of Vaccines)

While some social media companies such as Twitter have tried to discourage the spread of disinformation using alert systems, such as a prompt for users to open a link to an article before sharing it,⁴⁶ there remains a lack of transparency around the level of fake news which exists. Getting to the source of the issue and informing people about why it is there will create better dialogue and a sense of awareness. One way this can be achieved is through 'social listening' mechanisms:

“Countries should integrate a social listening mechanism within their immunisation programmes. You can't start to address fake news or people's concerns, questions or information gaps if you don't understand what they are. So, you have to be doing this systematically. It requires both technology and human intelligence, you can't just have machines doing it.”

(Dr Angus Thomson, Irimi)

Platforms such as Vaccination Demand Observatory have been created to achieve this:

Vaccination Demand Observatory (VDO)

The VDO aggregates data to monitor and help identify misinformation and information gaps on vaccination programmes. Alerts to misinformation, disinformation, and gaps in information are provided to each participating country and visualized within the VDO Dashboard. Strategic communication guidance is then provided to the relevant stakeholders at a local and national level within those countries to help respond to misinformation or information gaps.⁴⁷

By observing fake news and keeping track of its presence, it will become easier to stop it from repeating and spreading. Without transparency and cooperation from social media companies, however, this will be unachievable. They need to work with governments and other bodies to keep tabs on what is being said online alongside vaccination programmes in the real world. Social media companies must be clear on why fake news has been permitted on their platforms and must work with the relevant stakeholders within different countries to ensure that it is reduced and removed.

Recommendations – how to address fake news in Europe

There is a clear opportunity to tackle fake news through policy solutions that address communication issues, improve people's awareness, and ensure greater transparency from social media companies. National European governments and EU policy makers must ensure that the future of immunisation programmes across the continent is not disrupted or damaged by the wide-ranging impact of fake news. The COVID-19 pandemic has brought to light the importance of immunisation but has also provided an opportunity for rogue actors and disinformation authors to undermine people's confidence in vaccines. Now is the time to relay information on, reduce, and remove vaccination fake news.

Relay – governments need to communicate the dangers of fake news better

Preventing malicious information on vaccination is imperative. This can be achieved best by governments and policy makers relaying relevant, impartial, and informative communication to their citizens, and doing so before fake news can take a hold. Working across different sectors and with a range of delivery partners is a fundamental way that this can be achieved, with top-level information being disseminated through relevant organisations in local communities.

At a national level

National governments should work with local charities and civil society groups to deliver communication on vaccination and information on fake news. Local organisations are more effective at delivering information to people within communities, especially those who are more vaccine-hesitant and prone to receiving fake news such as marginalised and underserved populations. Faith leaders, community champions and HCPs should deliver the information on vaccination and how to spot fake news to people locally.

At an EU level

The EU should increase funding for vaccination communication through the EU4Health programme 2021-2027. As part of the aim to 'Protect people',⁴⁸ the EU should include a point on 'Increasing immunisation communication and tackling false information' to ensure that there is financial and political commitment to communicating vaccines and vaccination better to European citizens. While there is an aim of ensuring better prevention, there aren't currently specific aims on how this will be achieved. An EU-wide communication strategy through the EU4Health initiative should therefore be adopted.

Reduce – systemic changes are needed to ensure people are confident about vaccines and do not rely on false information

Reducing the creation and spread of vaccination fake news requires systemic and cultural changes to ensure that the current and next generation is confident and clear on the benefits of life course immunisation. Learning environments should be at the heart of reducing misinformation and disinformation, with schools and other educational institutions acting as the conduit for teaching how to spot fake news and false information on vaccination.

At a national level

National governments should emulate the Finnish national school curriculum by implementing critical thinking and information literacy across different areas of learning. By instilling awareness about the dangers and impact of fake news in educational environments, children will be more conscious of the causation and consequences of disinformation. Education on critical thinking should also come with more education on health prevention and vaccination. In a post-COVID era, governments should ensure that young people are informed about infectious diseases and how to prevent them, including the way vaccines work and help society. Positive learning about the benefits of vaccination now will reduce hesitancy in the future and help to reduce the power of fake news.

At an EU level

Through the European Centre for Disease Prevention and Control (ECDC), the EU should monitor fake news and false information on vaccination. In addition to monitoring disease cases and vaccination uptake – as done successfully with COVID-19 – the ECDC should monitor fake news through its Surveillance Atlas of Infectious Diseases⁴⁹ using social listening techniques and shared data across EU member states. Under the ‘Health topic’ tab on the Atlas, the ECDC should include a ‘Disinformation’ option which tracks where vaccination fake news is circulating across the EU. This could incorporate similar techniques to the VDO (as discussed in the previous chapter) and would help to inform national stakeholders and policy makers about the disinformation circulating in respective EU member states. This would enable relevant authorities to have more information to coordinate national responses that can reduce disinformation in local populations and help strengthen confidence in vaccination programmes.

Remove – the end goal of governments and social media platforms should be stopping deliberate disinformation altogether

Eradicating fake news in all settings – online and offline – is an immense challenge, but one which should be the aim of European governments and social media companies alike. Both parties must work together to ensure that there is greater transparency on how the authors of false information can operate, as well as greater penalties for the platforms that permit the spread disinformation on vaccination.

At a national level

National governments should work with charities and organisations that specialise in online harm to identify the main culprits of vaccination fake news. Where there is malicious intent, national governments should act against individuals and organisations who deliberately try to disrupt immunisation programmes. National governments should adopt laws and frameworks which allow them to take financial action against platforms which host fake news authors. This is currently being legislated at an EU level through the Digital Services Act (DSA), which would enable firms to be fined up to 6% of their global turnover if they do not act on removing disinformation.⁵⁰ Member states should seek to implement the DSA.

At an EU level

CLCI welcomes the European Commission's strengthened Code of Practice on disinformation published in June 2022.⁵¹ In addition to the establishment of a Transparency Centre and Task Force,⁵² the European Commission should require social media companies to publish how their algorithms work to help inform citizens about how fake news authors operate on their platforms. This should come under the remit which looks to 'Empower users'⁵³ because it will enable people to understand why fake news appears on platforms and who sees it. This greater level of transparency will also hold social media companies to account, as it incentivises them to make sure that their platforms are not being used to favour those who create and share false information on vaccination and other topics.

Conclusion

Immunisation throughout the life course is vital to ensure that people of all ages and stages remain healthy and better protected from infectious diseases. However, in this new digital age, that ability to remain in good health is under threat from the false narratives and fake news on vaccination that are circulating on social media and elsewhere.

Ensuring deceptive information does not undermine and disrupt immunisation programmes across Europe is critical. In a post-COVID Europe, the positive conversations had about vaccines and vaccination over the past two-and-a-half years need to be continued. Policy makers must do more to make sure that the right messages on vaccination are effectively communicated to their citizens. Local organisations and civil society groups need to help disseminate this information, while social media companies must play a more proactive role in discouraging and removing fake news from their platforms.

As long as there are vaccines, there will always be groups and individuals who will seek to discredit them. Nevertheless, by working together across different sectors, fake news can be reduced and removed over time. Preventing fake news and infectious diseases are both important: they must go hand in hand to maximise the power and resolve of vaccines and vaccination.

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Established in 2017, the Coalition for Life Course Immunisation is a diverse network of expert members made up of associations from civil society, public health, patients, health NGOs and other advocacy groups, along with academics and health professionals from across Europe.