



Political identity, media consumption and health decisions in times of COVID-19: evidence from Estonia and Ukraine

ABOUT



Arena is a research programme dedicated to overcoming the challenges of disinformation and malign propaganda that endanger democracy. Arena seeks to foster a pluralistic and resilient public sphere fit for the digital age.

Based since 2021 at the SNF Agora Institute at Johns Hopkins University, Arena's initial projects were conducted at the London School of Economics and Political Science (LSE). We also have a partnership with the Institute for Strategic Dialogue for carrying out rapid research such as for this project on influences on health decisions around COVID-19.

Our projects bring together academia, media and civil society – computer scientists and story-tellers, social science and the humanities – in order to analyse disinformation campaigns, to understand their impact on audiences and to design innovative counter-measures. They include elements of data science, polling, content creation and historical analysis. To date we have conducted research in Ukraine, Hungary, Italy, Sweden, Russia and Germany.

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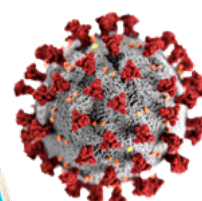
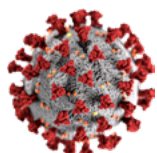
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Focus groups and interviews for this project were carried out by the Kharkiv Institute for Social Research.

This research was carried out by Arena in collaboration with the Institute for Strategic Dialogue (ISD), as part of the 'Arena @ ISD' project series, and the Open Source Communications, Analytics Research (OSCAR) Development Centre, based within the Cardiff University Crime and Security Research Institute.

This research was funded by the U.K. Foreign, Commonwealth & Development Office.

Cover and report design: Anna Shakun



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Executive summary

Health choices should be informed by science, and not by partisan identity and political propaganda. However, during the COVID-19 pandemic, health and science issues have become increasingly politicised and exploited by malign actors seeking to promote pernicious polarisation within and between societies.

COVID-19 has become a focus of the Russian state's overt and covert foreign information operations, especially among Russian speakers in the countries it borders, such as Ukraine and Estonia. What is the impact of these operations? To what extent do they define people's attitudes and behaviours around COVID-19 and vaccines? Do people 'prefer' Russian vaccines if they are on Russia's side in geopolitical conflicts? Have health and science issues become subordinate to questions of political identity – or is there hope that evidence and facts will reach audiences irrespective of their cultural and geopolitical inclinations?

Between August and October 2021 we carried out focus groups and interviews with audiences who are potentially particularly vulnerable to the Kremlin's propaganda in order to explore whether and how media consumption patterns and identity are related to people's choices regarding vaccines against COVID-19. We focused our fieldwork on Russian speakers in Estonia and in the temporarily occupied territories (TOT) in Eastern Ukraine.



A. How political views and identity affect people's health decisions

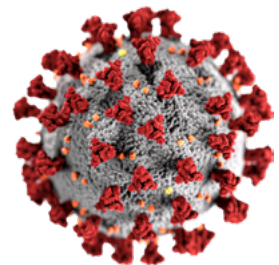
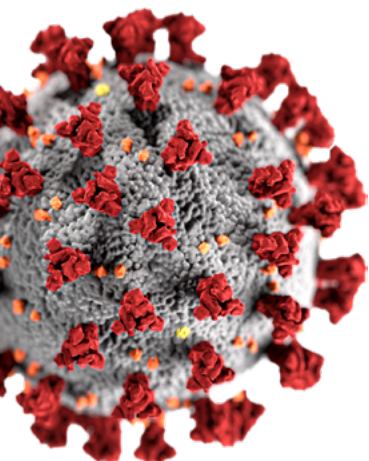
- There appears to be a **strong association between having a pro-Russian orientation and favouring the Sputnik V vaccine**. Some respondents themselves admitted that their attachment to Russia or their 'Soviet mentality' predisposes them towards Sputnik V. For example in Estonia, one respondent expressed that perhaps the real reason for their preference for Sputnik V is that their 'soul is from there' (i.e. from Russia).
- In the TOT in Ukraine, a common response was the idea that 'patriotic' sentiment determines vaccine preferences. In other words, Russia-oriented individuals by default opt for Sputnik V, while Ukrainian patriots refuse to get vaccinated with Sputnik V and opt for another vaccine type instead as a matter of principle. In a similar vein, one respondent from the government-controlled areas of Ukraine claimed that the political situation influences people's vaccine choice to the extent that Russia-oriented people would choose Sputnik V, while pro-Western people would pick Western vaccines, mainly Pfizer but also Moderna and AstraZeneca.
- Respondents who trust Sputnik V tend to hold a positive view of Russian/Soviet medical history and practice, while respondents who trust Western vaccines hold Western medical technology in high regard. Most respondents in this second group also manifest a pro-Western position more generally.
- However, despite the evident connection between political and identity factors and health choices, practicality usually trumps identity. In many cases, even where respondents preferred a certain vaccine, their ultimate choices were based on the availability of vaccines. There were also several respondents in both Ukraine and Estonia who professed their alignment with Russian and Soviet identity, yet they trusted the Pfizer vaccine more than Sputnik V, highlighting that health preferences do sometimes test the limits of identity and political affiliations.

B. How media consumption is associated with a propensity for conspiracy thinking, a vulnerability to disinformation and vaccine preferences

- **Conspiracy thinking does not necessarily mean that people reject vaccines.** Among our respondents in both countries, the vast majority agreed that the pandemic had an artificial origin. This was the case among pro-Sputnik, pro-Pfizer and anti-COVID vaccine respondents alike. Respondents held various views on whether the pandemic was engineered deliberately or caused by an accidental lab leak. **Meanwhile people who are vaccine-hesitant may also reject conspiracy theories, and merely want to wait until more evidence emerges about potential side effects from vaccines.**
- **There does seem to be a correlation, however, between conspiratorial thinking and regular consumption of Russian state-controlled media.** Conversely, we also observed that among our respondents, the rejection of conspiracy theories and the consumption of independent media were often aligned. Respondents in this category from both countries tend to favour Western vaccines and be sceptical towards Sputnik V.
- We observed that among many respondents, conspiratorial thinking is tiered: people believe in some conspiracies, and reject others (for example, they may believe in the idea of COVID-19 as a bioweapon but dismiss the vaccine microchip theory). This points to the need to take a nuanced approach to understanding conspiracy thinking: **categorising audiences by binary definitions of ‘conspiracy-minded’ versus ‘rational’ does not ring true. In short, people are highly sensitive to disinformation, though paradoxically may use conspiracy theories as a mental crutch to negotiate uncertainty.**

C. How people cope with information overload and take health decisions in a time of uncertainty

- Some respondents reported that they try to 'filter' any information obtained online, often comparing different sources before drawing conclusions, since **no media can be trusted '100 per cent'**. These results align with other research that has been carried out in Estonia, which showed that Russian speakers in the country consume a wider range of information sources, and report lower trust towards all channels. **There appears to be demand for truly trustworthy media, which would need to offer a radically different model to current outlets.**
- **In the TOT in Ukraine, there is widespread distrust towards all media (Russian, Ukrainian, local and international), which creates a feeling of powerlessness.** Several respondents expressed a defeatist attitude towards fake news, taking the view that they do not have a way to check the truthfulness of news anyway.
- Most respondents in both countries considered **doctors and healthcare professionals as the most trusted sources of information** given their experience of treating the COVID-19 disease. Significantly, this sense of trust was shared equally among respondents who preferred Western vaccines and those who favoured Sputnik V. Many also mentioned **friends and relatives as key sources of information in navigating the overload of information on the virus.**



Recommendations

Geopolitical identities influence people's vaccine choices to some degree: Russia-oriented people are more likely to prefer Sputnik V, while pro-Western individuals tend to privilege Western vaccines. However, geopolitical identity is often not the decisive factor in choosing vaccines.

Rather than being decisive in people's ultimate health choices, vaccine preferences are in some cases a way of signalling political loyalties, and in other cases they highlight the limits to these loyalties. Do people who are overtly pro-Kremlin, but who prefer Western vaccines, feel less beholden to Russian state narratives? Could science and health issues be more constructive topics through which to engage with these groups, that could meet less resistance than political discourse?

For all sides of the political spectrum, information overload exacerbates people's feelings of anxiety, distrust and powerlessness.

Based on our findings, we have the following recommendations for future research:

1. Develop social research that defines and segments why and how people make health decisions

We recommend building on our initial findings to carry out quantitative studies on the defining reasons why people make health choices. Can we categorise people by different segments based on the reasons why they make their health decisions? Among which segments is political identity a decisive factor? Who among these segments will ultimately do what local authorities tell them to do?

While a lot of understandable worry is about disinformation around health issues, how important are conspiracy theories in influencing people's health choices? A deeper understanding of this could help media and other communicators to know which conspiracy theories to focus on in their debunking efforts, and among which audiences.

Meanwhile, people who are hesitant about getting the vaccine voiced a range of motivating factors in their decision-making. Understanding the cultural and psychological roots of fears and concerns related to the vaccine, rather than pinning the blame on conspiratorial mindsets or vulnerability to disinformation, is key to communicating with vaccine-hesitant audiences.

2. **Develop and test media that addresses people's motivations and fears around health choices**

Collaborate with independent media to verify which type of content on health issues resonates with audiences who are particularly vulnerable to Russian disinformation campaigns and are culturally Russia-oriented. How can media cut through identity loyalties and conspiratorial beliefs to get to the essence of people's hopes, fears and decisions around health issues?

Content-testing will prove especially useful for engaging with audiences with more nuanced views, where their political identity is aligned with Russia, despite not trusting Russian state-controlled media channels.

3. **Create media that respond to and guide people through 'info-chaos'**

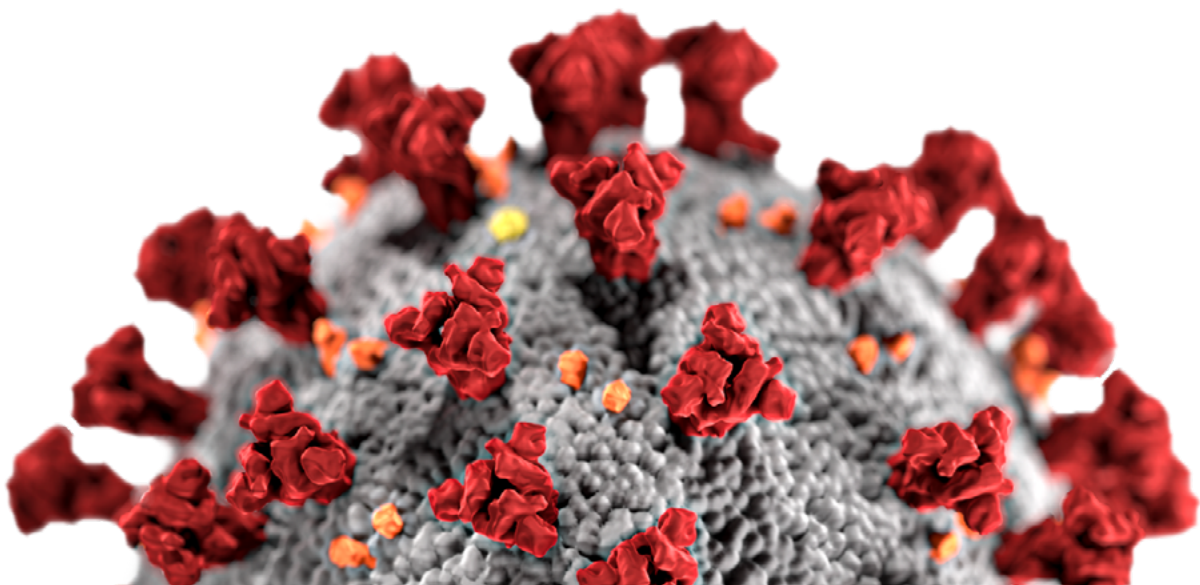
One recurring theme in this and other Arena research is how people feel they need to negotiate the complex chaos of our

(dis)information environment. There is a clear need for an 'information force' that helps to negotiate the challenges of information overload. Media need to experiment with approaches such as engagement journalism, which provides channels that respond to people's questions and needs. This can be done through online forums as has been pioneered by media initiatives like Hearken¹, or by bringing people into newsrooms, or getting reporters to meet them in the community.

4. Disaggregate 'identity politics' from evidence

Our research suggests that there are some people who prefer Western vaccines despite overtly aligning with Kremlin policies. Moreover, we have seen many Russian speakers in Estonia defecting from Russian state media and following the local public broadcaster instead, presumably because they find its COVID-19 coverage more useful. Teasing out why people are 'defecting' from the avowed political identities when it comes to questions of health can help us to understand the limits of partisan loyalty more broadly. **Studying the factors that cause people to separate their political orientation from their health choices can help to develop a more nuanced perception of audiences, and challenge existing assumptions.**

¹ <https://wearehearken.com>



Introduction

Health and science issues should be above and beyond geopolitics and partisan identities. However the ‘info-demic’ around the COVID-19 crisis has shown this not to be the case. In many parts of the world, the discourse around health has become deeply politicised. Whether you wear a mask or which vaccine you prefer has become a subject of political identity.

Russian state information operations, for example, have looked to undermine faith in ‘Western’ vaccines, and in the health institutions that are meant to deliver these². How does Russian propaganda influence target audiences’ choices around vaccines? What other factors influence their decisions?

This project explores the interaction of ethnic, cultural and political identity with the choices Russian speakers make about vaccines in Estonia and in the temporarily occupied territories (TOT) of Ukraine – populations that are aggressively targeted by Kremlin propaganda. In an environment of ‘information disorder’, how do people arrive at the health choices they make, and can we ensure that health discourse is defined by evidence and rational choice in the future?

Through a series of focus groups and interviews we explored the following questions:

- a. How do geopolitical identities influence people’s views on health issues? To what extent are the vaccines that people pick a proxy for identity? A key focus of our research was investigating whether Russia-aligned respondents wish to be vaccinated with Sputnik V by default, and whether

² For example, see Michael R. Gordon and Dustin Volz, ‘Russian Disinformation Campaign Aims to Undermine Confidence in Pfizer, Other Covid-19 Vaccines, U.S. Officials Say’, Wall Street Journal, 7th March 2021. Available at: <https://on.wsj.com/3sjx1dD> Manveen Rana and Sean O’Neill, ‘Russians spread fake news over Oxford coronavirus vaccine’, The Times, 16 October 2020. Available at: <https://bit.ly/3Lf4qCX> and ‘EEAS SPECIAL REPORT UPDATE: Short Assessment of Narratives and Disinformation Around the COVID-19 Pandemic (Updated December 2020 – April 2021), pp. 1-4. Available at: <https://bit.ly/3uxx5JK> Interestingly, research suggests that Russian disinformation has been active in politicising health discourse and eroding trust in vaccination through social media even before Covid-19. For example, see David A. Broniatowski et al. (2018), ‘Weaponized Health Communication: Twitter Bots and Russian Trolls Amplify the Vaccine Debate’, American Journal of Public Health, 108(10): 1378–1384. Available at: <https://bit.ly/34nRmqb>

pro-Western individuals are more likely to accept only Western vaccines, mainly Pfizer but also Moderna and AstraZeneca. We have looked into whether identity plays a role in people's vaccine choices, and whether people believe that health and politics are (or should be) separate domains.

- b. How does a person's information environment shape their beliefs about COVID-19 and their decision to get one vaccine instead of another (or any at all)? How does Russian state disinformation influence people's personal health choices?

Kremlin propaganda pushes two key messages: it promotes the efficacy of the Sputnik V vaccine as a symbol of Russia's political competence³; and it spreads disinformation and conspiracy theories that discredit Western vaccines, pinning the blame for the pandemic on (Western) elites involved in some grand sinister scheme⁴. Do consumers of Russian state-controlled media believe in conspiracy theories to a greater extent than individuals who do not rely on Kremlin media as primary sources of information? Are audiences who are regularly exposed to Russian disinformation more likely to choose Sputnik V?

- c. How do people make choices in a time of uncertainty? What strategies do people employ to navigate the information overload? We asked respondents which sources they trust more if they encounter contradictory pieces of information on health topics, and we investigated whether people feel it is possible to have 'healthy' debates during the pandemic, or whether these debates inevitably run along politically polarised lines.

3 See Vera Michlin-Shapir and Olga Khvostunova, The rise and fall of Sputnik V. How the Kremlin used the coronavirus vaccine as a tool of information warfare, 2021. Available at: <https://bit.ly/34GG8Nh>

4 See Miriam Matthews et al., Superspreaders of Malign and Subversive Information on COVID-19. Russian and Chinese Efforts Targeting the United States, p. 11. Available at: <https://bit.ly/3GwAQBw>. In addition, one report by Arena found out that supporters of pro-Russian parties in Ukraine are more likely to believe anti-Western conspiracies such as that the US has established a network of biolabs in Ukraine to experiment on humans. See Why Conspiratorial Propaganda Works and What We Can Do about It. Audience Vulnerability and Resistance to Anti-Western, pro-Kremlin Disinformation in Ukraine, p. 17. Available at: <https://bit.ly/35UNj5j>

These three aspects can be understood as different stages of what we may call people's 'information journeys'. Like a modern Odysseus, we navigate a tempestuous sea of information and disinformation, full of the siren calls of conspiracy theories, whirlpools of algorithmic influence and wild winds of social media rage. People are left in a state of constant uncertainty, questioning what we know, fending for ourselves while trying to learn about our surroundings and protect ourselves, longing for a place of trust and security.

Focus group criteria

To explore these questions, we focused our research on Russian speakers in Estonia⁵ and people residing in the TOT in Eastern Ukraine. The rationale for this choice was that in both these social groups there is high exposure to Kremlin disinformation and pro-Western and pro-Russian identities tend to be highly politicised.

For the majority of focus groups we recruited people according to their geopolitical orientation towards Russia or the West. Respondents in Estonia were asked whether, in their opinion, Estonia should orient itself towards Russia or the US, for the sake of the overall well-being of the country. For TOT respondents, we asked about preference for the EU or the Russia-led Customs Union⁶. These recruitment questions encompass both respondents' personal political orientations and the option they think is most beneficial for the country. It does not necessarily indicate support for all Russian or Western political positions, and may be based on cultural ties as well as political views, and personal interests (such as economic and

5 Russian speakers, who form 27% of the whole Estonian population, speak Russian fluently and have mainly Russian, but also Belarusian and Ukrainian origin (there is also a minority of other Russian-speaking ethnic groups present). See Estonian Statistics, 2021. Available at: <https://bit.ly/3sqh6dA> The majority of Russian speakers mainly live in three districts around Tallinn and the Ida-Viru county close to the Estonian-Russian border. For people residing in these districts, poor knowledge of Estonian language as a result of the Russian-language schooling system and exposure to an exclusively Russian-speaking social environment limit their ability to diversify their information sources.

6 It is important to note that there are significant challenges in carrying out data collection in the TOT, and our findings should therefore be evaluated with caution. See more detail on methodological constraints in our methodology section.

practical benefits that respondents may benefit from thanks to stronger ties with Russia or the EU).

Categorising respondents in this way helped us to investigate possible links between general political orientation and health choices; however, as we go on to explore later in this report, our focus groups demonstrated that these binaries of pro-Russian vs pro-Western have their limitations. People often hold significantly more nuanced views that do not always fit neatly into these categories. Our findings also demonstrated that geopolitical orientation might be based not only on political views but also on ethnocultural and personal factors (for example, personal ties with friends or relatives in Russia).

The Russian-speaking community in Estonia increased significantly as a result of Soviet-era forced relocation policies. After restoring independence in 1991, Estonia joined the European Union and NATO and for decades invested into integrating ethnic and linguistic minorities. While younger generations developed a stronger sense of belonging to Estonian society - for some, especially among the older generation, Soviet nostalgia may translate into a Russia-oriented outlook. For example, according to a recent report commissioned by the Estonian Ministry of Defence, while 40 per cent of Russian speakers view friendly relations with Russia as the main security guarantee for the country, 73 per cent of ethnic Estonians support NATO membership.⁷ For decades, Russian TV channels have been the dominant source of information for Estonian Russian speakers. However, during recent years, Estonian Russian speakers have turned to local Estonian channels. There are several reasons for this change, including: the launch of an Estonian Russian-language public TV channel in 2015; the necessity to receive local news during the pandemic; and changes in the programme schedule of Pervij Baltijskij Kanal (which often broadcasts news and TV shows made by the Kremlin-controlled Channel 1), with news being moved from earlier in the evening to midnight. While the use of Estonian online news sources and the public Estonian channel

⁷ Public opinion on national defence, 2021, p. 36. Available at: <https://bit.ly/3GARUWV>

ETV+, all in the Russian language, has recently increased,⁸ consumption of Russian state-controlled TV channels has decreased by 10 per cent from 2017 (71 per cent) to 2020 (61 per cent). In addition, people have been using the Russian social media network Odnoklassniki much less, now relying more on the international network of Facebook.⁹ Although our research shows that the majority of people still trust the Russian state-controlled sources, it is important to conduct further analysis of these changes and their impact on these audiences' perceptions of the pandemic and vaccination.

During the first few weeks of the pandemic, the information awareness of Russian speakers was significantly lower compared to that of Estonians. Yet, once the government's official communications about the crisis were introduced in three languages (Estonian, Russian and English), almost one-third of Russian speakers soon considered the Estonian state online websites (such as kriis.ee and terviseamet.ee) to be important sources of information. The same occurred in autumn 2020 at the peak of the second wave in northeast Estonia.¹⁰ However, many Russian speakers are still exposed to a large amount of conflicting information from Russian state-controlled channels. This makes it hard for them to evaluate whether information can be trusted and takes longer to make the decisions accordingly, which may be one of the reasons for lower vaccination rates among Russian speakers – also noted in qualitative studies of attitudes towards vaccination among older Russian speakers.¹¹ In the face of contradictory information, communication with relatives, friends, acquaintances and colleagues remains the most important source of information for Russian speakers in Estonia,¹² a trend also observed in our study. From this perspective, this type of information-sharing may lead to indirect consumption of Russian media narratives.

8 72% consider Estonian Russian-language online news sources as important sources of information, while 55% indicated ETV+. See Estonian Integration Monitoring (2020), p. 74. Available at: <https://bit.ly/3shexKI>

9 See Estonian Integration Monitoring (2020), p. 78. Available at: <https://bit.ly/3shexKI>

10 Riigikantselei, 2021, Available at: <https://bit.ly/3sr7Vd1>

11 Sotsiaalministeerium, 2021 Qualitative study of vaccination attitudes of Russian-speaking elderly inhabitants of Ida-Virumaa region. Available at: <https://bit.ly/3gwheCY>

12 89% consider conversations with friends, relatives and acquaintances as the most important source of information and 75% - at schools or at work. See Estonian Integration Monitoring (2020), p.74. Available at: <https://bit.ly/3shexKI>

The information ecosystem in the TOT in Eastern Ukraine is unique in the sense that local residents have very little exposure to alternative information sources beyond Russian and 'republican' media (which maintain a strong anti-Ukrainian line). As shown in the methodology section below, it is extremely difficult to collect data in these territories. This directly affects any research efforts to investigate people's media consumption patterns and how these may influence their views on the situation in the region, including the handling of the pandemic. Based on interviews with local residents, existing journalistic investigations indicate that older people rely primarily on local 'republican' and Russian TV channels, whereas younger generations rely mostly on online sources, giving them a greater opportunity to escape the information bubble in which they find themselves.¹³

Traditionally, this largely Russian-speaking region has been Russia-oriented both in economic and cultural terms, with a strong regional identity of Donbas, which informed firm autonomist (yet never irredentist) aspirations in the years preceding the war in 2014.¹⁴ However, the war has had a profound impact on local residents' sense of belonging. Some started to feel a stronger affiliation to 'Greater Russia' and are now hoping for the region to be integrated into the Russian Federation, with the local propaganda machine centred on mobilising precisely this emotion. Others rediscovered a sense of Ukrainian patriotism albeit in captivity, unable to voice their dissent without fearing for their safety. Others developed a feeling of total abandonment and complete distrust towards everyone (be it the Ukrainian state, the Russian Federation or the de facto authorities), fuelled by political apathy and a sense of powerlessness.¹⁵ Due to practical and security difficulties in accessing the region, it remains virtually impossible to conduct large-scale sociological studies that could examine in depth any changing trends in people's media preferences and identity.

13 Radio Svoboda Ukrayina, 'Kak boyeviki razgonyayut feyki pro Ukrainu? | Donbass Realii' [How are militants spreading fakes about Ukraine? | Donbas Realii]. Available at: <https://bit.ly/3sr8SBY> (accessed 13th November, 2021).

14 See Andrew Wilson (2016) 'The Donbas in 2014: Explaining Civil Conflict Perhaps, but not Civil War', *Europe-Asia Studies*, Vol. 68, No. 4 (2016): pp. 631-652, doi: 10.1080/09668136.2016.1176994

15 See 'Ukraine and 30. From independence to interdependence. What unites Ukrainians and divides Ukrainians after 30 years of independence', pp. 37-9. Available at: <https://bit.ly/3gsasOs>

The recommendations presented at the end of this report will be relevant to policymakers, non-governmental organisations (NGOs), and independent media in the post-Soviet region. But they will also apply elsewhere to such audiences who seek to better understand the various factors contributing to the success of Russian disinformation in politicising health discourse, to reach out to vulnerable audiences, and to find solutions to reduce polarisation, promote media literacy and encourage ‘healthy’ debates during and after the pandemic.

Methodology

This study used a mix of individual interviews and focus groups with Russian speakers in Estonia (based in the capital Tallinn and Narva, a town in the east bordering with Russia) and with residents in the TOT in Eastern Ukraine. The study began with individual interviews to identify the most recurrent themes. It then proceeded with focus groups to explore how respondents shared their views with others who differed according to certain characteristics (see Table 1). In total, we conducted 16 online interviews (eight per country, in four rounds) and five online focus groups (two in Estonia, two in the TOT of Eastern Ukraine, and one in the government-controlled areas (GCAs)¹⁶ of Eastern Ukraine close to the contact line, in two rounds) between August and October 2021. It is important to note here that recruitment challenges in the TOT cannot but affect the representativeness of our sample. It is likely that individuals willing to participate in online discussions addressing sensitive political and health topics are unlikely to be representative of the broader population in the region. Furthermore, in responding to politically charged questions, it is likely that some respondents may answer with what they view to be the ‘correct’ response, due to security concerns. In analysing our data, our research team has taken such considerations into account, and we also encourage readers to evaluate our findings from focus groups in the TOT with caution.

¹⁶ Given the severe challenges residents in the TOT face in terms of access to independent media and EMA-approved vaccines, recruiting participants from the GCAs allowed us to explore any parallels or differences across the contact line worth noting with regards to our variables of interest.

Our age group of interest included respondents aged 45 to 55, who were split evenly by gender. People of this age group are more likely to feel nostalgic for the Soviet Union compared to younger cohorts, which provides an important proxy for (Russia-oriented) identity. At the same time, respondents in this age group are still fairly active on the labour market and in society. The original quotes in footnotes illustrate how people's responses informed the arguments presented in the report.

Respondents are identified by:

- country of origin [**EE** for 'Estonia', **UA TOT** for 'temporarily occupied territories in Eastern Ukraine', **UA GCA** for 'Ukrainian government-controlled areas in Eastern Ukraine'];
- gender [**M** for 'male', **F** for 'female'];
- vaccination status [**vacc.** for 'vaccinated', **not vacc.** for 'not vaccinated'];
- vaccine preference [**+** to express 'preference for...', followed by the name of the preferred vaccine; e.g. **+ Sputnik**, **+ Pfizer**].¹⁷ Respondents recruited on the basis of their expressed 'rejection of all COVID vaccines' (but not necessarily vaccination in general) were marked as follows [**against COVID vacc**];

17 During the recruitment process, we asked the following questions:

1. Are you vaccinated? yes / no

1.1. If yes, which Covid-19 vaccine did you receive? (please select the correct option)

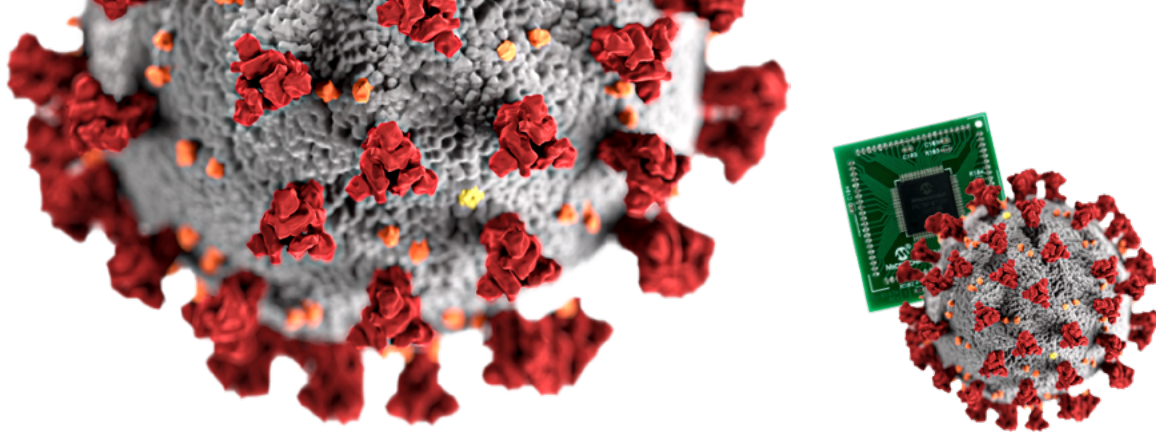
- Pfizer
- AstraZeneca
- Other

1.2. If no, would you like to get vaccinated? (please select an option)

- Not at the moment, but maybe in the future.
- I will not get the Covid vaccine, no matter what.
- **Yes, I would like to be vaccinated.**

If yes, which vaccine would you prefer? (please select up to 2 options in order of preference. If there's only 1 vaccine that you would choose, select only 1 option)

- * Pfizer
- * AstraZeneca
- * Sputnik V
- * Moderna
- * Janssen
- * Sinovac
- * None of the above
- * No preference



- geopolitical orientation [+ to express 'preference for...', followed by either US or Russia for respondents in Estonia, and either EU (i.e. European Union) or CU (i.e. Customs Union) for respondents in Ukraine].¹⁸

If a particular characteristic is missing, it means that the relevant question was not included during a particular recruitment round (insights from earlier rounds allowed us to refine respondents' profiles in later rounds). If the responses revealed ambiguous or 'on the fence' views, this is reflected in the footnotes (for example, if a respondent originally expressed a preference for Sputnik but then concluded that due to their similar composition, AstraZeneca would also be a satisfactory option, the respondent will be identified as [+ Sputnik V/ AstraZeneca]. If a respondent emphasised explicitly that their indicated vaccine preference is heavily dependent on the limited availability of vaccination options in their region,¹⁹ this was pointed out in the footnotes as follows **[+ ... due to unavailability of other vaccines]**.

18 During the recruitment process, we asked the following questions:

- 1. Collaboration with which country would be most beneficial for Estonia for the general well-being of the country?**
 - Russian Federation
 - USA
- 2. Would it be more beneficial for Ukraine to join...?**
 - The European Union
 - The Customs Union with Russia

Beyond political identity, we attempted to capture ethnic and cultural identity by asking the following question: 'What nationality do you consider yourself to be?'

19 The vaccine Sputnik V is not available in Estonia as it has not yet been approved by the European Medical Agency (EMA). The EMA began its rolling review of Sputnik V in March 2021. See: <https://bit.ly/3JeJJ4r> As for the TOT in Eastern Ukraine, Russia has been the primary provider of vaccine doses, although local residents have the right to be vaccinated with one of the EMA-approved vaccines by crossing the contact line. However, the local de facto authorities in the self-proclaimed 'republics' effectively only recognise certificates of Russian vaccines, thereby severely constraining people's choices. See: <https://bit.ly/3GCtMmG> While referring to Ukrainian intelligence data, Ukrainian media has also drawn attention to Russia's distribution of the Sputnik 'Light' single-jab version, claiming that residents in the TOT may be used as 'lab rabbits' to test its effectiveness. See: <https://bit.ly/3GAgXJN>

Table 1. Respondents' profiles

Interviews			Focus groups		
	EE	UA TOT	EE	UA TOT	
First round	<ul style="list-style-type: none"> • F, vacc., + Pfizer • F, not vacc., + Sputnik 	<ul style="list-style-type: none"> • M, vacc., + Pfizer • F, not vacc., + Sputnik 			
Second round	<ul style="list-style-type: none"> • F, not vacc., + Pfizer, thinks that Crimea is part of Russia • F, not vacc., + Pfizer, thinks that Crimea is part of Russia 	<ul style="list-style-type: none"> • M, not vacc., + Pfizer, + EU] • F, not vacc., + Sputnik, + CU 	<ul style="list-style-type: none"> • (FG1), M, not vacc., + Sputnik, + Russia • (FG1), F, not vacc., + Sputnik, + Russia • (FG1), F, vacc., + Sputnik, + Russia • (FG1), F, vacc., + Pfizer, + Russia • (FG1), M, vacc., + Pfizer, + Russia • (FG1), F, vacc., + Pfizer, + Russia • (FG1), F, vacc., + Pfizer, + Russia • (FG1), M, vacc., + Pfizer, + Russia 	<ul style="list-style-type: none"> • (FG1), F, not vacc., + Sputnik, + CU • (FG1), F, not vacc., + Sputnik due to unavailability of other vaccines, + CU • (FG1), F, not vacc., + Pfizer, + CU • (FG1), F, not vacc., + Pfizer, + CU • (FG1), M, vacc., + Sputnik, + CU • (FG1), M, vacc., + Pfizer, + CU 	
Third round	<ul style="list-style-type: none"> • F, not vacc., + Sputnik 	<ul style="list-style-type: none"> • F, not vacc., + Pfizer, + CU 			
Fourth round			<ul style="list-style-type: none"> • (FG2), F, not vacc., + Sputnik, + Russia • (FG2), M, vacc., + AstraZeneca, + Russia • (FG2), F, vacc., + Sputnik, + US • (FG2), M, vacc., + Pfizer, + US • (FG2), F, not vacc., against COVID vacc.-1 • (FG2), F, not vacc., against COVID vacc.-2 	TOT	GCA's
				<ul style="list-style-type: none"> • FG2), F, vacc., + Sputnik, + EU • (FG2), F, + vacc., + Sputnik, + CU • (FG2), F, not vacc., + EU • (FG2), F, not vacc., + CU • (FG2), F, not vacc., against COVID vacc. • (FG2), M, not vacc., against COVID vacc. 	<ul style="list-style-type: none"> • (FG1), M, vacc., + Pfizer • (FG1), F, not vacc., + Sputnik • (FG1), F, vacc., + Sputnik / AstraZeneca • (FG1), F, vacc., + AstraZeneca • (FG1), F, not vacc., against COVID vacc. • (FG1), M, not vacc., against COVID vacc.

1

How political views and identity affect people's health decisions

Political identities and views align with vaccine preferences

Our interviews and focus groups in both countries revealed a **broad consensus that political views (both at the country and individual levels) shape people's vaccine preferences.**²⁰

One popular response in the TOT in Ukraine was the idea that 'patriotic' sentiment determines vaccine preferences. In other words, Russia-oriented individuals by default opt for Sputnik V, while Ukrainian patriots refuse to get vaccinated with Sputnik V and opt for another vaccine type instead as a matter of principle.²¹ In a similar vein, one respondent from the government controlled areas (GCAs) claimed that the political situation influences people's vaccine choice to the extent that

20 'Politics affects everything, including the choice of vaccine.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'Of course it has an effect.' [UA TOT, F, not vacc., + Pfizer, + EU] || 'I think it does have an effect, because Mariupol is a somewhat pro-Russian city and these anti-vaccination Telegram channels are flourishing here and on YouTube they are very common, and on social networks too.' [UA GCA (FG1), F, vacc., + Sputnik / AstraZeneca] || (Most said yes in EE - FG1) || 'Yes, I think politics does influence people's choices [around Covid].' [EE, F, not vacc., against Covid vacc.] || 'It definitely affects things of course. I know you can't go to China without a Chinese vaccine. Or to Russia without a Russian vaccine. [...] People who have a choice prefer the American vaccine.' [EE (FG2), M, vacc., + AstraZeneca, + Russia]

21 'Some people don't like Russia as a matter of principle, some don't like Ukraine as well as everything related to this state as a matter of principle, they do not and will not like each other, it's as if there are people over there, but we live here, our borders are closed with Ukraine, there are people who say: «Yes the borders are closed and thank God, we would not go there anyway as a matter of principle». It's the same with vaccines, the same attitude. [...] Those who [love Russia], get Russian ones. Those who do not like Russia don't trust the Russian vaccines.' [UA TOT, F, not vacc., + Pfizer, + CU] || 'It goes without saying that there is a connection [...] if there are political views that are often imposed on or preferred by a person, then it's as if he sometimes chooses the vaccine which corresponds to his patriotic feelings or attitudes. [...] I believe there is an information war going on and people are a bargaining chip in it.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'If people have some clear political repudiation of Russia, then it affects it a lot. [...] if on social networks, somewhere on a Telegram-channel, Sputnik is called useless rubbish which doesn't help anybody, then it's a patriot with the Ukrainian trident tattooed all over his back. But if on the other hand you're wrapped up in the Russian flag, then there you have it, AstraZeneca is just the golden billion's murder weapon, that's it. There are plenty of these die-hards from all sides.' [UA TOT (FG1), M, vacc., + Sputnik, + CU] || 'politics already has an effect here, in Ukraine, of course they don't recognise the Russian Sputnik.' [UA TOT (FG2), F, not vacc., against Covid vacc.]

Russia-oriented people would choose Sputnik V, while pro-Western people would pick Western vaccines.²²

As for the Estonian context, one respondent suggested that older people in the country tend to trust Russia in general, and this political orientation coincides with a preference for Sputnik V 'because it's Russian'.²³ Similarly, one Estonian respondent claimed that some Russian speakers even travelled to St Petersburg across the border to receive the Russian vaccine because they trust Russian politics.²⁴

Looking at the international context, one view was that vaccines are at the centre of a geopolitical competition,²⁵ with one respondent making a parallel with the space race of the Cold War.²⁶ One respondent from the TOT in Eastern Ukraine who had strong pro-Western sympathies explicitly referred to Sputnik V as 'a geopolitical weapon'.²⁷

Another perspective was that 'every government imposes its own vaccine on its people', with Russian TV channels in Russia and the TOT promoting Sputnik V, and Ukrainian media promoting Western vaccines.²⁸ This view that geopolitics informs the position that governments take on vaccine rollouts was widespread among respondents regardless of their vaccine

22 'I think it would influence the choice of vaccine, I think the political situation would affect it here. If there was free access to Sputnik, then people who call themselves more pro-Russian, yes, they would probably choose Sputnik, while those who are orientated towards the EU, towards the West, they would choose European vaccines.' [UA GCA (FG1), M, vacc., + Pfizer]

23 'Often people of different ages come to the café and we discuss and talk to many people, and the older generation, the over 60s, they still have more trust in the Soviet and Russian, to some extent that's also a political slant. A lot of people lean towards Sputnik because it's Russian.' [EE, F, not vacc., against Covid vacc.]

24 'There are a lot of Russian people in Narva who watch Russian TV [...] There are people who specially went to Russia, to St. Petersburg to get the vaccine there, because they trusted Russian politics and from that point of view they wanted to get a Russian vaccine.' [EE (FG2), F, vacc., + Moderna, + US]

25 'This point of view is pushed everywhere, that we are so good and we take care of you and our vaccine is the best and they are so bad and they don't take care of you.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'the political element is still present here, the race, that is, once again, not caring about people but about political issues'. [UA TOT (FG1), M, vacc., + Pfizer, + CU]

26 'It seems to me that a competition between these vaccines is going on, before, it was about who could fly faster into space, now, it is who will find a cure faster, who will release it faster.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU].

27 'their vaccine, the much publicised Sputnik, they have tried to use as a geopolitical weapon.' [UA TOT, M, not vacc., + Pfizer, + EU]

28 'Every state imposes its own vaccines on its people, [...] in this case in Donetsk they tell us about the Russian vaccine, how it's available here, so go and get vaccinated. And we're all accustomed to thinking... well here it's thought that, well not everyone, of course, there are some there who think that it's better in Ukraine where there are some other manufacturers. Everybody here essentially thinks that this vaccine helps more.' [UA TOT, F, not vacc., + CU, against Covid vacc.-1]

preferences.²⁹

Only a minority of respondents stressed that science and politics are³⁰ or even should be³¹ separate.

Overall, respondents who trust Sputnik V tend to hold a positive view of Russian/Soviet medical history and practice,³² and respondents who trust Western vaccines hold Western medical technology in high regard.³³ Most respondents in this second group also manifest a pro-Western position more generally. To give an example, one respondent from the TOT who referred to Ukraine as being 'on the periphery of Western civilisation',³⁴ mentioned the episode when Slovakia returned an entire Sputnik V batch after officials there identified different characteristics in the vaccine's composition from those being analysed in

29 'These are economic issues unfortunately, and political, and the EU is protecting its producers and indirectly the US ones, because they are in a bit of a confrontation with Russia.' [EE (FG2), M, vacc., + Pfizer, + US] 'it's pure politics and economic interest.' [EE (FG2), F, not vacc., + Sputnik, + Russia] || 'I also think it's just politics and nothing personal, just business. Pfizer is here, there and everywhere.' [EE (FG2), F, not vacc., against Covid vacc.-2]

30 'I don't think it has an effect. People are all the same and whatever political views and ideology they have does not affect their health. Rather, it's more the surroundings that has an effect, it's more the fear of something that has an effect.' [UA GCA (FG1), F, not vacc., + Sputnik] || 'I think there is no effect. Everyone looks at their health, at their own perception of things, there's nothing political about it.' [UA GCA (FG1), M, not vacc.]

31 'I believe that politics is politics and health is still health. They are two different things. [...] you can support China, but that doesn't mean you're going to get injected with some Chinese rubbish. But that's how it is, figuratively speaking. I have nothing against China.' [EE, F, not vacc., + Sputnik] || 'when it comes to health, politics has to step aside.' [EE, F, not vacc., against Covid vacc.] || 'My opinion is that politics and health are different things. Everyone should take care of their health, [...] and politics shouldn't feature here at all.' [UA TOT (FG2), F, not vacc., + EU]

32 'I would definitely choose the Russian Sputnik vaccine. Because immunology and virology in Russia is at a much higher level than in Europe, they were the first to create it and more research has been done on it, the results are more accurate I think.' [EE (FG2), F, not vacc., + Sputnik, + Russia] || 'Because in fact Russian scientists and education are at a higher level. If you compare Russian and Estonian schools, there is a little bit of a different approach. [...] I think there are stronger scientists there.' [EE, F, not vacc., + Sputnik] || 'Sputnik and generally, in Russia there are like 4 vaccines, [...] for some reason I trust them more, [...] they do more research there, somehow they explain it to people in layman's terms, because in Russia they are more concerned about it and if a person gets sick they have more opportunities to recover. They provide sanatoriums, medicines. [EE, F, not vacc., + Sputnik] || 'thanks to the Semashko healthcare system, I somehow trust Sputnik more.' [UA TOT, F, not vacc., + Sputnik]

33 'when it comes to the quality of a car, no one has any doubt that a Mercedes is better than a an old Soviet car, [...] with medicines [...] everything that came to us came from the West, so the methods, actually the very principle of vaccination itself, were developed there, so my trust is in Western [...] technologies [...] they are on a higher level than the local ones. So, if there is going to be a vaccine that the whole civilized world injects itself with, of course, I would prefer, at least in this respect, to be in support of it.' [UA TOT, M, not vacc., + Pfizer, + EU] || 'First of all, in terms of the manufacturer, that's the main thing, I always thought Pfizer is from Switzerland, right? Switzerland, and countries like it, have a high standard of living and culture and everything, and that means the production should be pretty good.' [UA TOT, F, not vacc., + Pfizer, + EU] || 'I would like to get a European vaccine, [...] here Pfizer is said to be the best. [...] it's good. [...] the fact that it's American, I think is more reassuring that it is something of good quality.' [UA TOT, F, not vacc., + Pfizer, + CU]

34 'We belong to Western [...] civilisation, but we are on its periphery, so when something important and necessary happens, it doesn't happen here, it happens there and then it reaches us.' [UA TOT, M, not vacc., + Pfizer, + EU]

peer-reviewed medical journals; they also noticed how Russia's general insufficient production capacity results in outsourcing, leading to unclear conditions³⁵ of production of certain batches – 'one Sputnik and a second Sputnik could work differently'. This respondent wishes for his region to be reintegrated into Ukraine³⁶ and believes Ukraine would be better off as part of the EU. Meanwhile a pro-Sputnik respondent from the GCAs justified their support for Ukraine's accession to the Russia-led Customs Union based on the argument that 'we are among our people' [мы свои]: 'regardless' of Russia's behaviour, 'one cannot simply give up' its historical legacy.³⁷

Other respondents had more complex identities. In the TOT, one unvaccinated pro-Sputnik respondent stated that if they could indicate the 'Soviet Union' as their nationality, they would.³⁸

In Estonia, one respondent's desire to get vaccinated with Sputnik V was informed by the positive experience of relatives, friends and acquaintances.³⁹ At a deeper level, that respondent admitted that having enjoyed some good student years in St Petersburg, maybe the real reason for their vaccine preference is that their 'soul is from there' (i.e. Russia).⁴⁰ A similar view was expressed by a respondent in the GCAs in Ukraine, who self-described as a 'Soviet emigrant', meaning that by default they 'do not trust the West, full stop' and their 'mentality' makes them trust 'there' (i.e. Russia) more.⁴¹

35 'First – there is the story, for example, with Slovakia, I think, who simply returned this Sputnik because, upon examination, it turned out to be not at all what it was supposed to be. Secondly, it turns out that to produce Sputnik, there is quite a complicated procedure with autoclaves, [...] there is not enough production capacity, so often this Sputnik is produced in unclear conditions, including in some not completely certified laboratories, [...] one Sputnik and a second Sputnik could work differently.' [UA TOT, M, not vacc., + Pfizer, + EU]

36 (M: out of these options which option is optimal or desirable for you? Continuing as the DNR, becoming a separate republic, either as part of Russia, or as part of Ukraine in the same form as it was before 2014.) 'Of course, returning to Ukraine.' [UA TOT, M, not vacc., + Pfizer, + EU]

37 'The way I see it, you can't just give it all up [...] in whatever language you want, we all have the same roots and only when we realise that we are all one and the same, and speaking specifically about the Customs Union, whatever Russia might be like, yes, there's a whole bunch of problems there too, but at least we would be going in the same direction, we would be among our own people. [...] I'm in favour of the Customs Union.' [UA GCA (FG1), F, not vacc., + Sputnik]

38 'If you can define nationality as 'Soviet Union', I would define myself that way.' [UA TOT (FG1), F, not vacc., + Sputnik, + CU]

39 'Maybe because I have a lot of friends in St. Petersburg, somehow you trust them by their reviews.' [EE, F, not vacc., + Sputnik]

40 'Maybe because I studied there, my soul is from there.' [EE, F, not vacc., + Sputnik]

41 'I have confidence in Sputnik, we don't have it, and that's the way it is. [...] maybe it's a mentality, I have more trust there, that's all, I can't say why according to any kind of criteria, it's closer to me somehow. [...] Everyone who comes from the Soviet Union is the same, you know, I don't trust

There are also cases of individuals who do not align with Russia, but nevertheless prefer Sputnik V. For example, one respondent who accepted AstraZeneca due to its supposed similar composition to Sputnik V, took a strong anti-Russian stance, emphasising that they simply 'cannot have any type of friendship with Russia'.⁴² This individual explained that their negative stance on Russia was due to the experience of having their home in Donetsk bombed and losing their son to the war.⁴³ The individual self-described as '100 per cent Ukrainian without question'.⁴⁴ This is an interesting case in that it shows how the effects of the war in Eastern Ukraine may have politically alienated individuals who may nonetheless hold a deep-seated respect for Soviet/Russian medicine.

We also observed tensions between geopolitical identities and vaccine preferences among Estonian respondents. Some pro-Sputnik⁴⁵ Russian-speaking respondents from Estonia believed that 'America is very far away' and Americans have a 'different mentality'.⁴⁶ Under this premise, in their opinion the country would benefit from stronger ties with Russia. This connection between alignment with Russia and preference for Sputnik V was also manifested by several pro-Sputnik respondents who voiced their attachment to Russia, and were concerned that Russian-speaking Estonians (especially the younger generations⁴⁷) are becoming distanced from Russia and ever closer to Estonia.⁴⁸ However, it is important to note that

the West, full stop.' [UA GCA (FG1), F, not vacc., + Sputnik]

42 'My grandmother died when she was 99, she kept asking me: «Was it definitely the Russians that killed our Dima?», I told her: «Yes, Grandma», she said: «How could they? Well, how?» [...] but she couldn't understand how a Russian man who is a brother, a comrade, a neighbour, etc., can take up arms against that same brother, a Ukrainian, so for me the issue of the Customs Union is closed once and for all, [...] I can't have any friendship with Russia.' [UA GCA (FG1), F, vacc., + Sputnik / Astrazeneca]

43 'I am a former resident of Donetsk, my house was bombed and I came to Mariupol with my son's coffin. So I don't want to know anything about Russia.' [UA GCA (FG1), F, vacc., + Sputnik / Astrazeneca]

44 'I'm Ukrainian 100%, without question.' [UA GCA (FG1), F, vacc., + Sputnik / Astrazeneca]

45 '[The US] is very far away. [...] Russia yes. [...] America [...] they have a very different mentality, it's hard to understand them.' [EE (FG1), F, vacc., + Pfizer, + Russia]

46 'You need to live amicably with your neighbours. America is far away, Russia is next door. [...] Different mindset, different people.' [EE (FG1), F, not vacc., + Sputnik, + Russia] || 'that's how Finland is friends with Russia and all is well. [...] The Americans are far away.' [EE (FG1), M, not vacc., + Sputnik, + Russia]

47 'They are already different to how we are here, but we still understand them. But the younger generations now... They are already very different.' [EE (FG1), M, not vacc., + Sputnik, + Russia]

48 'When I go to Russia, I realise that they are not like us anymore. We have become different, and they have probably stayed the same.' [EE (FG1), M, not vacc., + Sputnik, + Russia] || 'We are different already anyway. I have relatives in Russia and when we go there, we are kind of Russian, but we are still not them. You end up with something in between Russians and Estonians. You accept some part of them, because you understand them, but overall, we still live in Estonia.' [EE (FG1), F, not vacc., + Sputnik, + Russia] || 'I am a Russian living in Estonia. I am not a Russian person anymore.

there were some exceptions, with several respondents voicing that they feel 'closer to Russians' on a psychological level, but nevertheless indicated Pfizer as their preferred vaccine.⁴⁹ **This highlights that there are limits to the power of political identity – at some point other considerations kick in, especially when it comes to health.**

When asked about why Sputnik V had not been made available in Estonia, respondents provided different rationales. With a few exceptions ('Russia did not provide all the right documents'⁵⁰), **most responses were informed by the belief that the decision had been largely political.** That view was supposedly confirmed even by some Estonian doctors, who objectively qualify the efficacy of the Russian vaccine as 'decent'.⁵¹ According to many of our respondents, the failure of the European Medical Agency (EMA) to approve Sputnik V may have been dictated either by a general distrust towards Russian research standards,⁵² or by the lack of a willingness in the West to admit that Russia too is a powerful state with strong medical technology,⁵³ or by straightforward geopolitical competition.⁵⁴ Alternatively, the decision may simply be the product of the present state of affairs – a 'blockade'⁵⁵ – in which 'everything that is Russian

Russians don't consider us Russians anymore.' [EE, M, not vacc., + Sputnik, + Russia].

49 'Russia yes. Of course, it has its own mindset over there too, but it's still nearer and more understandable. We speak the same language, people in Estonia also speak Russian. The relationship is more understandable than it is with America. [...] The Russian one is more understandable. [EE (FG1), F, vacc., + Pfizer, + Russia] || 'We are Russians, so we understand them better, we are closer.' [EE (FG1), F, vacc., + Pfizer, + Russia]

50 'It seems to me that it was examined on some kind of medical level and at some point some sort of correspondence didn't go through. Many people say it's on a political basis. [...] I think actually Russia did not submit all the right documents' [EE, F, not vacc., against Covid vacc.] || 'we mostly think it is politics, Russia's misunderstanding of Estonia, but the vaccine should go through testing in Estonia.' [EE (FG1), F, vacc., + Pfizer, + Russia]

51 'I can't assess the Russian one. But what the Estonian media say is true, in my opinion. An Estonian virologist, who is now often on the screens, said in one interview that the Sputnik vaccine is not better or worse than others, it is decent. And the question over licensing is more of a political one.' [EE (FG2), M, vacc., + Pfizer, + US]

52 'There is less trust in Russian data from any source. [...] Distrust in Russian research.' [EE (FG2), M, vacc., + Astrazeneca, + Russia] || 'This Sputnik V is not recognised abroad, because there's nothing, no data, nothing to back Sputnik up. [...] those people who are with Sputnik V, they are not allowed to work in Europe, it's not for political reasons that they are not allowed in, but because these vaccines have no guarantee, that's my first point. Secondly, they only made this Sputnik for the sake of making it, [...] here you go - the first Sputnik in the world.' [UA TOT (FG2), M, not vacc., against Covid vacc.]

53 'I think this is purely a political issue, a question of sanctions, the question is about the fact that recognising this vaccine would show that there is strong medical technology in Russia, that it is a solid state, but now that is not in the West's interests to show that in any way, so they will not recognise it, I think that is why.' [UA GCA (FG2), M, vacc., + Pfizer]

54 'Competition, I guess. Are they afraid of the Russian vaccine? That's more a question for politics.' [EE, M, not vacc., + Sputnik, + Russia]

55 'it's more political, more to do with the blockade of Russia'. [UA TOT (FG2), F, + vacc.,

is effectively not recognised' by default.⁵⁶ This group of responses indicates that the majority of respondents are not fully aware of the rigorous international regulatory requirements and procedures for vaccine safety, which paves the way for ideologically-driven explanations.

A few respondents from Estonia insisted that Sputnik V should be made available in their country.⁵⁷ In the words of one respondent, if the Russian vaccine were allowed, then 90 per cent of the population would be fully vaccinated.⁵⁸ In this respect, one respondent emphasised that not making Sputnik V available was a mistake, because 'Russian speakers trust Russian vaccines more'.⁵⁹ One respondent emphasised that it should be an individual choice which vaccine to get, also considering that older people in northeast Estonia are likely to want Sputnik V.⁶⁰

Occasionally we observed how political preferences feed into cases of vaccine hesitancy. One respondent from the GCAs trusts Sputnik V and stated that the moment the Russian vaccine becomes available, they 'will rush and get vaccinated'.⁶¹ But since the Russian vaccine is not available in Ukraine, they choose not to get vaccinated, expressing a feeling of being overwhelmed by the number of vaccine options out there.⁶²

Sputnik, + CU]

56 'I think it's just a political issue, because practically everything in Russia now is not recognised [...] I think some steps were taken anyway [...] to make sure that this doesn't go further.' **[EE, F, not vacc., against Covid vacc.-2]** || 'maybe these are some kind of political games. Because the whole world does not relate to Russia very well at the moment and maybe because of that they don't approve this vaccine as robust. In my opinion it's politics.' **[UA TOT (FG2), F, not vacc., + EU]** || 'political [...] this is the norm now.' **[UA TOT (FG2), F, not vacc., + CU]**

57 'I know many people who say they only trust Sputnik. Let them bring Sputnik **[EE (FG2), M, vacc., + AstraZeneca, + Russia]**

58 'If we had been allowed the Sputnik vaccine, I think we would have a 90% vaccination rate, especially in Ida-Viru county. People do not understand why it is banned. **[EE (FG1), F, + Pfizer, + Russia]**

59 'I think it's wrong that it has been banned because Russian-speaking people trust Russian vaccines more.' **[EE, M, not vacc., + Sputnik, + Russia]**

60 'In Russia, Pfizer and Moderna are available. [...] Why not allow it the other way around? Why don't people have a choice? Some want the Russian one as a matter of principle, especially the older generation. It is very difficult for them to convince the elderly Russian-speaking generation that we live in Estonia and medical care is more accessible here than in the back and beyond of the Russian Federation. [...] It's the personal affair of each person, each person takes their own decision.' **[EE, F, vacc., + Pfizer due to unavailability of other vaccines]**

61 'I have confidence in Sputnik, we don't have it, so there you go. [...] I definitely already can't wait for it to be available here and when it is, I'll rush to get vaccinated.' **[UA GCA (FG1), F, not vacc., + Sputnik]**

62 'I don't want to say that I'm against vaccines, I would be vaccinated if I was completely certain and it was confirmed that it was invented here or there, and not like how it is, you know what I'm saying, they offer so many vaccines to us here.' **[UA GCA (FG1), F, not vacc., + Sputnik]**

In Estonia one respondent also said that they were postponing their decision to get vaccinated due to a similar logic based on limited availability: when asked whether they are considering getting vaccinated in Russia with Sputnik V, they lamented that for Estonian passport holders this may be difficult, so for the time being they would 'give it a thought'.⁶³

Practicality usually trumps identity

Although political identity played an important role in understanding the COVID-19 crisis generally, and vaccine preferences specifically, it was not necessarily a determining factor in decision-making about health. More practical thinking seemed to win out.

For example, one Estonian respondent who expressed a preference for Western vaccines actually did praise Russian medical history and practice, though the lack of transparent information on some issues (implicitly referring to Sputnik V) prompted distrust.⁶⁴ One respondent from the GCAs in Eastern Ukraine who self-identified as a 'Soviet emigrant' also admitted that they initially trusted Sputnik V more because they generally had trusted the Soviet healthcare system, but then they had learned that AstraZeneca and Sputnik V were similar types of vaccines (i.e. viral vectors), so chose to get AstraZeneca, which is available in Ukraine.⁶⁵ In other words, **respondents themselves recognised that having a 'Soviet mentality' may predispose them towards Sputnik V**, but they made choices ultimately based on availability of vaccines.

63 (M: And if let's say Sputnik isn't brought here, would you consider getting vaccinated in Russia?) 'Well, once again, if they let us in. They only let in people with red passports, and if we have Estonian citizenship, it will be more complicated, so we'll give it a thought.' [EE, F, not vacc., + Sputnik]

64 'It seems that despite the fact that Russian science is indeed at a very high level, the internal structure of the country is such that there are a lot of pitfalls and a lot of information is hidden. They conceal things and therefore there is distrust.' [EE (FG2), M, vacc., + Pfizer, + US]

65 'I am also sort of an emigrant from the Soviet Union [...] since there was powerful medicine in the Soviet Union, I would have liked, for some reason it seemed so to me, that Sputnik would be preferable. But then I read an article that Sputnik and AstraZeneca are essentially the same, so on 13 May I went to the clinic and they told me, please go on, you can choose any vaccine you want. [...] I also happen to come from the Soviet Union.' [UA GCA (FG1), F, vacc., + AstraZeneca / Sputnik]



Conversely, **some pro-Sputnik respondents in both countries confirmed that they would be open to the option of receiving the Pfizer vaccine**, with their positive assessments of Pfizer sometimes based on the reported experience of relatives.⁶⁶ These responses suggest that the **influence of a pro-Russian geopolitical orientation on an individual's vaccine preferences, while significant, should not be seen as the main determinant.**

A very important point is that **the issue of availability affects people's attitudes beyond ideological preferences.** (Only EMA-approved vaccines are being offered in Estonia, and Russian vaccines are the only viable option in the TOT.) As a result, sometimes pragmatism drives people in both countries to get vaccinated.⁶⁷ However, occasionally the lack of access to Western vaccines in the TOT and the exclusive option of Sputnik discouraged some respondents from getting vaccinated

⁶⁶ 'If I wanted to, I could go to my son's place and get vaccinated with Pfizer, but I don't see the need. I could go there and get vaccinated with Pfizer, it's very good as well by the way, and all our relatives, who are in Kyiv, were vaccinated with it.' [UA TOT, F, not vacc., + Sputnik, + CU] || 'If I got vaccinated here I would choose between these two vaccines, Moderna or Pfizer, so I haven't decided yet.' [EE, F, not vacc., + Sputnik] || 'Well Sputnik is less common here, but acquaintances in Russia say it has fewer side effects, [...] They have heard it has fewer side effects than Pfizer. But Pfizer is OK too.' [EE, F, not vacc., + Sputnik]

⁶⁷ 'I had both doses a long time ago with the Pfizer one because at that time there was only Pfizer in our region, only that vaccine.' [EE, F, vacc., + Pfizer due to unavailability of other vaccines] || 'Honestly I don't know much about [...]. [Sputnik V], we don't have it in any case, it's impossible to make, so I wasn't interested in that particular vaccine. I was only interested in the ones we have in Estonia.' [EE, F, not vacc., against Covid vacc.-2] || 'There is what we have and I will use what we have, let's say, if it's needed. But since we have no choice, we use what we are given.' [UA TOT (FG1), F, not vacc., + Sputnik, + CU] || 'Politically I'm not at all influenced, the only thing is the availability and that's all.' [UA TOT (FG1), M, vacc., + Sputnik, + CU] || 'with our Sputnik. [...] we know a lot about it and we have it available.' [UA TOT, F, not vacc., + Sputnik, + CU]

altogether until Western vaccines become available.⁶⁸ Others meanwhile were considering Sputnik (or have already received Sputnik⁶⁹) simply because of a lack of options,⁷⁰ even respondents who are against COVID-19 vaccination in general.⁷¹ Participants also pointed out that people in the TOT are effectively being pressurised by the de facto authorities to receive the Russian vaccine. One respondent reported the experience of a friend who had to pay a fine to guards in order to cross the contact line, as their international vaccine certificate was not accepted by the self-proclaimed 'Donetsk People's Republic' since only the Sputnik vaccine was being recognised.⁷²

To summarise: political preferences and identity correlate with vaccine preferences. However, usually, more practical considerations like availability kick in when it comes to making actual health choices. Moreover, health questions can reveal the limits of identity as a determinant: some respondents professed to being pro-Kremlin, but when push came to shove preferred Western vaccines.

68 'I am not against vaccination as such. I am against what we have going on, specifically in my community. We are, first of all, exclusively talking about Russian vaccines.' [UA TOT, M, not vacc., + Pfizer, + EU] || 'I would like to get vaccinated in Europe, but with this situation we can't go anywhere so I haven't had the chance yet. [...] this Pfizer, they say it's the best. [...] it's more effective. [...] the fact that it's American I think is more reassuring that it is something of good quality. [...] I trust the imported one more.' [UA TOT, F, not vacc., + Pfizer, + CU] || (M: You're afraid [of getting sick], but you're not going to get vaccinated yet?) 'Because I don't have the opportunity to. If we had Pfizer or AstraZeneca here now, I would go and get vaccinated.' [UA TOT, F, not vacc., + Pfizer, + EU]

69 'I would also have been vaccinated with some European vaccine, if I had had the chance, but today I have been going by what I can get, and generally I didn't feel any changes in my body at all.' [UA TOT (FG2), F, vacc., + Sputnik, + EU] || 'here in the DNR, only a Russian vaccine can be given for free, Ukraine has not sent its vaccine here for free. If Ukraine had sent free vaccines here, people would have chosen them, but there is not much choice.' [UA TOT (FG2), F, + vacc., Sputnik, + CU]

70 'I don't really trust the Sputnik vaccine. If there was a Ukrainian, well, not Ukrainian, European vaccine, I would still consider it, but in general I plan to get vaccinated, I need to get vaccinated. [...] but what to get vaccinated with, that's the question. [UA TOT (FG1), F, not vacc., + Sputnik due to limited availability, + CU]

71 'We have no options in Donetsk. We have nothing to choose from, we have a single vaccine. [...] Half of Donetsk is vaccinated with Sputnik and nothing else. [...] if there is no choice, so be it, I will get vaccinated with what there is.' [UA TOT, F, not vacc., + CU, against Covid vacc.-1] || 'in our territory it's only Sputnik and Sputnik Lite. I'm undecided, for the time being I'm not going to get vaccinated at all and generally speaking I don't have much choice.' [UA TOT (FG2), F, not vacc., against Covid vacc.]

72 'I have a neighbour who also moved away like me, and she wanted to go to Donetsk in the summer. She is vaccinated like me, she has an international certificate and they didn't let her in, they said that your vaccinations are not recognised at all, if you get vaccinated with our Sputnik, then you can go through, they demanded 1700 rubles from her to pass the test and said if you want to go to Donetsk for free, then please get vaccinated with our Sputnik, [...] When she was on her way back, [...] she was told that: «Oh, the international certificate, fine, go on through». [...] «I felt the difference and I was pleasantly surprised that our side, Ukraine, doesn't take money while the other side does takes money for vaccines and doesn't recognise all the rest.» [UA GCA (FG1), F, vacc., + Sputnik / Astrazeneca]

2

How media consumption is associated with a propensity for conspiracy thinking, a vulnerability to disinformation and vaccine preferences

Conspiracy thinking is present among respondents from all groups

In our fieldwork, we used questions about **the origins of the pandemic as proxies to identify respondents who may be prone to conspiracy thinking.**⁷³

The vast majority of respondents held the view that the pandemic is the result of an accidental leak from a lab.⁷⁴ This was the case among pro-Sputnik, pro-Pfizer and anti-COVID

⁷³ One useful explanation of the term 'conspiracy' in our context is the 'intuitive' definition given by Cass Sunstein and Adrian Vermeule: a conspiracy theory is 'an effort to explain some event or practice by reference to the machinations of powerful people, who have also managed to conceal their role' (see Vermeule and Sunstein's paper, Conspiracy Theories, p.4, available at: <https://bit.ly/3wkQyM6>). As Kreko et al. write in The Conspiratorial Mindset in the Age of Transition, 'this definition allows for a specific conspiracy theory to be true. Indeed, our critique of conspiracy theories does not centre on whether individual conspiracy theories are true or false. Rather, it centres on what we call a 'conspiratorial mindset', a firm belief that conspiracies can be used to explain all sorts of events and decisions. The conspiratorial mindset may lead to correct decisions in certain cases – it hardly needs saying that some conspiracies are in fact real. But someone with a conspiratorial mindset is likely to often go wrong simply because their approach relies too heavily on conspiracy theories in the face of the available evidence... a belief that the government is not fully in control of the country is not in itself a conspiracy theory, because it can also reflect the view that the government's powers are merely limited. For a full-blown conspiracy theory to emerge, power must at least be attributed to a particular source – a secret club or an individual megalomaniac, for instance.' Available at: <https://bit.ly/3fycJZl>

⁷⁴ 'There's a lot of evidence now that the Chinese who researched the virus actually made a disastrous mistake and ended up letting the genie out the bottle, this virus could theoretically be completely man-made.' [UA TOT, M, not vacc., + Pfizer, + EU] || 'I'm also inclined to think it's man-made. The negligent behaviour of an employee allowed this to happen.' [UA TOT (FG2), F, vacc., + Sputnik, + EU] || 'if it was a wild mouse then that could have come before everything else. It is, in any case, something to do with a laboratory. Maybe it was a mouse that escaped from the lab, maybe someone carried the virus out [...] something got out of control. [...] I don't think they did it on purpose [...] Generally speaking it came from China, maybe from a Chinese lab.' [EE, F, not vacc., + Sputnik] || 'I think it came from a lab. [...] The leak could have been somehow accidental. [EE (FG1), M, vacc., + Pfizer, + Russia] || 'I'm leaning more towards the lab-leak theory too.' [EE (FG1), F, vacc., + Pfizer, + Russia] || 'I think something was snatched from nature that wasn't meant for us. [...] I don't think it's the evil plots of the Americans, the Chinese. [...] you should let sleeping dogs lie, nature will have her revenge.' [EE, F, not vacc., + Pfizer, thinks that Estonia should rather not be in NATO and refused to have an opinion about Crimea]

vaccine respondents alike, and both in Ukraine's TOT and GCAs, and in Estonia.

In both countries, some seemed to believe that the pandemic had an artificial origin, though such opinions were cautiously expressed.⁷⁵ Others who insisted that COVID-19 had an artificial origin were undecided as to whether this was a deliberate plan or an accident.⁷⁶

Only a minority of respondents in both countries shared the opinion that COVID-19 had a natural origin. The few people who did share that view all expressed a preference for Pfizer.⁷⁷ However, there were other pro-Pfizer respondents in both countries who expressed the belief that the pandemic was deliberately engineered.

The table below provides an overview (in order of popularity) of the most common conspiracy beliefs mentioned in both countries regarding the possible origins of COVID-19, and which respondents subscribed to these.

75 'I guess I don't know if someone created it.' [...] I'm not sure, of course. [...] some say China did it on purpose, some say America did it, they were talking about this from the beginning of it all. Some said it was Russia. [...] I partly believe this, partly not.' **[UA TOT, F, not vacc., + Pfizer, + CU]** || 'It is a man-made virus. But it's not clear to me what for and by whom. But I mostly believe in this theory.' **[EE (FG2), F, vacc., + Moderna, + US]**

76 'It seems to me that it was somehow introduced into the population by humans [...] I don't know what happened there, whether it was done on purpose or whether someone carelessly leaked it. [...] You have to be extremely knowledgeable about politics or something else, I can't tell you for sure.' **[UA TOT, F, not vacc., + Sputnik, + CU]** || 'If I'm not getting anything confused, then there was something being developed in the lab, there was a leak and it got out. [...] I think that in fact yes, there was some kind of leak, or possibly it was intentional. Of course, on the other hand I don't reject the idea that someone is making money out of this.' **[EE, F, not vacc., + Pfizer, thinks that Crimea is part of Russia]**

77 'It's just another mutation. Some sort of covid existed before and has mutated into one that has now become dangerous to the world's population.' **[EE (FG1), M, vacc., + Pfizer, + Russia]** || 'I agree with the World Health Organization that the man-made origin of the virus is so unlikely that it can be ruled out.' **[UA TOT, M, vacc., + Pfizer]** || 'they say bats brought it in [...] from East Asia [...] I trust this information.' **[UA TOT, F, not vacc., + Pfizer, + EU]**

Table 2. Profiles of respondents who held conspiracy belief

Conspiracy narrative mentioned ⁷⁸	ESTONIA	TOT IN EASTERN UKRAINE	GCA IN EASTERN UKRAINE
The pandemic was deliberately engineered as a bioweapon by powerful (American) elites ('the 1%') to reduce the world population (or at least that of China ⁷⁹)	yes • pro-Sputnik ⁸⁰	yes • pro-Sputnik ⁸¹ • those against all vaccines ⁸²	yes • pro-Western vaccines ⁸³ • pro-Sputnik ⁸⁴

78 **NB:** We did not directly ask about these specific narratives, but asked an open-ended question about the origins of the pandemic. The specific narratives were brought up by respondents themselves, therefore the fact that in some groups some narratives were not mentioned does not necessarily mean that they are not believed. It is also worth noting that in many cases, these narratives were mentioned not in response to the question about the origins of the pandemic, but rather at another point in the discussion.

79 'Maybe even in order to reduce the size of the population of China itself.' [EE (FG1), F, vacc., + Pfizer, + Russia]

80 'This virus was invented in a laboratory' (M: And if it was done in a laboratory, for what purpose?) 'Well, to cull the population. The planet is already overpopulated, we're wrecking the environment.' (M: Who do you think is behind it?) 'Well, once again the powers that be in this world. There are actually people who rule the world.' [EE, F, not vacc., + Sputnik] || (M: How do you generally see this situation with the lab?) ('The leak could have been accidental...') 'Or not accidental [...] 'The golden billion.' (M: So the idea of the golden billion is to reduce the planet's population?) 'That kind of information is flooding in somewhere too.' [EE (FG1), F, vacc., + Sputnik, + Russia] || 'Any version is possible. Right up to the intentional manufacture, why not? Some people lose, some people win. [...] People are losing something, maybe there really is a large population, soon there will be nothing to eat, or maybe it could be politics. Everything is possible, the market, the powers that be in the world. Who knows.' [EE (FG1), M, not vacc., + Sputnik, + Russia]

81 'This mouse was bred on purpose, released on purpose, infected on purpose. When it didn't all work out, they clearly added something else to make new variants so that there would be a golden billion left, as the rumour goes.' [UA TOT (FG2), F, + vacc., Sputnik, + CU]

82 'I think it's a man-made virus, totally man-made, it can only have come from a laboratory. [...] They say the Americans invented it in a lab in China. [...] everyone is convinced it's an American plot, that it was Bill Gates who said that 7 billion of us is really a lot, and that there must be a golden billion left and nobody else. [...] I think this is close to the truth [...] if they decided to reduce the population in this barbaric way then it's just inhumane. [...] Those who invented this vaccine. It benefits them, they are all billionaires, millionaires [...] Well, what motivated them? Just the reduction of the population, that's all.' [UA TOT, F, not vacc., against Covid vacc.-2, + CU]

83 'this is just a plan to reduce the number of people on earth.' [UA GCA (FG1), F, vacc., + Astrazeneca]

84 'A man-made virus for population reduction, for some sort of global plans that we can't influence.' [UA GCA (FG1), F, not vacc., + Sputnik]

Conspiracy narrative mentioned ⁷⁸	ESTONIA	TOT IN EASTERN UKRAINE	GCA IN EASTERN UKRAINE
COVID-19 is a bioweapon	no	yes • against all vaccines ⁸⁵	no
The pandemic was deliberately engineered by pharmaceutical companies to enrich themselves through the production of vaccines	yes • pro-Pfizer ⁸⁶	no	no
COVID-19 should be viewed as 'World War 3', as it was deliberately created by either the US or Russia to 'blow up the Chinese economy' (or the other way round)	yes • pro-Pfizer ⁸⁷	no	no
COVID-19 has been artificially created to sow panic ^{85 86 87 88}	no	yes • pro-Pfizer ⁸⁸	no

85 'It's [...] American bioweapons. I've heard that we have to remove 'x' amount of the population. The entire world is overpopulated' [UA TOT (FG2), F, not vacc., against Covid vacc.] || 'it's a bacteriological weapon, released intentionally, not just by China, also by the US.' [UA TOT (FG2), F, not vacc., + CU] || 'This virus came from China, from a military laboratory, they developed it [...] It's lab-produced. [...] There is, in fact, a military laboratory there, near Wuhan.' [UA TOT (FG2), M, not vacc., against Covid vacc.] || This was a man-made virus. [...] there's no doubt about it. [...] Chemical weapons were made, I don't know what the purpose was - I don't know if it was man-made or if, in fact, a mouse escaped... from that lab, infected somebody. [...] someone was making this bacteriological, chemical weapon.' [UA TOT, F, not vacc., against Covid vacc.-1, + CU]

86 'Maybe someone actually needed it to happen. [...] Maybe it's the pharmaceutical companies, who are now producing vaccines. But I don't have any information, I hardly watch TV, I don't follow it, but why not?' [EE (FG1), F, vacc., + Pfizer, + Russia] || 'now it's leaning towards the lab-leak theory [...] the big boys decided to play a game to see who is better, pharmaceuticals or oil, and so they played.' [EE, F, vacc., + Pfizer]

87 'I don't reject the idea that someone is making money out of it, [...] It could be anyone. It could be Russia, it could be the US, it could be China. [...] in my mind it's the third world war. Of course, there's money to be made out of vaccines, that's true. But most likely yes, it didn't just happen, maybe they wanted to undermine the economy [...] Maybe the US did it to undermine China's economy, maybe Russia's as well. I think either Russia or China, one of the two.' [EE, F, not vacc., + Pfizer, thinks that Crimea is part of Russia]

88 'I believe this is a man-made virus, that's all there is to it, and it was set up to sow panic.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU]

Link between conspiracy thinking and consumption of Russian state-controlled media

While we did not observe any link between conspiracy thinking and vaccine preference, there does seem to be a correlation between conspiracy thinking and regular consumption of Russian state-controlled media, based on qualitative data from both countries.

In both countries, the correlation between media consumption and vaccine preference was even brought up by some respondents themselves. One respondent based in the TOT mentioned an acquaintance who was ‘brainwashed’ by watching Russian state media and who, as a result, advocates Sputnik V at all costs.⁸⁹ Another respondent who rejected all COVID-19 vaccines suggested that unlike residents in Tallinn, people living in Narva are likely to watch Russian TV channels and prefer Sputnik V.⁹⁰

However, the exploratory nature of this project means that **more research is required to investigate a possible relationship between media consumption and conspiracy thinking, and the potential role of other intervening factors.** Moreover, in Ukraine’s TOT, it is not easy to access (Ukrainian) independent media, and the entire media ecosystem in the TOT is dominated by either Russian or ‘republican’ sources.⁹¹

The table below illustrates how among our respondents, a belief in various conspiracy theories around the pandemic was often accompanied by regular consumption of Russian state-controlled media.

89 ‘I have an acquaintance at work, [...] she constantly watches Rossiya-1, RTR-Planeta, RTR-Rossiya, this Olga Skabeeva, [...] she’s so obsessed, and you know, people are kind of zombified, «Here’s Sputnik V, you must be vaccinated, you too...». I think that it’s simply the information that influences this.’ [UA TOT, F, not vacc., + Pfizer]

90 ‘They did an interview in Narva, in Ida-Viru county, and there the residents who live near Russia are waiting for Sputnik V. [...] it really might be that they watch all these Russian channels, that is why they are asking for this Sputnik V. But here in Tallinn I have not heard anyone say that they are waiting for Sputnik here.’ [EE, F, not vacc., against Covid vacc.-2]

91 ‘Our Internet in Donetsk is mostly DNR, Russian, so it’s no surprise that here everyone is for Russia, even if we didn’t have it, it will still be Russian, there is no choice.’ [UA TOT (FG2), M, not vacc., against Covid vacc.] || ‘I, for example, have no Ukrainian channels, I would like to watch them and make my own conclusions, but you just need to dig it out from the internet somewhere.’ [UA TOT (FG2), F, not vacc., + CU]

Table 3. Links between media consumed and conspiracy theory

Narrative	Media consumed by respondent	Vaccine preference	Country
The virus was artificially created to destroy the Chinese economy	Primarily consumes Russian state-controlled media, although also consults Estonian sources such as Delfi and Postimees, arguing that it is critical to consult multiple sources of information when it comes to serious topics ⁹²	pro-Pfizer	Estonia
The powerful '1%' elite of the world are behind the pandemic	Primarily consumes Russian state-controlled media, following presenters such as Olga Skabeeva, who moderates the propagandist <i>60 minutes</i> political talk show broadcast on the channel Rossiya-1, and Vladimir Solovyov, who also runs a talk show parroting Kremlin messages on the same channel ⁹³	pro-Sputnik	Estonia
The pandemic was artificially created as part of 'some global plan' to reduce the world's population	Watches Rossiya-1 ⁹⁴ and stated that they 'do not trust Western sources at all'	pro-Sputnik	GCAs
The pandemic was originally prepared as a 'chemical bioweapon'	Mainly consumes Russian and 'republican' TV channels ⁹⁵	against all COVID vaccines	TOT

92 «3+», «RTR», «NTV». Well Russian channels. [...] Well Malakhov. He's not my favourite, I just don't know the others. [...] I get information from Delfi, I watch Postimees as well, I read Facebook too and that's it. [...] I will read all the information from the different interested parties. And from the Russians too, I watch Russian channels, I watched a documentary on RTV, I also highlighted information for myself. It's like going to the doctor, if something is serious, you need to hear the opinion of more than one doctor.' [EE, F, not vacc., + Pfizer, thinks that Crimea is part of Russia].

93 'In terms of TV, some RTR programmes. [...] I admire Vladimir Solovyov. [...] Well, I also watch Russian channels, so also Olga Skabeeva.' [EE, F, + Sputnik, + Russia]

94 (M: Which channel do you watch, if you watch it, do you have one of the Russian ones on in the background?) Rossiya-1. [UA GCA (FG1), F, not vacc., + Sputnik]

95 'We mostly watch our local news channels. [...] only the news in the morning mostly. [...] it's 'Union'... and "Pervyi Respublikanskii", [...] sometimes we turn on 'Rossiya 24' to have a listen.' [UA TOT, F, not vacc., against Covid vacc.-1, + CU]

Narrative	Media consumed by respondent	Vaccine preference	Country
The virus had been 'produced and spread' from a military lab	Regularly watches Russian and 'republican' 'political' TV channels ⁹⁶	against all COVID vaccines	TOT
COVID-19 is an 'American bioweapon'	Rossiya-1 was indicated as the main source of information ⁹⁷	against all COVID vaccines	TOT
New COVID-19 variants had been artificially spread to ensure the survival of the '1%' (the 'golden billion' in Russian) at everyone else's expense	Rossiya-1 was indicated as the main source of information ⁹⁸	pro-Sputnik	TOT
Bill Gates is the mastermind of a plan to use COVID-19 as an instrument to reduce the global population	Relies on Russian state channels such as Rossiya-1, ORT, Rossiya-24 ⁹⁹	against all COVID vaccines	TOT
Exception			
The pandemic may be the product of profit-seeking pharmaceutical companies	Explicitly rejected Russian media as a reliable source of information '100%', relying rather on local (i.e. Estonian) sources ¹⁰⁰	pro-Pfizer	Estonia

96 (M: Favourite TV channels or the ones you watch most often) 'The Russian ones are political as well.' (M: What have you watched in the last couple of days?) 'Donetsk ones, Union, Oplot, our political channels from Donetsk. News channels are also going on.' [UA TOT (FG2), M, not vacc., against Covid vacc.]

97 I mainly watch Inter Ukraina, which I like, and STB, which also has a lot of useful tips. And Russian ones - Rossiya-1, ORT.' [UA TOT (FG2), F, not vacc., against Covid vacc.]

98 The news channel I probably turn on more often is Rossiya-1'. [UA TOT (FG2), F, + vacc., Sputnik, + EU]

99 'I really liked STB, but now in Donetsk they've turned it off, we don't have Ukrainian channels. «There is no 'STB', we have 'Ukraina' and '1+1', I think. [...] I watch «Rossiya», because we have «Rossiya», I watch «Rossiya». [...] I watch «ORT», «Rossiya 24», «TNT»' [UA TOT, F, not vacc., against Covid vacc.-2, + CU]

100 (M: Which point of view do you share most often, the one promoted by the local media, the Russian media or the Western media?) 'Definitely not the Russian one, and I can't say that I watch American news and YouTube channels. So the local ones of course. I live here. So the local ones, if they are really contradictory (M: As for Russian media? [...] are there any that you can trust in your opinion?) '100% no.' [EE (FG1), F, vacc., + Pfizer, + Russia]

Link between a rejection of conspiracy thinking and consumption of (Western) independent media

Conversely, it also seems that **a rejection of conspiracy theories and the consumption of independent media are often aligned. Respondents in this category from both countries tend to favour Western vaccines and be sceptical towards Sputnik V.**

For instance, one respondent from the TOT, who reported consuming various independent Ukrainian and international media, was sceptical about conspiracy theories concerning the origin of the pandemic. He described in detail how he only came to contemplate the lab leak theory after carefully following the international debate, which moved from a consensus around a natural origin of the virus, to considering the possibility that a leak from a laboratory could be the source. This respondent dismissed the TV channels broadcast in the self-proclaimed 'republics' as completely unreliable. He insisted on the need to 'separate the wheat from the chaff' when consulting online sources, and listed among his main sources of information about COVID-19, medical journals (such as The Lancet), the independent Ukrainian online news media Censor.net, and (unspecified) Telegram channels managed by doctors.¹⁰¹

The respondents who expressed the belief that the pandemic had a natural origin all reported that they consume independent media, and voiced their distrust in Russian state media.¹⁰²

For example, a respondent from Estonia who expressed a preference for Pfizer dismissed conspiracy theories which view the pandemic as a bioweapon engineered to reduce the world population or claim that microchips have been placed in vaccines.¹⁰³ This respondent described their nationality as a 'lazy

¹⁰¹ 'articles, scientific journals, it's all available to us via the internet. [...] on the Internet we should try to separate the wheat from the chaff and use more or less verifiable data sources, which, by the way, is quite difficult. [...] TV channels are simply impossible to watch here. [...] I like Censor.net portal. It gives, from my point of view, a more or less balanced picture, including on questions to do with coronavirus. [...] I'm subscribed to a group of doctors on Telegram.' [UA TOT, M, not vacc., + Pfizer, + EU]

¹⁰² 'Illustrative example of pro-Pfizer respondent who consumes independent media, and who voiced their belief that the pandemic had a natural origin: 'If we're talking about Estonia, it's Radio 4, TV+, newspapers, internet, well, and websites I have trusted and used previously. [...] Russian media is very different. [...] [you can trust] those that give a point of view from different sides. Not one-sided, but pluralistic. As a rule, these are not the state channels. [...] for example, Dozhd TV channel. They clarify things, they give different points of view.' [EE FG(1), M, vacc., + Pfizer, + Russia]

¹⁰³ 'People are making money out of it. There are these bloggers, for example. [...] A lot of people

Russian' (due to being slow to learn the Estonian language) and criticised the dominant narrative that there cannot be friendly relations with Russia (the respondent has lots of friends in Russia).¹⁰⁴ Nonetheless, this individual indicated that their main sources of information are Estonian and 'Western' media – 'obviously not Russian' – ('RTR for nothing in the world, NTV is also not for me'¹⁰⁵). In particular, this respondent criticised the Russian Ren TV channel for scaremongering and spreading fake news.¹⁰⁶

Interestingly, **the association between consumption of independent media and a rejection of conspiracy-based beliefs also seems to exist among some respondents who refused to get vaccinated altogether.** For example, one respondent with this profile based in Estonia dismissed the conspiracy theory that vaccines carry microchips as 'nonsense'.¹⁰⁷ This respondent described Facebook and other social media as a key platform for the spread of fake news, mentioning the same conspiracy theory as an example.¹⁰⁸ This respondent primarily watches the independent channel ETV+ weekly¹⁰⁹ and highlighted that when they do watch Russian channels, they understand that it is 'crazy nonsense'.¹¹⁰ Regarding the topic of COVID-19 specifically,

I know send me things about reducing the earth's population, tell me to read it. I'm not interested. [...] We're making this stuff up ourselves [...] I don't believe that they are killing us, microchipping us, those theories are not for me.' **[EE, F, not vacc., + Pfizer, thinks that Estonia should rather not be in NATO and refused to have an opinion about Crimea]**

104 'I used to see that all people were friends, now I realise that they're not. [...] Now there is this policy that you should not be friends with Russia. I watch the news, they tell me not to be friends with them. I am a Russian person, I have many friends in Russia, St. Petersburg is my favourite city. [...] I'm Russian. A lazy Russian. I constantly study Estonian, but I haven't managed to master it.' **[EE, F, not vacc., + Pfizer, thinks that Estonia should rather not be in NATO and refused to have opinions about Crimea]**

105 'RTR - no way, NTV isn't for me either, [...] after all it's about our Estonia, so that's where I'll tune in. [...] The Estonian news on the Internet. [...] I search Estonian News about covid, read one article, switch to another. [...] Obviously not Russian. Well, the Western ones as well as ours, I guess.' **[EE, F, not vacc., + Pfizer, thinks that Estonia should rather not be in NATO and refused to have opinions about Crimea]**

106 'That channel "Ren TV" seems to me to be the worst channel ever. It's a channel of horror films, so if I want to scare myself I turn on Ren TV, watch it, and I won't sleep for a week.' **[EE, F, not vacc., + Pfizer, thinks that Estonia should rather not be in NATO and refused to have opinions about Crimea]**

107 'It's not clear where it came from. Some say it was brought, some say man-made, but I don't want to believe it was man-made[...] I have heard that it is man-made and that they spray it at us from aeroplanes, but I think that is nonsense. I've heard from many people that we are being microchipped, but that's nonsense too, I don't believe in it.' **[EE, F, not vacc., against Covid vacc.]**

108 'Sometimes you look at the news on these Facebooks and you realise it's not credible. This microchipping, spraying and even the fact that it was sprung upon us, is fake news [...] I think it's a disease, not this man-made nonsense.' **[EE, F, not vacc., against Covid vacc.]**

109 (M: do you watch the news on the Russian-language ETV+ channel?) 'Yes. [...] Maybe a couple of times a week.' **[EE, F, not vacc., against Covid vacc.]**

110 (M: If you watch any information about coronavirus on the Russian channels, which information do you pay attention to above all?) 'Sometimes I listen and I realise it's crazy nonsense.' **[EE, F, not vacc., against Covid vacc.]**

this respondent indicated the Estonian government's official portal as the main source of information, along with friends who are doctors.¹¹¹ The respondent's concerns about getting vaccinated were based on experiences of friends who suffered strong side effects, fears about her own vulnerable health and cases of people getting infected with COVID-19 even after being vaccinated.¹¹²

Notwithstanding these findings, our research suggests that categorising audiences according to binary definitions of 'conspiracy-minded' vs 'rational' does not ring true. We observed that among many respondents, conspiracy-based thinking is tiered: people believe in some conspiracies, and reject others. For example, a respondent from the TOT expressed the belief that the pandemic had been engineered as a 'chemical bioweapon',¹¹³ yet was sceptical about other conspiracy theories such as the vaccine microchip theory¹¹⁴ or that Americans are behind it.¹¹⁵ Another respondent dismissed the microchip conspiracy theory¹¹⁶ while cautiously saying that they 'partially believed, partially didn't believe' the hypothesis that the virus was engineered deliberately by the US, China or Russia.¹¹⁷

111 'I try to find this out on the state portal, I know hospital staff, I ask them how serious the situation is, how many patients there are.' **[EE, F, not vacc., against Covid vacc.]**

112 'I've seen from the examples of friends who have some health conditions that they had strong side effects[...] Many people felt bad, had a temperature, and were in such a state that they could not get out of bed. This is scary too. [...] I honestly have a very weak heart and I may need an operation in the next year or two, so to be honest I am afraid. I'm thinking about it, probably I need to get it done, but I'm scared about it. And on the other hand I understand that many who got the vaccine still get unwell.' **[EE, F, not vacc., Against Covid vacc.]**

113 'This was a man-made virus. [...] there's no doubt about it. [...] Chemical weapons were made, I don't know what the purpose was - I don't know if it was man-made or if, in fact, a mouse escaped... from that lab, infected somebody. [...] someone was making this bacteriological, chemical weapon.' **[UA TOT, F, not vacc., against Covid vacc.-1, + CU]**

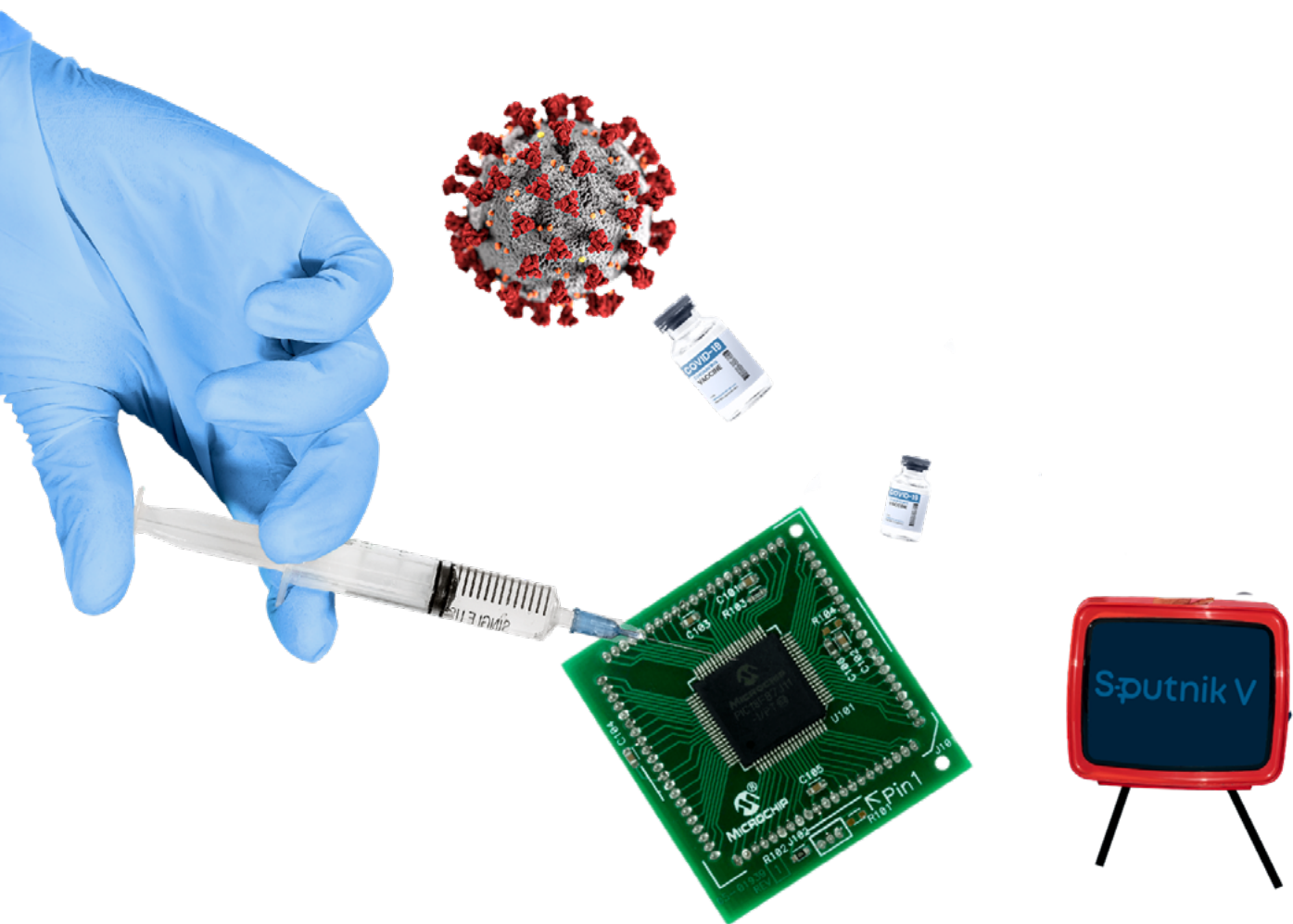
114 (M: Have you heard about microchipping?) 'Yes, I have read about it, but I don't believe it, to be honest.' **[UA TOT, F, not vacc., against Covid vacc.-1, + CU]**

115 'Well, some American organisations. [...] that, well, in that laboratory there... are producing this coronavirus. [...] Well, I don't know how true it is, but I saw an article on this [...] in the Odnoklassniki newsfeed, [...] a photo of this newspaper... I think it was in 2004 [...] or in 2005 the newspaper was photographed, moreover it was our newspaper. [...] it's written there in Russian words.' **[UA TOT, F, not vacc., against Covid vacc.-1, + CU]**

116 (M: Have you heard about microchipping? That they microchip you when they vaccinate you, or have you not heard about this?) 'Well, you do hear about it, [...] I don't think the vaccine has anything to do with that.' **[UA TOT, F, not vacc., + Pfizer, + CU]**

117 'I guess I don't know if someone created it.' [...] (M.: that it was man-made, do I understand correctly?) 'Well, I'm not sure, of course. [...] some say China did it on purpose, some say America did it, they were talking about this from the beginning of it all. Some said it was Russia. [...] I partly believe this, partly not. [...] I guess I don't believe it because there was flu before, and there was swine flu and well, it was probably not man-made. Well, maybe that's how it was.' **[UA TOT, F, not vacc., + Pfizer, + CU]**

Moreover, conspiracy thinking does not mean that people reject vaccines. People can believe in extreme conspiracies about the origins of the virus and still get vaccinated. Other people who are vaccine-hesitant can reject conspiracy theories, and merely want to wait until more evidence emerges about the potential side-effects of vaccines. In short, we need to radically shift preconceptions of audiences, away from categories of 'vulnerable to disinformation' or 'rational' regarding health issues, and towards a better understanding of the drivers of behaviour, and the interplay between disinformation and behaviour.



3

How people cope with information overload and take health decisions in a time of uncertainty

The most common cause for concern among respondents was that the vaccines had been created relatively recently, and that we still lack knowledge about COVID-19. The idea that more time is needed before people can fully trust vaccines was equally shared among vaccinated and unvaccinated respondents who favoured Pfizer¹¹⁸, Sputnik V¹¹⁹, or who preferred not to get vaccinated against the virus at all.¹²⁰ However, among many respondents, these fears – ‘the whole world is being treated like guinea pigs’ – were balanced out by the acknowledgement that the risks associated with catching COVID-19 outweigh those of potential side effects from the

118 ‘I don't fully trust any vaccine that is currently available in the world. [...] because in actual fact not all the clinical trial phases have been passed.’ [EE, F, vacc., + Pfizer due to unavailability of other vaccines] || ‘no one has a full understanding of what COVID-19 is [...] It takes at least a decade and a half to develop and roll out a vaccine that works as well as possible. And any vaccine that's available today has a disclaimer that it's for emergency use.’ [UA TOT, M, vacc., + Pfizer] || ‘My distrust and anxiety in terms of these vaccines is based on the fact that it was all developed as there was a pandemic in the world, so some solution had to be found urgently and everything was developed very quickly, it seems to me, everything was not fully tested.’ [UA GCA (FG1), M, vacc., + Pfizer]

119 ‘of course all the vaccines are not tested and not much time has passed since they were made, invented, so it's all very much like that.’ [EE, F, not vacc., + Sputnik] || ‘this vaccine will probably not be proven until after a certain amount of time.’ [EE, F, not vacc., + Sputnik] || ‘a lot of people don't know what to do, the vaccine is so new.’ [EE, M, not vacc., + Sputnik, + Russia]

120 ‘it is not logical to get vaccinated with this vaccine because you could not have made a good quality one in that amount of time. [...] they did not and they could not have completed the trials.’ [UA TOT, F, not vacc., + CU, against Covid vacc.-1] || ‘this vaccine has not been studied, that's what scares me the most. Because all these childhood vaccinations, they've not just been studied for years, they've been studied for decades [...] And here, how can you vaccinate against a disease that no one knows anything about. [...] It should take at least a few years [...] to understand how people react, what the side effects are. And to have it all out in the open.’ [EE, F, not vacc., against Covid vacc.-2] || ‘this vaccine is just over a year old. [...] Any vaccine takes four to five years to test. We don't have that kind of time. Somehow I don't trust this vaccine. None of them - be it Pfizer, Moderna, there are a lot of them, and Sputnik.’ [UA TOT, F, not vacc., + CU, against Covid vacc.-1] || ‘I wouldn't choose any. The vaccines are still half-baked, the trials are not complete. I think any vaccine is being experimented now on people. It should take at least 10 years to get to this point.’ [EE (FG2), F, not vacc., against Covid vacc.-2] || ‘the vaccines aren't fully tested yet, it's only been a year since they were made.’ [UA TOT (FG2), F, not vacc., against Covid vacc.] || ‘all these vaccines that now exist, that we have, in Russia, in the world, I don't accept them, [...] it's just an experiment on people. We don't know the side effects yet, because it takes years for the side effects to be identified.’ [UA TOT (FG2), M, not vacc., against Covid vacc.]

Responses revealing scepticism towards Sputnik (even among respondents who theoretically favour the Russian vaccine¹²²) **pointed to the lack of adequate information.**¹²³ Some respondents from the TOT in Eastern Ukraine were concerned about the issue of transporting and preserving vaccines. Interestingly, both individuals who favoured Pfizer and those who favoured Sputnik V voiced this concern – with the former noting the practical difficulties in accessing Pfizer in the territories controlled by the *de facto* authorities¹²⁴ and the latter aware of the special conditions required for preserving Pfizer.¹²⁵

This set of answers points to the existence of **general feelings of anxiety and uncertainty related to COVID-19, exacerbated by both information overload about vaccines and the difficulty in knowing where to look for clear, trustworthy sources of information.**

How do respondents cope with this level of uncertainty in their information environment?

Some respondents reported that they try to ‘filter’¹²⁶ any information obtained online, often comparing different sources

121 ‘the whole world is being treated like guinea pigs. Well [...] the risk of catching this disease is much higher than having a lethal reaction to this vaccine, although there have also been cases, there have been far fewer than from the coronavirus itself.’ [EE, F, vacc., + Pfizer due to unavailability of other vaccines]

122 ‘There is little information about Sputnik.’ [EE, M, not vacc., + Sputnik, + Russia]

123 ‘I don’t have much information because we live in the European Union and to have genuinely accurate information you have to communicate with the medical networks in Russia and really look at the picture.’ [EE, F, vacc., + Pfizer due to unavailability of other vaccines] || ‘Sputnik might be an excellent vaccine, [...] but judging from the sources I get information from, [...] there is not enough information on Sputnik.’ [UA TOT, M, vacc., + Pfizer] || ‘I don’t know the effect of it, I don’t know either, at best it’s harmless, but injecting an unknown substance from an unknown manufacturer into your body [...] I think for the time being it’s an unnecessary risk, that’s to say covid itself [...] for me personally, seems less threatening than this unknown liquid.’ [UA TOT, M, not vacc., + Pfizer, + EU]

124 ‘I still trust European vaccines more and I’ll tell you why, it seems to me that while they deliver them to the DNR, I don’t always think the conditions of transportation, storage and delivery are met, that’s what really concerns me.’ [UA TOT (FG1), F, not vacc., + Pfizer, + CU].

125 ‘I still prefer the Russian ones, as for these other ones, well yes, I have questions about Modern, and I have questions about AstraZeneca, about all these side effects [...] also the storage conditions, when they deliver these European ones, they should be -70°C, I think it was it, or -60°C, I think it’s very difficult to transport them.’ [UA TOT (FG1), M, vacc., + Sputnik, + CU]

126 ‘It’s hard to say that something on the Internet is 100% true, you have to do a lot of filtering, you have to be an analyst, so when I’m interested in something I take a long time to look, read and then do my own analysis. [...] I never jump to conclusions, I mean I check it, I try to check these sources.’ [EE, F, vacc., + Pfizer due to unavailability of other vaccines] || ‘I think any information has to be filtered. I mean, I have read through it and I have made some conclusions for myself. [...] I’ll also believe Estonian news, I’ll listen to the Russian media, read it, compare it and make conclusions for myself.’ [EE, F, not vacc., + Sputnik] || ‘I go to the computer, go to the search engine, to google, type in «COVID-19», and more information starts flooding in. At random I look through all the information, and then I compare and analyse it for myself, come to a conclusion, what is close to truth, what is not close to truth, what is just propaganda.’ [UA TOT, M, vacc., + Pfizer] || ‘you must know how to filter information.’ [UA TOT, F, not vacc., + Pfizer, + EU]

before drawing conclusions.

Some unvaccinated respondents expressed frustration: in their view, there is an ongoing 'information war' with regards to different vaccines and their properties, leaving the impression that there are no trustworthy media on the subject.¹²⁷ In the face of information overload, several respondents, both vaccinated and unvaccinated, pro-Pfizer, pro-Sputnik and against all COVID vaccines, drew the conclusion that no media can be trusted 100 per cent.¹²⁸

Most respondents from the TOT who supported Ukraine's accession to the Russia-led Customs Union nevertheless expressed a total distrust towards local *de facto* authorities as sources of information on the virus and vaccination.¹²⁹ In an interview, one respondent stated that local *de facto* authorities 'lie'.¹³⁰ At the same time, several respondents in Ukraine had a defeatist attitude towards fake news, saying that they have no way of checking the truthfulness of stories.¹³¹ In particular, one respondent emphasised that conspiracy theories are gaining traction because people feel that they themselves are

127 'Now there's an information war going on in the media about the vaccines, because one side is really vilifying the European vaccines, and the other one, of course, is attacking Sputnik. And I understand that there is no real or reliable information.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'I have the impression that actually there is no reliable information about the difference between the vaccines in the media, everyone is trying to somehow slander the other vaccine and to whitewash theirs. And the information that is missing in the media is how they actually differ.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU]

128 'Now nobody will tell the whole truth [...] Now nobody can be trusted about anything.' [EE, M, not vacc., + Sputnik, + RU] || 'There is a lot of different information and none of it is 100% reliable. Every manufacturer writes that their vaccine has 90% efficacy, in fact, now they have confirmed that the last variant, [...] makes no difference for these vaccines. [...] it's all over the internet and nobody can be trusted.' [EE, F, vacc., + Pfizer due to unavailability of other vaccines] || 'you can't be sure of any information, there's somehow no such thing as looking at something in particular and believing it.' [UA TOT, F, not vacc., + Pfizer, + CU] || 'But where do you check? Everything is written about differently everywhere, there are no sites where they might write something that gives you any kind of certainty.' [UA TOT, F, not vacc., + Pfizer, + CU] || 'Now, they're probably all distorting each other, and we poor people absorb it all and don't know what to do. It seems to me there's a lot of disinformation going on here or there's a lot of information that benefits somebody.' (M.: You don't believe anybody, did I hear that right?) 'Yes.' [UA TOT (FG2), F, vacc., + Sputnik, + EU] || 'Nobody.' [UA TOT (FG2), M, not vacc., against Covid vacc.] || 'I don't trust anyone.' [UA GCA (FG1), F, not vacc., + Sputnik] ||

129 (M: Are local government representatives your sources of information about covid and vaccines?) 'Absolutely not.' [UA TOT (FG1), F, not vacc., + Sputnik due to unavailability of other vaccines, + CU] || 'no.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'no.' [UA TOT (FG1), F, not vacc., + Sputnik, + CU]

130 'I won't speak about the local authorities because they will still lie anyway, because they will do what benefits them.' [UA TOT, F, not vacc., + Sputnik]

131 'I can't verify it, that's all there is to it.' [UA GCA (FG1), F, vacc., + Sputnik / Astrazeneca] || 'How do we verify untruthful information? How will we find the truth when one site says one thing, and another says something else?' [UA GCA (FG1), F, not vacc., against Covid vacc.] || 'There is no way to determine whether the information is true or disinformation. Until you get confirmation by seeing it with your own eyes, or from people who have come across it themselves, there is no way you can verify it.' [UA GCA (FG1), M, vacc., + Pfizer] || 'We can't verify it.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'it's impossible to verify.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'It can't be verified.' [UA TOT (FG1), F, not vacc., + Sputnik due to unavailability of other vaccines, + CU]

not 'valued' by their government – they feel that 'no one needs us',¹³² suggesting that **feelings of powerlessness provide a fertile ground for beliefs in conspiracies**. Interestingly, one Russia-oriented respondent from the TOT who was nostalgic for the Soviet era and favours Sputnik V,¹³³ articulated a nuanced approach to sources of information that seek to explain the situation in Donbas. On the one hand, this respondent criticised 'non-local' sources – 'where can they collect trustworthy information from?'. On the other hand, the respondent noted that since international media 'do not have their hands tied' (unlike the local media), they are in a position to 'talk more objectively' when they do access such information. Ultimately, the respondent admitted having previously watched both international and local news to compare, but now had reached the conclusion that 'everyone lies'.¹³⁴

Especially in the Ukrainian TOT, respondents said that friends and relatives were their main trusted sources of information on COVID-19, with online information seen as being truthful only '50–50'.¹³⁵ (Some respondents in Estonia also shared this view.¹³⁶) Interestingly, one particular respondent who noted that friends and relatives were their main source of information held the conspiratorial belief that variants had been artificially spread to sustain the 'golden billion' elite. In this respect, people may theoretically realise that information online is not always trustworthy, yet they still may indirectly consume the same

132 'There have always been these kinds of theories, but now they are widespread because people don't feel confident that the state cares about them. [...] I don't think it's a conspiracy or anything, people's fears are understandable because they feel abandoned, especially at retirement age.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU]

133 'I would like to see it joined up with Russia. In general, I would like to see 15 republics living peacefully, not only 15 republics, but the whole world as a republic. Simply that kind of world peace. Of course, with Russia. For me the Union is needed.' [UA TOT, F, not vacc., + Sputnik, + CU]

134 'Those who are not local, when they talk about what's going on here, for example, well, how can they have reliable information. On the one hand. And on the other hand, they don't have their hands tied, they can speak more objectively, as long as they have this information. [...] I used to watch both international and local news and try to compare things. [...] I came to the conclusion that everybody lies.' [UA TOT, F, not vacc., + Sputnik, + CU]

135 'I trust information from acquaintances and relatives more - this is 100% reliable information. Because both on the Internet and on TV - it's 50/50 true.' [UA TOT (FG2), F, + vacc., Sputnik, + CU] || (M: And if you got some information that you heard from your friends' relatives and then you understand that this information is different from the information you got in well-known publications, from the Internet, on TV, then which information do you trust more?) 'I would trust the people I know more.' [UA TOT (FG2), F, + vacc., Sputnik, + CU] || 'I trust acquaintances, relatives, more than the facts presented on the internet.' [UA TOT (FG2), F, not vacc., against Covid vacc.]

136 'First of all I will ask my acquaintances, some smart people who know a lot. I gather information from these people and I know that they are up to date on the topic. I always ask them for advice or some information and only after that can I look something up, read something on the internet. [...] I just ask my acquaintances, friends, people I trust.' [EE, F, not vacc., against Covid vacc.-2]

information through friends and relatives.

Within this context, most **respondents indicated doctors as the most trusted sources of information** given their experience of treating the COVID-19 disease. Significantly, this sense of trust was **shared equally by respondents who preferred Western vaccines¹³⁷ and those who favoured Sputnik.¹³⁸** Some mentioned friends and relatives as being their most trusted source.¹³⁹ **Trust in doctors implicitly emerged among certain respondents who refused any type of COVID vaccine in both countries.¹⁴⁰** For example, one respondent based in Estonia suggested that even if they personally are against the government's imposition of lockdowns, they admit their own limited knowledge on the subject, which is a doctor's area of expertise – 'if I were a doctor, I would be in a position to say whether it's right or wrong'.¹⁴¹ In asking friends who are health professionals about the evolving pandemic, this respondent stated that 'I know they will always tell me the truth' – the main sources of information

137 'When well-known doctors, well-known people who have some authority speak, and they give their specialist medical opinion.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'more to an epidemiologist who understands how disease spreads.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'who better to trust than doctors?' [UA TOT, F, not vacc., + Pfizer, + EU] || 'I have acquaintances in the medical field, in the hospital, who see it every day, who deal with it, this kind of information +/- can be trusted.' [UA GCA (FG1), M, vacc., + Pfizer] || 'I listen to my doctor.' [EE (FG1), F, vacc., + Pfizer, + Russia] || 'It's of course health care, it's doctors that I trust.' [EE (FG1), F, vacc., + Pfizer, + Russia] || '[trust] people with some kind of medical education.' [EE, F, not vacc., + Pfizer, thinks that Crimea is part of Russia]

138 (M.: Which sources inspire the most trust?) 'A doctor, and especially if he is an infectious disease doctor.' [UA TOT (FG1), M, vacc., + Sputnik, + CU] || 'Who would I trust most - an immunologist. That is, if people would speak clearly, tell me, explain, yes, this information would be more objective for me.' [UA TOT (FG1), F, not vacc., + Sputnik, + CU] || 'I have doctors who are really specialists, they rely on Soviet-era knowledge about vaccinations, they know. I trust them [...] I have trust here because I know these people are good specialists.' [UA TOT (FG1), F, not vacc., + Sputnik, + CU] || (M: is there maybe someone else you trust the most when it comes to covid and vaccines?) 'Doctors. [...] this particular doctor we have, he and his department have been on this since it all started, he's a top surgeon, he's a smart guy, I've known him for very many years [...] if any question comes up, I will only call [...] him. [...] That's why I trust him, because he works in the covid unit and he sees everything from the inside.' [UA TOT, F, not vacc., + Sputnik, + CU] || 'if any kind of political show comes on, where they talk specifically about covid, I only listen to specialists, [...] medical professionals who know and understand it all, [...] those doctors who are involved in it all, I trust them.' [UA GCA (FG1), F, vacc., + Sputnik / Astrazeneca] || 'I would trust doctors. Popov, for example. They deliver information objectively, as it is.' [EE, F, not vacc., + Sputnik]

139 (M: Friends, acquaintances, as a source of information about covid?) 'It's an absolute must, because the way things are nowadays they are scattered in many countries.' [UA TOT (FG1), F, not vacc., + Pfizer, + CU] || 'All the practising doctors who work are my close friends or relatives. I'm trying to find it all out authentically, first-hand, from the red zone.' [UA TOT (FG2), F, vacc., + Sputnik, + EU] || 'If you meet up with family or friends then these questions, like if someone decides to not to do it, are discussed. There is a lot of information everywhere, but if you're talking specifically, it's all about person-to-person interaction.' [EE (FG1), F, vacc., + Pfizer, + Russia] || 'I just ask my acquaintances, friends, people I trust.' [EE, F, not vacc., against Covid vacc.-2]

140 'Mostly also from doctors I know.' [UA GCA (FG1), M, not vacc. against Covid vacc.]

141 'I don't think all these lockdowns are right, but I don't know everything, I don't understand everything, so I can't judge. They know more than I do, consultations are going on with doctors. Maybe they're right about something. [...] If I were a doctor or a professor, then I would say whether it is right or wrong. But as it is, I cannot condemn the government for the decisions they have taken.' [EE, F, not vacc., against Covid vacc.]

on COVID-19 are local doctors and Estonian government portals.¹⁴²

The pandemic has also had different effects on different people with regards to media consumption in the TOT in Eastern Ukraine. For example, one respondent emphasised that the pandemic encouraged them to familiarise themselves with the opinion of people they disagreed with,¹⁴³ while another admitted that they had started consulting international (mainly US) news.¹⁴⁴ By contrast, another respondent stressed how the pandemic had only exacerbated their frustration with the news, perceived as overly 'politicised'.¹⁴⁵ This frustration has occasionally translated into a desire for escapism, away from the negativity of political news in search of 'positive' entertainment content.¹⁴⁶

In short, people are highly sensitive to disinformation, though paradoxically may use conspiracy theories as a mental crutch to negotiate the uncertainty. There appears to be a demand for truly trustworthy media – sources that would need to offer a radically different model to current outlets.

142 'It's probably the health professionals who I know that tell me the truth. People really do get sick. [...] I don't deny it. [...] I will choose [sources of information] where there is generally reliable medical and government data, not people's speculation. [...] I look at Narva sources, our Ida Viru County doctors, state portals.' **[EE, F, not vacc., against Covid vacc.]**

143 'Whereas previously I used to listen to a single opinion, now I'm interested in the opposing opinion. Because, going back to what I was saying - I can't figure out, where is this truth?' [UA TOT (FG1), F, not vacc., + Pfizer, + CU]

144 (M.: Tell me, do you watch more international news or less?) 'I guess I started watching more. [...] I started watching, say, news from America. I wasn't interested in this country before. And now I'm interested in how covid-related things are developing there.' **[UA TOT (FG1), F, not vacc., + Pfizer, + CU]**

145 'Television. Political programmes, very rarely of course. News, but not often either, of course. I like positive channels more, even some kids channels or where they have good, old movies, so there is less politics and fewer negative things like that to watch'. **[UA TOT (FG2), F, not vacc., + EU]**

146 'Less. [...] lately the news in general... It really annoys and upsets me, so I try not to watch it at all.' **[UA TOT (FG1), F, not vacc., + Sputnik due to unavailability of other vaccines, + CU]**

Conclusion:

Staying afloat in a sea of info-chaos

Our study found that geopolitical identities influence people's vaccine choices to some degree: Russia-oriented people are more likely to prefer Sputnik V, while pro-Western individuals tend to privilege Western vaccines. However, geopolitical identity is often not a decisive factor when choosing vaccines, or in being vaccine-hesitant. It is often practical considerations that win out. Even 'pro-Russians' will take Western vaccines if those are the ones available, although this may significantly delay their decision to get vaccinated, as they have to 'negotiate' with their own pre-existing beliefs before choosing a 'non-Russian' vaccine.

Rather than being decisive in people's ultimate health choices, vaccine preferences are a way of signalling political loyalties – and they can also hint at limits to these loyalties. In this sense, binary categories such as 'pro-Russian' vs 'anti-Russian' are not helpful and can often conceal a more nuanced picture. Do people who are overtly pro-Kremlin, but who prefer Western vaccines, feel less beholden to Russian state narratives? Could science and health issues be more constructive topics through which to engage with these groups, that could meet less resistance than political discourse?

Two additional points should also be further questioned. First, pro-Russian geopolitical positioning can go hand-in-hand with the view that the West has better technology and health innovations than in Russia, and these views are not necessarily contradictory. As one respondent noted, when



it comes to deciding between a Mercedes or Zhiguli, buying an iPhone, or going to Italy and France rather than Sochi for holidays – for most people the choice is clear. However, these preferences do not necessarily make these people less Russia-oriented geopolitically. Second, another question to take into consideration is how Russian speakers living outside Russia could be even more nostalgic about Russian culture and life in Russia than people living in the country itself. Can this factor make them even more Russia-oriented on issues like health (vaccines) and culture than Russian residents?

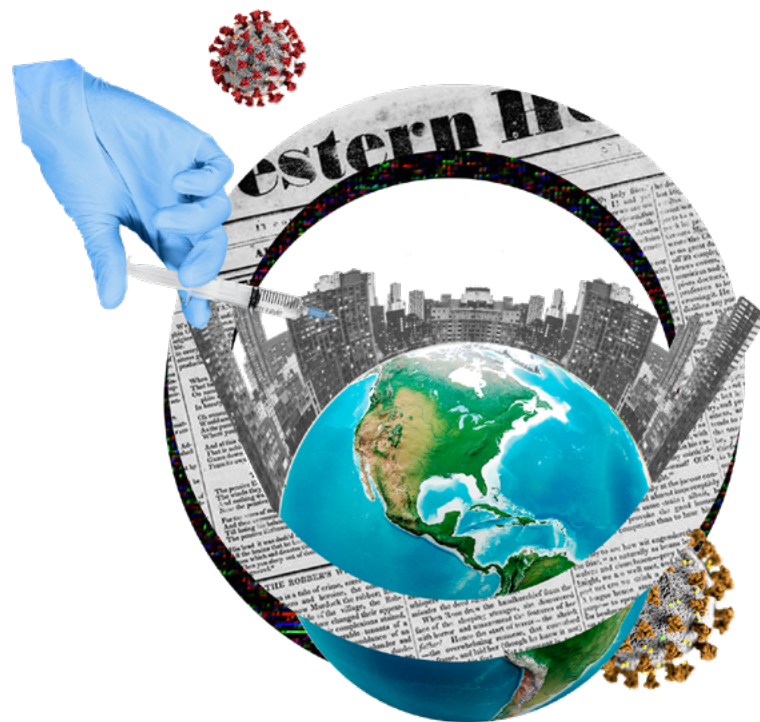
Our research indicated that regular consumption of Russian state-controlled media increases the likelihood of believing in conspiracy theories about the nature of the COVID-19 pandemic and vaccines, and of choosing Sputnik V. However, this link is not absolute, and future studies should direct attention to other possible contributing factors. Moreover, belief in conspiracy theories does not necessarily mean that people reject vaccination. This also opens up the question as to whether ‘vulnerability to disinformation’ is the critical factor in decision-making on health. People may use conspiracies to make sense of the world in a superficial way, but that does not mean that these theories play an intrinsic role in their decision-making.

Interestingly, the people in our groups who were vaccine-hesitant were not the strongest believers in conspiracies. People who are hesitant about getting the vaccine voiced a range of motivating factors in their decision-making. The cultural and psychological roots of fears and concerns around the vaccine need to be explored, rather than just seeing those who are vaccine-hesitant as ‘victims’ of conspiratorial propaganda and disinformation.

Moreover, conspiratorial thinking is not an ‘either/or’ issue. People can believe in one conspiracy theory (that COVID-19 was created by elites to control the world), but reject others (such as the microchip theory) as ‘disinformation’. As with identity, we need to move beyond categorising people into simplistic binaries of ‘conspiratorial’ versus ‘non-conspiratorial’ mindsets.

Most people show awareness of what ‘disinformation’ is, and often associate it with the Russian state media. However, they will still adopt some disinformation narratives to make sense of the world.

Information overload exacerbates people’s feelings of anxiety, distrust and powerlessness, especially in a crisis like the pandemic where choosing sources of information is perceived as a matter of life or death. This generates a whole spectrum of reactions, from a proactive search for opposite viewpoints to escapism through entertainment. Moving forward, people should be encouraged not to simply stay afloat in the sea of information out there, but learn how to confidently navigate it and how to safely approach various information ‘shores’. The recommendations below are a good starting point in this direction.





Recommendations

1. Develop social research that defines and segments why and how people make health decisions

More research needs to be done to address some gaps in our understanding of the interrelation between media consumption, identity and health choices. We suggest conducting **quantitative studies to test the initial findings of our exploratory research** and examine the possible existence of intervening variables. Ultimately, what are the defining reasons why people make health choices? Can we categorise people by different segments based on the reasons why they make their health decisions? Among which segments is political identity a decisive factor? Who will ultimately do what local authorities or their doctors tell them to do?

While a lot of understandable worry is about disinformation around health issues, how important are conspiracy theories and disinformation in people's decision-making? What if they are often secondary factors for many segments and do not actually inform decision-making in any fundamental way? Which conspiracy theories are more important than others in influencing decision-making? A deeper understanding of this could help media and other communicators to know which conspiracy theories to focus on in their debunking efforts, and among which audiences.

2. Develop and test media that cuts through to people's motivations and fears around health

Future studies should consider **content-testing by collaborating with independent media** to verify which type of content on health issues resonates with audiences who are particularly vulnerable to Russian disinformation campaigns and are culturally Russia-oriented. How can media cut through identity loyalties and conspiratorial beliefs to get to the essence of people's hopes, fears and decisions around health issues? Media need to learn to address the issues that people really care about, not the surface noise of a discourse that is admittedly packed with disinformation. People's motivations could be less to do with conspiracy theories about the origins of the vaccine, and more about fears of, for example, side effects that they have heard about in their community. Social research and media effects studies will help to clarify whether 'debunking' disinformation about the origin of the vaccine misses the point, as this sort of disinformation could actually only play a small role in decision-making.

Content-testing will prove especially useful for engaging with audiences with more nuanced views. These could include those who gravitate towards Russia in their geopolitical positioning or cultural ties, yet who do not trust Russian state-controlled media channels and do not necessarily align with all political positions of the Russian state. From this point of view, future research efforts should be directed towards developing a better understanding of the various factors that inform people's geopolitical orientation and how these factors interrelate in different contexts (including during times of heightened polarisation where people are more likely to feel they need to choose a side). **Refining our audience segmentation** will allow policymakers, media representatives and civil society actors to better understand what messages work and which ones tend to alienate specific audiences who do not fit reductive binary categorisations of pro-Russian vs liberal audiences.

3. Create media that respond to and guide people through 'info-chaos'

One recurring theme in this and other Arena research is how people feel that they need to negotiate the complex chaos of our (dis) information environment. There is a clear need for an 'information force' that helps them to negotiate this chaos. This is not media in the old sense of a one-to-many broadcaster that talks down to people, but a new form of media which responds to their worries and questions, and which becomes a trusted guide and aid through the info-chaos. **Media need to experiment with approaches such as engagement journalism, which provide channels that respond to peoples' questions and needs.** This can be done through online forums as has been pioneered by media initiatives like Hearken,¹⁴⁷ or by bringing people into newsrooms or getting reporters out meeting them in the community.

One common grievance among our respondents was the lack of a platform in which all essential information on COVID-19 in general, and vaccines in particular, would be in one place. Content-testing and audience segmentation can assist existing projects that attempt to meet this demand, but also new ones that are still in the making.

One example is 'Crisis',¹⁴⁸ an online platform created by the Estonian government in three languages (Estonian, Russian, English) that provides key information on how various areas have been impacted by COVID-19, from specific topics such as vaccination to larger issues such as the economy and labour market. Another relevant Estonian online platform in English and Russian also gathers in one place all the information that a resident in Estonia might need about vaccination in general and where/how to get one.¹⁴⁹ An obvious next research step is to evaluate best practises from these initiatives.

147 <https://wearehearken.com/>

148 <https://www.kriis.ee/en>

149 <https://vaktsineeri.ee/ru/>

Another project worth mentioning is ‘Filtr’,¹⁵⁰ created by the Ukrainian Ministry of Culture in 2021 dedicated to promoting collaboration between state institutions, media and civic society to increase levels of media literacy among Ukrainians. Given that a significant portion of respondents mentioned their struggle to ‘filter’ information online, organisers of projects such as ‘Filtr’ could consider expanding their initiatives by becoming the reference point for all basic information on COVID vaccines. This approach would allow an initiative such as ‘Filtr’ to **assert itself as a trustworthy and user-friendly platform for people who are struggling to navigate information overload and detect disinformation online.** There is also space for **cross-country collaborations, exchanging best practises on how to increase media literacy and resilience, especially in countries that are heavily targeted by Russian (and not only Russian) disinformation campaigns.** Which tactics do and do not work in guiding people who are consuming information online? Such initiatives also provide fertile ground for creating a common front between Russian independent media and Western media.

4. Disaggregate ‘identity politics’ from evidence

The COVID-19 crisis and ensuing ‘info-demic’ have catalysed the already highly prevalent tension between a public discourse that prioritises partisan loyalty and belonging, and one that privileges evidence. This tension is particularly important among Russian speakers in the countries surrounding Russia, where audiences are targeted by Russian state propaganda playing on emotional bonds, nostalgia and identity.

This project showed that public health issues are deeply intermingled with identity, even if identity is not necessarily the decisive factor in people’s decision-making. In this respect, **future initiatives need to take into consideration how identity may influence people’s attitudes to consuming information online, including about health issues.**

¹⁵⁰ <https://filter.mkp.gov.ua/pro-nas/>

Health communicators and media who cover health cannot ignore this dynamic. They need to consider using the expertise, traditions and language already familiar to people. From this perspective, identity should not be treated as a binary category (e.g. pro-Russian vs anti-Russian) – there may be different ‘degrees’ of loyalty depending on how polarised a certain political context is.

At the same time, health issues can also show the limits of political identity constructs. Our research suggests that there are some people who, although overtly aligning with Kremlin policies, prefer Western vaccines. Moreover, we have seen many Russian speakers in Estonia who defect from Russian state media and follow the local public broadcaster instead, presumably because they find its pandemic coverage more useful. Does this indicate that Estonian and Western media increase people’s self-confidence and sense of empowerment when navigating the info-chaos, whereas living in a Russian media bubble deepens people’s sense of insecurity? Teasing out why people are ‘defecting’ from the avowed political identities when it comes to questions of health can help us to understand the limits of partisan loyalty. This way we can **understand what needs to be done to disaggregate political identity from personal health choices.**





Political identity, media consumption and health decisions in times of COVID-19: evidence from Estonia and Ukraine

FEBRUARY 2022