

# Perceptions of the COVID-19 pandemic phases and future waves

## HIGHLIGHTS

- A pulse survey on nearly 6000 respondents from Italy, Spain, Portugal, Romania, Poland, France, and Sweden took place in May 2022, investigating the beliefs and perceptions of EU citizens on the COVID-19 pandemic phases and future waves.
- The majority of respondents (about 70%) believes that COVID-19 pandemic in their own country is at “post-peak” phase.
- Unvaccinated respondents are more likely to believe that the COVID-19 pandemic is finished compared to vaccinated ones.
- Predictably, unvaccinated respondents do not expect to take up the vaccine in the future, compared to the already vaccinated. Also, if vaccinated individuals think that a next wave is unlikely to happen, then they tend to be undecided about getting a COVID-19 booster.

## Pulse survey on the pandemic status and future waves

During the month of May 2022, and in the context of a larger cross-sectional survey on vaccination acceptance and demand, a representative sample of the general population of 7 EU Member States (Italy, Spain, Portugal, Romania, Poland, France and Sweden) answered a number of questions regarding their perceptions of the current status of the pandemic and how it will evolve in the future. For the same population, socio-demographic information and vaccination status was collected. The insights were collected by Ipsos European Public Affairs on behalf of the JRC. The study was designed by JRC’s Competence Centre on Behavioural Insights (CCBI). The more general objective of the study was to collect information on vaccine confidence and hesitancy in the EU, in order to assess the behavioural determinants of vaccine hesitancy across different sub-groups of the population and for specific vaccines, including COVID-19, in a selection of EU Member States. The study was designed at the intersection of similar initiatives, such as those carried out by [WHO European Region](#) and the [Vaccine Confidence Project](#). In Table 1 we summarize the sample size of the study, overall and by Member State.

Table 1 - Overview of general population sample size

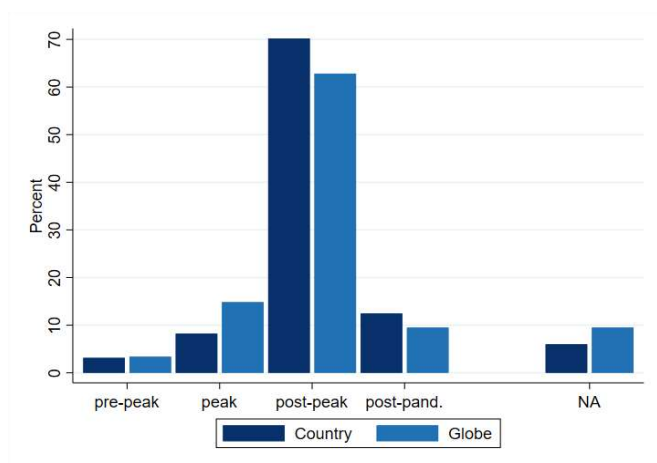
		General population (age 18 and above)
Country	Italy	859
	Spain	855
	Portugal	860
	Romania	857
	Poland	853
	France	851
	Sweden	860
Total		5995

## Pandemic phases

Opinions were collected about the current phase of the COVID-19 pandemic at national and at global level. Participants had to complete two sentences: “In your opinion, the COVID-19 Pandemic in [country] // [at global level]” by selecting only one answer from the available 6 options (“has not reached its acute phase yet”; “is still in an acute phase”; “is past the acute phase, but we might still experience more waves”; “is finished”; “Don’t know/Prefer not to say”). The pandemic phases listed in this question were an adaptation of the [WHO pandemic influenza phases](#) (2009). In Figure 1 we

show the answers for the country (dark blue) and for the globe (light blue), labelled as “pre-peak”, “peak”, “post-peak”, “post-pandemic” and “NA: don’t know/prefer not to say” (pooled data from all countries).

Figure 1 - Pandemic phases



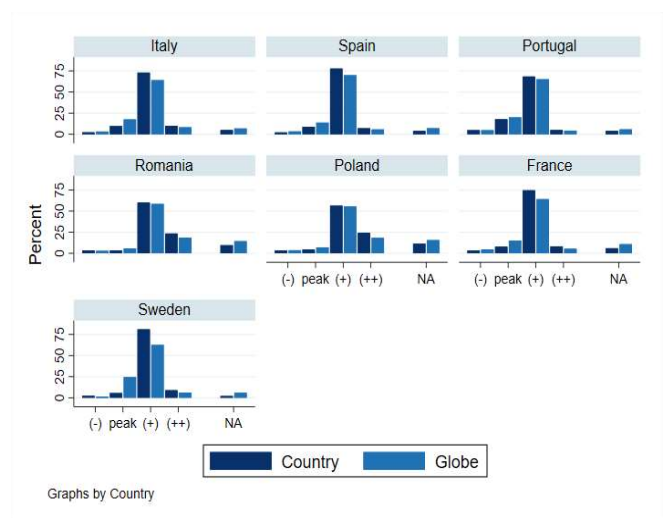
Most respondents (about 70%) believe that COVID-19 pandemic in their own country is at “post-peak” phase. With an additional 12% believing that their country is in a “post-pandemic” phase, **more than 82% of respondents believe that the peak-phase is well behind.** Similar results apply on the COVID-19 pandemic phase at the global level: although responses between country-specific and global levels have been found highly correlated ( $\rho=0.69$ ,  $P<0.01$ ) there is still a significant difference between the two (Wilcoxon sign-rank test,  $P<0.01$ ). This means that **respondents are more optimistic about the pandemic status of their own country, compared to the status at the global level.**

The sample included 15% of unvaccinated people. **Significantly more unvaccinated people believe that the COVID-19 pandemic is over** (37% at the country level and 32% at the global level, respectively) **compared to vaccinated people** (8% and 5%). A significant difference in the responses between vaccinated and non-vaccinated people was found for both country and global questions (Pearson Chi-square test,  $P<0.01$ ). The sample also included 40% of people who reported to have been infected by the virus and having had COVID-19. However, no significant response differences were associated with the reported infection status.

Figure 2 shows the responses for each country separately. A first observation is that the country and global estimations are quite similar in Portugal, Poland, and Romania. Indeed, no significant difference between these countries was found (Wilcoxon sign rank test,  $P>0.10$  in all three of these countries). In all the other countries (Italy, France, Spain and Sweden) the difference between the answers given in the two questions is significant ( $P<0.01$  in all countries but in Spain, where  $P<0.05$ ). For Italy, France, Spain and Sweden the

evidence suggests that participants see a rosier perspective for their nation than for the world.

Figure 2 - Pandemic phases by country



Furthermore, 81% of the Swedish respondents chose for their own nation the “post-peak” option, a percentage significantly higher compared to other countries (test of proportion  $P<0.01$ , except for Spain where  $P<0.05$ ). For what concerns the global pandemic status, 70% of Spanish participants selected the “post-peak” option, the highest percentage across all countries (test of proportion: Poland and Romania at  $P<0.01$ ; Sweden, France and Italy at  $P<0.05$  and Portugal at  $P<0.10$ ).

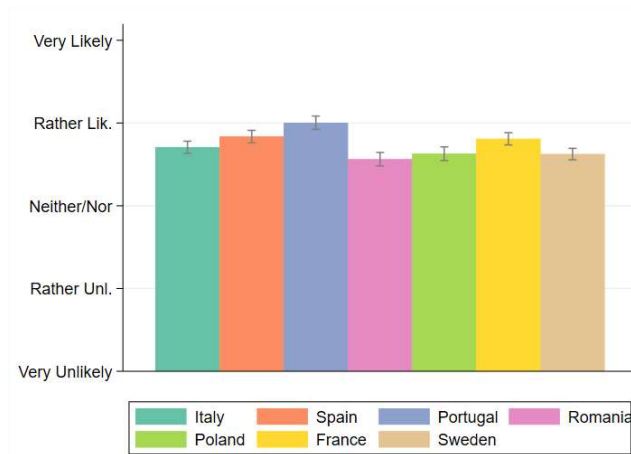
Results also show that the unvaccinated, compared to the vaccinated, report that the pandemic is further along in its cycle. This result is significant and consistent in all member states and for both the country and global status questions (Pearson Chi Square test,  $P<0.01$ ). The only exception is Portugal where the difference between the two subgroups was significant ( $P<0.05$ ) for country status and marginally significant ( $P<0.10$ ) for global status. This was due to the low number of observations in the unvaccinated group (46 observations). Finally, we did not find any difference in the opinions between respondents who were infected or not with COVID-19 (difference in Sweden only marginally significant,  $P<0.1$ ).

### Future waves

Participants were also asked about the likelihood (from 1: “Very Unlikely” to 5: “Very Likely”) of a new wave of COVID-19 in their country before the end of 2022 (“In your opinion, what is the likelihood of a new wave of COVID-19 before the end of 2022 in [Country]?”). Figure 3 presents the average scores in each country, with the corresponding 95% confidence interval (after excluding “Don’t know” and “Prefer not to say” answers). The evidence collected suggests that respondents in Portugal on average are more likely to think that a new wave of COVID-19 before the end on 2022 is expected, followed by respondents in Spain, France, Italy, Poland, Sweden and Romania. In fact, there are significant differences across all

countries (Kruskal-Wallis test detected  $P < 0.01$ ). Portugal had the highest average score, 4.00 points (out of 5), and this was significantly higher compared to all other countries (Mann-Whitney test,  $P < 0.001$ ). Romania gave the lowest average score (3.56) followed closely by Poland, and Sweden (no significant differences with either country). However, Romania's score was significantly lower compared to Portugal, Spain and France ( $P < 0.01$ ) and to Italy ( $P < 0.05$ ).

Figure 3 - Likelihood of a new wave of COVID-19



We also checked for differences in the answers between vaccinated and unvaccinated respondents. We found that overall **unvaccinated participants assigned a significantly lower likelihood of a new COVID-19 wave before the end of 2022 compared to vaccinated participants** (3.24 and 3.83 points respectively - Mann-Whitney test,  $P < 0.01$ ). Looking at the likelihood of a new wave of COVID-19 by country and by vaccination status, we see that the vaccinated tend to agree across the 7 EU Member States: a new wave before the end of 2022 is rather likely. However, there are substantial differences between countries for the unvaccinated: in Italy and Spain their belief is pulling strongly towards the “rather unlikely”, while in Romania, Poland, France and Sweden the tendency is to be uncertain (“Neither likely, nor unlikely”). The only exception was the unvaccinated in Portugal, who also appear to believe that a new wave is likely; however, the number of unvaccinated in Portugal in our sample was very small. Last, we found no difference between previously COVID-19 infected and uninfected participants.

### Willingness to get vaccinated

Participants were also asked “How likely are you to get vaccinated against COVID-19 in the future?” and could answer on a scale from 1: “Very Unlikely” to 5: “Very Likely”. Figure 4 and Figure 5 report in the vertical axis the differences in willingness to get another dose of a COVID-19 vaccine in the future, while in the horizontal axis is reported the expectation of a new wave of COVID-19. Figure 4 accounts for the already

vaccinated against COVID-19, while Figure 5 for the unvaccinated.

Figure 4 - Willingness to be vaccinated against COVID-19, if already vaccinated

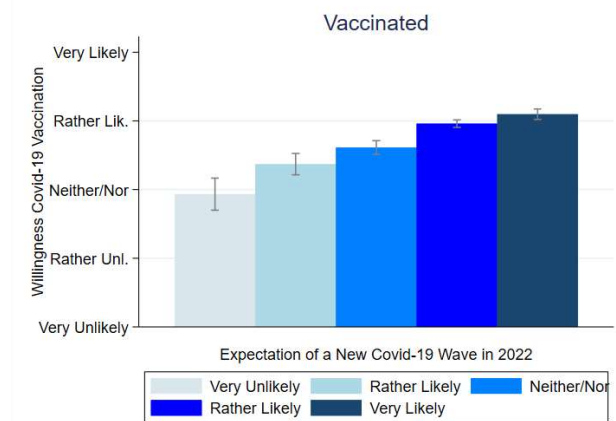
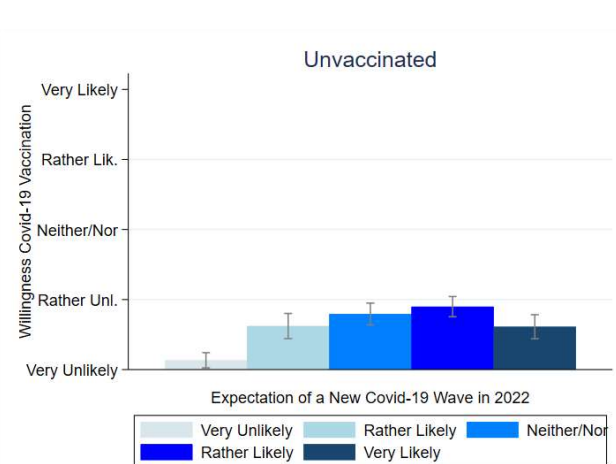
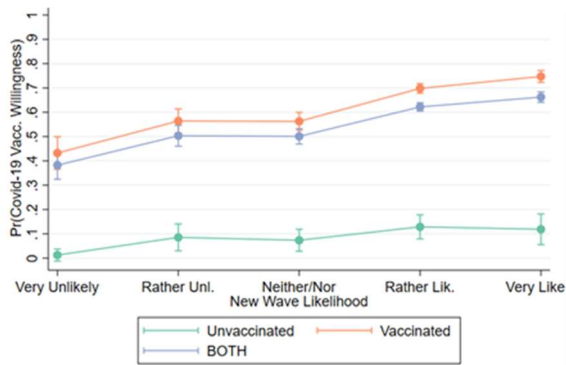


Figure 5- Willingness to be vaccinated against COVID-19, if unvaccinated



First, **the unvaccinated do not expect to be vaccinated in the future, meaning that this group could be hard to reach with universal vaccination messages, if at all.** Secondly, **the vaccinated expect to get a booster in the future, but this very much depends on their beliefs on the likelihood of a next wave of the pandemic:** if vaccinated individuals think that the next wave is very unlikely or rather unlikely to happen, then they tend to be undecided about getting a COVID-19 booster. Therefore, policymakers should expect a transversal resistance to get a booster amongst those who do not expect a next wave of the pandemic. A more detailed view is given in Figure 6, where are presented the predictive margins (with the corresponding 95% confidence intervals) of the likelihood of a new wave of COVID-19 on future uptake of the vaccine. It tells us what is the average probability of each one of the five subgroups of participants (categorised according to their beliefs on the likelihood of a new wave) to be vaccinated in the future. Other covariates are assumed to be held constant.

Figure 6 -Probability of vaccination by likelihood of new wave



There is a significant difference between vaccinated and unvaccinated participants ( $P < 0.01$ ). There is also a positive association between willingness to vaccinate and the likelihood of a new wave but only in the vaccinated subsample. **The higher the likelihood of a new wave for the vaccinated, the bigger the average probability of being vaccinated in the future.** More specifically, for the vaccinated the average probability of those who consider “rather” or “very” likely to have a new pandemic wave is significantly higher to all other likelihood subcategories ( $P < 0.01$ ). For the unvaccinated subsample there is not a similar effect, as only one significant difference is detected between the two extreme subgroups (i.e., the unvaccinated people who consider a new wave to be “Very Unlikely” and those who consider it “Very Likely”,  $P < 0.05$ ).

## POLICY IMPLICATIONS

In late April 2022, the European Commission proposed a set of actions to prepare for the next phase of the COVID-19 pandemic. Two of the actions proposed then could benefit from the evidence presented in this science for policy brief.

First, stepping up vaccination and boosting would require campaigns with tailored messaging. If the campaign is targeting the unvaccinated, then policy makers should be aware of the fact that the unvaccinated both think that the COVID-19 pandemic is almost finished and that a next wave is not very likely before the end of 2022. We urge policymakers to acknowledge this difference and match epidemiological intelligence with tailored information campaigns aimed at remedying wrong beliefs. At the same time, the unvaccinated do not expect to take up the vaccine in the future, and therefore could be hard to reach with universal messages that promote vaccination, if at all. On the other hand, since there is a strong association between increased perceived risk of a new wave and willingness to get a booster, the vaccinated population could be more

responsive to information about the potential next wave of the pandemic. Still, it is important to stress that our evidence also shows that the vaccinated who also think that a next wave is unlikely to happen tend to be less prone to get a booster. Tailored messages for this specific category should be carefully designed to be effective, possibly by clearly communicating the likelihood of a new COVID-19 wave in the future. However, a brief word of caution on targeted communication interventions is necessary. Although information is essential, it not sufficient on itself to change people’s behaviours, especially for complex and articulated decision processes, such as vaccination choices. Also, targeted messaging requires further reflections on its ethical implications: policymakers should make use of ethics assessment tools specifically designed for behaviourally informed public policy (for example, the [FORGOOD framework](#)) in order to consider whether the intervention is open and transparent, rather than hidden and manipulative, to take into account the opinions of citizens on the means and end of the intervention, but also to ensure the respect of people’s autonomy, dignity, freedom of choice and privacy, to name just but of a few,

Second, intensifying collaboration against mis- and disinformation on COVID-19 vaccines should also consider the understanding of the pandemic phases and likelihood of next waves. For example, misinformation that Omicron is “the last COVID-19 variant” gained traction in spring of 2022 and it is likely that similar arguments would resurface in the next months. This could be especially critical if such messages are linked to vaccination being “unnecessary” given the status of the pandemic and the likelihood of next waves. Making sure to link information campaigns with the evidence presented in this brief and epidemiological intelligence is key, if the objective is to anticipate mis- and disinformation messages.

## DISCLAIMER AND ACKNOWLEDGEMENTS

The authors of this report are Marianna Baggio, Antonios Proestakis and Hannah U. Nohlen. The results presented in this science for policy brief are part of a larger cross-sectional survey that took place between the months of February and May 2022. The results of the survey will be published in due time, but should the reader require further clarifications they can contact [Marianna.baggio@ec.europa.eu](mailto:Marianna.baggio@ec.europa.eu). To cite this science for policy brief: Baggio, M., Proestakis, A. and Nohlen, H.U. (2022). Science for Policy Brief “Perceptions on the COVID-19 pandemic phases and future waves – Pulse Survey”. Joint Research Centre (Brussels, Belgium)

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