EUROPEAN CITIZENS PERCEPTION SURVEY 2021 Report

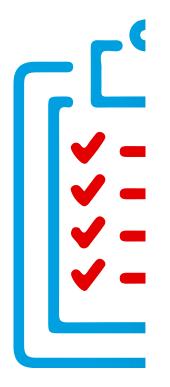




EXECUTIVE SUMMARY

Never before has the role and importance of public health been at the forefront of public debate. The opportunity to implement the learnings from the COVID-19 pandemic and ensure Europe's Pharmaceutical Strategy creates a competitive, world-class system for innovation for patients in Europe comes at a critical time. Both the perceptions and expectations of European citizens will inform this debate and the policy choices to be made on the future of healthcare in Europe.

To assess the perceptions of European citizens on areas central to future healthcare policy in Europe, Lilly carried out a survey in late 2020 of the general public in 14 European countries (Belgium, Bulgaria, Czechia, France, Germany, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, Slovenia and Spain).



We looked at six key areas:

- 1. The impact of the pandemic on the perception of the biopharmaceutical industry (page 3)
- 2. Public awareness of the scale and scope of research and development (R&D) in the biopharmaceutical industry (page 5)
- 3. Opinions on levels of access to medicines (page 10)
- 4. Priorities in healthcare (page 15)
- 5. Opportunities presented by digital health (page 18)
- 6. Opinions on the environmental performance of the biopharmaceutical industry (page 20)

The first iteration of this report was published in 2019 with six countries featured: Belgium, France, Germany, Ireland, Italy and Spain. The results from this initial survey will be referred to throughout as the '2019 Survey'. Certain questions from the 2019 Survey have been repeated in the 2020 Survey, allowing us to draw comparisons regarding how opinions have changed over time. It is important to bear in mind that these results and comparisons are applicable only to the six countries that were represented in the 2019 Survey.

To read more about our policy recommendations to make life better for patients and support the EU in being a world leader in life sciences, including learnings to date from COVID-19, visit www.LillyEU.com.



SNAPSHOT OF KEY FINDINGS



The biopharmaceutical industry is viewed more favourably since the start of the pandemic. This small but significant shift has likely been due to the role biopharmaceutical companies have played in developing COVID-19 vaccines and treatments, as well as an increased appreciation of the role of the healthcare system in society more generally.

Europeans surveyed were 2-4 times more likely to correctly answer that the biopharmaceutical industry is the one that invests the largest percentage of its income in R&D in the EU. Though the biopharmaceutical industry was the most popular answer, an overall majority still assume that it is another industry that invests most, such as aerospace and defence, software and computer services, or the automotive sector.

Respondents on average believed 33% of medicines are made available to patients after entering clinical trials. Only 10% of medicines successfully make it through clinical trials. Those in Slovenia were the most likely to correctly estimate that 1-24% of medicines successfully make it through clinical trials (40%), and those in France were the least likely (26%).

Respondents estimated that just over one third of Active Pharmaceutical Ingredients (APIs) for new medicines are developed in the EU. More than three guarters of APIs are developed in the EU. People in Romania were the most

likely to guess this (11%), and people in Slovenia were the least likely (3%).

Europeans surveyed were twice as likely to believe the US was the fastest market for medicines approval. In 2019, it took a median of 423 days for the European Medicines Agency (EMA) to approve a new active substance versus 243 days in the USA.2

Respondents were more likely to be pessimistic than optimistic about their own country's speed and level of access in comparison with other EU countries, and more than half of respondents would prioritise faster access to medicine, even if that meant higher purchase costs.

Europeans surveyed identified cancer as their top health priority for the next five years, followed by cardiovascular disease and respiratory diseases. Alzheimer's disease and dementia fell out of the top 3 to fifth priority.

Most Europeans remain open to providing health data to support digital innovation in healthcare, but there is a trend towards less comfort in doing so. Respondents in Hungary and France are the most likely to be uncomfortable with sharing data in this way (37% and 35%). Those in Bulgaria, Poland and Italy are the most likely to be comfortable with this (74%, 73% and 71%).

Europeans identify the biopharmaceutical industry as a top performer in environmental efforts. Portuguese respondents were the most likely to rank the pharmaceutical industry among the top 3 industries for environmental efforts (32%), while Dutch respondents were the least likely (11%).

^{1.} Mafini et al (European Commission, Joint Research Centre). The 2020 EU industrial R&D investment scoreboard. 2020. DOI: 10.2760/203793

^{2.} Centre for Innovation in Regulatory Science. R&D Briefing 77. 2020. URL: https://cirsci.org/wp-content/uploads/2020/06/CIRS-RD-Briefing-77-6-agencies.pdf



IMPACT OF COVID-19

The biopharmaceutical industry is viewed more favourably since the start of the pandemic.





Overall, the industry is viewed more favourably since the start of the pandemic



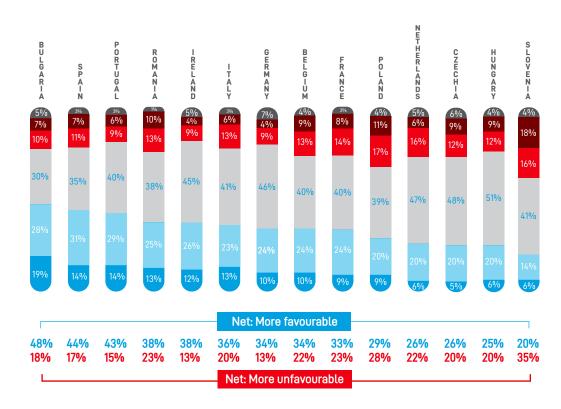
Slightly more favourable

Stayed the same

Slightly more unfavourable

Much more unfavourable

Don't know



The reputation of biopharmaceutical companies has improved amongst 1 in 3 adults as a result of their response to the pandemic. This has likely been due to the role biopharmaceutical companies have played in developing COVID-19 vaccines and treatments, as well as an increased appreciation of the role of the healthcare system in society more generally. However, the shift has not been entirely positive, with about 1 in 5 respondents reporting to be less favourable towards the industry.

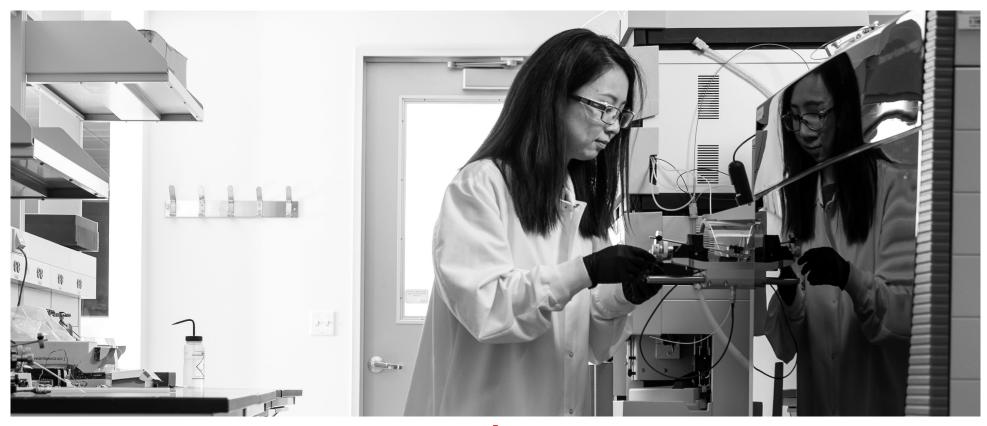
Slovenia is the only country in which attitudes have shifted more negatively than positively, with 35% of people reporting to be more unfavourable and only 20% reporting as more favourable. The most positive shifts were in Bulgaria and Spain, where 47% and 44% are more favourable, versus 18% and 17% less favourable, respectively. Large positive shifts are also reported in Portugal, Romania and Ireland.



RESEARCH & DEVELOPMENT IN THE BIOPHARMACEUTICAL INDUSTRY

Europeans surveyed were 2-4 times more likely to correctly answer that the biopharmaceutical industry invests the largest percentage of its income in R&D, compared with any other industry in the EU. Though the biopharmaceutical industry was the most popular answer, an overall majority still assume that it is another industry that invests most.

Although the drive for vaccine and treatment research and authorisation in response to the coronavirus pandemic has made certain aspects of the R&D process better understood, misconceptions remain prevalent. Such misconceptions may impact the perceived value that the biopharmaceutical industry brings and how this translates into fair and sustainable pricing.



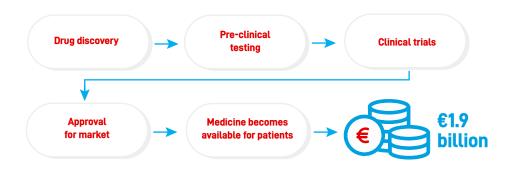


The cost of developing a medicine is not well understood

Most Europeans do not know how much it costs to develop a medicine, with many believing it is considerably cheaper than the reality.

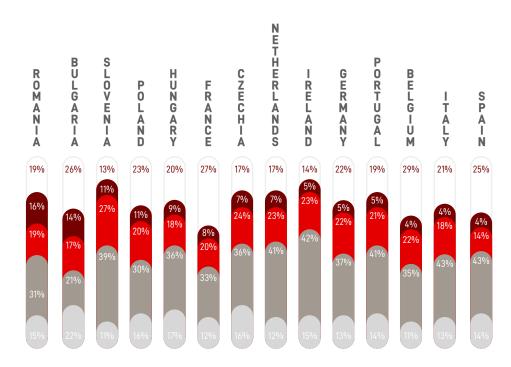
The correct average cost of developing a new medicine is €1.9 billion.³ Less than 10% of respondents believe it costs over €1 billion to develop a medicine. More respondents believe it costs less than €10 million to develop a medicine. People in Romania and Bulgaria are the most likely to say it costs more than €1 billion (16% and 14%, respectively). Along with Poland and Slovenia, these were the only countries in which more than 10% of respondents estimated correctly.

Compared to the 2019 Survey, respondents are less likely to believe it costs more than €1 billion to develop a medicine (9% in the 2019 Survey versus 5% now).



The R&D of medicines in the biopharmaceutical industry is a long and resource-intensive process. It starts with drug discovery and goes through three phases - pre-clinical development, clinical trials, and registration and authorization - before a medicine can become available to patients.

Perceived average cost of developing a new medicine - by country



O Don't know

Under €10 million

^{€10} million - €100 million

^{● €100,000,001 - €1} billion

^{• €1} billion+

^{3.} Di Masi et al. Innovation in the pharmaceutical industry: New estimates of R&D costs. J Health Econ. 2016. DOI: 10.1016/j.jhealeco.2016.01.012



Understanding of relative R&D spend is improving

The majority of Europeans surveyed are not aware that the biopharmaceutical industry is the largest spender on R&D in the EU by proportion of income, but there are signs that this understanding is improving.

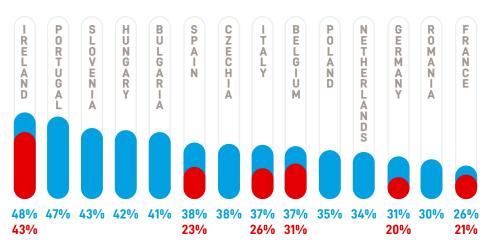
% who believe this industry spends the highest proportion of revenue on R&D



Almost 40% of respondents think that the biopharmaceutical industry spends the largest percentage of its income on R&D in the EU. This is 2-4 times higher than other tested industries.

Compared to the previous survey, a higher proportion of respondents in countries included in the 2019 Survey (+11p.p.) correctly believe that the biopharmaceutical industry spends more on R&D in the EU than any other industry.

% who believe the biopharmaceutical industry spends the highest proportion of revenue on R&D



Between European countries, there are significantly different perceptions of R&D spend. Nearly half of respondents in Ireland and Portugal say that the biopharmaceutical industry spends the largest percentage of its income on R&D. In comparison, just over a quarter of those in France say the same.

Mafini et al (European Commission, Joint Research Centre). The 2020 EU industrial R&D investment scoreboard. 2020.
DOI: 10.2760/203793

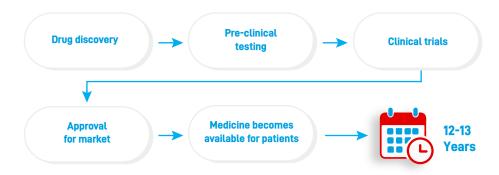


Europeans underestimate the time it takes to develop a medicine

Just 7% of Europeans can correctly estimate the length of time it takes to develop a medicine.

The average time it takes is 12-13 years.5

A majority of respondents believe it takes less than five years. Respondents in the Netherlands and Hungary were most likely to estimate correctly that it takes 10-12 years (both 14%) followed by Czechia, Ireland and Belgium (13%, 12% and 11%, respectively). In all other countries, 10% or less estimated correctly.

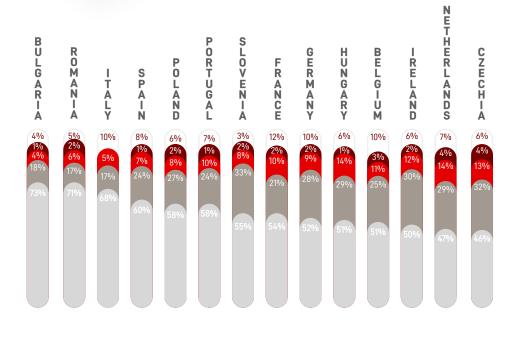


In the 2019 Survey, 16% of respondents correctly estimated the length of time it takes to develop a medicine, compared with 7% now. This suggests expectations have been strongly influenced by the speed of development of COVID-19 vaccines and treatments.

The fact that vaccines and treatments were developed so quickly is an extraordinary achievement. However, many factors contributed to the uniqueness of the situation, including strong worldwide collaboration and mobilisation of resources, years of previous research on related viruses, use of pre-existing vaccine technology, and emergency authorisation processes.



Perceived average length of time to develop a new medicine - by country



Net: 0-5 years Net: 10-20 years

- Net: 5-10 years
- Net: 20+ years

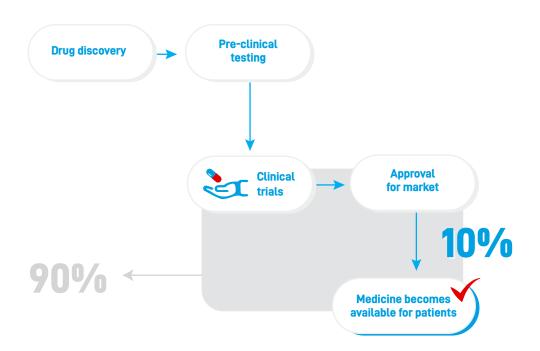
O Don't know

^{5.} Di Masi et al. Innovation in the pharmaceutical industry: New estimates of R&D costs. J Health Econ. 2016. DOI:10.1016/j.jhealeco.2016.01.012



Europeans overestimate clinical trials success

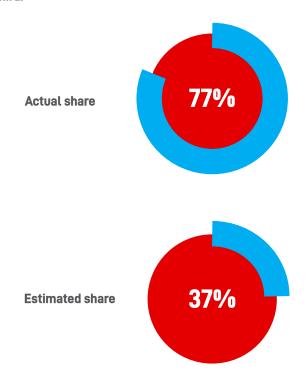
On average, respondents say that 33% of medicines that enter the clinical trials stage are successfully made available for patients. In reality, the figure is 10%.6



Respondents in Slovenia were the most likely to correctly estimate that 1-24% of medicines successfully make it through clinical trials (40%). People in France were the least likely (26%).

Europeans underestimate how many APIs originate in the EU

More than three quarters of Active Pharmaceutical Ingredients (APIs) for new medicines are developed in the EU.7 Respondents estimated this figure to be just over one third.



People in Romania were the most likely to guess it was over 75%, and people in Slovenia were the least likely (11% and 3%, respectively). 18% of all respondents did not feel able to make an estimate.

^{6.} Di Masi et al. Innovation in the pharmaceutical industry: New estimates of R&D costs. J Health Econ. 2016. DOI: 10.1016/j.jhealeco.2016.01.012

^{7.} European Federation of Pharmaceutical Industries. Internal survey (n=17). 2020.



ACCESS TO MEDICINES



In general, Europeans surveyed were twice as likely to believe the US was the fastest market for medicines approval. In 2019, the timeframe for the EMA to approve a new active substance was a median of 423 days versus 243 days in the USA.

Respondents were more likely to be pessimistic than optimistic about their own country's speed and level of access, in comparison with other EU countries, and more than half of respondents would prioritise faster access to medicines, even if that meant higher purchase costs.

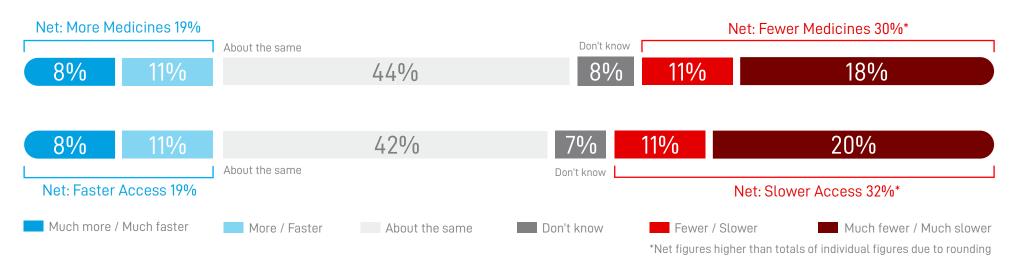
Access to medicines is a topic of critical importance to many Europeans, and one of particular interest in light of the ongoing rapid development, procurement and distribution of vaccines to combat the coronavirus pandemic. We share the goals of addressing barriers and delays to access to innovative medicines for patients, and bringing all stakeholders together to deliver equal access in Europe.





Opinions differ on the relative availability of medicines

Survey respondents are more likely to be pessimistic than optimistic about the speed of access and availability of medicines in their country compared to the rest of the EU.



About 1 in 3 respondents think that fewer medicines are available in their country, and that medicines become available more slowly in their country, when compared with the rest of the EU. There is significant divergence of perspective on this topic between the countries surveyed.

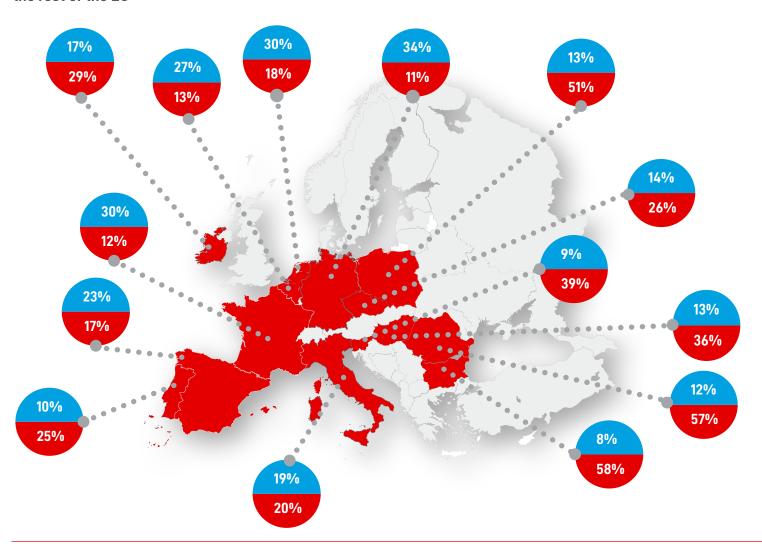
Respondents from Bulgaria, Poland and Romania were the most likely to report that they perceived access to medicines to be slower and more limited in their country, in relation to other EU countries. Those in Germany, the Netherlands and France were most likely to believe the level and speed of access to be better in their country. These perceptions are consistent with the assessment of medicines availability compared with the EU average in the EFPIA Patients W.A.I.T. Indicator Survey, which highlighted a clear disparity between countries in terms of both the speed of access to - and level of availability of - EMA approved medicines. For example, the time to availability for Germany and Denmark was 120 days and 169 days respectively, compared to 815 days and 883 days in Poland and Romania. Similarly, nearly 90% of medicines are available in Germany and Denmark, with this figure being just over a quarter in Poland and Romania.8

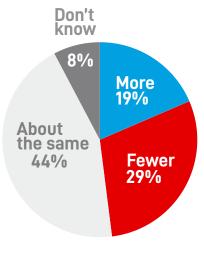
Comparing these results with the 2019 Survey shows a significantly improved perspective in the countries analysed in that survey (Belgium, France, Germany, Ireland, Italy and Spain) with regard to the level and speed of medicines access.

^{8.} European Federation of Pharmaceutical Industries. EFPIA Patients W.A.I.T. Indicator 2020 Survey. URL: https://www.efpia.eu/media/602652/efpia-patient-wait-indicator-final-250521.pdf



Almost one in three Europeans surveyed think fewer medicines are available in their country compared to the rest of the EU



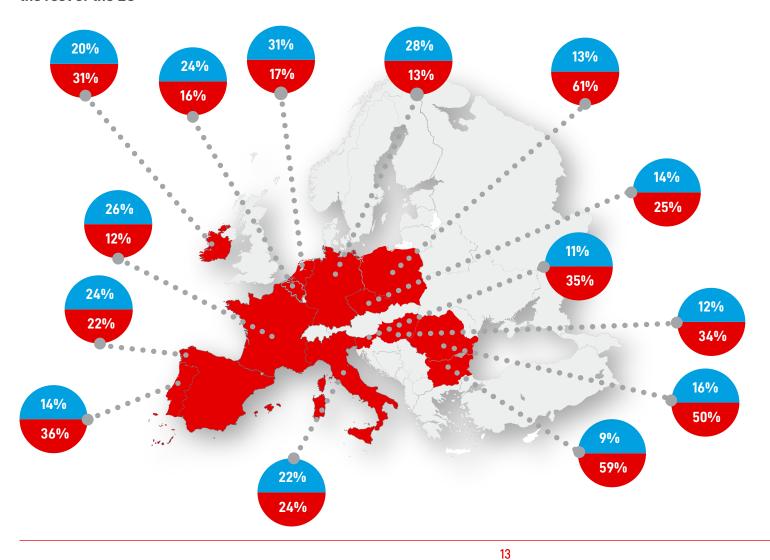


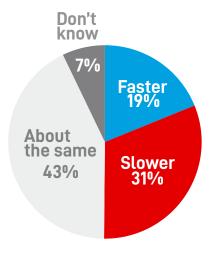
Total: all countries

Net: More Medicines Net: Fewer Medicines



Almost one in three Europeans surveyed believe access to medicines to their own country is slower than in the rest of the EU





Total: all countries

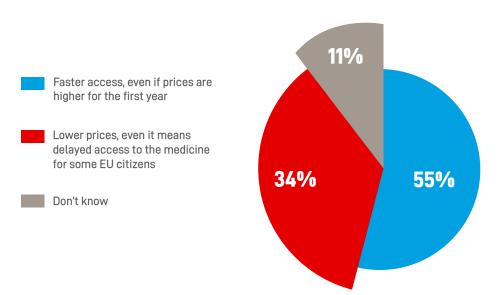
Net: Faster Access Net: Slower Access



Europeans prioritise the speed of access to medicines

More than half of respondents in surveyed countries would prioritise faster access to medicine in the first year after its development, even if that means purchase costs are higher.

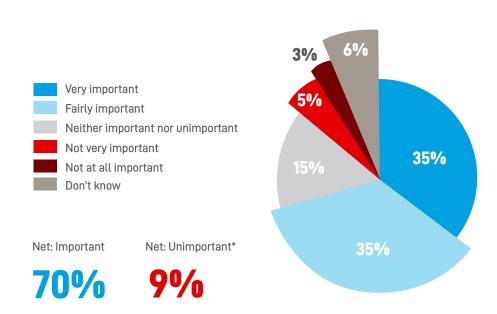
Priorities in the first year after a new medicine is created



Europeans value patent protection

Europeans surveyed overwhelmingly recognised patent protection of unique ideas as an important force in driving scientific discovery.

The perceived importance of patent protection in scientific discovery



^{*}Net figure higher than total of individual figures due to rounding



HEALTH PRIORITIES

When asked which diseases the EU should consider a priority in health in the coming years, Europeans surveyed identified cancer as their top priority, followed by cardiovascular disease and respiratory diseases.

This is in line with the current priorities of the European Commission, who in February 2021 launched Europe's Beating Cancer plan. However, other diseases impacting large numbers of Europeans, such as diabetes, remain quite low on the list of priorities of European citizens.

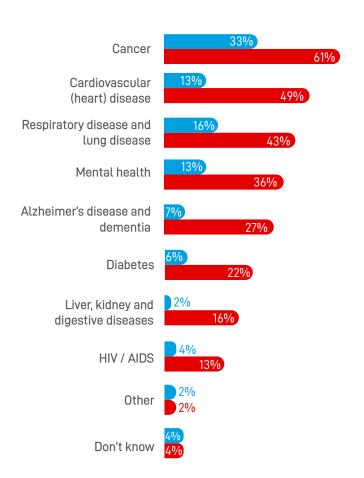
Please note: The questions in this section were carried over from the 2019 Survey so the results could be compared. Therefore, the results do not directly reflect COVID-19 as a standalone illness. The impact of the pandemic is examined in a separate section.





Cancer, cardiovascular and respiratory disease are Europeans' top health priorities

Priorities for the next five years





Ranked in the top 3

Adults in the surveyed countries identified cancer, cardiovascular disease, and respiratory and lung diseases as the top 3 illnesses for the EU to focus on over the next five years. One in three respondents ranked cancer as the biggest priority.

Only 6% ranked diabetes as the top priority and less than one quarter placed it in their top 3. This is despite the fact that 60 million people in Europe have diabetes, presenting a significant challenge for European health systems, which spend €150 billion on the disease.9

^{9.} International Diabetes Federation. International Diabetes Federation Atlas, 9th edition. 2019. URL:https://www.diabetesatlas.org/en/



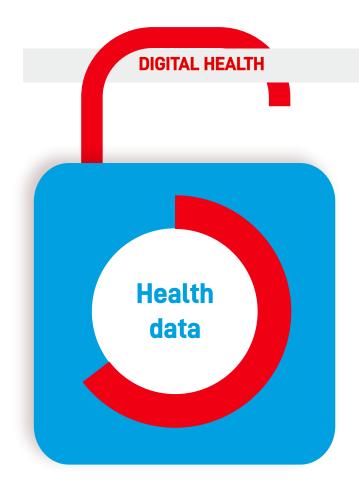
Change from 2019 Survey

In the 2020 Survey, respiratory diseases and lung disease, which were not a top 3 priority in the last survey, have risen to second place. This is perhaps unsurprising given the focus on respiratory illness brought about by the pandemic. Alzheimer's disease and dementia has fallen out of the top 3 to fifth priority, while 11p.p. fewer respondents identified it as a top 3 priority. Note: the data below represents only that of the six countries which can be compared with 2020 because they featured in the 2019 Survey (Belgium, France Germany, Ireland, Italy and Spain).

Percentage point change in priority







Most Europeans surveyed remain open to providing health data to support digital innovation in healthcare, but there is a trend towards less comfort in doing so.

This negative trend is a cause for concern if the EU intends to fulfil its ambitions in digital health and health innovation.

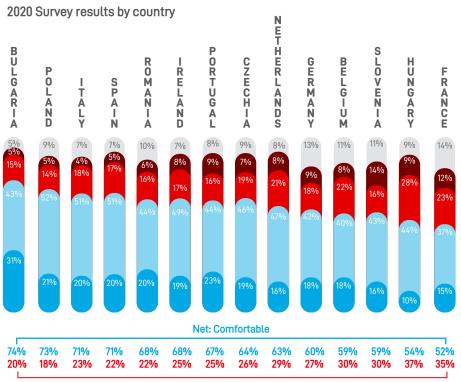




Europeans remain comfortable sharing data for health innovation

Most Europeans remain open to providing health data to support digital innovation in healthcare, but there is a trend towards less comfort in doing so. Overall, 26% of respondents reported feeling uncomfortable about sharing anonymous health data in exchange for using innovations in digital healthcare, while 65% said they would be comfortable doing so.

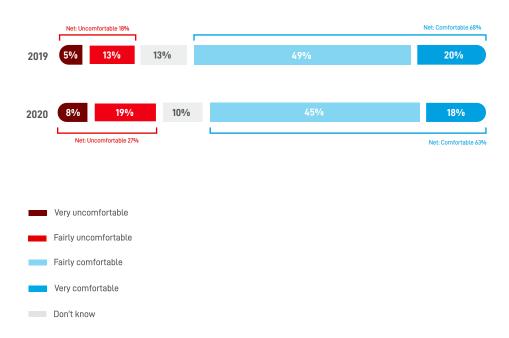
Providing health data anonymously in exchange for using innovations in digital healthcare.



Net: Uncomfortable

Respondents in Hungary and France are the most likely to be uncomfortable with exchanging health data for innovations (37% and 35%, respectively). People in Bulgaria, Poland and Italy would be the most comfortable of all tested countries with trading their health data (74%, 73% and 71%, respectively).

Comparing results from 2019 Survey markets with the 2020 Survey



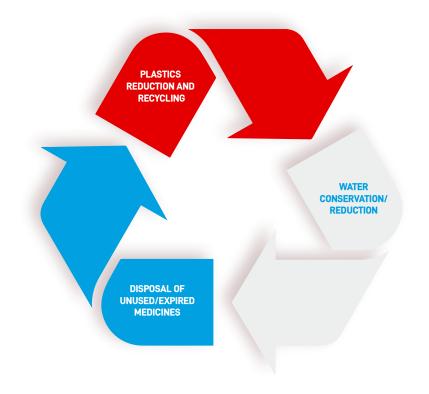
While positive overall, results from the 2020 Survey indicate Europeans are becoming less comfortable with the idea of sharing data for health purposes over time. If Europe is to push ahead with a digital health agenda, this trend needs to be reversed.

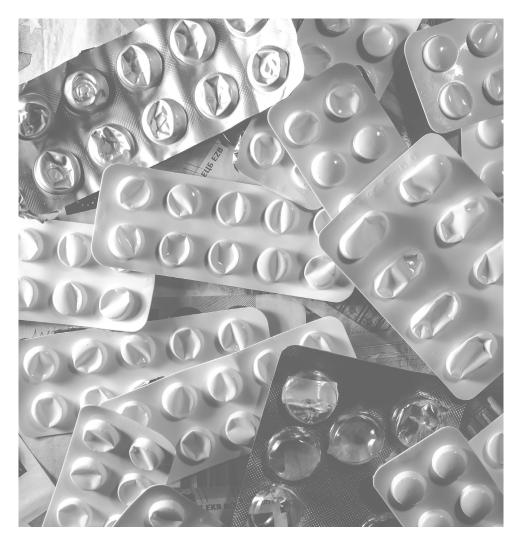


ENVIRONMENTAL EFFORTS

Europeans identify the biopharmaceutical industry as a top performer in environmental efforts.

The areas survey respondents identified for action in the future are plastics reduction and recycling, water conservation/reduction, and disposal of unused/expired medicines.







Industry comparison

About one in five Europeans place the biopharmaceutical industry among their top 3 performing industries for green/environmental efforts. 6% place it first.

ranked the

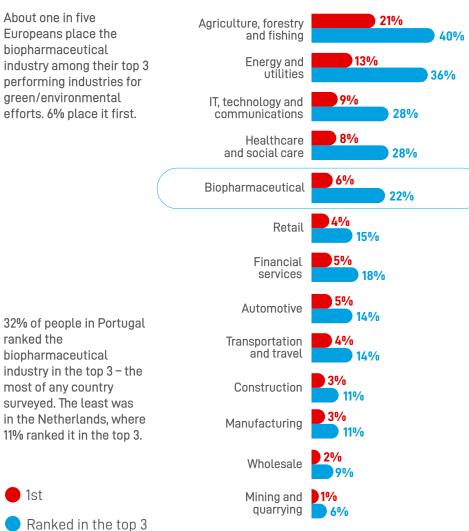
1st

biopharmaceutical

most of any country

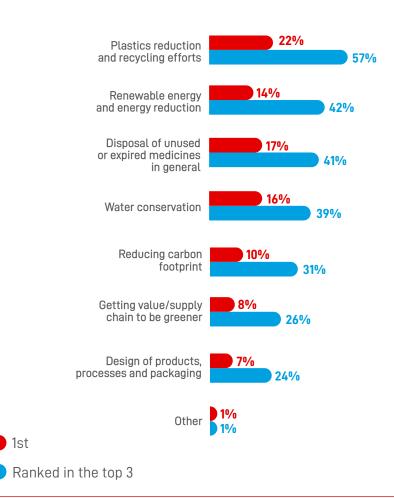
surveyed. The least was

11% ranked it in the top 3.



Priorities

Respondents believe the top 3 future environmental efforts for the biopharmaceutical industry should be plastics reduction and recycling, energy reduction, and disposal of unused/expired medicines.



1st



LILLY IN EUROPE

Lilly is a biopharmaceutical company with over 34,000 employees worldwide, including more than 9,000 in Europe. Founded over 140 years ago in the United Sates and established in Europe in 1934, our pioneering medical breakthroughs through the years include the first commercially available human insulin and the polio vaccine.

Lilly's commercial activities span the whole of Europe, and in addition, we have a considerable R&D and manufacturing presence located across four countries in Europe. Our researchers are currently seeking breakthrough therapies in Diabetes, Oncology, Immunology, Neurodegeneration and Pain. Lilly is also bringing the full force of our scientific and medical expertise to attack the coronavirus pandemic around the world.

To learn more about Lilly in Europe, please visit us at www.LillyEU.com.

METHODOLOGY

Lilly commissioned Savanta ComRes to survey 7,604 members of the general public across 14 European countries through an online survey.

Countries include Germany (515), France (563), Italy (588), Spain (588), Republic of Ireland (513), Belgium (520), Netherlands (514), Poland (604), Czechia (531), Hungary (522), Portugal (517), Slovenia (574), Romania (535) and Bulgaria (520).

Fieldwork took place between 2nd September and 6th October 2020.

Data were weighted to be demographically representative of all adults ages 18+ in each country by age, gender and region.

