2021 Apollo Healthcare Predictions Based on insights and analysis from our annual physician survey

February 4, 2021

Apollo Intelligence

Executive Summary

- VS and EU physicians vary in their views on COVID-19 impact, however, their outcomes are more similar than different
- Drug affordability, treatment access, and physician burnout are the top three issues that physicians want prioritized by the industry in 2021
 - ✓ For 2021, a majority of US respondents foresee difficulty in achieving herd immunity and expect improvements in care due to advances in health-tech
 - As compared to US physicians, European physicians are more focused on drug innovation and healthcare research funding
- Consistently high again, 72% of respondents anticipate health-tech will create privacy issues the industry is unprepared for and a slight increase of respondents expect improvements in access in 2021
- ✓ A majority of physicians are optimistic regarding the COVID vaccine and their facilities' capacity through the remainder of flu-season—widespread vaccine roll-out is the top critical need in 2021 for US and EU
- The toll on respondents is significant with a third or more experiencing pervasive loss and 47% experiencing some form of burnout
- ✓ The data reflects US respondents are cynical about big pharma and very polarized in their views

2020 Predictions Revisited

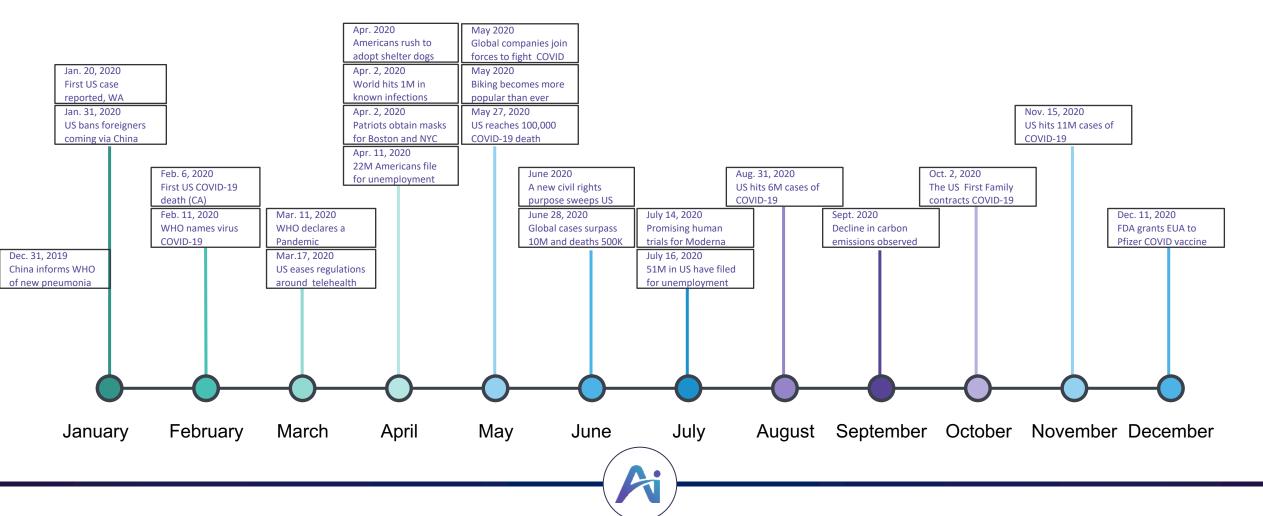
Predictions for 2020

- While 59% predicted no changes would occur in the industry in 2020, nearly 30% of physicians predicted drug prices would rise in 2020, which was the highest percentage recorded since our initial 2016 survey.
- In 2020, physicians report significantly higher concerns for affordable healthcare and access and placed less emphasis on the development of new therapies, compared to 2019.
 - Physicians believe that cost should be the most important industry focus in 2020, with many claiming that there is little purpose in developing new drugs if patients can't afford them.
- Seventy percent of physicians believed health-tech would create more patient privacy issues.

Hopes for 2020 compared to previous years

- Similar to previous years, physicians reported that their biggest hopes for 2020 were reduced drug prices (68%) and increased insurance coverage (18%).
- Ten percent wanted to see less DTC marketing and sales reps.
- Nine percent were hoping for more price transparency in the care process.

Healthcare in 2020



Methodology

2021 Survey Details

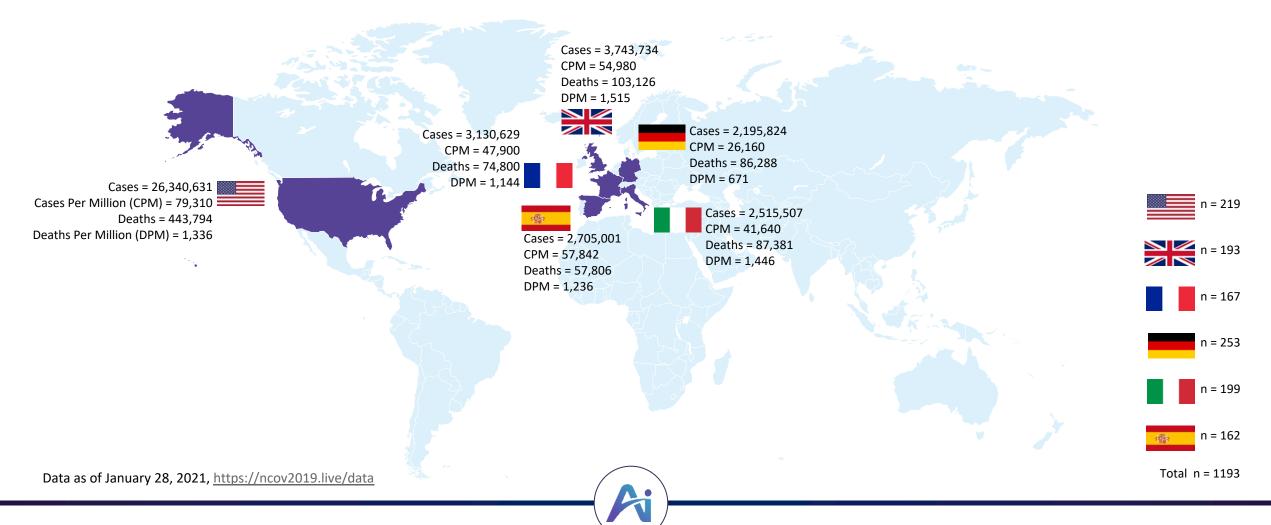
- Method: 10-Minute Survey
- **Crowd:** US & European Physicians
- Fielding Period: January 2-5

European Comparison

A selection of survey questions is compared to an international dataset, consisting of n = 974 physicians across the UK, Italy, Spain, Germany, and France

Logistics	Year-Over-Yea	ar		
			N	e ca
Survey	Fielding Period	Total US Crowd	Generalists	Specialists
2021 Survey	Jan 2021	219	112	107
2020 Survey	Jan 2020	201	100	101
2019 Survey	Jan 2019	200	100	100
2018 Survey	Nov 2017	203	102	101
2017 Survey	Dec 2016	150	36	114
2016 Survey	Nov 2015	118	52	66

Global Audiences & Context





Hopes for Pharma Industry in 2021

Although lower drug cost is still listed as the most desirable change for US pharma in 2021, increased drug development and discovery is also noted as important for the coming year.

Q2a

What important changes would you most like to see in the pharmaceutical industry in 2021?

Responses Unaided Mentions	2021 n=219	2020 n=201	2019 n=200	2018 n=203	2017 n=150	2016 n=118
Lower price to patient/improved coverage	67%	86%	76%	78%	78%	54%
Increase development & discovery	11%	6%	5%	8%	8%	4%
Improved access programs	8%					
More generics	7%	7%	7%	5%	4%	8%
Less DTC marketing and sales reps	7%	10%	9%	9%	7%	4%
More transparency	6%	9%	9%	4%	1%	4%
More efficient production and distribution	5%					
Advancements in technology and care	2%					



Predictions for Pharma Industry in 2021

Though US physicians continue to assume no major changes in the industry will occur—as has been the case in previous years—fewer of them shared this sentiment with only a third reporting it this year, down from nearly 60% last year. A similar trend was noted for rising drug prices as well.

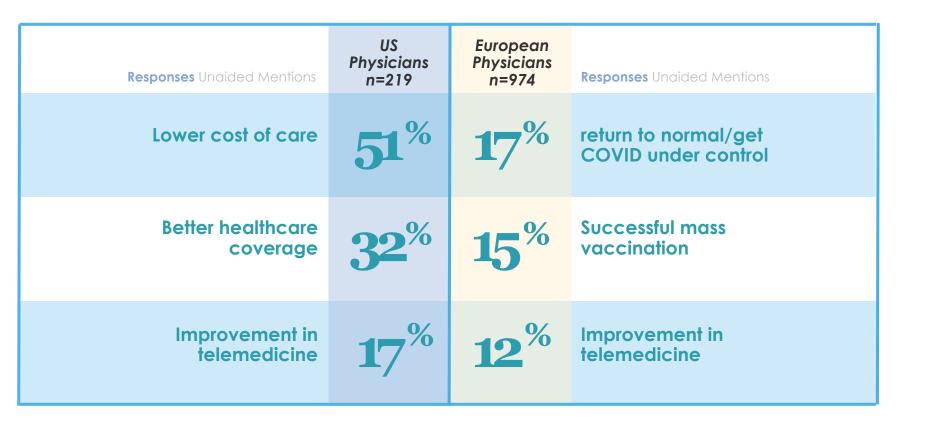
What changes do you realistically predict we will see in the pharmaceutical industry in 2021?

Q2b

Responses Unaided Mentions	2021 n=219	2020 n=201	2019 n=200	2018 n=203	2017 n=150	2016 n=118
No significant changes	32%	59%	60%	65%	74%	42%
Rise in drug prices	20%	29%	20%	24%	23%	24%
New drug approvals	9%	12%	8%	6%	5%	4%
Increased focus on COVID treatments	6%					
Decreased drug prices	5%	6%	6%	2%	1%	0%
More generics	4%	4%	4%	1%	1%	2%
Better patient assistance programs	2%	5%	1%	3%	0%	0%
More price transparency	2%	4%	3%	2%	1%	2%
More DTC advertising and sales reps	1%	10%	5%	8%	5%	4%

Hopes for Healthcare Industry in 2021

US physicians report that their biggest hopes for 2021 are lower cost of care (51%) and improved healthcare coverage (32%). While returning to normal and getting COVID under control tops the list for European respondents at 17%. With both groups recognizing the growing demand for better telemedicine.



Q1a

What important changes would you most like to see in the healthcare industry in 2021?

Reality for Healthcare Industry in 2021

US physicians predict continued use of telehealth (20%) as the most realistic outcome of 2021, where only 12% in Europe see this as a realistic outcome. Fifteen percent of US physicians believe 2021 will bring better access for patients, but just 1% of European respondents think this.

Responses Unaided Mentions	US Physicians n=219	European Physicians n=974	Responses Unaided Mentions
Continued telehealth	20 %	12 %	Continued telehealth
Better access for patients	15 %	1%	Better access for patients
Return to normal/COVID under control	15 %	8 %	Return to normal/COVID under control
Success of COVID vaccine	9 [%]	14 [%]	Success of COVID vaccine

Q1b_

What changes do you realistically predict we will see in the healthcare industry in 2021?

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Most Critical Healthcare Needs

Q2 Given the disruptive nature of the global healthcare market due to COVID-19, what would you say are the most critical needs in healthcare for 2021?



Both US and European physicians feel the most critical need for 2021 is a widespread vaccination rollout plan. However, US physicians feel the global healthcare market also needs to address access. European and US respondents have very different views on increased healthcare and research funding.

Responses Unaided Mentions	US Physicians n=219	European Physicians n=974	Responses Unaided Mentions
Widespread vaccination rollout	31 %	24 %	Widespread vaccination rollout
Addressing coverage and access issues	2 4%	10 %	Increased staffing
Increased PPE and improved distribution	14%	10%	More and improved telemedicine
Increased healthcare/research funding	0%	11 [%]	Increased healthcare/research funding



Improved access to care and continuity of care via one's primary physician,

namely by removing/reducing financial burdens of medical care. With the financial implications of COVID many of my patients are avoiding routine preventive cares and chronic disease management."

European Investment Views

Breaking down European respondents' views on increased healthcare and research funding, Spanish physicians led the region with nearly one-in five expressing this critical need, where fewer than one-in-ten German and Italian respondents reported it.

Q2 100 Given the US European **Physicians Physicians** disruptive nature n=199 n=193 n=162 n=167 n=253 n=219 n=974 of the global healthcare Increased market due to healthcare/research COVID-19, what funding would you say are the most More investment in staff, resources and research. It would be very important to educate critical needs in – PCP, people on health/risk prevention." healthcare for Spain 2021? The research in oncology and in the bio-technology sector should continue to operate. Better – PCP, staffing especially small departments that are rapidly incapacitated by acute viral diseases." Germany



Perceived Importance of Industry Changes

Drug affordability, treatment access, and physician burnout are the top three issues that physicians want to be prioritized by the industry in 2021.

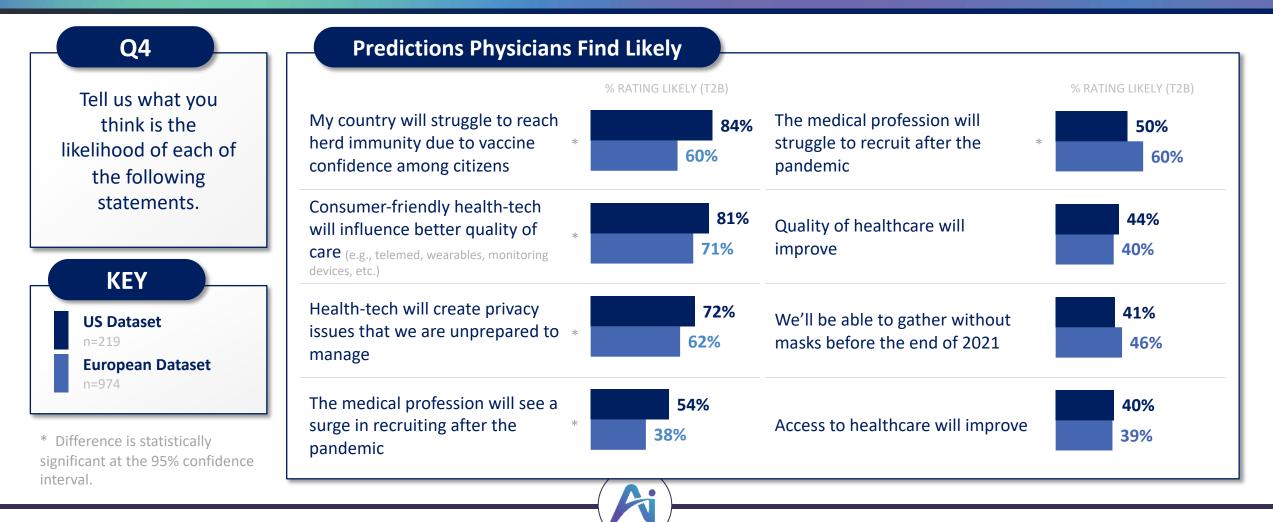
Q3

Rank the importance of the following items or changes in the pharmaceutical pharmaceutical industry that you feel are most critical to best meet the demands of our changing society.

	MEAN	% RANKING HIGHLY (T2B)		MEAN	% RANKING HIGHLY (T2B)
Making therapies more affordable for patients	2.9	55%	Bringing innovative drugs to market faster	5.6	12%
Improving wider access to available therapies	3.8	38%	Researching new therapies with improved safety & efficacy	5.7	11%
Addressing burnout for healthcare professionals	4.4	29%	Rebuilding provider networks and confidence post-pandemic	6.0	11%
Rebuilding care delivery and the patient journey post-pandemic	5.1	18%	Innovating in pharma manufacturing to improve efficiency	6.2	8%
Adapting to post- pandemic care delivery models	5.2	17% it mor	n better utilize the medication e accessible . Focusing on new i nen current resources are underu	nnovatio	ns is important but

Likelihood of Occurrences 1/4

The top four expectations for 2021 in the US are seen at a much higher frequency in US physicians as compared to physicians outside of the US.



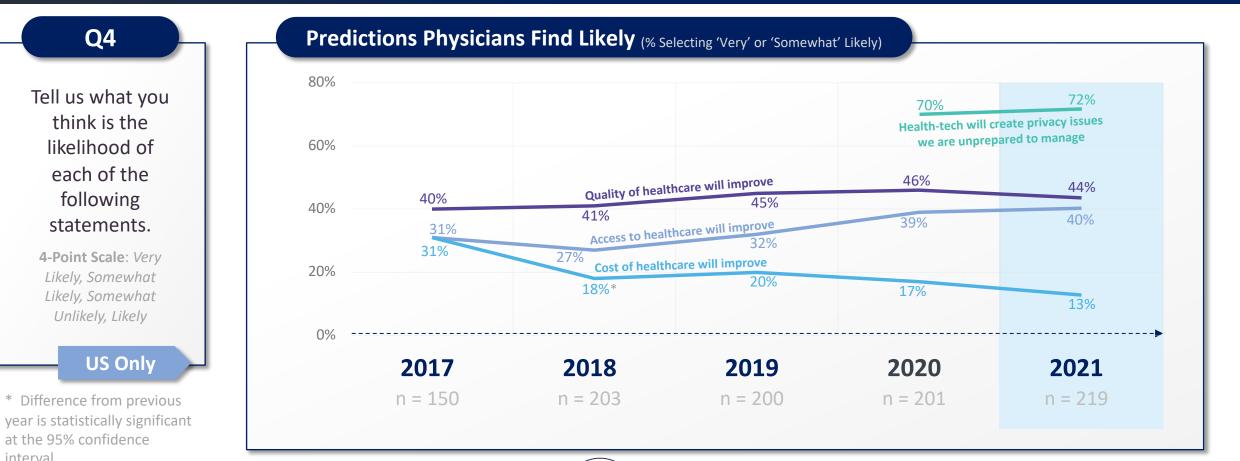
Likelihood of Occurrences 2/4

The top four expectations for 2021 in the US are seen at a much higher frequency in US physicians as compared to physicians in Europe.

Q4	Predictions Physicians Find Likely	200000					
Tell us what you	(Top-2 Box)	n=219	n=167	n=253	n=199	n=162	n=193
think is the likelihood of each of	My country will struggle to reach herd immunity due to vaccine confidence among citizens	84%	75%	57%	63%	54%	52%
the following statements.	Consumer-friendly health-tech will influence better quality of care (e.g., telemed, wearables, monitoring devices, etc.)	81%	72%	67%	66%	67%	81%
	Health-tech will create privacy issues that we are unprepared to manage	72%	66%	66%	53%	60%	63%
	The medical profession will see a surge in recruiting after the pandemic	54%	45%	36%	35%	25%	48%
	The medical profession will struggle to recruit after the pandemic	50%	52%	61%	67%	69%	51%
	Quality of healthcare will improve	44%	48%	36%	39%	41%	39%
	We'll be able to gather without masks before the end of 2021	41%	51%	45%	44%	36%	51%
	Access to healthcare will improve	40%	37%	39%	38%	41%	38%

Likelihood of Occurrences 3/4

As compared to expectations for 2020, more respondents anticipate privacy issues and improvement in access in 2021.



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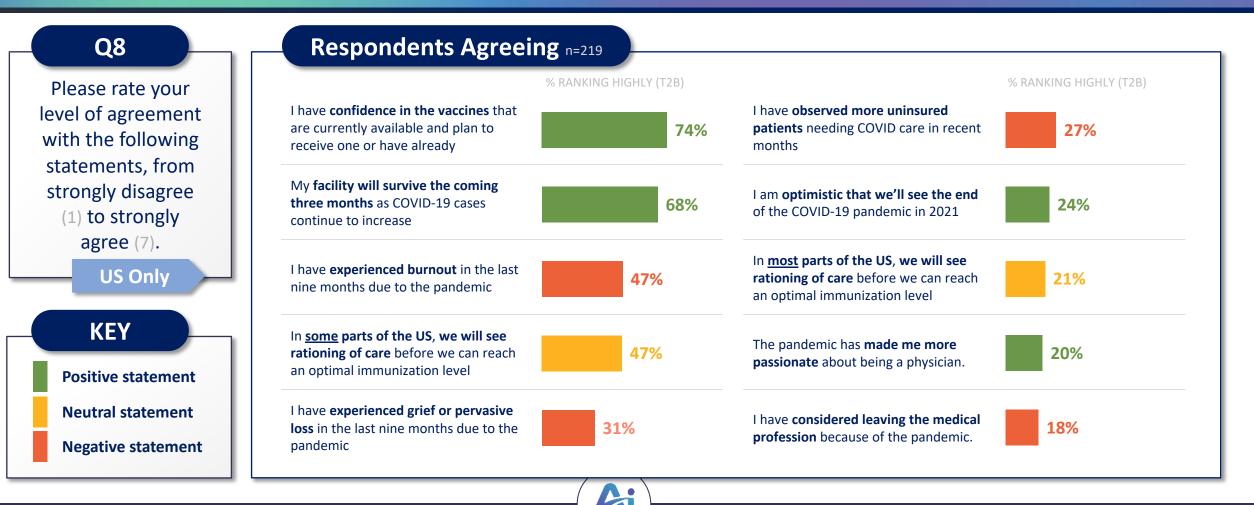
Likelihood of Occurrences 4/4

Physicians expect a rise in consumer health technology in 2021 with commensurate pros and cons, however physicians appear most concerned with not being able to reach herd immunity in the US.

Q4	Events Rated by	Likelihood of Occurring in 2021
Tell us what you think is the likelihood of each of the following	The country will struggle to reach herd immunity due to vaccine confidence among citizens	"Given widespread hesitancy there maybe large pockets of the population unprotected. I worry failure to achieve herd immunity will increase the risk of future mutations that could render the vaccine less efficacious." – PCP, NY, age 31
statements.	Consumer-friendly health-tech will influence better quality of care (e.g., telemed, wearables, monitoring devices, etc.)	"These developments are already in the works, and the public is becoming more accepting of the use of their personal data when used for their benefit." – PCP, DC, age 60
KEY	Health-tech will create privacy issues that we are unprepared to manage	"Telemedicine use will continue to rise post-COVID-19. With patient records being online there is always a risk that privacy will be compromised." – PCP, NJ, age 65
Very likely Somewhat likely Somewhat unlikely	The medical profession will see a surge in recruiting after the pandemic	<i>"I don't think medicine will have any problems recruiting, they need to meet the demand.</i> More people need care now more than ever ." – Specialist, CA, age 36
Very unlikely	The medical profession will struggle to recruit after the pandemic	<i>"I think we will see less recruitment to frontline jobs, more physicians looking to specialize.</i> <i>Currently, frontline staff is doing extra work with pay-cuts. Residents and medical students see this.</i> – Specialist, NY, age 38

COVID-19 Observations and Expectations

A majority of respondents are optimistic regarding the COVID vaccine and their facility's capacity through the remainder of flu-season, however around a third or more also note burnout or pervasive loss.



Impact of Last Year on Pharma Confidence

Despite rapid advancement in vaccine development in 2021, most physicians express that this has not improved their confidence in pharma, stating that this level of mobilization has been motivated by massive financial incentive.

Confidence in pharma Confidence in pharma Q9a has not improved has improved 43%† 57% † Has the last year changed your confidence in the pharmaceutical "They have been able to do amazing things in a short period "It reinforces what I thought. The capability is there but industry, and if of time, which increases my confidence, however it does the greed is what keeps products from being so, how? make me wonder why progress has been so slow on obtainable." – Specialist, OR, age 51 everything else in the past." - PCP, age 51, FL "Just more evidence that sole motivation is profits. When **US Only** "Despite valid criticism, the industry showed that it has there are guaranteed enormous payments from the significant resources at its disposal and when focused on *government progress is swift.*" – Specialist, TX, age 41 public good can be quite helpful. I hope ongoing support and [†]Based on evaluation of pressure can push the industry toward more altruistic unaided, open-ended "There is still no cure or FDA approved outpatient endeavors." – Specialist, NY, age 51 responses treatment for COVID, there is still no consensus on hospital treatment of COVID and there have been no "I have been heartened by their ability to share data and changes for other diseases." – PCP, NY, age 42 work together." – PCP, age 50, FL

Effects of Pandemic on Patient Journey 1/2

Physicians note positive impacts of the pandemic on the patient journey, such as the surge in telehealth, as well as negatives, such as the avoidance of in-person appointments.

Q9b

What are the positive and negative effects the pandemic has had regarding the patient journey?

Positive Effects Unaided Mentions	% n=219	Negative Effects Unaided Mentions	% n=219
Telehealth and digital adoption	22%	Fear of coming in for treatment/ delaying care	13%
Improved patient access	7%	Decreased access to care	11%
Improved patient communication and involvement in care	4%	Increase in mental health cases	7%
Innovation	3%	Politicization of healthcare/ mistrust in science	6%
Improved hygiene and disease awareness	2%	Patient mortality	5%



Effects of Pandemic on Patient Journey 2/2

While some physicians note that telehealth has helped improve patient access, most focus on the many deleterious affects the pandemic has had on healthcare access.

Q9b

What are the positive and negative effects the pandemic has had regarding the patient journey?

US Only

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"Hospitalized patients have had to go through their care journey alone, and have also died alone. That has been extremely challenging and incredibly sad."

— Specialist,

WI

"As far as positive effects, I am currently utilizing telemedicine more and hope that it will continue to reach a wider population that would otherwise go without

healthcare or greater timeframes from seeing doctor."

— Specialist, NY "It's easy to be discouraged by people not taking the pandemic seriously and then suffering consequences (significant

illness, death) because of that. It is frustrating to see people still resist the vaccine since they don't have a good understanding of COVID if they were not personally affected."

— Specialist, NY "Some patients have had to withhold care or were prevented from receiving proper care due to the pandemic. Positive effects has been the tenacity shown my healthcare providers during these trying times to deliver care for their patients despite the adversity and challenges."

— Specialist, TX

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Needs for Returning Care to Pre-Pandemic Levels

Physicians mention how both organized institutional roll-outs as well as widespread public acceptance of the vaccine are both necessary for patient care to return to pre-pandemic levels.

Q10

Understanding that COVID-19 has not only killed hundreds of thousands in the US but has also impeded care and increased severity levels for patients with existing conditions, what will it take to get patient care and patient health status back to prepandemic levels?

Responses Unaided Mentions	% n=219
Widespread vaccine roll-outs	23%
Trust in science and health system	15%
More time	11%
Herd immunity	9%
Improved funding and government support	9%
Control of the virus and public compliance	8%
Responsible leadership and policy	8%
Advancements in technology and care	2%



Changes Needed to Manage Future Pandemics

Physicians point to communication as a crucial element in managing future pandemics, stressing that the government needs uniform messaging to states and clear scientific communication to citizens.

Q11

What changes do you think need to happen in the US to optimally manage future pandemics (with optimally managed defined as the fewest casualties possible and with the least impact to society)?

Responses Unaided Mentions	% n=219
Uniform federal government messaging and coordinated response	26%
Improved scientific communication and education	14%
Depoliticization/decreased mistrust and conspiratorial thinking	9%
Adequate distribution of supplies	8%
Stricter public health policy and legislation	5%
Increased healthcare funding	5%
Centralized pandemic response team/task force	3%

Top Outcomes of a Well Managed Pandemic

In a world where COVID-19 had been more optimally managed, physicians would have expected lower mortality, less stress on healthcare workers and the economy, and a more unified country.

Q12

Based on your previous response, if the US had optimally managed the COVID-19 pandemic what are the top three outcomes you would have expected instead of what we've seen?

	% SELECTING		% SELECTING
Fewer cases and deaths	70%	Shorter "lock-down" restriction periods	19%
Less impact on healthcare systems and workers	43%	Less impact on unemployment	16%
Less impact on the economy	41%	Limited public restrictions (e.g., social distancing, masking, etc.)	8%
More unified society	41%	Innovations in vaccines	6%
Schools and most ousinesses remain open	23%	None - We experienced the best possible outcomes	3%
Little to no spread in the US	21%		

For more information:

Meghan Oates-Zalesky Apollo, SVP of Marketing meghan.oates@apollointelligence.net

Mary Kae Marinac Apollo PR Representative mk@mkmarinac.com



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