



Enhancing public trust in COVID-19 vaccination: The role of governments

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While the rapid development of vaccines against COVID-19 is an extraordinary achievement, successfully vaccinating the global population presents many challenges, from production to distribution, deployment, and importantly, acceptance. Trust in the vaccines is vital, and is critically dependant on the ability of governments to communicate the benefits of vaccination, and to deliver the vaccines safely and effectively. This brief addresses the role of governments in promoting confidence in the effectiveness and safety through effective communication, as well as trust in their ability to procure and distribute them efficiently and equitably. While only a small minority of the population holds strong anti-vaccination views, hesitancy about COVID-19 vaccination is evident in many countries. Recognising that vaccination campaigns of the magnitude needed are unprecedented, government actions to garner trust will be essential to their success, and to the emergence of more resilient societies after the crisis.



Key messages

While the development of COVID-19 vaccines has been an extraordinary success, vaccinating most of the global population is an enormous challenge, one for which gaining – and maintaining – **public trust in COVID-19 vaccines and vaccination will be as essential as the effectiveness of the vaccines themselves**. Moreover, the experience with COVID-19 will likely shape confidence in other vaccines making it even more important to build confidence at this time.

Trust in vaccination, and in the ability of governments to communicate, and to successfully deliver a vaccination programme, is critically dependent on:

- the extent to which the government can instil and maintain public **confidence in the effectiveness and safety of the vaccines**;
- the competence and reliability of the institutions that deliver them;
- the **principles and processes that guide government decisions and actions** in vaccine procurement, distribution, prioritisation, and administration;
- the **capacity and effectiveness of regulatory agencies** in handling issues and communicating consistently as events arise, while retaining public confidence in their review processes; and
- the effectiveness of the **public engagement and communications** that accompany these.

Given the speed at which COVID-19 vaccine development has taken place it is important for governments to emphasise that **no developmental or regulatory corners were cut in the process**, as:

- development was facilitated by extensive prior research, unprecedented levels of international collaboration among researchers, and massive public investment in R&D and manufacturing capacity; and
- approval processes were accelerated, in part through procedures that allow the acceptance of more preliminary evidence in circumstances of public emergency; and with COVID-19 products accorded the highest priority by regulators.

Successful vaccination campaigns also require governments to partner and support community organisations to conduct **extensive and well-managed community engagement**. A thorough understanding is needed of different populations' specific concerns, prior experiences both with vaccination and the health system in general, religious and/or political affiliations, and socio-economic status. It is also important to ensure that government actions are **open to public scrutiny**, and that **public institutions engage with the population**, by:

- Proactively **releasing timely information** on vaccination strategies, modalities and accomplishments in disaggregated, user-friendly and open source formats;
- **Enhancing transparent and coherent public communication** to address misinformation and the “infodemic”; and
- **Engaging the public** when developing vaccination strategies, and in the form and content of key communications.

Finally, fairness is a hallmark of human behaviour that underpins social cohesion and trust. Governments must therefore **manage public expectations** and explain why it is fair that particular population groups within a country are prioritised for vaccination.



Introduction

“The most important ingredient in all vaccines is trust.”

Barry Bloom, Harvard T.H. Chan School of Public Health

There is broad agreement within the global scientific community that the most effective way to defeat the COVID-19 pandemic is through the mass vaccination of populations around the world. The development of vaccines for COVID-19 has been a powerful demonstration of how substantial public funding, intense focus, and unprecedented levels of scientific collaboration can help spur innovation to address global public needs in a very short time. However, the approval and rollout of vaccines does not herald the immediate end of the health crisis, as attaining herd immunity will require the vaccination of a very substantial proportion of population, and is therefore a major challenge (OECD, 2021^[1]). To succeed in the global effort to immunise billions of people as rapidly as possible, governments need to give priority to addressing issues of trust – trust both in vaccines, and in the institutions responsible for the vaccination endeavour. They need to promote confidence among the public in the effectiveness and safety of the vaccines, as well as in the capacity of governments to manage the logistical challenges competently.

Despite an initial “rally around the flag” effect seen early in the pandemic, many countries are observing increasing levels of distrust in government capacity to handle the crisis and implement coherent policies (OECD, forthcoming^[1]). This has resulted in declining compliance with public health-related rules, and increasing scepticism about long-term economic recovery. More broadly, the pandemic has triggered widespread disinformation that has undermined both understanding and acceptance of science and public policy (de Figueredo et al., 2020^[2]), and this extends to the issue of vaccine acceptance. Despite widespread recognition that COVID-19 is a critical issue to people all around the globe, many remain unwilling to be vaccinated. However, in February 2021, an average of 76% of the population across 11 OECD countries indicated willingness to be vaccinated, an increase from only 66% in December 2020 (Ipsos, 2021^[3]). However, recent data from seven OECD countries showed that a quarter of the population in France, Germany and the United States may refuse COVID-19 vaccination, and an even higher proportion among younger population cohorts. More than 50% of French 25- to 34-year-olds, and one-third of Dutch 25- to 34-year-olds, said they would probably or definitely not get vaccinated (Kantar, 2021^[4])

Not surprisingly, trust in the safety of vaccines has also been seriously tested by recent reports of rare, but serious, adverse events with a probable causal link to the Oxford/AstraZeneca vaccine. Both the safety signal, and the different responses of regulators around the world, are likely to have undermined public confidence. That said, there is also evidence to suggest that as more people are vaccinated, more will be inclined to accept vaccination. While this may to some degree indicate a gradual dissipation of initial fears about the safety of novel vaccines (recent events notwithstanding), it may also reflect that being vaccinated gradually becomes normative, and is increasingly accepted as the path out of restriction and confinement (Bish et al., 2011^[5]).

Trust in vaccines must also be complemented by trust in the institutions responsible for vaccination. Lack of acceptance of vaccination may derive from previous failures of health systems and public institutions to serve certain population groups effectively and engender their trust. In general, trust in institutions is critical for the effective functioning of society and acceptance of public policy, and particularly so during a crisis. Trust is defined as one’s belief that another person or institution will act in accordance with one’s expectations of positive behaviour by others (OECD, 2017^[6]), and institutional trust is recognised as a key measure of government performance (OECD, 2019^[7]). The OECD has developed a Trust Framework as



a guide for governments in developing specific policy actions to strengthen public trust, built around the five dimensions of government mandates that research shows largely explain people's trust (see Box 1).

Overall, the success of vaccination campaigns will largely be influenced by the extent to which people trust the effectiveness and safety of the vaccines, the competence and reliability of the institutions that deliver them, and the principles that guide government decisions and actions. Drawing on the OECD Trust Framework, this paper identifies some policy priorities for countries to strengthen public trust as they rollout COVID-19 vaccines, and provides examples of good practices that countries have implemented and can enhance people's confidence in vaccination campaigns. The following section discusses the relevance of government competence in building trust in vaccines, with the subsequent sections discussing integrity, openness and fairness in this context.

Box 1. The OECD Trust Framework

The OECD Trust Framework identifies five main policy dimensions that drive people's trust in government institutions: responsiveness, reliability, integrity, openness and fairness. These five dimensions correspond to government mandates such as providing public services, protecting citizens, using power and resources ethically, etc. The empirical relevance of this framework has been tested in eight OECD countries and evidence shows that both government competence and values are strong predictors of public trust (Murtin et al., 2018^[9]; OECD/KDI, 2018^[10]; OECD, forthcoming^[2]).

Trust Component	Government Mandate	Concern affecting trust	Policy Dimension
Competence The ability of governments to deliver to citizens the services they need, at the standard they expect	Provide public services	Access to public services, regardless of socio-economic status; Quality and timeliness of public services; Respect for public service provision, including responsiveness to citizens' feedback;	Responsiveness
	Anticipate change, protect citizens	Anticipation and adequate assessment of evolving citizen's needs and challenges; Consistent and predictable behaviour; Effective management of social, economic and political uncertainty;	Reliability
Values The drivers and principles that inform and guide government action	Use power and public resources ethically	High standards of behaviour; Commitment against corruption; Accountability;	Integrity
	Inform, consult and listen to citizens	Ability to know and understand what government is doing; Engagement opportunities that lead to tangible results;	Openness
	Improve socio economic conditions for all	Pursuit of socio economic progress for society at large; Consistent treatment of citizens and businesses (vs. fear of capture);	Fairness

Source: OECD (2017^[6]), Trust and Public Policy: How Better Governance Can Help Rebuild Public Trust, <https://doi.org/10.1787/9789264268920-en>.



Competence

Provision of quality goods and services is a key indicator of government competence

An important indicator of government competence is responsiveness to people's needs, as demonstrated by the provision of high quality goods and services required by the population. The development of several effective COVID-19 vaccines in less than a year is an impressive demonstration of the ability of public authorities to stimulate scientific R&D efforts in the direction of the greater good, and an exemplar of the benefits of international co-operation between public and private stakeholders.

However, in order to promote public trust in these products, it is essential that governments demonstrate that no quality or safety standards were compromised for the sake of speedy development and approval processes. As with other medical goods, COVID-19 vaccines have been, and are continuing to be developed, evaluated and approved in accordance with existing regulatory guidelines and legal requirements (EMA, 2020^[10]). They are initially tested in the laboratory (in pre-clinical studies), and then in clinical trials involving human volunteers.¹ These trials are intended to confirm how the vaccines work and importantly, elucidate their safety and protective efficacy. In more usual circumstances, developing new vaccines can be a lengthy process, with the different phases of development undertaken sequentially. In the case of COVID-19, a number of factors contributed to significant acceleration of both the development of vaccines, and of the chances of successful candidates (see Box 2). Regulatory evaluation and authorisation processes were also accelerated, in part through rolling review of data as they became available, and through the use of emergency procedures that enable the acceptance of more preliminary evidence in circumstances of significant unmet need or public emergency.

Box 2. How it was possible to develop and approve COVID-19 vaccines so rapidly

A number of factors contributed to the speed with which successful COVID-19 vaccine candidates were able to be developed and tested. These include:

- SARS-CoV-2 is genetically close to various other coronaviruses that have been the subject of previous investigation in the past decade, so vaccine R&D did not start from a zero base, even for the newer technological platforms (e.g. mRNA and non-replicating viral vectors);
- Development was facilitated by extensive knowledge gained with previous vaccines, coupled with unprecedented levels of engagement and collaboration among researchers internationally;
- A large number of vaccine candidates have been, and are continuing to be developed and tested in parallel, using a variety of different platforms, increasing the chances that one or more would prove successful;
- Some vaccine candidates (and two of the products already authorised) rely on a novel messenger ribonucleic acid (mRNA) platform, which allows them to be developed, modified and manufactured more rapidly than vaccines using traditional platforms;
- Governments invested heavily both in R&D and in manufacturing capacity, the latter to enable the production of large quantities of vaccine before the results of the phase III trials were available, and in many cases potentially absorbing the full financial risks of R&D failure;

¹ Pre-registration clinical trials of medicines and vaccines usually occur in 3 sequential phases: phase I trials usually assess safety and tolerability in a small group of less than 100 adults; phase II trials test safety, dosage and method of delivery in a larger group, usually of several hundred people; and, phase III trials aim to establish safety and efficacy usually in a large group of several hundred to several thousand people.



- The scale and severity of COVID-19 underscored the urgency of vaccine development. This drove intensive investment and faster development processes, via for example running trials in parallel that in other circumstances would be conducted sequentially and by combining trial phases I and II, to assess safety and immune responses;
- The combination of the high prevalence of COVID-19 in many locations and rapid clinical trial recruitment accelerated the demonstration of efficacy in preventing symptomatic infection.

Besides the use of emergency procedures, other factors that helped to accelerate the process of approval included:

- National regulatory agencies engaging with COVID-19 vaccine developers, and supporting the research and development effort indirectly, in some cases by providing early scientific advice on the most appropriate study designs for generating robust data;
- Regulatory review being expedited via a process known as “rolling review”, whereby developers submit tranches of data incrementally as they become available rather than waiting to assemble a complete dossier before submission;

COVID-19 products being accorded the highest priority by regulators, with additional resources applied to enable rapid, intensive review of dossiers.

Ongoing surveillance for the potential emergence of adverse effects is also essential to support public trust, using well-developed pharmacovigilance systems to track problems or adverse reactions not detected in the clinical trials. With the rollout of COVID-19 vaccines, stringent regulatory authorities (e.g. FDA, EMA)² are expanding their vaccine monitoring procedures and publishing regular safety updates.³ As the recent controversies about the safety of the Oxford/AstraZeneca vaccine highlight, authorities face a number of complex challenges in communicating about the safety and effectiveness of vaccines, and promoting and preserving public trust in the vaccines as they are rolled out, particularly in a context of health emergencies (see Box 3).

However, while the handling of these issues presents an opportunity to highlight to the public that pharmacovigilance systems work, it is important to ensure that communication regarding potential safety signals are handled with both transparency and care. Communication needs to be balanced and contextualised, to clearly convey what is and is not known, and to avoid reinforcing hesitant people’s cognitive biases, and it should ideally be informed by the expertise of behavioural scientists and risk communication experts. In particular, confirmation bias (i.e. the tendency to select information that

² The concept of a stringent regulatory authority was developed by the WHO Secretariat and the Global Fund to Fight AIDS, Tuberculosis and Malaria to guide medicine procurement decisions, and is now widely recognised by the international regulatory and procurement community as a regulatory authority that is:

- a member of the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH), being the European Commission, the US Food and Drug Administration and the Ministry of Health, Labour and Welfare of Japan also represented by the Pharmaceuticals and Medical Devices Agency; or
- an ICH observer, being the European Free Trade Association, as represented by Swissmedic, and Health Canada; or
- a regulatory authority associated with an ICH member through a legally-binding, mutual recognition agreement, including Australia, Iceland, Liechtenstein and Norway.”

See: WHO Expert Committee on Specifications for Pharmaceutical Preparations Fifty-first report (Technical Report Series, No. 1003, 2017)

³ <https://www.ema.europa.eu/en/news/first-COVID-19-vaccine-safety-update-published>.



reinforces people's beliefs) and negativity bias (i.e. the tendency of negative feelings and information to have a greater effect on people than positive or neutral ones) should be carefully addressed. For example, a study of parents' attitudes while searching information online about vaccines showed that people tend to select belief-consistent information and tend to rate this information as more credible, useful and convincing (Meppelink et al., 2019^[11]).

Box 3. Maintaining trust when adverse events occur

In early March 2021, cases began to emerge of serious and even fatal thromboembolic events after vaccination with the Oxford/AstraZeneca vaccine. The detection of these adverse events pointed to the strength of pharmacovigilance mechanisms in rapidly identifying a potential safety signal, and prompted precautionary suspension of the use of the vaccine by 12 EU countries and Thailand pending regulatory review to confirm or exclude the existence of a causal link and if necessary, re-evaluate the benefit-risk profile. On 18 March the EMA recommended the resumption of vaccination with the vaccine, as in its view a causal link with these adverse events had not been established. Despite this, the suspension remained in place in several countries, while others recommenced or continued vaccination with the product albeit with age restrictions reflecting the preponderance of adverse event reports being in people under the age of 50. Subsequently, on 7 April the EMA announced that it had concluded that there was a possible causal link, but that the overall risk/benefit balance remained positive. When a similar pattern of adverse events began to emerge in the United States in relation to the Johnson and Johnson (Janssen) COVID-19 vaccine, on 13 April the US FDA also temporarily paused use of the vaccine pending investigation by the FDA and the US Centers for Disease Control & Prevention (CDC). Subsequently, on 23 April the FDA and CDC recommended the resumption of the use of the vaccine, confirming that the risk-benefit balance remained favourable.

While these temporary suspensions may be seen as appropriate applications of the precautionary principle, they also prompted concern regarding the risks of slowing down vaccination during the pandemic, as well as the potential effects on overall confidence in the safety of COVID-19 vaccination. Similar precautionary measures by regulators are not uncommon in the presence of significant potential safety signals, but are not usually undertaken in circumstances of such widespread public attention, and within populations already partly sceptical about the benefits and risks of the intervention. While temporary suspension of the use of the vaccine reflects that potential safety issues were being thoroughly investigated by regulators, it may also have the effect of prompting or augmenting the doubts among certain population groups that have, for example, led significant quantities to remain unused in France and Germany. That said, failure to take such precautionary measures in the face of emerging reports of rare, but in some cases, fatal adverse events, could have resulted in a similar – or potentially even greater – diminution in credibility and trust.

Further, despite subsequent confirmation by the EMA that the risk-benefit balance remains overwhelmingly in favour of the continued use of the Oxford/AstraZeneca vaccine, two jurisdictions opted to discontinue use of the vaccine. Several others elected to limit its use to particular, but varying, age groups, and this lack of consistency may contribute to ongoing confusion and doubt among the public. While regulatory decisions are routinely made at national level, they rarely pertain to products that are disseminated globally on this scale, or subject to such intense public scrutiny. Currently, information about these various decisions is being widely disseminated in the international media, and while the extent to which these have been influenced by the availability of alternative products is unclear, the uncertainty suggested by the different approaches could further undermine confidence in the product, and in vaccination more broadly.

This points to the value of greater co-ordination among regulators and health authorities that make vaccination policies, and for exceptional care and consistency in messaging around these issues. It is



also important to try to improve general levels of science literacy, and to find ways of communicating concepts of risk and benefit in ways that are more easily understood, in order to create a broader appreciation of the risks and benefits of COVID-19 vaccines relative to the risks posed by COVID-19 itself.

Sources: <https://www.dw.com/en/covid-astrazeneca-vaccine-remains-unpopular-in-germany/a-56630827>, <https://www.euractiv.com/section/coronavirus/news/unused-stocks-of-astrazeneca-vaccine-remain-in-france-germany/>, <https://florianstigler.medium.com/rare-vaccination-side-effects-should-we-care-da91e3953ad1>, <https://www.ema.europa.eu/en/news/astrazenecas-COVID-19-vaccine-ema-finds-possible-link-very-rare-cases-unusual-blood-clots-low-blood>, <https://www.politico.eu/article/trust-oxford-astrazeneca-coronavirus-vaccine-wanes-europe-survey/>.

Effective and inclusive vaccine policies foster trust in government competence

While it is clear that the development of COVID-19 vaccines has been a remarkable success story, much still needs to be done to engender trust in the vaccination programmes that deliver them. In addition to ensuring the effectiveness of the vaccine and the integrity of the development, evaluation and monitoring processes, governments must also demonstrate their capacity to procure vaccine supplies, and to design and deliver effective and inclusive vaccination campaigns.

To ensure timely delivery, governments need to establish policies and infrastructure for distributing, storing and administering vaccines across their jurisdictions. A recent report to the European Economic Area (EEA) indicated that most EEA countries intended to utilise existing vaccination infrastructure, while only a few had plans to procure additional equipment to ensure the correct storage of vaccines (ECDC, 2020^[12]). However, in many jurisdictions current infrastructure and supplies may not be adequate to ensure a swift vaccination campaign, particularly when considering the particular transport and storage requirements of certain vaccines (e.g. very strict cold-chain maintenance). In fact, there is already evidence that some countries are struggling to maintain their planned timetables.

Co-ordination, involvement in decision-making, alignment of actions, and transfer of resources across levels of government together contribute to effective and inclusive vaccine policy. For example, Spain designed a national vaccination strategy steered by the Inter-territorial Council of the National Health System (ICNHS), a collegiate body in which the Minister of Health participates together with the health advisors of the autonomous communities and cities.⁴ In the United States, each State orders doses from the Vaccine Tracking System, up to a limit decided at the federal level.⁵ Central governments also need to ensure that subnational authorities have sufficient funding and capacity to procure the necessary quantities of ancillary products such as syringes and gloves (National Academies of Sciences, Engineering, and Medicine, 2020^[13]).

Strengthening control mechanisms between national government entities, being each branch responsible for its actions towards the others, and moving beyond emergency rules will help increase support for vaccine policies seen as transparent, balanced and inclusive.

Instituting reliable and transparent legal provisions for the indemnification of vaccine manufacturers, and compensation for vaccine injury is another dimension influencing trust, since compensation provisions can theoretically provide some reassurance to those concerned about the risks of emergent side-effects. The introduction of indemnification and compensation provisions stems in part from the 1955 Cutter incident in the United States, in which certain batches of polio vaccine administered to the public contained live polio

⁴ <https://www.newtral.es/vacunas-covid-criterios-reparto-ccaa/20210119/>.

⁵ <https://www.cdc.gov/vaccines/programs/vtrcks/index.html>.



virus, leading to over 250 cases of polio, many of which resulted in paralysis.⁶ While the incident led to more effective federal regulation of vaccines, it also prompted a wave of litigation for vaccine injuries, creating a disincentive for manufacturers to enter the vaccine market.

To address this disincentive, the US Government introduced the National Vaccine Injury Compensation Programme in 1986 to protect vaccine manufacturers from litigation that could threaten the continued development and manufacture of vaccines, and to provide compensation for injuries arising from adverse events following routine vaccinations.⁷ Later, the Public Readiness and Emergency Preparedness (PREP) Act of 2005 established a framework to deal with liability and compensation for injuries associated with vaccines and other countermeasures during the period of a declared pandemic or other public health emergency. Subsequently, in 2006 the International Federation of Pharmaceutical Manufacturers and Associations began advocating for broader indemnification provisions for vaccine-related adverse events in the context of pandemic responses (Halabi, Heinrich and Omer, 2020^[14]). Outside the United States, it has been reported that in its bilateral contracts, AstraZeneca has been granted protection against legal claims arising from its vaccine products in several countries.⁸

While 20 four countries currently have no-fault vaccine-injury compensation systems for routine immunisation (Mungwira et al., 2020^[15]), the World Health Organization recently agreed to underwrite a no-fault compensation plan for claims of serious side effects in 92 poorer countries due to receive COVID-19 vaccines via the COVAX sharing scheme.⁹ Vaccine injury compensation schemes that provide concomitant indemnification of vaccine manufacturers reduce, by design, the financial risks for manufacturers. These can, however, also be perceived as reducing the accountability of manufacturers with regard to the safety of their vaccines, and the rationale therefore needs to be conveyed carefully, particularly among population groups already sceptical about vaccine safety and effectiveness.

Values

Integrity and accountability in vaccine development are critical

Since the beginning of the COVID crisis, governments have had to make quick decisions and implement many unplanned measures to protect communities at risk. In the first months, the widespread use of direct awards as an exceptional measure to procure goods, services and works has drawn attention to potential integrity risks, most notably fraud and corruption, that could seriously weaken the effectiveness of government action if not correctly mitigated. Some instances of irregularities and allegations of corruption in the purchasing and supply of medicines have been reported, as well as other types of misbehaviours such as health professionals stockpiling medications, and a variety of online scams (OECD, 2020^[13]). Yet there has been little discussion on specific integrity risks related to the development and distribution of

⁶ <https://www.cdc.gov/vaccinesafety/concerns/concerns-history.html>.

⁷ <https://www.cdc.gov/vaccinesafety/concerns/concerns-history.html>.

⁸ <https://www.reuters.com/article/us-astrazeneca-results-vaccine-liability/astrazeneca-to-be-exempt-from-coronavirus-vaccine-liability-claims-in-most-countries-idUSKCN24V2EN>.

⁹ https://www.reuters.com/article/us-health-coronavirus-who-vaccines-compensation/idUSKBN2AM266?taid=6033fbb0ea66990001cf36d6&utm_campaign=trueanthem&utm_medium=trueanthem&utm_source=twitter; <https://www.who.int/news/item/22-02-2021-no-fault-compensation-programme-for-COVID-19-vaccines-is-a-world-first>.



vaccines,¹⁰ and how these could affect people's trust in, and the effectiveness of, government vaccination strategies.

Public integrity refers to the consistent alignment of, and adherence to, shared ethical values, principles and norms for upholding and prioritising the public interest over private interests in the public sector (OECD, 2017^[14]). Integrity is a core institutional value and driver of trust. According to the OECD Trust Framework, the manner in which public institutions conduct themselves and the degree to which they can be trusted to safeguard the public interest play a key role in influencing the level of trust in them (OECD, 2017^[5]). In the context of vaccine development, four main integrity issues are critical for governments in building and enhancing trust.

Strengthening safeguards and accountability in the allocation of public funds and in emergency public procurement

The need to protect public health and ensure public service continuity has rendered public procurement a key priority for governments in developing their responses to the COVID-19 crisis.¹¹ The health emergency has prompted governments to make massive investments in R&D, and commit immense sums to the procurement of vaccines, treatments and diagnostics, both at the multilateral level (through the WHO ACT-Accelerator) and domestically. Although complete and accurate data are not yet available, governments of OECD countries have provided at least USD 13 billion in direct funding for R&D and building of manufacturing capacity for COVID-19 vaccines. This does not include additional billions allocated to advance purchase commitments for vaccines, and broader funding to prop up health systems, procure necessary supplies, and develop other health technologies to respond to the pandemic. Even larger sums – in the trillions of US dollars – have been allocated by governments to compensate for lost income and support struggling sectors of the economy. Such measures were taken very rapidly as the crisis unfolded in the first half of 2020.

Despite the rapid pace of the response, integrity and accountability safeguards must be observed when mobilising such exceptional public funds, to enhance trust and ensure that funds are allocated in the public's best interests. While the majority of OECD Governments had the necessary legal frameworks in place for emergency public procurement, they had to balance the need to procure large volumes of goods and services quickly, frequently from suppliers with whom they had not previously worked, and with the increased commercial and propriety risks associated with emergency procurement. In Canada, for example, emergency regulations allow direct procurement from non-prequalified suppliers (in the face of the pandemic, the government simply asked the private sector who could provide products such as facemasks, disinfectants, etc.). All decisions were documented, however, can be legally challenged, and are subject to audit. In the United States, the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020 stipulates that the allocation of public funds to research and development of vaccines, and products developed with certain funds must be made available at a "fair and reasonable" price.

While these rapid procurement activities secured unprecedented volumes of essential supplies, the use of direct awards meant absence of competition in procurement, which is a crucial aspect in maintaining citizens' and business' trust in these processes. Without competition in the procurement process, in order to maintain the integrity of the purchasing activities, public buyers need to provide clear documentation on how they have considered and managed potential conflicts of interest or bias in their procurement decisions

¹⁰ <https://globalanticorruptionblog.com/2020/10/26/corruption-and-the-COVID-19-vaccine-the-looming-problem-of-distribution/>; <https://www.oecd.org/coronavirus/policy-responses/public-integrity-for-an-effective-COVID-19-response-and-recovery-a5c35d8c>.

¹¹ <http://www.oecd.org/coronavirus/policy-responses/stocktaking-report-on-immediate-public-procurement-and-infrastructure-responses-to-COVID-19-248d0646/>.



and actions, publish their contract awards and contracts in a timely manner, and document due diligence checks carried out on suppliers and associated parties. The US Pandemic Response Accountability Committee, composed of independent inspectors, was created by the CARES Act to audit spending related to the response to COVID-19 to increase accountability and identify waste, and to investigate fraud and abuse in spending specifically related to the response to the coronavirus crisis.¹²

While the pandemic highlighted a number of procurement risks and associated mitigation measures, targeted efforts to increase a risk-based approach to public procurement existed prior to the crisis. Initially focusing on integrity threats, growing attention has been directed in recent years to tackle other risks that could significantly affect the outcome and impact of public procurement processes, including operational, financial, reputational, social and environmental and other contextual risks (OECD, 2019^[16]). The current exceptional circumstances of the pandemic also present an opportunity for international organisations and governments to permanently strengthen integrity and accountability safeguards and promote comprehensive risk management approaches within public procurement.

Promoting strong integrity standards in interactions between public officials and stakeholders

The second integrity issue in relation to COVID-19 vaccines relates to interactions between public officials and other actors. Stakeholders who participate in policy making processes, including representatives from the private sector and interest groups, can bring valuable insights to the policy debate. However, it is important to establish clear standards regarding the manner in which private interests influence and interact with policy makers, and to promote openness, integrity and fairness in order to maintain public trust. Otherwise there is a risk that some interests may have undue influence over the decision-making process and capture policies, to the detriment of the public interest.

A study of interest representation during COVID-19 found that lobbying activities increased during the crisis – especially concerning economic rescue packages – and that some actors enjoyed access advantages (Junk et al., 2020^[17]). Such an environment can favour stakeholders and sectoral interests with experienced and well-funded representatives,¹³ who already have access to key decision-makers and are able to sustain long-established relationships through phone calls, or other digital means.¹⁴

Recognising that using ethical principles to guide decision-making can enhance trust and solidarity and strengthen legitimacy and acceptability of measures to respond to the pandemic, in March 2020 the Irish Government developed an ethics framework for decision-making. The framework establishes ethical principles for decisions, and procedural values to guide the manner in which those decisions are made. Among the principles, fairness, for example, requires that resource allocation decisions are not made arbitrarily, and underscores that a fair decision is one that gives people an equal chance of benefiting from health care resources. Further, responsibility as a procedural value highlights that there should be an opportunity to revisit and revise decisions as new information becomes available, as well as mechanisms to address disputes and complaints. Additionally, in order to promote transparency and timely accountability in lobbying activities, the Office of the Commissioner of Lobbying of Canada ordered all

¹² <https://www.pandemicoversight.gov/>.

¹³ See, for example, Olson (2020^[57]) on corporate lobbying and conflicts of interest during the COVID-19 pandemic. Wouters et al. (2020^[58]) provide background on lobbying by the bio-pharmaceutical industry, which includes vaccine manufacturers.

¹⁴ <https://www.politico.eu/article/brussels-lobbying-goes-digital-because-of-coronavirus/>.



COVID-19 related activities to have digital tags, and included a keyword search capability in an online register of lobbyists, thereby facilitating timely scrutiny of the information by the public.¹⁵

Ensuring transparency and integrity of advisory bodies

Another element in building trust in vaccination strategies is ensuring transparency and integrity in special advisory bodies¹⁶ (such as scientific committees) (OECD, 2014_[18]). Many governments have established such entities to inform public decision-making in responding to the pandemic. There is some evidence that various industry sectors may engage with these bodies in order to influence regulatory processes, for example, by developing programmes “*ostensibly intended to tackle health problems arising from the products they manufacture or distribute*” (Mindell et al., 2012_[19]). For example, in the aftermath of the 2009 swine flu (A(H1N1) pandemic, scientific and public debates prompted accusations of commercial bias and that some governments and public institutions were misled into stockpiling a drug with limited efficacy. An analysis of how the Danish group of experts developed the plan to tackle the swine flu pandemic showed that they were lobbied by the industry directly and more subtly (Vilhelmsson and Mulinari, 2017_[20]). Recent investigations have shown that following reports of shortages in the United Kingdom, Spain, the Netherlands and Poland, the EU purchased and stockpiled a significant quantity of antivirals, despite limited evidence of their effectiveness (Hordijk and Patnaik, 2020_[21]). In general, advisory activities are excluded from influence frameworks. For example, only seven OECD countries made information publicly available on agendas, minutes and participants in advisory bodies in 2014, and in 2019 only 47% of OECD countries required public disclosure of the members of advisory bodies involved in regulatory processes at the national level (OECD, 2014_[18]).¹⁷ However, the European Commission Advisory Panel on COVID-19 is an example of a higher standard of transparency in the current pandemic. The group’s agenda and meeting reports are published online, thus supporting accountability to the public. In addition, minutes of meetings, participant submissions, and any external contributions received can be made available on request. The Advisory Committee of Immunization Practice (ACIP) in the United States, which develops recommendations on how to use vaccines, is another example of transparency. All discussions are streamed live and public comment is invited.¹⁸

More generally, some studies underline the positive role of “operational transparency” – when governments and public agencies disclose information regarding the way they work and the reasons for some decisions – in enhancing people’s trust in the processes and outcomes of public policies (Buell, 2019_[22]). Accordingly, raising awareness of the vaccine approval procedures followed by international and national regulatory bodies can contribute to enhancing trust in vaccines.

Fostering transparency and integrity in medical research

Lastly, governments need to ensure that information about, and results of research into treatments and vaccines are communicated transparently and comprehensively. In the COVID-19 vaccine development process several companies published their clinical trial protocols, but the results of key trials were initially

¹⁵ <https://lobbycanada.gc.ca/en/registration-and-compliance/COVID-19-emergency-funding-and-registration-requirements/>.

¹⁶ An advisory body or expert group refers to any committee, board, commission, council, conference, taskforce, or similar group, or any subcommittee or other subgroup thereof that provides governments with advice, expertise or recommendations. They are made up of public and/or private-sector members and/or representatives from civil society and may be put in place by the executive, legislative or judicial branches of government or government subdivisions.

¹⁷ <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>.

¹⁸ <https://www.cdc.gov/vaccines/acip/meetings/index.html>.



communicated in headlines and via press releases,¹⁹ with little detail, prompting speculation²⁰ prior to publication and peer review about the underlying data. In addition, to date the rapid authorisations of vaccines by stringent regulators have been made mainly under emergency protocols, potentially creating perceptions that the assessments involved less than usual rigour,²¹ or were based on preliminary or incomplete data²² (See Box 2 above on how regulatory authorisation was expedited while safeguarding safety standards). The transition of these products to full authorisation, the peer-reviewed publication both of the results to date and of long term follow-up of subjects in ongoing clinical trials, and complete transparency of post-marketing data from Phase IV trials, routinely-collected datasets, and active and passive pharmacovigilance, should be paramount.

This degree of transparency was not always the norm prior to the COVID-19 pandemic. Several studies have shown that bio-pharmaceutical industry-funded clinical research is often subject to significant publication bias, favouring studies with positive results, as well as cherry-picking of evidence and marketing spin. (Smith, 2005^[23]; Lundh et al., 2017^[24]). However, since 2015, the European Medicines Agency (EMA) has instituted a policy of increasing transparency, publishing all clinical trial data submitted in pharmaceutical companies' regulatory submissions and assessed by its Committee for Human Medicinal Products (CHMP). In addition, for each submission the EMA publishes a European public assessment report on its website, providing the CHMP assessment of the data. During the COVID-19 crisis, regulatory authorities also instituted 'exceptional transparency' measures in the assessment of COVID-19 vaccines. For example, the EMA has published key documents following vaccine authorisation, including the complete version of the risk management plan and the vaccine clinical trial data reviewed in support of the authorisation.²³

In addition to ensuring transparency of clinical trial data, it is critical to try to avoid, or where unavoidable, manage, conflicts of interest between the different parties (e.g. researchers, pharmaceutical companies, governments) involved in vaccine development, as well as to strengthen the independence of researchers through funding and oversight mechanisms that insulate them from political and economic pressures. To that end, transparency requirements, together with clear institutional policies on industry sponsorship and conflicts of interest, are needed to preserve research integrity and independence.

The US National Institutes of Health (NIH) maintains a database containing a registry of clinical trials where the public can access a list of clinical studies specifically related to COVID-19. The US Food and Drug Administration (FDA) requires scientists and organisations that provide inputs to their processes to disclose their revenue sources and funding (Bowers and Cohen, 2018^[25]). Additionally, professional and industry associations have developed voluntary measures. For example, the American Psychiatric Association published a policy in 2007 requiring individuals involved in clinical trials, or in the revision of diagnosis and treatment protocols for mental disorders, to disclose any relationships with industry within three calendar years of their appointment, with updates to be provided annually for the duration of their participation (Wheeler and Cosgrove, 2013^[26]). In 2016, the European Federation of Pharmaceutical Industries and

¹⁹ For example <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-conclude-phase-3-study-COVID-19-vaccine>.

²⁰ For example: <https://eu.usatoday.com/story/news/health/2020/11/09/pfizers-covid-vaccine-candidate-shows-90-effectiveness-early-test/6011925002/>.

²¹ For example: <https://www.nature.com/articles/d41586-020-03219-y>.

²² For example: <https://www.nature.com/articles/d41586-020-03441-8>.

²³ <https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-COVID-19/treatments-vaccines/COVID-19-vaccines-and-related-pages>.



Associations (EFPIA) implemented a voluntary code²⁴ similar to that of the Physician Payment Sunshine Act in the United States. The latter requires medical product manufacturers to disclose to the Centres for Medicare and Medicaid Services (CMS) any payments or other transfers of value made to physicians or teaching hospitals,²⁵ which are then published on a public website.²⁶

Institutional trust requires openness and community engagement

Open government refers to a culture of governance that promotes the principles of transparency, integrity, accountability, and stakeholder participation, in support of democracy and inclusive growth (OECD, 2017^[27]). Evidence from previous studies shows that in countries where low levels of openness were widely perceived by the public, increasing openness was a significant driver of institutional trust (OECD/KDI, 2018^[9]). In the context of the COVID-19 pandemic and vaccination campaigns, four actions are identified to ensure that government's actions are open to public scrutiny, and that public institutions engage with the population, especially those segments that are most hesitant to be vaccinated.

Proactively releasing timely information and data regarding vaccination strategies, modalities and accomplishments in disaggregated, user-friendly and open source formats

The COVID-19 pandemic has highlighted how a lack of clear information and timely data can cause uncertainty in decision-making and foster mistrust in the population. Ensuring the availability of timely and granular open source data on key issues, such as the number of people vaccinated, the number of doses administered, geographical coverage, and the number of people experiencing adverse reactions, will facilitate data analysis and dissemination in online trackers, news sites, etc.

Proactively releasing information that is up-to-date, reliable and easy to understand about procurement and funding of vaccines, in compliance with access to information laws, is also crucial for people outside government to have confidence in the effectiveness of government vaccination strategies and policies. However, supply contracts and the information therein contained, including delivery commitments, have generally remained confidential. Only very limited details about the procurement of vaccines were initially released by national authorities, with little or no disclosure of prices, delivery schedules and other contractual terms, or the financing of R&D, all of which are issues of public interest.

While some contracts were eventually published, these were heavily redacted, and only released after repeated requests by civil society organisations, or following disputes between governments and manufacturers over the timing, magnitude and nature of delivery commitments.²⁷ The absence of reliable and readily accessible information can leave much scope for speculation, false claims and controversies. Ultimately, it can also lead to an erosion of trust if there is a perception among the public, whether justified or not, that information is deliberately being obscured or withheld in order to evade accountability. The proactive release of all non-commercially sensitive details of contracts with vaccine manufacturers, on the

²⁴ <https://www.efpia.eu/relationships-code/the-efpia-code/>.

²⁵ The Physician Payments Sunshine Act (PPSA) is also known as section 6 002 of the Affordable Care Act (ACA) of 2010.

²⁶ <https://www.cms.gov/openpayments/>.

²⁷ The dispute between the EU and AstraZeneca on the timing and volume of vaccine deliveries is a case in point, though the eventual release of the heavily redacted contract resolved little of the conjecture surrounding the terms of the deal. The contract refers repeatedly to a requirement that AstraZeneca makes its "best reasonable effort" to manufacture and deliver vaccine doses according to the contract's schedule, prompting speculation as to whether in its negotiations the EU may have traded away certainty for price.



other hand, could not only help to build trust, but also reduce the burden that governments and the judiciary system are facing with increased volumes of access to information requests (UNESCO, 2020^[28]).

Enhancing transparent and coherent public communication to address misinformation and the 'infodemic'

Since its onset, the COVID-19 pandemic has been accompanied by an 'infodemic' (WHO, 2020^[29]) – an overabundance of information, whether accurate or not. Addressing it with determination is also crucial to enhancing trust.

Most of the problematic content circulated online (generally through social media) is based on manipulations of facts and unproven scientific theories. Scope for the dissemination of such content was opened by governments who, faced with scant and evolving scientific evidence, did not communicate decisively at the start of the pandemic (OECD, 2020^[30]). The mere fact of being exposed to 'science in the making', with evolving knowledge, and being exposed to debates in disciplines (e.g. epidemiology) that most people were not exposed to before the pandemic, can contribute to increase vaccine hesitancy due to lack of understanding. Cognitive overload is also a problem. As new information is being generated and disseminated at a fast pace, people can be overwhelmed and left unable to distil the most important principles that could guide their behaviour.

Social media platform algorithms tend to prompt users to consume content that is similar to what they have previously viewed, which may help create echo chambers. In non-moderated social media, even though the volume of content about COVID-19 from unreliable sources was relatively smaller than the content from reliable sources, the volume of reactions (e.g. likes, comments) to the former was larger (Cinelli et al., 2020^[31]). Several social media companies have reinforced their moderation policies, including removing misinformation²⁸ in 2020. Nevertheless, the majority of them do not have clear definitions of the types of content that need to be removed,²⁹ and few of them report how they perform content moderation or how users can contribute to it. More transparency would be needed regarding the activities of lobbyists and other actors seeking to influence national affairs on social media. The majority of governments have not established definitions of disinformation and misinformation, which would enhance a consistent content moderation policy across media platforms (OECD, forthcoming^[11]).

Effective and authoritative public communication can contribute to increased trust. Governments need to ensure that the public is able to access timely and accurate information from trusted sources about why vaccination is the only realistic means of achieving herd immunity in the medium term, and which is essential for the safe reopening of our societies and economies. For example, Belgium has delegated the task of delivering daily briefs to citizens to its crisis centre and scientific experts.³⁰ Governments can also learn from each other through sharing good communication practices. As part of its G7 Presidency, the UK Government, intends to launch a Global Vaccine Confidence Campaign to address health misinformation and build vaccine confidence through a comprehensive approach (Box 4).

²⁸ For example, Facebook published a policy on promoting accurate information across its platforms: <https://about.fb.com/news/2020/12/coronavirus/#misinformation-update>.

²⁹ A recent report by the OECD on approaches to terrorist and violent extremist content (TVEC) in online content-sharing services shows that the majority of platforms ban such content to a certain extent, the majority do not have a definition of TVEC and only five companies produce reports about how they moderate and remove such content (OECD, 2020^[60]).

³⁰ <https://www.ft.com/content/3d24b654-187e-4270-b051-acfc350498d2>.



Box 4. G7 Global Vaccine Confidence Campaign

As part of its G7 presidency, the United Kingdom is planning to launch a Global Vaccine Confidence Campaign together with G7 and partner countries, including the World Health Organization (WHO), OECD, and other international organisations as well as Cambridge University, Harvard University, and the London School of Hygiene and Tropical Medicine. The aim will be to raise vaccination confidence and build resilience of global audiences to vaccine misinformation. The campaign will rely on multiple channels and will be delivered together with G7 partners and external stakeholders.

The campaign will seek the endorsement of G7 countries, as well as an international network of government communicators, of evidence-based global standards to build confidence in public communication and address misinformation, which will be developed in partnership with the OECD and the University of Cambridge. Some of the findings will highlight the importance of informing rather than persuading (given that people are less receptive when they believe a communicator holds a hidden agenda), sharing all relevant pieces of information (not only those that fit with a narrative), disclosing uncertainties, and being open about the quality of the evidence supporting a claim, for example reporting survey sample sizes (Blastland et al., 2020^[32]).

The principles developed by the OECD will be informed by a range of practices covering specific communication activities; the enabling institution that define the organisation and co-ordination of the communication function within and outside of government; and the wider enabling ecosystem that supports timely and effective sharing of information and data.

Source: Blastland et al. (2020^[32]) "Five rules for evidence communication", *Nature*, Vol 587, pp. 362-364. <https://doi.org/10.1038/d41586-020-03189-1>.

However, governments should also be open about residual uncertainties when communicating, given that omitting important pieces of information can foster distrust among the public once new evidence becomes available. Indeed, recent research shows that communicating uncertainty in news articles only produces a small decrease in trust in the numbers being reported and in the source of information (van der Bles et al., 202^[33]).

Efforts to increase people's ability to detect misinformation and their media and scientific literacy can contribute to reducing the uncertainty that drives vaccine hesitancy. Some countries, (e.g. Spain³¹) have begun monitoring disinformation campaigns in a systematic way, and have implemented action plans or laws in response. France, for example, passed a law against the manipulation of information in 2018.³² Other approaches include toolkits to help citizens detect false information. Other countries have created educational materials about disinformation. The Danish health authority has published a video on its website providing guidance on how to detect fake news, including, for example, by verifying whether it comes from an authoritative source and whether it is published in multiple outlets.³³ 'Pre-bunking' (also known as 'social inoculation') – exposing audiences to small doses of misinformation to explain their flawed reasoning – can help hesitant people overcome their fears about the COVID-19 vaccine (OECD, 2020^[30]). Together with the University of Cambridge, the UK Government has developed "Go Viral!",³⁴ a game to

³¹ <https://boe.es/boe/dias/2020/11/05/pdfs/BOE-A-2020-13663.pdf#BOEn>.

³² <https://www.gouvernement.fr/action/contre-la-manipulation-de-l-information>.

³³ <https://www.sst.dk/en/english/corona-eng/vaccination-against-COVID-19>.

³⁴ <https://www.goviralgame.com/>.



expose people to and educate them about the techniques used for spreading misinformation on social media.

Effective communication also entails sound knowledge of the various audiences (e.g. media consumption, languages spoken), partnerships with community leaders and subnational governments to overcome barriers to information, and empathy (OECD, 2020^[30]; OECD, 2020^[34]). In many countries ethnic minorities are reported to be more vaccine hesitant. Moreover, a recent study showed that, in Ireland and the United Kingdom, population groups that are resistant to taking vaccines against COVID-19 resort to social media as a source of information more than vaccine-accepting segments, and have lower levels of trust in information coming from news agencies, government agencies and health care professionals. People who are unwilling to be vaccinated were also found to hold stronger religious beliefs (Murphy et al., 2021^[35]).

Various strategies can be effective in stimulating demand for vaccination among hesitant population groups (see, for example, Evans and French (2021^[36])), many of which are already being used by some governments in OECD countries. In Israel, the Ministry of Health launched a public relations campaign to encourage vaccination among ultra-orthodox Jewish communities. Religious leaders of some of these groups communicated the importance of being vaccinated to their members, including sharing pictures of their own vaccinations. In the United Kingdom, the Department for Digital, Culture, Media and Sport launched a campaign to tackle false vaccine information shared amongst ethnic minority communities, providing a toolkit with content designed to be shared via WhatsApp and Facebook community groups, as well as Twitter, YouTube and Instagram. The campaign is fronted by trusted local community figures such as religious leaders, clinicians and others who provide simple tips on how to spot misinformation and what to do to stop its spread in short, shareable videos.³⁵ Box 5 provides other examples of good practices in public communications by governments.

Box 5. Good practices in public communications during the COVID-19 pandemic

Leveraging the use of behavioural science to increase vaccine confidence in Canada

Impact Canada led the implementation of the World Health Organization (WHO) Behavioural Insights data collection tool, which was applied in several waves, surveying around 2000 Canadians on key behavioural areas including public risk perceptions, information sources and vaccine confidence. The findings revealed that citizens who trust the government correspond to those who trust vaccines.

In addition, Impact Canada analysed over 125 sources of information to gain insights on successful COVID-19 international communication campaigns and policy responses. The results showed that demonstrating efficacy, evoking emotional responses, emphasising collective action and adaptiveness, making social norms salient, and addressing pandemic fatigue were effective ways of communicating.

Chatbots and call-contact centre in Estonia and Slovenia

Estonia's Communication Unit established an automated Chabot with nearly a thousand questions related to the COVID-19 crisis on multiple aspects, and is embedded in several public websites. In an effort to cater to minorities, the content is also translated into Russian and English. Slovenia's government set up a call-contact centre for citizens seeking information and answers, as well allowing them to express their fears and worries while talking to someone knowledgeable, trustworthy and understanding. The calls are answered by medical students at the University of Ljubljana, under the professional supervision of doctors at the Clinic for Infectious Diseases and Febrile Conditions who receive training and updated information to respond to these calls.

³⁵ <https://dcmsblog.uk/check-before-you-share-toolkit/>.



The Slovenian National Institute of Public Health also created a user friendly website (<https://www.cepimose.si/>), which provides information regarding vaccines, including about how they were developed and approved, about vaccination in general, and an FAQ section. It also features an interactive tool with vaccination data and other health advice.

Partnerships with influencers in Finland and Korea

Finland's Prime Minister's Office, in collaboration with the National Emergency Supply Agency and the private sector partnered with social media influencers to provide clear and relevant information for younger audiences that can be harder to reach through traditional channels. Following a comprehensive influencer mapping, over 1 800 Finnish influencers helped the government share reliable information on health measures to empower and engage citizens in the fight against COVID-19. A follow-up survey conducted revealed that: "94% of followers felt they got enough information and instructions about coronavirus via influencers with the over half saying influencer communication affected their behaviour" and "97% of respondents consider the COVID-19 information shared by influencers reliable".

During the pandemic, the Korean Ministry of Health and Welfare launched the "Thanks Challenge" on Instagram, with the aim of expanding the reach of awareness raising efforts around COVID-19 measures. The initiative invited citizens to share a picture of themselves at home to promote social distancing and "stay at home" measures. Celebrities and influencers also took part in the campaign and helped the government disseminate official information about the disease and its symptoms.

Targeted messaging through social media in Italy

During the second wave of the pandemic, a key priority was to address COVID-related messages to selected audiences that appeared to be the most reluctant to follow the rules set by the Italian Government in order to limit the spread of the virus: wear a mask, maintain social distancing and wash your hands. As such, the Presidency of the Council of Ministers implemented a multi-platform campaign on major social media channels focused on these three elements, with ad-hoc messages for selected audiences such as youth, or small and medium business owners. Studies concluded that a 3-week campaign on Facebook and Instagram led to a 2.4 percentage point increase in remembering the advertising campaign and a 1.5 point increase in compliance with the three rules.

Source: OECD (2020_[37]), The COVID-19 crisis: A catalyst for government transformation?, <https://doi.org/10.1787/1d0c0788-en>;
 OECD (2020_[34]), Building resilience to the COVID-19 pandemic: the role of centres of government, <https://doi.org/10.1787/883d2961-en>;
 Media Pool (2020), Combating coronavirus together by sharing reliable information, available online at <https://pinghelsinki.fi/en/combating-coronavirus-together-by-sharing-reliable-information>;
 World Bank (2020), Co-ordinating pandemic responses from the centre of government: Why country context matters, <https://blogs.worldbank.org/governance/co-ordinating-pandemic-responses-centre-government-why-country-context-matters>.

The OECD has facilitated a number of in-depth conversations on the role of communication and government efforts to build trust in vaccines, with an OECD Forum Series event³⁶ exploring the importance of effective communication to tackle the "infodemic" and a high-level event³⁷ taking stock the challenges posed by misinformation in the covid context and providing an opportunity for participants to share experiences and communication good practices.

³⁶ <https://oecd-events.org/public-health-and-misinformation>.

³⁷ <https://oecd.ukgovernment.live/schedule>.



Engaging the public when developing vaccination strategies

Governments need to listen to people's concerns and the reasons why they do not trust the approved vaccines against COVID-19, and cater to their need for reassurance. While vaccine hesitancy is characterised by mistrust in experts (Stecula, Kuru and Jamieson, 2020^[38]), this is unrelated to their competence or technical knowledge of the subject, but rather to perceptions that experts do not act in good faith (Eiser et al., 2009^[39]). For this reason, one-way communication about the benefits of vaccination will not suffice in convincing people to modify their views. Instead, allowing vaccine-hesitant people to express their views, expressing empathy, and dealing with resistance without antagonism, are effective ways of promoting behaviour change (Gagneur et al., 2018^[40]). Following this approach, the Economic, Social and Environmental Council of France produced a website³⁸ to ask citizens about the reasons why they are or are not willing to be vaccinated.

To sustain or restore confidence in vaccines, a thorough understanding is needed of each citizen's specific vaccine concerns, historical experiences, religious or political affiliation, and socio-economic status. For example, in the United States, African-Americans are less willing to be vaccinated than other groups (Reiter, Pennell and Katz, 2020^[41]). This distrust may be linked to personal or vicarious, negative experiences with the health care system and other public services, as well as current and historical abuses of power (e.g. lack of informed consent) towards these groups. Evidence shows that African-Americans tend to experience lower communication quality (such as information-giving and participatory decision-making) with physicians, especially with non-African American physicians. (Johnson Shen et al., 2018^[42]). Underprivileged groups are also more exposed to COVID-19 because of their living conditions and/or occupations (which may prevent them from isolating at home or sustaining effective social distancing in the workplace), and have less access to safety nets should they become severely ill (OECD, 2020^[43]). More generally, these population groups also tend to have poorer access to health care, which contributes to the limited impact of existing recommendations. Another example is low MMR coverage in minority populations of London boroughs.³⁹ All of these factors combined contribute to scepticism about government recommendations. This calls specifically for engagement of the communities in the development and implementation of public health strategies addressing their needs as well as for broadening of all of the governmental services involved.

Clearly explained and communicated decisions about vaccination strategies are also necessary to increase vaccination acceptance. Demand for COVID-19 vaccines will continue to exceed supply for several months (OECD, 2021^[44]). Many countries must therefore prioritise the administration of limited vaccine stocks. Clarity in how these decisions are made is essential to gaining the public's trust in government action. For instance, health workers and workers in essential services are particularly exposed as they are at the 'frontline' of the fight against the pandemic. Also, the elderly and people with co-morbidities have higher probability of developing severe forms of the disease, and these groups have seen much higher mortality rates than the rest of the population. It is widely recognised that immunising these groups first would contribute to alleviating pressure on health systems. Communication efforts on why these two groups are in almost all countries seen as priority population would facilitate acceptance and foster trust in intentions.

Successful vaccination campaigns require extensive and well-managed community engagement. All population groups need to be involved in the design and implementation of grassroots initiatives that will build trust in vaccines, and strengthen relationships between communities and their governments, particularly for marginalised or underserved segments of the population.⁴⁰ In the case of COVID-19, this requires a specific emphasis on addressing issues of concern regarding the speed of development and of approval of the vaccines (see Box 2).

³⁸ <https://participez.lecese.fr/>.

³⁹ <https://www.london.gov.uk/press-releases/assembly/concern-about-londons-low-vaccination-rate>.

⁴⁰ <https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccination-community-engagement-2021.1>.



Governments can partner with, and support community organisations in order to leverage existing structures to vaccinate the population, achieve a clearer understanding of barriers and enablers to vaccination for specific communities, and empower community leaders, who are better positioned to instil confidence in vaccines. Employers (Milkman et al., 2011^[45]), co-workers (Chapman and Coups, 1999^[46]), and family members and friends (Takahashi et al., 2003^[47]) play an important role in influenza vaccination uptake in adults. Physician recommendation has also consistently shown to increase vaccination rates for other diseases (Brewer and Fazekas, 2007^[48]). The Rapid Community Assessment, developed by the American Centre for Disease Control and Prevention, provides health officials with five-steps guidance to assess what communities think about COVID-19 vaccines, identify community leaders and trusted messengers, and prioritise potential intervention strategies to increase confidence in and uptake of COVID-19 vaccine (Centers for Disease Control and Prevention, 2021^[49]).

When done appropriately, community engagement increases the likelihood that communities lead on issues that affect them, use services, and build resilience. Community engagement expands the influence of local actors, facilitates access to and understanding of information, enables and promotes the right to provide feedback on the received services, and builds on existing local capacities. In the United States, recent pilot programmes in California offer relevant lessons in the value of community engagement (Mondal, 2021^[50]). For example, a longitudinal cohort study that began in 1999 as an examination of the effects of pesticide use on farmworkers across California's Central Valley recently shifted to investigating the impacts of COVID-19. In its latest report, researchers found that in October 2021, 20% were SARS-CoV-2 antibody positive, but as many as half expressed reluctance to accept a COVID-19 vaccine, as they did not trust the government. Investigators quickly realised that building trust in vaccination among the cohort would require inclusive community participation.

There is an expectation that the more the public are involved in decisions regarding the approval and delivery of vaccines, the more likely they will accept vaccination. Deliberative democracy⁴¹ is gaining traction as a way of addressing pressing policy problems, in areas such as urban planning, health and environment (OECD, 2020^[51]). These processes are generally successful when they are asked to address moral dilemmas (such as whether to implement 'vaccine passports') and given sufficient time to weigh arguments and evidence. For example, in the case of Scotland, a citizens' panel was set up to evaluate the governments' response to COVID-19, weighing evidence from experts in fields ranging from epidemiology to law and economy, and provide a report to the Parliament's COVID-19 committee.⁴²

Consulting and engaging citizens and local communities will also help to develop the vaccination strategy most adapted to the local context, thus overcoming some of the logistical challenges and vaccination hesitancy. For example, Canada's COVID-19 immunisation plan involves collaboration between the Federal Government; the provinces; the territories; First Nations, Inuit and Métis leaders; and municipal governments, among others.⁴³ The United Kingdom's COVID-19 vaccine delivery plan takes a local, community-led approach, with partnerships between national government, local authorities, national health system, local directors of public health, local health and well-being boards, voluntary, and community and faith sectors.⁴⁴

⁴¹ By representative deliberative democratic processes it is meant processes that involve a group of randomly selected people, broadly representative of society, who are provided with the time and evidence to deliberate on a policy issue and propose collective, informed recommendations to public decision makers.

⁴² <https://www.parliament.scot/newsandmediacentre/116952.aspx>.

⁴³ <https://www.canada.ca/content/dam/phac-aspc/documents/services/diseases/2019-novel-coronavirus-infection/canadas-reponse/canadas-COVID-19-immunisation-plan-en.pdf>.

⁴⁴ <https://www.gov.uk/government/publications/COVID-19-vaccination-uptake-plan/uk-COVID-19-vaccine-uptake-plan>.



Fairness as a foundation for trust

Fairness as a dimension of public trust refers to the consistent treatment of citizens and business by governments, and the pursuit of progress for the benefit of society as a whole. As such it is a hallmark of human behaviour that underlies social cohesion.⁴⁵ Individuals or organisations that feel unfairly treated may decide not to co-operate even if the consequences are not in their interest (Giacalone and Greenberg, 1997^[52]); (Lind et al., 2000^[53]). Conversely, when citizens feel fairly treated they are generally more willing to incur costs for the greater good – provided they feel confident that others are doing the same (Lunn, 2014^[54]). Whether individuals or organisations, including governments, are perceived as behaving fairly is thus a key determinant of their trustworthiness. COVID-19 vaccines are perceived to be goods that, once available to most people, will allow an eventual return to some level of normalcy. People therefore expect that vaccines and their benefits be distributed fairly. Specific to COVID-19 vaccines, there are two dimensions of fairness to be addressed: first, fairness in allocation within countries, and second, fairness in access globally.

Because of vaccine manufacturing constraints, COVID-19 vaccination programmes are being done in phases, with populations prioritised according to their risk and with highest priority accorded to frontline health workers, the elderly, and others at risk of more severe disease in most countries. In stratifying populations governments must ensure they manage public expectations and explain not only why it is fair but also why prioritising specific population groups is both efficient and essential to bringing the acute phase of the pandemic under control.

Ensuring that the vaccine is accessible to everyone and that no geographic, cultural, social, ethnic or financial factors lead to exclusion or delay in vaccinating some groups, are other key elements of fairness that will contribute to increase trust in vaccines and immunisation programmes. Communities must be engaged using culturally and linguistically inclusive approaches to disseminate key messages. For example, recent data from the United Kingdom show that willingness to be vaccinated among minority ethnic communities is significantly lower than in the broader population (Robertson, 2021^[55]; ONS, 2021^[56]). In the United States, 23 states currently publish vaccination statistics disaggregated by race with uneven results. In Virginia, for example, African-Americans represent 19% of residents (and account for 21% of the state's COVID-19 cases and 24% of its deaths), but have received only 12% of vaccines administered in the state thus far.⁴⁶ But some states, such as Colorado, are taking actions to increase equitable distribution, with the objective of reaching racial and ethnic minorities and rural residents who typically have poorer access to health care. The authorities plan to send 40% of their vaccine doses to local public health agencies and safety net clinics, and 15% to “equity clinics” located in underserved areas.⁴⁷ California took similar steps, announcing that 40% of its vaccine allocation would be directed to 446 communities in the bottom quartile of the state's Healthy Places Index.⁴⁸

For minorities, among whom trust has been eroded by discrimination, under-representation in health research and vaccine trials, and negative experiences within culturally insensitive health care systems, mistrust is likely to be amplified. In order to address this issue in the United Kingdom, local NHS authorities have received extra financial support to boost uptake of COVID-19 vaccine in ethnic minorities and

⁴⁵ See, for example, McAuliffe et al. (2017^[59]) and <https://www.psychologicalscience.org/news/releases/are-humans-hardwired-for-fairness.html>.

⁴⁶ <https://time.com/5936135/covid-race-data/>

⁴⁷ <https://www.axios.com/colorado-covid-vaccine-distribution-equity-d38a8ea8-ebc3-4e27-a987-5521236ff504.html>.

⁴⁸ <https://www.sacbee.com/news/equity-lab/article249731623.html>.



marginalised and underserved communities, including through targeted community engagement.⁴⁹ In addition, the Community Champions Program allocated 23 million GBP to councils and voluntary groups to expand COVID communications with at-risk groups.⁵⁰ The pandemic has also severely affected people experiencing homelessness, for whom isolating, regular hand-washing, and social distancing are all the more challenging. For this reason, Denmark has begun to include them in its priority populations.⁵¹ Similar actions are being taken by municipalities in the US city of Detroit, and in parts of Montreal in Canada. In Austria and the United Kingdom, people experiencing homelessness are now part of priority groups who benefit from tailored vaccination invitations⁵².

However, in addition to considerations of fairness in prioritising certain population groups within countries, as noted above, governments also need to explain why it makes sense to distribute vaccines fairly at a global level. A needs-based global allocation rather than “our country first” approaches are not only fairer, but also the most efficient way to bring the pandemic under control, reopen societies, and rebuild the global economy (OECD, 2021^[44]). Flows of people and goods from one country to another cannot be fully interrupted, and will continue to be conduits for the transmission of infection. Furthermore, as long as active transmission continues somewhere in the world, the risk of emergence of a viral variants will persist, potentially jeopardising the entire global immunisation effort.

Accordingly, putting in place mechanisms to ensure that vaccines reach all countries, and prioritising their administration in locations of greatest need, will be important to achieving a global recovery (OECD, 2021^[44]). Explaining this rationale effectively – that vaccine nationalism will ultimately be self-defeating as it will hinder the revival of the global economy, and that it is not only a matter of fairness, but also a question of efficiency in bringing about the end of the pandemic – will be critical in maintaining trust, particularly where governments choose to donate vaccine or re-prioritise access.

References

- Bish, A. et al. (2011), “Factors associated with uptake of vaccination against pandemic influenza: A systematic review”, *Vaccine*, Vol. 29/38, pp. 6472-6484, <http://dx.doi.org/10.1016/j.vaccine.2011.06.107>. [5]
- Blastland, M. et al. (2020), “Five rules for evidence communication”, *Nature*, Vol. 587/7834, pp. 362-364, <http://dx.doi.org/10.1038/d41586-020-03189-1>. [32]
- Bowers, S. and D. Cohen (2018), “How lobbying blocked European safety checks for dangerous medical implants”, *BMJ* 363, <https://doi.org/10.1136/bmj.k4999>. [25]
- Brewer, N. and K. Fazekas (2007), “Predictors of HPV vaccine acceptability: A theory-informed, systematic review”, *Preventive Medicine*, Vol. 45/2-3, pp. 107-114, <http://dx.doi.org/10.1016/j.ypmed.2007.05.013>. [48]

⁴⁹ See https://www.bmj.com/content/372/bmj.n580?int_source=trendmd&int_medium=cpc&int_campaign=usage-042019 and <https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2021/02/C1217-supporting-ccgs-to-address-vaccine-inequalities-next-steps.pdf>.

⁵⁰ See <https://www.gov.uk/government/news/community-champions-to-give-COVID-19-vaccine-advice-and-boost-take-up>.

⁵¹ <https://sco-op.me/denmark-homeless-COVID-19-vaccination/>.

⁵² <https://www.gov.uk/government/news/jcvi-advises-prioritising-homeless-people-and-rough-sleepers-for-COVID-19-vaccine>.



- Buell, R. (2019), *Operational Transparency*, <https://hbr.org/2019/03/operational-transparency>. [22]
- Centers for Disease Control and Prevention (2021), *Rapid Community Assessment Guide: Understand your community's needs regarding COVID-19 vaccines*, <https://www.cdc.gov/vaccines/covid-19/vaccinate-with-confidence/rca-guide/>. [49]
- Chapman, G. and E. Coups (1999), "Predictors of Influenza Vaccine Acceptance among Healthy Adults", *Preventive Medicine*, Vol. 29/4, pp. 249-262, <http://dx.doi.org/10.1006/pmed.1999.0535>. [46]
- Cinelli, M. et al. (2020), "The COVID-19 social media infodemic", *Scientific Reports*, Vol. 10/16598, <http://dx.doi.org/doi.org/10.1038/s41598-020-73510-5>. [31]
- de Figueredo, A. et al. (2020), "Mapping global trends in vaccine confidence and investigating barriers to vaccine uptake: a large-scale retrospective temporal modelling study", *The Lancet*, Vol. 396/10255, pp. 898-908, [http://dx.doi.org/10.1016/S0140-6736\(20\)31558-0](http://dx.doi.org/10.1016/S0140-6736(20)31558-0). [2]
- ECDC (2020), *Overview of COVID-19 vaccination strategies and vaccine deployment plans in the EU/EEA and the UK*, <https://www.ecdc.europa.eu/sites/default/files/documents/Overview-of-EU-EEA-UK-vaccination-deployment-plans.pdf>. [12]
- Eiser, J. et al. (2009), "'Trust me, I'm a Scientist (Not a Developer)": Perceived Expertise and Motives as Predictors of Trust in Assessment of Risk from Contaminated Land", *Risk Analysis*, Vol. 29/2, <http://dx.doi.org/10.1111/j.1539-6924.2008.01131.x>. [39]
- EMA (2020), *COVID-19 vaccines: development, evaluation, approval and monitoring*, <https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19/treatments-vaccines/covid-19-vaccines-development-evaluation-approval-monitoring>. [10]
- Evans, W. and J. French (2021), "Demand Creation for COVID-19 Vaccination: Overcoming Vaccine Hesitancy through Social Marketing", *Vaccines*, Vol. 9/4, p. 319, <http://dx.doi.org/10.3390/vaccines9040319>. [36]
- Gagneur, A. et al. (2018), "Promoting Vaccination at Birth Using Motivational Interviewing Techniques Improves Vaccine Intention: The PromoVac Strategy", *Journal of Infectious Diseases and Therapy*, Vol. 6/5, pp. 1–7, <http://dx.doi.org/10.4172/2332-0877.1000379>. [40]
- Giacalone, R. and J. Greenberg (1997), *Antisocial behavior in organizations*, Sage Publications. [52]
- Halabi, S., A. Heinrich and S. Omer (2020), "No-Fault Compensation for Vaccine Injury — The Other Side of Equitable Access to Covid-19 Vaccines", *New England Journal of Medicine*, Vol. 383/23, p. e125, <http://dx.doi.org/10.1056/nejmp2030600>. [14]
- Hordijk, L. and P. Patnaik (2020), "Covid-19: EU countries spent over €220m stockpiling remdesivir despite lack of effectiveness, finds investigation", *BMJ*, p. m4749, <http://dx.doi.org/10.1136/bmj.m4749>. [21]
- Ipsos (2021), *Global Attitudes on a COVID-19 Vaccine: Ipsos survey for The World Economic Forum*, https://www.ipsos.com/sites/default/files/ct/news/documents/2021-03/global-attitudes-on-a-covid-19-vaccine-march-2021-report_.pdf. [3]



- Johnson Shen, M. et al. (2018), “The Effects of Race and Racial Concordance on Patient-Physician Communication: A Systematic Review of the Literature”, *Journal of racial and ethnic health disparities* 5, pp. 117-140, <http://dx.doi.org/10.1007/s40615-017-0350-4>. [42]
- Junk, W. et al. (2020), *Interest Representation during the Corona Virus Crisis: Results from the European Union and Nine European Countries. Summary Report*, University of Copenhagen, University of Amsterdam, Trinity College Amsterdam, https://61b80c4f-58c1-4b9d-bce6-c58106af2ef4.filesusr.com/ugd/9a0cb4_dda8dac6e4e04e7fa88d30caab8b95a3.pdf (accessed on 21 December 2020). [17]
- Kantar (2021), *COVID-19 vaccine faces an increasingly hesitant public*, <https://www.kantar.com/inspiration/coronavirus/covid-19-vaccine-faces-an-increasingly-hesitant-public>. [4]
- Lind, E. et al. (2000), “The winding road from employee to complainant: Situational and psychological determinants of wrongful-termination claims”, *Administrative science quarterly*, Vol. 45/3, pp. 557-590, <http://dx.doi.org/10.2307/2667109>. [53]
- Lundh, A. et al. (2017), “Industry sponsorship and research outcome”, in Lundh, A. (ed.), *Cochrane Database of Systematic Reviews*, John Wiley & Sons, Ltd, <http://dx.doi.org/10.1002/14651858.MR000033.pub3>. [24]
- Lunn, P. (2014), *Regulatory Policy and Behavioural Economics*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264207851-en>. [54]
- McAuliffe, K. et al. (2017), “The developmental foundations of human fairness”, *Nature Human Behaviour*, Vol. 1/2, <http://dx.doi.org/10.1038/s41562-016-0042>. [59]
- Meppelinka, C. et al. (2019), ““I was Right about Vaccination”: Confirmation Bias and Health Literacy in Online Health Information Seeking”, *Journal of Health Communication*, Vol. 24/2, pp. 129-140, <http://dx.doi.org/10.1080/10810730.2019.1583701>. [11]
- Milkman, K. et al. (2011), “Using implementation intentions prompts to enhance influenza vaccination rates”, *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 108/26, pp. 10415-10420, <http://dx.doi.org/10.1073/pnas.1103170108>. [45]
- Mindell, J. et al. (2012), “All in this together: the corporate capture of public health”, *BMJ* 345, <https://doi.org/10.1136/bmj.e8082>. [19]
- Mondal, A. (2021), “The importance of community engagement on COVID-19 vaccination strategy: Lessons from two California pilot programs”, *EClinicalMedicine*, Vol. 32, p. 100754, <http://dx.doi.org/10.1016/j.eclinm.2021.100754>. [50]
- Murphy, J. et al. (2021), “Psychological characteristics associated with COVID-19 vaccine hesitancy and resistance in Ireland and the United Kingdom”, *Nature Communications*, Vol. 12/29, pp. 12-29, <http://dx.doi.org/10.1038/s41467-020-20226-9>. [35]
- Murtin, F. et al. (2018), “Trust and its determinants: Evidence from the Trustlab experiment”, *OECD Statistics Working Papers*, No. 2018/2, OECD Publishing, Paris, <https://dx.doi.org/10.1787/869ef2ec-en>. [8]
- National Academies of Sciences, Engineering, and Medicine (2020), *Framework for Equitable Allocation of COVID-19 Vaccine*, The National Academies Press, <https://doi.org/10.17226/25917>. [13]



- OECD (2021), "Access to COVID-19 vaccines: Global approaches in a global crisis", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, <https://doi.org/10.1787/c6a18370-en>. [44]
- OECD (2020), "Building resilience to the Covid-19 pandemic: the role of centres of government", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, <https://doi.org/10.1787/883d2961-en>. [34]
- OECD (2020), "COVID-19: Protecting people and societies", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, <https://doi.org/10.1787/e5c9de1a-en>. [43]
- OECD (2020), "Current approaches to terrorist and violent extremist content among the global top 50 online content-sharing services", *OECD Digital Economy Papers*, Vol. 296, <http://dx.doi.org/10.1787/68058b95-en>. [60]
- OECD (2020), *Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave*, OECD Publishing, Paris, <https://doi.org/10.1787/339306da-en>. [51]
- OECD (2020), "The Covid-19 crisis: A catalyst for government transformation?", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, <https://doi.org/10.1787/1d0c0788-en>. [37]
- OECD (2020), "Transparency, communication and trust: The role of public communication in responding to the wave of disinformation about the new coronavirus", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, <https://doi.org/10.1787/bef7ad6e-en>. [30]
- OECD (2019), *Government at a Glance 2019*, OECD Publishing, <http://dx.doi.org/10.1787/8ccf5c38-en>. [7]
- OECD (2019), *Reforming Public Procurement: Progress in Implementing the 2015 OECD Recommendation*, OECD Public Governance Reviews, OECD Publishing, Paris, <https://dx.doi.org/10.1787/1de41738-en>. [16]
- OECD (2017), *OECD Recommendation of the Council on Open Government*, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0438> (accessed on 12 March 2021). [27]
- OECD (2017), *Trust and Public Policy: How Better Governance Can Help Rebuild Public Trust*, OECD Public Governance Reviews, OECD Publishing, Paris, <https://doi.org/10.1787/9789264268920-en>. [6]
- OECD (2014), *Lobbyists, Governments and Public Trust, Volume 3: Implementing the OECD Principles for Transparency and Integrity in Lobbying*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264214224-en>. [18]
- OECD (forthcoming), *Government at a Glance 2021*, OECD Publishing, Paris. [1]
- OECD/KDI (2018), *Understanding the Drivers of Trust in Government Institutions in Korea*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264308992-en>. [9]
- Olson, A. et al. (2020), *Lobbying Expenditures of the Health Sector During the COVID-19 Pandemic*, Springer, <http://dx.doi.org/10.1007/s11606-020-06085-6>. [57]



- ONS (2021), *Coronavirus and vaccine hesitancy, Great Britain*, [56]
<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/datasets/coronavirusandvaccinehesitancygreatbritain>.
- Reiter, P., M. Pennell and M. Katz (2020), "Acceptability of a COVID-19 vaccine among adults in the United States: How many people would get vaccinated?", *Vaccine*, Vol. 38/42, pp. 6500-6507, <http://dx.doi.org/10.1016/j.vaccine.2020.08.043>. [41]
- Robertson, E. (2021), "Predictors of COVID-19 vaccine hesitancy in the UK Household Longitudinal Study", *Brain, Behavior, and Immunity*, Vol. 94/May 2021, pp. 41-50, <http://dx.doi.org/10.1016/j.bbi.2021.03.008>. [55]
- Seale, H. (ed.) (2020), "Global landscape analysis of no-fault compensation programmes for vaccine injuries: A review and survey of implementing countries", *PLOS ONE*, Vol. 15/5, p. e0233334, <http://dx.doi.org/10.1371/journal.pone.0233334>. [15]
- Smith, R. (2005), "Medical Journals Are an Extension of the Marketing Arm of Pharmaceutical Companies", *PLoS Medicine*, Vol. 2/5, <https://doi.org/10.1371/journal.pmed.0020138>. [23]
- Stecula, D., O. Kuru and K. Jamieson (2020), "How Trust in Experts and Media Use Affect Acceptance of Common Anti-Vaccination Claims", *The Harvard Kennedy School Misinformation Review*, Vol. 1/1, <http://dx.doi.org/10.37016/mr-2020-007>. [38]
- Takahashi, O. et al. (2003), "Influence of family on acceptance of influenza vaccination among Japanese patients", *Family Practice*, Vol. 20/2, pp. 162–166, <http://dx.doi.org/10.1093/fampra/20.2.162>. [47]
- UNESCO (2020), *The Right to Information in Times of Crisis: Access to Information – Saving Lives, Building Trust, Bringing Hope!*, [28]
https://en.unesco.org/sites/default/files/unesco_ati_iduai2020_english_sep_24.pdf.
- van der Bles, A. et al. (202), "The effects of communicating uncertainty on public trust in facts and numbers", *Proceedings of the National Academy of Sciences*, Vol. 117/14, pp. 7672-7683, <http://dx.doi.org/10.1073/pnas.1913678117>. [33]
- Vilhelmsson, A. and S. Mulinari (2017), "Pharmaceutical lobbying and pandemic stockpiling of Tamiflu: a qualitative study of arguments and tactics", *Journal of Public Health*, Vol. 40/3, pp. 646–651, <http://dx.doi.org/10.1093/pubmed/fox101>. [20]
- Wheeler, E. and L. Cosgrove (2013), "Drug Firms, the Codification of Diagnostic Categories, and Bias in Clinical Guidelines", *The Journal of Law, Medicine and Ethics*, Vol. 41/3, pp. 644-653, <https://doi.org/10.1111/jlme.12074>. [26]
- WHO (2020), *Novel Coronavirus(2019-nCoV) Situation Report - 13*, [29]
<https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf>.
- Wouters, O. (2020), "Lobbying Expenditures and Campaign Contributions by the Pharmaceutical and Health Product Industry in the United States, 1999-2018", *JAMA Internal Medicine*, [58]
<http://dx.doi.org/10.1001/jamainternmed.2020.0146>.



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