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Our Impact

Making a Difference to Improve People's Lives.

Vaccine Development

Clinical data scientist explains the development of the COVID-19 vaccine.

Vaccine Approval

Medical writer describes how the COVID-19 vaccine got approved.

Vaccine Hesitancy

Analysis to understand the UK public opinion on the COVID-19 vaccine.

Vaccine for Somalia

Exclusive interview with the Ministry of Health, Puntland State of Somalia.

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EDITOR'S NOTES

JANUARY - FEBRUARY

ISSUE

It has been a very long and surreal year. Our way of doing things has changed completely. Like many people, I have not come to terms with the reality of the pandemic. It haunts me to hear news of bereaving friends, family and peers having to cope with the loss of loved ones. There is also distance and disconnetion both physically and spiritually between people. How can we really show comfort to others without being physically present to offer a hand, shoulder or even a hug during many people's darkest hour. Of course, we are adapting with technology but it is just not the same. I have heard directly from GPs, that patients as young as seven are now starting to show signs of suicidal tendancies as a result of the pandemic. However, as the year closed, a glimmer of light started shimmering out the dark tunnel, giving us vision for life after lockdown. This month, OUR IMPACT brings our readers, articles from the experts working behind the scenes. We wanted our readers to feel reasured with hope without falling victim to the unchecked misinformation spreading on the internet. However, the principles of autonomy is a pillar to any democracy. We must allow people to decide with the best available information on how to proceed into 2021 and beyond.

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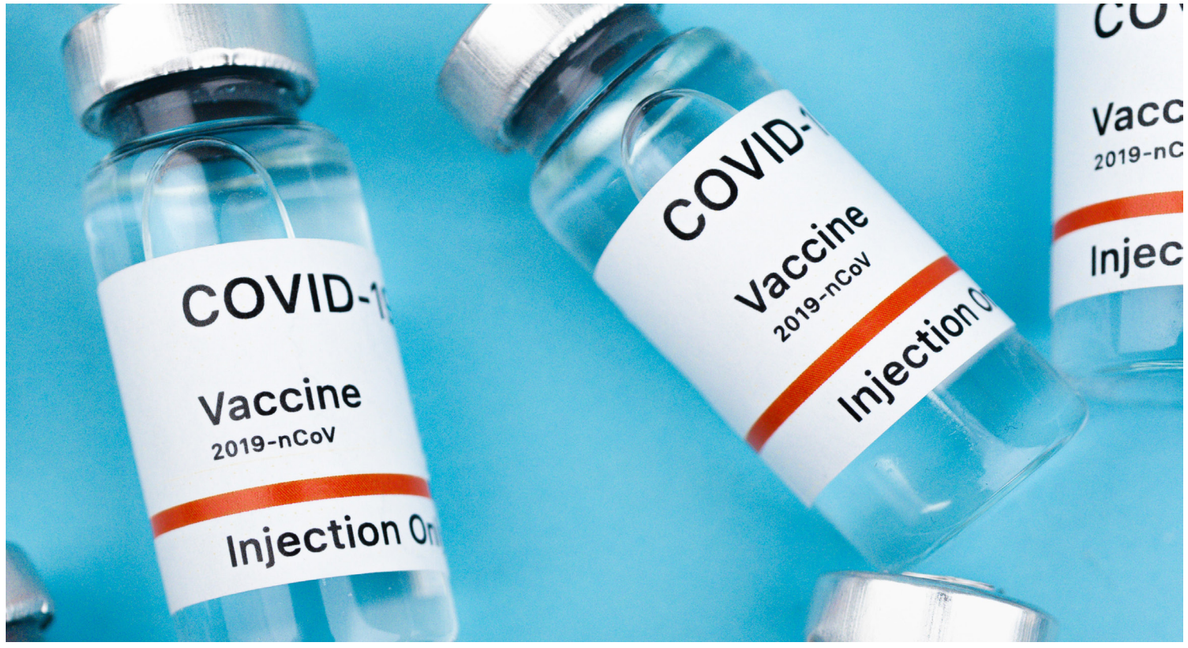

Vaccine Development

A paradigm shift in the making?

by Parvez Sheikh-Taj

The world as we know it, is in a precarious position in its human history. There are many challenges humanity faces, and solutions which need to be rapidly developed before it's too late. We have shared global challenges with climate change, famine, wars, and as a result of which mass migration of refugees across continents that the world has never seen on such a scale. The year 2020 has presented us with a new challenge that has become a matter of life and death, the emergence of a particular type of a virus known as COVID-19.

For once, humanity has become deeply united, across all borders and nationalities, across all faith and no faith groups, across demographics and cultures, to eliminate and overcome this one common microscopic enemy that has impacted our existence, our freedom, our liberty and our very day-to-day activities. The global drive and collaboration between governments, pharmaceutical and biotech companies and academic research institutions to come up with a vaccine has been impressive. But how is it that a vaccine that takes several years to develop, has emerged in a matter of months? To understand why it takes time and how it reaches the final stages of being administered to the patients, let us have a look at the processes involved.

In a 2010 article "Deconstructing the Drug Development Process: The New face of Innovation",[1] the author K.I. Kaitin discusses back then that the pharmaceutical and research industry is in dire need of updating the outdated processes, timelines and costs for bringing new therapies to the market sooner. One of the key bottlenecks in clinical trials has been patient enrolment and retention on clinical studies. With the global pandemic at its-sadly-full force, finding COVID-19 patients, enrolling them and retaining them on the course of treatment has certainly been the least of our challenges. This, combined with a global collaboration by governments and regulatory agencies, to expedite through the red tape associated with ethics, reviews and approvals, has helped immensely. It has enabled us to come up with a potentially life-saving vaccine to reach the patients before we lose more lives-and loved ones-to this raging disease.

The need to bring such a vaccine to the market does not mean the clinical trial phases have to be neglected. There are

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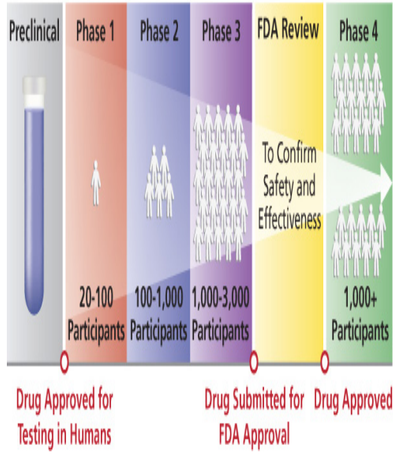


Source: Clinical Trial Lifecycle (Stegeman 2018)

four main phases across which a vaccine or a new drug/treatment will go through before it is finally considered to have completed all stages of clinical development. Bound by the need to adhere to the scientific and ethical standards set in the International Conference on Harmonization Good Clinical Practice (ICH GCP), its overall objective is to ensure all patients that participate in clinical trials have their safety protected, more so than the need to obtain the scientific data from their participation. This covers across the spectrum of the clinical development of a vaccine or a drug, including the design, conduct and collection as well as reporting of data from human subjects for regulatory approvals.

Phase I: This is the phase where the therapy is first introduced to humans to see if they can tolerate the drug. The number of trial participants can range from 10-80, depending on the needs of the clinical protocol. In essence this Phase I assesses the safety, tolerability and pharmacokinetics (PK) of a new drug. It also seeks to establish the drug-drug interactions, the bioequivalence and bioavailability of the drug in the body. Assessments can include vital signs, blood tests, ECG, physical assessment amongst others as may be deemed necessary by the particular clinical protocol. These assessments will be utilized also for the subsequent Phases II-III/IV as deemed appropriate. Sometimes the trial participants in Phase I are healthy volunteers instead of people that would actually be in need of the therapy.

Phase II: The Phase II seeks to answer the question, does the new therapy actually work? It addresses this by looking at the efficacy, which is similar to effectiveness, but slightly different. While effectiveness is based on real-world results (refer to Phase IV below), efficacy is based on ideal conditions during the clinical testing phase. The Phase II aims to also determine the optimal dose level for the patients as well as comparing the new drug with an existing therapy. Where it compares to an existing therapy, if the study is a 'blinded' study, there will be dummy drug (placebo) given to one group of the participants. To maintain the integrity of the clinical research, in such cases neither the investigational site, nor the patient will know if they are being given the actual new drug or the placebo. Phase II trials can have participant numbers from 20 up to several hundreds.

Phase III: Aims to determine whether the new treatment is more effective or comparable to an existing therapy for the same disease. To establish this, a large scale patient enrolment across multiple countries and continents may be conducted. The patient numbers can vary from a few hundred to 20,000 patients for a global mega trial. Once a trial successfully completes Phase III, based on statistical analyses and a clinical study report, the new drug/vaccine will be submitted to the regulatory authorities such as the Food and Drug Administration (FDA) in the USA and the Medicines and Healthcare products Regulatory Agency (MHRA) of the UK.

Phase IV: This is also the Post-marketing surveillance phase. Once a drug or a vaccine has been approved by the FDA or the MHRA upon successful completion of Phase III, the drug or vaccine is then followed up on patients who have been taking it for however long that course of treatment may have been, and collecting long-term data. This will involve collecting the patient's Quality of Life as well as other data related to adverse events or even blood chemistry, if the clinical protocol requires it. The phase IV will collect data of thousands of patients across several years to see what the medium to long-term effect of the treatment is on the patient's health and quality of life.

With new therapies and vaccines becoming available for patients in different countries, although the short-term results are impressive, we will need to monitor and observe how the patients are responding to these over the coming years. Will they need booster doses 6 months or even 10 years later? Will there be other positive effects of taking this drug or perhaps serious adverse events? Will the drug formulation need to be reconsidered to increase its effectiveness and stability in different temperature environments?

The answers to such questions will become clearer further down the line. But for now, let us recognize that we have achieved a remarkable human feat: to have developed a vaccine for a disease in a matter of just months instead of years. Perhaps the COVID-19 vaccines such as the ones by BioNTech-Pfizer and Oxford University-AstraZeneca, have caused a paradigm shift in the timelines needed to develop novel therapies for critical diseases. It has shown that when governments, pharmaceutical companies and researchers have a willingness to collaborate as a team, overcome challenges and reduce red tape, humans can achieve great feats. Perhaps, this phenomenal model of collaboration of minds can be taken and applied to finding solutions to humanity's other long-standing challenges such as international conflicts, climate change, poverty; and not just seen to be applicable for the world of vaccine development.

Parvez Sheikh-Taj is a Clinical Data Scientist with over 15 years experience in the pharmaceutical and biotech industry. He has worked with major global companies including GlaxoSmithKline, Merck, Bayer amongst others and has worked across therapeutic areas including oncology, metabolism and vaccines.

Vaccine Approval

Why was Pfizer's COVID-19 vaccine approved so fast?
by Kat Romanska

Regardless of what we might have been expecting of the beginning of 2021, probably being in a very clear and infirmed state, it is hard not to have an impression that we're still drowning in questions regarding the COVID-19. Aside from having a pandemic, we also have an 'infodemic' with so much information circulating around. It certainly makes it harder to find this one precious answer that would quench the hunger for information.

We definitely have many successes behind us, like the vaccines being found. It can only get better but misinformation around the vaccines evolves. Are the vaccines safe? Why was it developed so fast? Were the regulators cutting corners? Are just some of the questions that reach us daily. When we don't know what is happening behind closed doors of laboratories of vaccine developers and regulatory agencies that approve them, we can take a closer look at the regular processes that have been in place and analyse how they were optimised to find some answers.

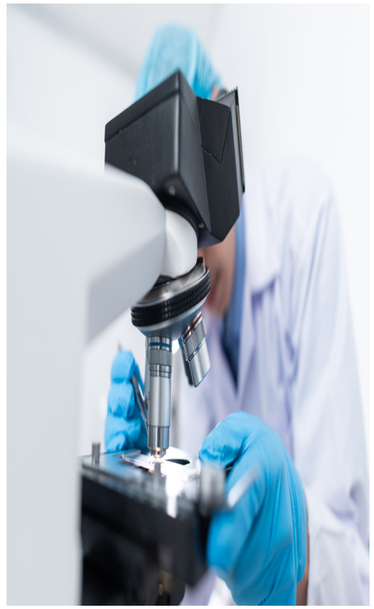
The pharmaceutical industry is the second most regulated industry in the world. Contrary to what some may say, the times of bad pharma and wily plans of making medicine development lucrative have finished. This is simply due to the fact that developing a medicine is costly, risky and time-consuming.[1] Developers are afraid of failing when sinking money into innovative research. Moreover, with the dwindling clinical development success rates, many drugs do not make it to the markets to generate income.[2] Less money from sales forces the drug developers to trim the research spending. Then, why anyone would want to risk the business and misinform people in the time of pandemics? This is definitely neither of the interest of an agency nor a company which is investing heavy resources in swift development.

Why can medicines and vaccines be developed faster?

The swift development of COVID-19 vaccine is nothing more than a legacy of the earlier research that we can be proud of. An immense amount of work and data that was done by scientists and regulators during earlier epidemics, such as SARS, could have been leveraged to expedite the development process now and bring the vaccine faster to the market.

The technology used to produce the COVID-19 approved vaccine is also not entirely new and the scientists have built an mRNA platform for vaccines many years ago.[3] The work on an mRNA vaccine was taking place as early as 2011 for cancer trials or in 2013 during SARS outbreak.[4] In 2020 as soon as we knew the RNS sequence of corona virus,[5] the work on mRNA was restarted and thanks to the financial resources pumped into the risky vaccine development, the research could continue until it succeeded.[4]

Nowadays, there is a plethora of regulatory tools which can help develop and approve medicines faster which are not only applicable to vaccines, but also to medicines which address a major medical need.[6] Normally when a drug is developed which is of a major interest to the population and meets unmet medical needs, the agency is willing to help the developers use its reciprocated system of help. The purpose of such help is to provide guidance for the industry on policies and procedures to allow for expedited development and optimise the work of both entities. Some regulatory agencies with robust regulatory systems (eg. FDA or EMA)[7] provide medicine developers scientific advice on the most appropriate way to generate robust evidence on a medicine's benefits and risks.[8] The advice that is received is on best methods and study designs to generate robust information on how well a medicine works and how safe it is. In the era of constrained budgets, this allows the regulators and developers to save up human and financial resources and allocate them where they are really necessary for the moment.



In addition, both sides have been mobilised working towards one aim. The conversations between agencies and developers, taking place normally have been reinforced this time. They has mobilised their systems and has checked new ways of working closely. This means that processes that were normally done sequentially, have now been done in parallel. Thanks to the regulatory guidance and flexibilities, large multi-centre clinical trials have been organised, involving over 40,000 people at once.[9] Until now, this has not been observed in the history of vaccine development.

Next the reviews of vaccine data are prioritized and are done in a rolling basis, as data becomes available from clinical trials, rather than once all the clinical trials are completed.[10] This has streamlined the bureaucracy, improved the communication systems between regulators and industry and clarified information communicated to the public inorder to fight fake news. This situation has proved that what previously 'couldn't have been done' is now possible, and that both the industry and the regulators can be more flexible and clearer in communication.[11] This will definitely allow us to focus resources on what is needed to address health problems in a better manner.

To sum up, rather than fearing, we should appreciate the unified international efforts being made to produce a safe and effective vaccine and put an end to the COVID pandemics. We should not fear the new technology; it is and will be extensively employed in the world of fast-developing science and pharmaceuticals. If not 10 months of the fastest-ever development of the vaccine, what can give us an example of turning impossible into possible?

Striking a Balance

There is a strict pharmacovigilance plan for some medicines and vaccines that receive emergency approval. This means that all new data and information collected about the vaccine post-approval will be promptly reviewed and any emerging new information will be shared with the public in a timely manner.

On another hand, we need to appreciate the immense financial risk that both governments and developers are taking. It is also worth noting that the large quantities of COVID-19 vaccine batches have started to be produced before the companies received any regulatory approval. This means that the manufacturers focussed on development and with the data received from trials put all their eggs in one basket.

"The pharmaceutical industry is the second most regulated industry in the world."

Kat Romanska is a medical writer with a degree in Pharmacology & Bio-business. She has experience working in the pharmaceutical industry and has a strong passion in global pharmaceutical regulations and policy. She is also a public speaker and sits as a committee member for Epsom Speakers (Toastmasters international).

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Vaccine Hesitancy

by Mohammed Ali & Courtney Grant

On March 11th 2020, the World Health Organization declared the novel coronavirus, COVID-19, a global pandemic.[1] As of the 15th December 2020, COVID-19, spread to over 73 million cases, and claimed over 1.6 million lives worldwide.[2]

On December 2nd 2020, the Medicines and Healthcare products Regulatory Agency (MHRA) clinically approved the Pfizer and BioNTech COVID-19 vaccine for use.[3] The results for this vaccine showed a result of 95% efficacy.[4] This made the United Kingdom the first country in the world to obtain a COVID-19 vaccine. The UK Government secured 40 million doses of this vaccine on behalf of its population. The vaccine is given in two shots to each person in order to acquire immunity.[3] With this vaccine now in the UK Government's hands, steps are being taken for vaccine distribution and ensuring sufficient population uptake. In fact, the UK's Secretary of State for Health, Matt Hancock describes this as "...the biggest civilian logistical efforts that we have faced as a nation..."[3]

In this article, we consider some of the challenges the UK Government faces in ensuring a population uptake needed for herd immunity of 82%.[5] A survey carried out by Imperial College London, found that only 51% of people said that they would be willing to take the COVID-19 vaccine.[6] Professor Heidi Larson from the London School of Hygiene and Tropical Medicine, who is also leading the 'Vaccine Confidence Project' states that: "...misinformation plays into existing anxieties and uncertainty around new vaccines, as well as the new platforms that are being used to develop them..."[7] Surveys have found misinformation as the biggest factor for vaccine hesitancy.[8]

Common misinformation relating to vaccine hesitancy has come in the form of linking measles, mumps, rubella vaccine (MMR) to autism[9], the COVID-19 virus not being real and also claims that 5G mobile technology is causing the virus.[7] Thus, the UK Government set up a task force working alongside social media giants aimed at tackling harmful misinformation about the vaccine being spread on the internet.[10]

Under normal circumstances, the development time from lab to jab should take around 17 years.[11] Studies have suggested that a mix of large-scale funding, collaborative global efforts running in parallel together, as well as working in risk, and efficient processes picked up from existing SARS-CoV-2 work has expediated the COVID-19 development cycle.[11] However, some hesitancy may be experienced due to 'bounded rationality'. This is where a person is unable to make a full rational decision due to the limited information and time available. No vaccine is 100% risk free. Therefore, bounded rationality could lead people to use fast and reactive "Systems 1" thinking rather than a slow and deliberated "Systems 2" thinking process, which is what is needed for any complex decision-making process, especially during a pressurising situation like the COVID-19 pandemic.[12]

A recent University of Lausanne paper entitled "Leadership to defeat COVID-19", states that leadership qualities such as charisma are important during problem solving in a crisis like the COVID-19 pandemic.[13] Charismatic leaders who communicate using value-based, symbolic, and emotional gestures can connect to an individual's morality in their selflessness for the public good. This can also be used to curb against "free riders" who essentially benefit from the acts of public good by others but do not necessarily contribute to it themselves.

"We will be judged by our capacity for compassion and individual acts of kindness."

The UK Chancellor of the Exchequer, Rishi Sunak, who was quoted saying, 'we will be judged by our capacity for compassion and individual acts of kindness."[14] Charisma here can be used to challenge views and tap into the public's moral compass. Thus, a leader's ability to show compassion and connection to the people they serve are fundamental during a global crisis, like the COVID-19 pandemic.

Moreover, leadership should be present at all levels. The King's Fund (a UK Think Tank) states that in order to motivate staff, leaders should empathise with their staff, feel their fears, and show support during times of uncertainty.[14] Thus, creating a sense of belonging, which fosters collective learning and innovation.

Furthermore, bestselling leadership author John Maxwell states that leading by example delivers results and gives credibility to leaders,[15] for example, New Zealand Prime Minister Jacinda Arden's succesful national strategy in eliminating COVID-19. When trust is instilled, then people listen to their leaders, and leaders listen to their people. Jacinda was one of the only leaders to have taken a pay cut to her salary to show solidarity with other New Zealanders who have been economically affected by the COVID-19 pandemic.[16] Thus, New Zealand hold the top position in the global rankings for COVID-19 resilience[17] and the COVID-19 global response.[18]

To achieve herd immunity, it is also important that vaccine confidence is raised for every section of society. The Royal Society of Public Health highlighted concerns from a survey carried out, which found lower rates of ethnic minorities, particularly Asians, willing to take the COVID-19 vaccination than whites.[19] This adds to the severity of ethnic minority groups being disproportionately at risk of dying to the novel coronavirus than UK caucasians.[20]

The "Understanding the impact of COVID-19 on BAME groups" report by Public Health England, PHE, found that the disproportionate risks faced by eth-

"Positive action through indirect suggestions, has been used to influence healthy behaviours"

nic minorities could be due to underlying health issues, poor housing, income inequalities, travelling and working in areas of high exposure to COVID-19.[20] The report found evidence of ethnic minorities showing reluctancy in seeking care and ethnic minority National Health Service (NHS) staff afraid of raising concerns over PPE.

Understanding communities' needs are very important and can help to create reassurance. A study by the London School of Hygiene & Tropical Medicine found that interventions aimed at increasing vaccine uptake that include dialogue-based approaches tend to perform better than those that don't.[21] An example of misinformation spreading amongst the UK Muslim community was the notion of pork gelatine being used in the COVID-19 vaccine, as common immunisation jabs in the past did actually contain animal products.[22] Muslims are forbidden to consume pork in their religion. However, the joint efforts of the Muslim Council of Britain alongside the British Islamic Medical Association reassured Muslim communities that pork was not used in the COVID-19 vaccine and they also verified its safe use for Muslims being offered the jab.[22] However, it is also important not to collectively blame groups like ethnic minorities for causing the spread of COVID-19 virus, as this undermines the confidence of such groups and creates unnecessary reluctancy.[23]

This can be particularly effective when employing social proofing. Bestselling author and psychologist, Dr. Robert Cialdini shows how social proofing can be used to influence others. For example, canned laughter in comedy sketches has been used in television broadcasts to encourage the audience to laugh and find sketches more funnier.[24]

Dr. Cialdini suggests that people's behaviour changes to suit the common practice in the presence of others.[24] In the UK, 90-year-old Margret Keenan was recorded in front of cameras as the first person in the world to receive the COVID-19 vaccine (Pfizer and BioNTech) outside of clinical trials.[25] This was directly followed by the NHS offering the vaccine to elderly patients. The televised vaccination was an example of social proofing, to encourage others being offered the vaccine, to feel safe in taking it. In a similar vein, "nudging", the process of reinforcing positive action through indirect suggestions, has been used to influence healthy behaviours like supermarkets placing trolleys next to fruit and vegetable isles to promote healthier diets.[26] Campaigns in the UK can incentivise those taking COVID-19 vaccines similar to proposals made in the Netherlands, where only vaccinated people would be able to enjoy certain privileges such as being able to enter governmental buildings, libraries and concerts.[27]

Public messaging is crucial to influencing people's behaviour. It's therefore important to think about how best to drive home the message you want to get across about vaccinating people. What's the most persuasive way to get your message across?

Research shows that if you're trying to persuade people to change their behaviour, it is best to present your case as a two-sided message.[28] This means that you should present both the view of the persuader and the view that opposes this position.[28]

When it comes to reducing vaccine hesitancy, this would involve firstly presenting the reasons for taking the vaccine. The next step would be to acknowledge the fears that people may have about taking the vaccine. The last step would be to then refute this alternative view, backed with supporting evidence. This has been shown to enhance credibility by being honest enough to look at both sides and showing valid reasons why the opposing side is wrong.

COVID-19 has caused disruption across the globe. The vaccine has been brought to reality through innovation and will need to be adopted widely in order for countries to achieve herd immunity. Given the innovation involved in creating the vaccine, added to the hesitancy being felt about taking the vaccine, the situation can be viewed through the lens of Rogers' "Diffusion of Innovation" model.[29]

Rogers described five adopter categories; (1) innovators, (2) early adopters, (3) early majority, (4) late majority, and (5) laggards.[29] In terms of looking at the issue of vaccine hesitancy, the second, third and fourth categories are key. The early adopters can be seen as those who are the first to receive the vaccine, namely the over 85s and Health Workers.

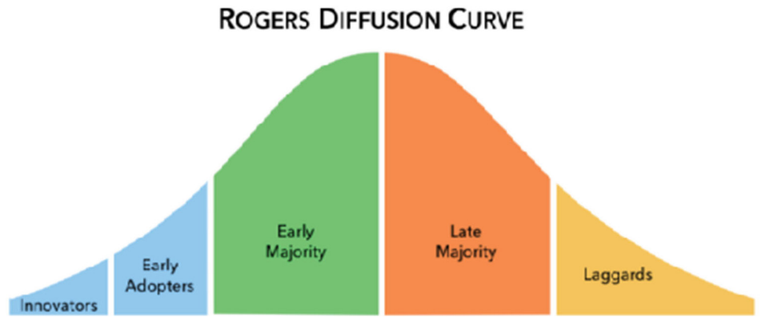
According to Rogers, individuals in this group serve as a role model to others further down in the adopter process. Rogers states that when it comes to delivering innovation, early adopters are crucial to triggering a critical mass of influencing others to adopt the innovation.[29]

The early majority make-up one-third of a system[29], and can be described as those who wish to, "be not the first by which the new is tried, nor the last to lay the old aside."[29] When applied to vaccine hesitancy, this suggests that if this group see enough others take the vaccine and can see that it is safe and effective, they will have no issues in taking the vaccine themselves. This would indicate that visible public campaigns around early adopters would be key to influencing this group.

The late majority make up another third of the system.[29] They approach innovations with scepticism, and peer pressure is key to influencing this group to change their behaviour.[29] This would indicate that they may remain sceptical about any public campaigns around the early adopters, but that once the behaviour of the early majority can be clearly seen to advocate for the vaccine, then social proofing based around this fact will be key to influencing the behaviour of the late majority.

John Maxwell states that it is important that leaders should lead by example and then set the path for others to follow.[15] Mike Pence, the Vice President of the United States of America became the first high ranking US official to receive the COVID-19 vaccine live in front of cameras as a way to promote public confidence in vaccine safety.[30]

However, there have been talks of mandatory vaccinations in the UK.[31] An IPOS survey found that 61% of people believed vaccination should be optional.[32] Mandatory vaccinations can become a legal disaster if things go wrong, and besides, the idea of mandating vaccines goes against the medical ethics of Beauchamp and Childress's "Principles of respect for autonomy."[33] Allowing people, the choice to decide is always fundamental in any true democracy and winning back trust through transparency, consistency and results would be the true winning formula of any COVID-19 vaccine strategy.



Source: Diffusion of Innovation Curve (Rodgers 1962)

Mohammed Ali has a BA (Hons) in Accountancy and Business, and an MSc in Global Health Policy. He is a member of the Coordinating And Mobilising Emergency Response Activists (CAMERA) Emergency Volunteer Team in Hammersmith & Fulham. He is also the treasurer and committee member for Sutton Speakeasy (Toastmasters International).

Courtney Grant has a BA (Hons) in Psychology, and an MSc in Human-Computer Interaction with Ergonomics. He is a Fellow and a Chartered Member of the Chartered Institute of Ergonomics and Human Factors, and is a Registered European Ergonomist. He is also a member of the Chartered Institute of Ergonomics and Human Factors COVID-19 Expert Panel.

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Vaccine for Somalia

Muhyadeen Ahmed interview by Mohammed Ali

The Federal Republic of Somalia is a country that sits on the horn of Africa. A country that has been torn after two decades of civil war. Somalia covers around 246,200 square miles of land that is boarded around Ethiopia, Djibouti, the Gulf of Aden and Kenya. It has a population of 16 million people.[1]

Somalia has three administrations: Puntland, Somaliland, and the South-Central region of Somalia. The country's health system is run by the Federal Ministry of Health. The private sector delivers much of the health services.

In 2013, the Health Sector Strategic Plans created a public and private partnership to provide universal healthcare.[2]

As of the 25th December 2020, Somalia reported 4690 COVID-19 cases and 127 related deaths.[3]

Somalia is ranked as one of the worst equipped country to cope with the outbreak of an infectious disease.[4] It is estimated that the available 2 billion COVID-19 vaccine doses are now all sold.[5]

High-income countries became the first to buy these vaccinations, leaving low- and middle-income countries like Somalia waiting in the queue that may stretch into 2022.[5]

Somalia has a history of immunisation programs, especially against measles and polio.

However, there are some hurdles Somalia have to overcome for any COVID-19 vaccination program. This includes vaccine storage, temperature and coverage. Here, I speak to Muhyadeen Mohamed, head of health promotion, Ministry of Health, Puntland State of Somalia.

Mohammed: Hi Muhyadeen, thank you very much for taking part in our interview. So the first question I wanted to ask.

On the 25th December 2020, Somalia reported 4690 COVID-19 cases and 127 deaths, which shows a lower prevalence in both cases and deaths compared to Western Europe.

What would you say has been the driving force for Somalia experiencing lower COVID-19 cases and fatalities?

Muhyadeen: Our population is comprised of young people. Which means the risks posed would be lower than that of countrires with aging populations.

However, there are challenges, such as the absence of a fully functional disease surveillance system in the country.

There has been difficulty with social and behavioral change among communities to follow the social distancing guidance. Particularly practices such as the maintaining of washing hands, respiratory and personal hygiene and the wearing of masks at all times.

There has also been a lack of resources for implementing Social and Behaviour Communication Change innovations.

However, the population density in rural and urban areas are low and therefore maintaining social distance becomes much easier.

Mohammed: The Federal Government of Somalia has imposed social distancing, self-quarantine and curfews in certain regions of the country. The head of Somalia's COVID-19 task force was quoted saying "We are not dismissing the fact that the death toll could be a lot higher than publicized".

What else would be needed to ensure the taskforce can fully monitor the situation?

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Muhyadeen: To improve the surveillance system's ability to rapidly detect, trace, track, test and report through enhancing active surveillance and expanding its geographic coverage to include both the private and public sector using a syndromic-based approach.

To procure and distribute enough Personal Protective Equipment (PPE) to the public and private health facilities, and schools, and also increase monitoring of compliance.

Mohammed: A World Health Organization report on The Vaccine Readiness Assessment Tool stated that 88% of participating African nations have yet to have plans in place for communication to the community.

What further health interventions could be used to encourage greater compliance?

Muhyadeen: We need active leadership and engagement from the highest levels of government with comprehensive national coordination plans and systems with budget. We need people behaving differently (in a positive way) due to their interaction with us. Then you know the material is resonating. If you don't see that then no matter how much you love your ideas or think they're great, they're not working.

Mohammed: Finally what challenges do you see in terms of vaccine cold chain storage and logistics, and what would be needed to resolve these issues?

Muhyadeen: The temperature-controlled logistics of the vaccination against Covid-19 is a real challenge. Experts are already at work to provide concrete answers and face the challenge.

Mohammed: Thank you very much for your time, Muyadeen.

MUHYADEEN MOHAMED is the head of health promotion in the Ministry of Health, Puntland State of Somalia, co-ordinating communities on vaccine preventable diseases and other communicable diseases.

Further Reading

Vaccine Development - A Paradigm shift in the making?

1. Kaitin, K., 2010. Deconstructing the Drug Development Process: The New Face of Innovation. Clinical Pharmacology & Therapeutics, [online] 87(3), pp.356-361. Available at: <https://ascpt.onlinelibrary.wiley.com/doi/abs/10.1038/clpt.2009.293> [Accessed 26 December 2020].

Vaccine Approval - Why was Pfizer's COVID-19 vaccine approved so fast?

1. Hay, M., Thomas, D., Craighead, J., Economides, C. and Rosenthal, J., 2014. Clinical development success rates for investigational drugs. Nature Biotechnology, 32(1), pp.40-51.
2. Govindarajan, V. (2019) R&D Spending Has Dramatically Surpassed Advertising Spending. Available at: https://hbr.org/2019/05/rd-spending-has-dramatically-surpassed-advertising-spending (Accessed: 12 December 2020).
3. Whiting, A., 2021. Five Things You Need To Know About: Mrna Vaccine Safety. [online] Horizon: the EU Research & Innovation magazine. Available at: <https://horizon-magazine.eu/article/five-things-you-need-know-about-mrna-vaccine-safety.html> [Accessed 29 December 2020].
4. Schlake, T., Thess, A., Fotin-Mleczek, M. and Kallen, K., 2012. Developing mRNA-vaccine technologies. RNA Biology, [online] 9(11), pp.1319-1330. Available at: <https://www.tandfonline.com/doi/full/10.4161/rna.22269> [Accessed 29 December 2020].
5. Kames, J., Holcomb, D., Kimchi, O., DiCuccio, M., Hamasaki-Katagiri, N., Wang, T., Komar, A., Alexaki, A. and Kimchi-Sarfaty, C., 2020. Sequence analysis of SARS-CoV-2 genome reveals features important for vaccine design. Scientific Reports, [online] 10(1). Available at: <https://www.nature.com/articles/s41598-020-72533-2> [Accessed 29 December 2020].
6. World Health Organization, 2017. Facilitated procedure in the assessment and accelerated national registration of pharmaceutical products and vaccines approved by stringent regulatory authorities. QAS/17.704/Rev.1. [online] Geneva: World Health Organization. Available at: <https://www.who.int/medicines/areas/quality_safety/quality_assurance/QAS17-704rev1-SRA_procedure_14082017.pdf> [Accessed 28 December 2020].
7. Putzeist, M., Mantel-Teeuwisse, A., Gispen-De Wied, C., Hoes, A. and Leufkens, H., 2010. Regulatory scientific advice in drug development: does company size make a difference?. European Journal of Clinical Pharmacology, [online] 67(2), pp.157-164. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3021701/> [Accessed 27 December 2020].
8. European Medicines Agency. n.d. How Scientific Advice Works - European Medicines Agency. [online] Available at: <https://www.ema.europa.eu/en/human-regulatory/research-development/scientific-advice-protocol-assistance/how-scientific-advice-works> [Accessed 27 December 2020].
9. Sharp, J. and Kenyatta, K., 2020. The Cost Of Speed: FDA Regulatory Flexibilities During The Coronavirus Pandemic. [online] Commonwealthfund.org. Available at: <https://www.commonwealthfund.org/blog/2020/fda-regulatory-flexibilities-during-coronavirus-pandemic> [Accessed 27 December 2020].
10. GOV.UK. 2020. MHRA Regulatory Flexibilities Resulting From Coronavirus (COVID-19). [online] Available at: <https://www.gov.uk/guidance/mhra-regulatory-flexibilities-resulting-from-coronavirus-covid-19> [Accessed 27 December 2021].
11. European Medicines Agency. 2020. Global Regulators Work Towards Alignment On Policy Approaches And Regulatory Flexibility During COVID-19 – Update #4 - European Medicines Agency. [online] Available at: <https://www.ema.europa.eu/en/news/global-regulators-work-towards-alignment-policy-approaches-regulatory-flexibility-during-covid-19-3> [Accessed 27 December 2020].

Vaccine Hesitancy

1. Time. 2020. The WHO Just Declared Coronavirus COVID-19 A Pandemic. [online] Available at: <https://time.com/5791661/who-coronavirus-pandemic-declaration/> [Accessed 23 December 2020].
2. Worldometers.info. 2020. Coronavirus Update (Live): 78,333,099 Cases And 1,722,572 Deaths From COVID-19 Virus Pandemic - Worldometer. [online] Available at: <https://www.worldometers.info/coronavirus/> [Accessed 15 December 2020].
3. GOV.UK. 2020. An Update On The Coronavirus Vaccine, 2 December 2020. [online] Available at: <https://www.gov.uk/government/speeches/an-update-on-the-coronavirus-vaccine-2-december-2020> [Accessed 23 December 2020].
4. Boseley, S., 2020. Pfizer Covid-19 Vaccine Has 95% Efficacy And Is Safe, Further Analysis Shows. [online] the Guardian. Available at: <https://www.theguardian.com/world/2020/nov/18/pfizer-covid-19-vaccine-95-effective-and-safe-further-tests-show> [Accessed 23 December 2020].
5. Savulescu, J., 2020. Good Reasons To Vaccinate: COVID19 Vaccine, Mandatory Or Payment Mod-el? | Journal Of Medical Ethics Blog. [online] Journal of Medical Ethics blog. Available at: <https://blogs.bmj.com/medical-ethics/2020/07/29/good-reasons-to-vaccinate-covid19-vaccine-mandatory-or-payment-model/> [Accessed 25 December 2020].
6. Alford, J. and Campus, S., 2020. Under Half Of People Currently Willing To Get COVID-19 Vaccine, Survey Suggests | Imperial News | Imperial College London. [online] Imperial News. Available at: <https://www.imperial.ac.uk/news/210393/under-half-people-currently-willing-covid-19/> [Ac-cessed 23 December 2020].
7. London School of Hygiene and Tropical Medicine. 2020. Exposure To Misinformation Could See People Making A U-Turn On Taking A COVID-19 Vaccine | LSHTM. [online] LSHTM. Available at: <https://www.lshtm.ac.uk/newsevents/news/2020/exposure-misinformation-could-see-people-making-u-turn-taking-covid-19-vaccine> [Accessed 23 December 2020].
8. Dunning, H. and Campus, S., 2020. Largest Global Vaccine Confidence Survey Reveals Hesitancy Hotspots | Imperial News | Imperial College London. [online] Imperial News. Available at: <https://www.imperial.ac.uk/news/203893/largest-global-vaccine-confidence-survey-reveals/> [Accessed 23 December 2020].
9. Geoghegan, S., O'Callaghan, K. and Offit, P., 2020. Vaccine Safety: Myths and Misinformation. Frontiers in Microbiology, 11.
10. GOV.UK. 2020. Social Media Giants Agree Package Of Measures With UK Government To Tackle Vaccine Disinformation. [online] Available at: <https://www.gov.uk/government/news/social-media-giants-agree-package-of-measures-with-uk-government-to-tackle-vaccine-disinformation> [Accessed 23 December 2020].
11. Hanney, S., Wooding, S., Sussex, J. and Grant, J., 2020. From COVID-19 research to vaccine applica-tion: why might it take 17 months not 17 years and what are the wider lessons?. Health Research Policy and Systems, 18(1).
12. Kahneman D (2013) Thinking Fast and Slow. Farrar, Straus and Giroux (1), 20-21
13. Antonakis, J., 2020. Leadership to defeat COVID-19. Group Processes & Intergroup Relations, [online] Available at: <https://serval.unil.ch/resource/serval:BIB_7A7B7C3B36C1.P001/REF.pdf> [Ac-cessed 25 December 2020].
14. The King's Fund. 2020. Covid-19: Why Compassionate Leadership Matters In A Crisis. [online] Availa-ble at: <https://www.kingsfund.org.uk/blog/2020/03/covid-19-crisis-compassionate-leadership> [Ac-cessed 24 December 2020].
15. Maxwell J C (2013) 5 Levels of Leadership. Centre Street (1), 89, 135
16. McKeever, V., 2020. New Zealand Leader Jacinda Ardern Takes 20% Pay Cut Due To The Corona-virus. [online] CNBC.com. Available at: <https://www.cnbc.com/2020/04/15/coronavirus-new-zealand-leader-jacinda-ardern-takes-20percent-pay-cut.html> [Accessed 24 December 2020].
17. Chang, R., Hong, J. and Varley, K., 2020. The Covid Resilience Ranking The Best And Worst Places To Be In Covid: U.S. Sinks In Ranking. [online] Bloomberg.com. Available at: <https://www.bloomberg.com/graphics/covid-resilience-ranking/> [Accessed 25 December 2020].
18. Globalresponseindex.foreignpolicy.com. 2020. The COVID-19 Global Response Index. [online] Available at: <https://globalresponseindex.foreignpolicy.com/?_ga=2.187063912.1578301659.1599591842-142889722.1598632622> [Accessed 25 December 2020].
19. RSPH.org.uk. 2020. New Poll Finds BAME Groups Less Likely To Want COVID Vaccine. [online] Available at: <https://www.rsph.org.uk/about-us/news/new-poll-finds-bame-groups-less-likely-to-want-covid-vaccine.html> [Accessed 23 December 2020].
20. Public Health England, 2020. Understanding The Impact Of COVID-19 On BAME Groups. Beyond the data. [online] Open Government Licence, pp.4-5. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892376/COVID_stakeholder_engagement_synthesis_beyond_the_data.pdf> [Accessed 23 December 2020].
21. Jarrett, C., Wilson, R., O'Leary, M., Eckersberger, E. and Larson, H., 2015. Strategies for addressing vaccine hesitancy – A systematic review. Elsevier, [online] 33(34), p.4185. Available at: <https://www.sciencedirect.com/science/article/pii/S0264410X15005046?via%3Dihub> [Accessed 23 December 2020].
22. Bradford Telegraph and Argus. 2020. Muslim Communities In Bradford Reassured Over Covid Vac-cine. [online] Available at: <https://www.thetelegraphandargus.co.uk/news/18950951.covid-vaccine-recommended-at-risk-muslim-communities-city/> [Accessed 23 December 2020].
23. Hockaday, J., 2020. Tory MP Slammed For Blaming Muslims And BAME People For Coronavirus Surge. [online] Metro. Available at: <https://metro.co.uk/2020/08/01/tory-mp-slammed-blaming-muslims-bame-people-coronavirus-surge-13068463/> [Accessed 23 December 2020].
24. Caldini R B (2007) Influence The Psychology of Persuasion. Harper (1), 116
25. The Independent. 2020. Covid Vaccine Roll-Out Begins As 90-Year-Old Becomes First To Get Jab. [online] Available at: <https://www.independent.co.uk/news/health/covid-vaccine-uk-coronavirus-b1767802.html> [Accessed 23 December 2020].
26. Cragg L, Davies M & Macdowall W. (2013) Health Promotion Theory, McGraw Hill Education (2), 152-153
27. DutchReview. 2020. Dutch Government Considers "Nudging" People Towards Vaccination – Dutchreview. [online] Available at: <https://dutchreview.com/news/coronavirus-news/dutch-cabinet-consider-implementing-an-indirect-vaccination-obligation/> [Accessed 23 December 2020].
28. Perloff, R M. (2017) The Dynamics of Persuasion, Routledge (6), 335.

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29. Rogers, E. M. (2003) Diffusion of innovations, Simon & Schuster International (5), 512.
30. The Independent. 2020. Mike Pence Receives Covid Vaccine Live On TV. [online] Available at: <https://www.independent.co.uk/news/world/americas/mike-pence-covid-vaccine-jerome-adams-pfizer-b1776139.html> [Accessed 23 December 2020].
31. RT International. 2020. No Jab, No Movement? UK MP Pushes Mandatory Covid-19 Vaccination For Travel, Suggests Army Should Oversee Rollout. [online] Available at: <https://www.rt.com/uk/502054-coronavirus-vaccination-mandatory-travel/> [Accessed 23 De-cember 2020].
32. Mediaite. 2020. New Survey: 4 In 10 Want To Make Covid Vaccine Mandatory. [online] Available at: <https://www.mediaite.com/news/new-survey-4-in-10-want-to-make-covid-vaccine-mandatory/> [Accessed 23 December 2020].
33. Saint Joseph's University Online. 2020. How The Four Principles Of Health Care Ethics Improve Pa-tient Care. [online] Available at: <https://online.sju.edu/graduate/masters-health-administration/resources/articles/four-principles-of-health-care-ethics-improve-patient-care> [Accessed 23 December 2020].

Vaccine for Somalia

1. Worldometers.info. 2020. Somalia Population (2020) - Worldometer. [online] Available at: <https://www.worldometers.info/world-population/somalia-population/> [Accessed 25 December 2020].
2. Uhcpartnership.net. 2020. Somalia | Universal Health Coverage Partnership. [online] Available at: <https://www.uhcpartnership.net/country-profile/somalia/> [Accessed 25 December 2020].
3. Worldometers.info. 2020. Somalia Coronavirus: 4,690 Cases And 127 Deaths - Worldometer. [online] Available at: <https://www.worldometers.info/coronavirus/country/somalia/> [Accessed 25 December 2020].
4. WardheerNews. 2020. Somalia Is The Worst-Prepared Country For Coronavirus - Wardheernews. [online] Available at: <https://wardheernews.com/somalia-is-the-worst-prepared-country-for-coronavirus/> [Accessed 25 December 2020].
5. Garowe Online. 2020. EDITORIAL | Somalia May Pay The Price For Not Moving Early On Covid-19 Vaccines. [online] Available at: <https://www.garoweonline.com/en/editorial/editorial-somalia-may-pay-the-price-for-not-moving-early-on-covid-19-vaccines> [Accessed 25 December 2020].

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