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Communication Capacity Assessment of Health Care System in Kazakhstan in Relation to Vaccination Against COVID-19

Final Report

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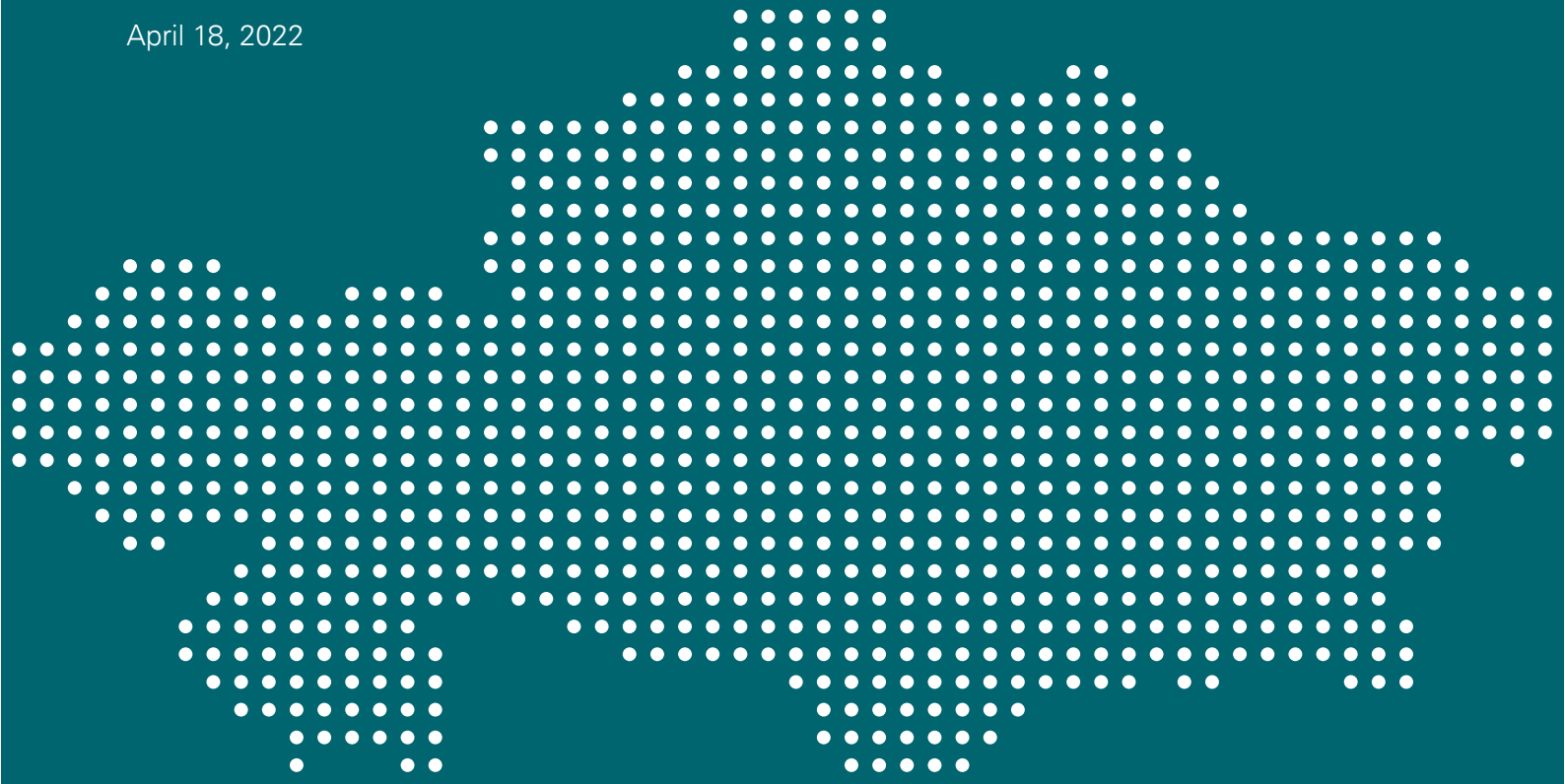

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Acronyms

CDC	Centers for Disease Control and Prevention
COVID-19	Corona Virus Disease 2019
CSEC	Committee for Sanitary and Epidemiological Control of MoH
GDP	Gross Domestic Product
GFTM	Global Fund to fight AIDs, Tuberculosis and Malaria
HIV / AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
ICAP	International Center for AIDS Care and Treatment Programs (now called ICAP at Columbia University)
IMF	Internationally Monetary Fund
MoH	Ministry of Healthcare of the Republic of Kazakhstan
NCPH	National Center for Public Health
OECD	Economic Co-operation and Development
PCR	Polymerase Chain Reaction
PR	Public Relation
SGBPH	State-Guaranteed Basic Benefits Package
SHIF	Social Health Insurance Fund (SHIF)
SHIF	Social Health Insurance Fund
SOP	Standard Operating Procedure
SWOT	Strengths, Weaknesses, Opportunities, Threats
TB	Tuberculosis
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	United Stated Dollar
WB	World Bank
WHO	World Health Organization

Summary

To generate a clear idea of existing communication structures, resources, framing, relations and guidelines, this research evaluated the current situation with respect to COVID-19 related communication across the health care system in Kazakhstan at both national and regional levels, coordinated by the Ministry of Healthcare of Kazakhstan (MoH). Based on this, a set of recommendations is proposed to enhance the overall communication capability of the MoH and the health system at large. A qualitative design was employed that comprised a desk review, SWOT analysis, stakeholder analysis, and interviews with FGDs.

This study revealed that enormous efforts have been made by the Government of Kazakhstan, the MoH and its subsidiary organizations, as well as regional health departments and partners to deal with the challenges posed by COVID-19, including the use of a variety of different forms of communication. Nevertheless, difficulties arose, and several challenges need to be addressed. To ameliorate what has taken place, sufficient capacity, resources, methodology, suitable policy, strategy and SOPs, and effective coordination mechanisms are required to support communication, demand generation and community engagement. In order to ensure transparency, access to information should be guaranteed. The MoH and its subsidiary organizations, as well as public health departments in the regions should adopt new procedures to make the electronic dissemination of MoH information an imperative. Besides, the MoH and related public health agencies need to listen to the concerns and questions raised through community engagement and empower communities to take positive action and increase people's resilience to misinformation. Even minor failures in communication can cause the public to lose trust in the ability of the government to deal with major threats to public health, which can give rise to adverse and unanticipated consequences.

Background

Kazakhstan is a Central Asia state. At an administrative level, it is composed of 14 regions (oblasts) and three cities of republican significance, Nur-Sultan, Almaty, and Shymkent. Each region is split into districts (rayons) with a total of 183 administrative-territorial units.[1] On March 16, 2022, President Kassym-Jomart Tokayev stated the need to improve the administrative-territorial structure of the country. He reported the foundation of three new regions (oblasts) in Kazakhstan. After the appearance of these regions, the country will administratively consist of 17 regions (oblasts).

In 2020, the GDP per capita of Kazakhstan was approximately 9,122.2 USD, equal to that of the Central European members of the Organisation for Economic Co-operation and Development (OECD) leading to its classification as an upper middle-income nation. Even though it suffered from an intense recession and hyperinflation following independence, it made a remarkable economic recovery to the extent that it became one of the global economies growing most rapidly during that period.

Indeed, GDP per capita has increased by more than two and a half times over the past 20 years.[2] However, domestic economic activity was substantially depressed by the COVID-19 pandemic in 2020, resulting in GDP falling by 2.6 per cent. Despite this, in 2021, GDP rallied by 3.5 per cent, representing one of the strongest rates of growth following the COVID-19 induced downturn.

After it became independent in 1991, the healthcare system in Kazakhstan transformed from one that was controlled and financed centrally to one that was decentralised and pluralistic, affording greater managerial and financial autonomy to healthcare provider organisations. Notable developments took place in 2004 with the introduction of the free State-Guaranteed Basic Benefits Package (SGBP) and wholesale reform of virtually all the elements of the healthcare system. This facilitated a fall in both morbidity and mortality rates and substantial enhancement of existing healthcare services. Nevertheless, enormous regional differences in levels of engagement with the health system suggest that access in some areas is somewhat restricted.[3]

A range of important health system reforms has occurred since 2010, including liberalisation of health services, improved regulation, and harmonisation of health service procurement, strengthening of the role of primary health care, and active digitalisation aimed at creating a unified medical records system and improved interoperability between different agencies and public databases. For example, all providers reimbursed from public sources had to switch to electronic medical records in order to be reimbursed since January 2018. Different state-owned information systems and patient registers were synchronized through the interoperability platform and each individual got access to a summary of health records (electronic health passport) via electronic government portal, which nowadays includes vaccination status against COVID-19.

For many years, rates of childhood immunisation per annum in Kazakhstan have been high, reaching at least 90 per cent or above for the majority of early childhood vaccines.[4] Despite this, there has been a steady increase in the number of parents refusing vaccines, primarily among those responsible for children younger than a year old, of whom 67 per cent in 2020 refused a vaccine. Most of these refusals (72 per cent) were for the Hepatitis B vaccine, which is given at birth, with a smaller number refusing the BCG vaccine.[5]

The COVID-19 pandemic has made the existing situation, with respect to routine childhood immunisation in Kazakhstan, even worse. This is due to the shift in allocation of resources towards COVID-19 at the expense of routine immunisation and elective care, and a growing fear of the use of any form of vaccine for children. For both COVID-19 and routine care, health providers claimed that healthcare organisations were increasingly unable to keep up with the demand. Moreover, due to the diversion of funds from routine care to COVID-19, the support for non-COVID activities diminished.[5] In addition to increased vaccine hesitancy among parents[6], a further obstacle to immunisation was created by the rapid dissemination of misinformation and myths.[7]

To address the challenge, UNICEF supports Ministry of Healthcare (MoH) of the Republic of Kazakhstan in establishing effective communication, demand generation, and community engagement functions in the public healthcare sector. In doing so, UNICEF seeks to work in partnership with the MoH to support improving official government agencies' overall ability to deliver a well-orchestrated strategic communications plan with a strong community engagement component capable of delivering reliable information, which can effectively address real and perceived vaccine concerns on the one hand and demand generation on the other.

UNICEF aims to support Kazakhstan's MoH and related healthcare institutions to address the current challenges by introducing international standards and building long-term institutional capacity to increase COVID-19 vaccine acceptance through the implementation of evidence-based, efficient communication and demand generation campaigns.

Specifically, UNICEF has commissioned this assessment of the state of communication related to COVID-19 at the healthcare level to produce a clear picture of the healthcare system current communication structures, resources, knowledge, and relations, and to arrive at a series of recommendations for improving the overall communication function of MoH. The policy recommendations set a basis to establish an actionable capacity development plan and track the progress over time.

2. Methodology

2.1 Conceptual Framework

This assessment was guided by a conceptual framework, which aimed to outline gaps, strategic directions, priorities, and opportunities regarding COVID-19 communication capacity of the health system in Kazakhstan, coordinated by the MoH, from providers' perspective. Figure 1 shows the communication capacity assessment conceptual framework. The framework helped explore ideas and insights related to the public's response to COVID-19 communications from the MoH, as well as its subsidiary organizations, national public health agencies and regional health departments. The conceptual framework also guided the project team in terms of data collection and data analysis of this study.

Figure 1. Communication capacity assessment conceptual framework (including the functions of communication, demand generation and community engagement)

The conceptual framework encompassed the following thematic areas:

1. **Organizational communication performance**. This was related to the overall environment, challenges, potentials and opportunities that enable or disable the sector related public health agencies and regional health departments for effective communication. It was supported by a (Strengths, Weakness, Threats, Opportunities) (SWOT) analysis.
2. **Organizational communication structure and resources**. This included the current structure and resources available at the national health governance level, as well as the regional level across health departments and health care organizations. The structure and resources assessment process moved vertically and horizontally to gain an understanding of the internal workings of the public relation of MoH and the public health system in general, as well as how much of its activities and budgets are designed to cater to a broader media offering that can be used to connect with the public.
3. **Organizational communication framing**. Framing stimulates the decision-making process by highlighting particular aspects while eliminating others. The Framing Review process evaluated the public health sector's narrative and message formation processes. It helped determine whether the narrative and set of messages being distributed were appealing to the general public.
4. **Organizational communication policy and guidelines**. This included the availability of policies, protocols, and guidelines. This aided in the examination of existing key documents and the identification of those that should be created.
5. **Organizational communication relations**. This consisted of collaborative relationships and interactions between the MoH and key stakeholders (such as public health agencies (NCPH, CSEC), regional health departments, the private sector, represented by the citizens' vaccination campaign headquarters and private health care providers, and communities).

2.2 Assessment Design

A desk review of key sources and information was conducted to understand the country's context related to health communications and COVID-19, while also identifying gaps and opportunities. The desk review took a look at the public documents, published and grey literature, as well as sources and information provided by key stakeholders to lay the groundwork for the program. Using a search engine and the websites of key stakeholders, the desk review took a look at policy documents, articles, reports, guidelines, and assessments. The desk review was guided by the conceptual framework.

Documents and sources reviewed included:

- Review of the Health System of the Republic of Kazakhstan, a report by OECD, 2018 (in English)[8]
- The Communication strategy of the Ministry of Culture and Sport, 2021 (in Russian) – the only officially adopted and recent communication strategy document available publicly.
- The Official website of the Ministry of Healthcare at: https://www.gov.kz/memleket/entities/dsm?lang=ru
- Donors, UN agencies and some private sector websites on Kazakhstan (UNICEF, UNFPA, WHO, CDC, USAID, World Bank, grassroots vaccination support initiatives).
- Analysis of MoH posts in social media networks such as Facebook, Twitter, Instagram, and Instagram.
- Monitoring of social media networks was carried out through queries relevant to the selected topic (using hashtags closest to the main keywords): vaccination, coronavirus, Covid, COVID-19, Sputnik-V, Pfizer, Comirnaty, BioNTech, and QazVac.
- Analysis of websites and channels of subordinate organizations of MoH and of regional health departments, as well as subordinate organizations of regional health departments (polyclinics, hospitals).
- Websites of relevant stakeholder organizations such as UNICEF, WHO, UNDP, and World Bank.

A working group in support of communication for vaccination, comprised of public health and communication experts, was formed earlier in 2021 by the NCPH of the MoH (NCPH Chairman order #43-21 dated 30 April 2021). Members of this existing working group, including workers of the MoH and public and private health agencies were involved in conducting the SWOT analysis for this assessment. The SWOT analysis conducted by this assessment was raised from the perspective that the performance of the MoH with respect to communications depends on the way in which the MoH interacts with both the internal stakeholders of the MoH, and the broader external context in which the MoH must act. This exercise was guided by a matrix shown in Annex 1 with four main questions. Additionally, the group conducted a rapid stakeholder analysis to identify key stakeholders, their levels of participation, and determine how to best involve and communicate with each of these stakeholder groups throughout the process.

Five focus group discussions (FGDs) were conducted from 19 January to 25 January 2022 with various groups of stakeholders namely MoH; Committee for Sanitary and Epidemiological Control of the MoH; National Center for Public Health (NCPH); Social Health Insurance Fund central office in Nur-Sultan; Medical staff of Primary health care from Almaty, Atyrau, North Kazakhstan, Zhambyl, East Kazakhstan regions and Nur-Sultan city; National Research Center for Maternal and Child Health of University Medical Center; Scientific Center for Obstetrics, Gynecology and Perinatology; Activists of civil headquarters on vaccination against COVID-19; Center for Disease Control and Prevention (CDC) in Central Asia; ICAP at Columbia University office in Central Asia (ICAP); United Nations Population Fund (UNFPA); United States Agency for International Development (USAID); and World Health Organization (WHO) country office in Kazakhstan. Of the 37 participants in total, on average, 7 respondents took part in each discussion. There were 74 per cent female and 26 per cent male participants in the discussions. The average time spent was 1.7 hours per FGD.
The respondents debated the subject, raised questions, expressed their opinions, and provided some shared ideas. The FGDs were guided by the conceptual framework as well as some structured questions. The questions used in FGDs were linked to the Structure and Resources Review, the Framing Review, and the Guidelines Implementations Review. Annex 2 shows the FGD questions discussed with the respondents.

To ensure high-quality data collection, a short but intensive training program was provided to the field assessment team to adequately understand assessment objectives, effectively collect and manage data, and appropriately protect study respondents' privacy and confidentiality. During fieldwork, the project team communicated with researchers on a daily basis to review the process and progress of data collection and to troubleshoot any issues that might arise. All discussions have taken place in Kazakh and Russian languages through Zoom. Zoom recordings were used to ensure that interviews were verbatim transcribed. The interviews were transcribed and translated into English. Participation in the FGDs was entirely voluntary.
The Framework Analysis method was used to analyse the data derived from the desk review, SWOT analysis, stakeholder analysis, and focus group discussions. The Framework Analysis is a technique for analysing data in primary qualitative research. A tangible advantage of this approach is that any questions or issues determined in advance are clearly and methodically incorporated into the analysis, while still allowing sufficient flexibility for the detection and characterization of issues that arise from the data.[9]

The findings of the SWOT analysis, stakeholder analysis and focus FGDs were triangulated and incorporated into the findings of this assessment.

3. Findings

3.1 SWOT analysis on communication, demand generation and community engagement functions of the public health sector

We elicited the views and opinions of respondents with respect to the strengths, weaknesses, opportunities, and threats associated with communication capacity, demand generation and community engagement functions of the public health sector under coordination of the MoH (Annex 1). The findings indicate that all respondents considered the visibility, identity, and performance of MoH to be reliant on effective communication. They also believed that the MoH should strive to sustain its reputation, enhance awareness, make good use of its resources, and communicate value to those whom it serves.
With regard to the strengths of communications in the MoH, the respondents considered it to be one of the most effective bodies within the government throughout the COVID-19 pandemic. They believed that it fulfilled an essential public function by conveying the risks linked to contracting COVID-19, along with vital statistical data on prevention measures, rates of morbidity and mortality, methods for controlling and treating COVID-19, and the rollout of the national vaccination programme. They asserted that information was disseminated effectively within the health system due to the well-organised and controlled framework of internal coordination within the MoH.

In terms of weaknesses, however, respondents raised concerns regarding the small number of skilled professionals, sub-standard communication plans, ineffective strategies for implementing these plans, the lack of financing for the Public Relations Department of MoH, and an absence of both plans and budget for operational and formative research and capacity building.

Respondents also stated that with respect to COVID-19 care and vaccination, the public are uncertain on to how to negotiate and navigate the health system in order to access these services; and despite the efforts made by the Government of Kazakhstan, they are ignorant of the different types of vaccines available. To combat the increasing dissemination of fake information about COVID-19, the government and MoH have together developed the Stopfake.kz Internet portal. The purpose of this website is to resolve misconceptions and uncertainty about COVID-19 and its treatment, and to limit the dissemination of so-called 'fake news' by highlighting where it comes from and what is driving the spread of this information.10 The respondents also pointed out that myths and misinformation (known as the infodemic) could be found within the vast body of information now available on COVID-19.

The opinions of respondents were also elicited on the factors they believed posed a threat or could obstruct the process of communications within the MoH process.

An especially salient issue in this regard was the general lack of trust among the public in both the MoH and, more broadly, the government. The respondents argued that to ensure the public are provided with enhanced, high-quality healthcare services, the MoH must develop a relationship with the public based on trust, which can only be facilitated through transparency in communications. Consequently, they believed that relations between the MoH and the public would soon deteriorate if communications were insensitive or lacked relevance.

When asked to identify factors that the MoH needs to be aware of and to maximise, the respondents stated that it would be useful to establish a professional development programme to enhance the capacity of the MoH with respect to communication, and for assistance to be provided to the MoH in delineating work processes and devising and implementing SOPs. They also argued that prior to their dissemination or implementation, communication strategies and messages must be approved by the MoH. An emphasis was also placed on the use of activities to enhance marketing, promotion, and vaccine demand by working closely with non-state providers, which includes the private sector. They highlighted the excellent opportunity available to enlist the help of non-state actors, such as prominent individuals or an organised group, in promoting a campaign to encourage people to get a COVID-19 vaccination.

3.2 Communication structure of MoH and resources

To enhance communications of the public health sector, it is vital to know about the relevant resources and structures in place and how these will serve both policy and practice throughout the COVID-19 pandemic and in subsequent years.

Either directly, or by providing support for other institutions and processes, the MoH had a pivotal role to play in helping prevent and control COVID-19, primarily by developing and enacting some policies and interventions. Above all, through a dynamic process of communication, the MoH is striving to increase public awareness, engage with relevant partners, and promote behaviour that will serve to protect people against COVID-19.

The findings indicate that the primary responsibility for communication within the public health sector lies with MoH. Within MoH, it lies with the Department of Public Relations (DPR), of which the principal responsibilities are as follows:

- Maintaining relations between mass media and the MoH, as well as other public health agencies under the oversight of MoH.
- Preparing, publishing, and distributing press releases and informational materials to the mass media.
- Organising press conferences, briefings, and other promotional and informational events
- Forming a positive public perception of the activities of the MoH by highlighting events and activities of the MoH leaders and of organizations under its oversight, which contribute to maintaining and improving people's health.
- Ensuring that the public's view of the activities of the ministry is positive.
- Engaging with mass media, individuals, and legal entities with respect to implementing MoH policies.
- Rapid, frequent, and well-organised circulation of materials and information pertaining to the ministry's activities.
- Assisting in developing and implementing the information policy of the government.
- Preparing interviews, live broadcasts, and speeches by organisational heads on the mass media.
- Editing drafts of interviews and informational materials prepared by MoH officials.
- Designing activities to construct a positive image and reputation for the MoH; analysing and monitoring information space, sustaining loyalty to the public.
- Daily monitoring on how MoH activities are reflected in mass media.
- Preparing press reviews.
- Verifying whether information published about the activities of organisations is reliable.
- Managing articles and publications, TV and radio projects concerning the activities of the MoH.
- Enhancing the PR strategy of the Ministry.
- Coordinating and maintaining the 'News' section of the MoH's website.
- Posting information materials from the official MoH pages on social media platforms such as Facebook and Twitter, and engaging with online media.
- Inviting representatives of the media to MoH-hosted events.

At the regional level, the Departments of Health along with healthcare workers are involved in promoting risk protection measures, disseminating health messages, and urging people to comply with policies recommended by the government such as social distancing, the use of face masks and vaccinations.

'I would like to say that the Ministry of Healthcare does a lot of work. First, we have a chat [mechanism of communication], where all the first information gets in and we work out the information on our level. Every day they give us the dynamics of progress; it is constantly available, for all levels. I assess it positively.' [FGD4]

Decisions regarding vaccination and the implementation of the COVID-19 vaccination campaign are the responsibility of the MoH Committee for Sanitary and Epidemiological Control. Two subsidiary organisations within the MoH also have a vital role to play. The first is the National Centre for Expertise of Medicines and Medical Devices, which disseminates information about registered COVID-19 vaccines, and the second is the National Center for Public Health, which is responsible for conveying important health messages relating to the vaccination, supplemented by brochures, infographics, and so on.

A recent initiative by the MoH titled '100 days – 100 questions' marked the beginning of a transparent series of exchanges with social activists, citizens, and partners.[11] This programme is used by MoH to personally connect with those concerned, via the MoH website , Instagram, Facebook , and email . A public announcement was issued by the MoH inviting people to suggest ways in which quality of care and other elements of healthcare could be improved.

Due to limited public health funding for communication from state budget, the MoH and public health sector in general heavily rely on support from the private sector. For example, to encourage more people to get vaccinated against COVID-19, various other private and public bodies have been enlisted to make a notable contribution. For instance, for a brief period, contests between vaccinated citizens were run by Nur-Sultan Akimat (Mayor's Administration). Along with prizes such as TVs, refrigerators, and washing machines, two iPhones per week were awarded to those who won the contest.[12] Other prizes for similar contests were a two-bedroom apartment[13] and, more recently, a tour to the Maldives.[14] For pensioners in Nur-Sultan who had gotten themselves vaccinated, there was the opportunity to take part in a raffle to win vouchers to sanatoriums.[15] Other prize draws have been held in the Car City shopping complex, Sputnik Mall, and the Tigrohaud shopping mall in Almaty. Supported by the Akimat of Auezovsky district, these events were set up by entrepreneurs who offered a wide range of prizes, including electric scooters, home appliances, and mobile phones.[16] Other private bodies have undertaken comparable actions to encourage people to get vaccinated.[17–19]

However, the findings indicate that no independent funding is received by the Public Relation Department from the MoH budget. Virtually all respondents expressed concerns regarding the insufficient resources available, which were not just financial, but also related to the availability of equipment and personnel. In 2020, the state budget allocated to the MoH exceeded KZT 1.5 trillion, of which 88 per cent was earmarked for expenditure on medical care. Following clarification of the national budget for 2020, the allocation awarded to healthcare in April 2021 rose by 88.4 billion tenge.[20] However, no money whatsoever was allocated to communication, nor was any money made available for the Department of Public Relation from the annual budget of the MoH, excluding the remuneration of staff.

'Firstly, what they [MoH] need is qualified human resources; secondly, financial resources and technology. It is necessary to improve public relations and allow people to reflect on the messages.'[FGD2]
"You can't manage an organization by empty hands." [FGD1]

Many participants commented that the number of staff working in the DPR is insufficient. Indeed, we found that the total number of staff employed in the field of media relations and public communications, including those relating to COVID-19, amounted to 3 full-time staff and 2 part time staff. Consequently, respondents felt they were overwhelmed with their daily workload, and were therefore unlikely to be able to focus on public relations in an organised and comprehensive manner.

1 https://www.gov.kz/memleket/entities/dsm?lang=ru
2 https://instagram.com/healthcare.gov.kz?utm_medium=copy_link
3 https://www.facebook.com/MinzdravRK
4 100dnei100voprosov@mail.kz

'What a structure there is! Only a few staff members there while they are responsible for all communications of MoH. Their main function is now only to notify. There is not enough staff to do serious work.' [FGD1]

Similarly, upon interacting with representatives of regional healthcare organisations, we found out that the main factor interfering with enhancing effective communication and building strong communication structures at the subnational and regional level is the shortage of human resources.

'Unfortunately, there are not enough human resources. Perhaps there is a need to attract students – journalists to fill the gap. But considering the low wage, people are hardly ready to work in the public sector.' [FGD3]

Our findings show that the representatives of communication at the regional level receive information from MoH and disseminate it via their channels. The regional level was found with no communication planning.

3.3 Communication framing in public health sector related to demand generation for vaccination against COVID-19

At the initial stages of the COVID-19 pandemic in Kazakhstan, leaders in the MoH had to act extremely quickly to disseminate messages enabling them to manage and contain the pandemic. The fact that it was such a novel scenario meant that dedicated research was, at that stage, lacking. Therefore, officials had to offer guidance based on the closest evidence available and without any certainty as to the likely outcomes and subsequent course of the disease. This was, understandably, the best that could be done at the time. Nevertheless, the expectation was that as normal operations resumed in the MoH, a clear theory of change would drive communications within the Ministry. However, a recent review of how the response to the pandemic was framed indicates that, after a period of nearly two years, there is no coherent theoretical framework underpinning communications within the MoH, which is largely adhering to a supply-oriented strategy where the views of the public are considered only occasionally.

An absence of the necessary framing prompted some respondents (from the five focus group discussions) to assert that they did not feel that behaviour at a community level could be impacted by health messages.

'Overall, the information is communicated, but how it is perceived by people, I can characterise it as distrustful, because there are so many anti-vaxxers, so much misunderstanding, and constantly some conflicts.' (FGD5)

"There is enough information, but maybe not informative enough, not capable of attracting attention. The MoH needs to change its communication strategy to raise awareness and transmit information in an accessible and understandable form for each target group.' (FGD3)

The desk review we conducted indicates that despite having just 73,000 followers, the most user-friendly and active social network of the MoH was Facebook. Its feed primarily comprises briefings supported by quotations, reports on meetings, COVID-19 statistics (new cases, deaths), and other news relevant to

Comments made by users regarding these posts were responded to by MoH within 24 hours with a message telling users that requests have all been registered and will be processed as soon as possible. There are two versions of each post, one in Kazakh and one in Russian. The MoH does not use Twitter actively for public communication, with the most recent tweet posted back on March 24, 2020. The MoH's Facebook feed is replicated on its Instagram account, which has 115,000 followers. The majority of posts present relevant statistics, with a small number (created in conjunction with the WHO) dedicated to raising awareness and exhorting people to act; for instance, by highlighting the benefits of getting vaccinated. In contrast to Facebook, the MoH does not respond quickly to the comments and enquiries made by followers on Instagram, the majority of which are critical of the MoH's performance. Additionally, to provide the public with relevant information on COVID-19, the MoH has also opened up a call centre.[21]

A number of FGD respondents felt that the MoH has performed well in its internal communications with healthcare workers and health managers. They articulated their belief that clear communication channels have been set up by the MoH to instruct healthcare workers. They were uncertain, however, as to whether the content of such communications were framed by any specific theories or methods.

They were also uncertain as to whether the communication strategy adopted by the MoH would offer sufficient framing support for those who were most vulnerable. Most respondents believed that the general nature of the messages communicated would not reach vulnerable groups. Furthermore, they felt that insufficient consideration was given to variations in age, gender, and the socio-demographic background of the populations, which they were trying to reach. Also relevant in this respect were variations at a regional level that respondents felt were important to take account of when creating specific messages.

'[Focus on] changing the priorities of work with target audiences. Firstly, identify these priorities based on available statistics, and then develop a plan for communicating with them.' [FGD2]

A recent media analysis suggests that nationwide, television and traditional media continue to be the most ubiquitous source of information, as presented in Table 1.[22] Nevertheless, there are notable differences in age groups, and between urban and rural residents. For instance, the Internet and social media networks are more likely to be used as sources of health information by young people and urban populations. The type of messaging app used most often is that of WhatsApp, although alternative messaging apps such as Telegram are becoming increasingly popular in Kazakhstan.[22] The different sources of information used in Kazakhstan in late 2019 are presented in Table 1.

The inconsistent nature of public communications was also highlighted by participants. They felt that this might undermine public trust in the strategy adopted by the government to manage the risks related to COVID-19, as it creates uncertainty and confusion regarding the effect of such risks.

'There were many instances that they said either get vaccinated or be fined by inspections; and people had no choice then. And then, it is said that vaccination is voluntary. People were lost, because it was not exactly voluntary, the employers forced vaccination as they didn't want to be penalised for noncompliance.' [FGD 3]

Respondents felt that although the novel nature of COVID-19 initially justified the use of unilateral top-down methods of communication by the MoH, this should now be discontinued. They argued that the appropriate strategy now was to engage in consultation with the public, elicit their feedback, and create policies based on a process of collaboration.

While analyzing the website and social networks of the Ministry of Health, we found out that the main focus of the MoH in vaccination campaign was on information work (statistics, information on the supply of vaccines, etc.), with less emphasis on explanatory work (how collective immunity works, the composition of vaccines, etc.).

Table 1. Information sources in Kazakhstan as of Sept 2019 (lasted available data, received with permission from the Social Health Insurance Fund of Kazakhstan with assertion that no such studies were conducted afterwards)

	Sept 2019
From television (news, programs, advertising)	70,2
Popular online news portals (for example: nur.kz, tengrinews, zakon, informburo and others)	19,5
Social media networks (Odnoklassniki, Facebook, Instagram, VKontakte, Moy Mir)	31,6
Messengers in the phone (WhatsApp, Viber, Telegram)	21,8
From acquaintances, friends, relatives	14,1
In a health care organization from a health worker (doctor)	11,6
Internet resources of state bodies and health care organizations	14,0
By radio	13,6
Information stands (walls) in health care organizations	13,6
Printed products: booklets, brochures	5,6
Awareness-building meetings of health care providers with the population	2,5
Outdoor advertising (street objects, billboards)	2,8
I'm not interested in such information	3,9
Other	0,1
I cannot answer	2,3

3.4 COVID19- related communication policy and guidelines in public health sector

The policies and guidelines relating to communications within organisations should form the basis of a set of principles guiding effective communication practices across an array of relevant organisational functions. This evaluation thus determines the extent and application of guidelines that assist the MoH and the public health sector in general in formulating their functions in relation to communication.

When asked whether they thought the MoH had developed guidelines in relation to health communication policy, planning, and implementation, no participants were aware of any documents of this kind. Here we specifically asked for the MoH functions since MoH coordinates all its subsidiary agencies, including NCPH, as well as its Committees with territorial branches, such as CSEC, and it coordinates health departments in the regions.

Source: National Communication Strategy for Routine Immunization in the Republic Kazakhstan 2021-2015 [5]

So the question was framed to elicit views on the leadership and coordination functions of the MoH, as related to communication for vaccination demand generation against COVID-19 and overall community engagement, in a manner that will help better manage population health during the pandemic. The absence of documents guiding communication was confirmed during the desk review stage, as the MoH declined our request for such documents.

'We haven't heard of such documents.' [FGD1]

A small number of respondents felt that essential documents pertaining to communications existed within the MoH, but were somewhat restricted in the extent to which they were used.

'There should be some strategy and algorithm developed. From my experience, the structural divisions in the ministry do not work well. We had a communication strategy, there was a request, but finally the documents were lying on the shelves gathering dust.' [FGD5]

Respondents therefore endorsed the idea of creating generic communication guidelines that could be easily incorporated into a range of strategies for social mobilisation, advocacy, and behaviour change.

3.5 Communication Structure in Health Sector of Kazakhstan: Review of Stakeholders

This section is organized in a way that presents all involved stakeholder organizations with whom the MoH maintains working relations, to support communication for demand generation, community engagement during the COVID-19 pandemic. The description of stakeholders includes national level, regional level public health bodies, private actors within the country, as well as international stakeholders, whose work was seamlessly integrated into activities of local (national and regional) actors from Kazakhstan.

MoH has two government agencies, which are government bodies, called "Committees", with territorial representation in each region of Kazakhstan. One is the Committee for Sanitary and Epidemiological Control (CSEC), responsible for COVID-19 related vaccination campaign and official decisions about vaccination; and the other is the Committee for medical and pharmaceutical control, responsible for quality control in health care, and the availability of vaccines and medicines among other functions. CSEC plays the most significant and leading role in managing the COVID-19 related pandemic, compared to all other institutes and stakeholders described below. The main responsibilities of CSEC are as follows:

- Dissemination of information on the activities of the Committee.
- Ensuring the Committee's relationship with the media.
- Organisation of information support for events with the participation of the chairman of the Committee.
- Providing the media with official information about the activities of the Committee;
- Interaction with the bodies ensuring the implementation of state policy in the field of mass media. and
- Coordination of activities with the media.

To support the provision of services at a national level, subsidiary organisations have been established within the MoH, namely state medical universities, national health policy institutes, and tertiary healthcare organisations (which the MoH owns). Those specifically handling COVID-19 issues and vaccination-related communications are the following:

- The National Center for Public Health is an institution responsible for devising health communication messages for the health sector and MoH, including brochures, infographics, and so on relevant to vaccination. Located within this institute is the Situational Center for COVID-19 statistics.[23]
- The National Center for Expertise of Medicines and Medical Devices, a body responsible for registering all devices, vaccines, and medicines, and entering the Kazakhstan market. It is responsible for disseminating information about registered COVID-19 vaccines.[24]

Intersectoral Commission on preventing the spread of coronavirus infection in the Republic of Kazakhstan. Chaired by the Deputy Prime Minister of Kazakhstan, and comprising the Minister of Healthcare and vice-ministers of selected areas of the economy. This is an official government committee established on January 27, 2020 that holds regular meetings. It is the supreme government body in Kazakhstan responsible for making decisions on government actions in relation to COVID-19 along with those pertaining to restrictions, quarantine, and vaccination.[25]

Social Health Insurance Fund (SHIF). Established in 2016, the SHIF is a not-for-profit joint stock company which functions as the single payer for health services and is the operator of the compulsory health insurance system. The SHIF also hosts the national health hotline 1406 that responds to questions posed by citizens and those living overseas regarding COVID-19 and other forms of care; the services that are provided for those with insurance, and a range of other issues concerning access to medical care. It also offers guidance and infographics relating to caring for those with COVID-19.

Health Departments within Local Executive Bodies in 17 oblasts and 3 cities of republican significance. These government agencies function in the regions and own most public healthcare provider organisations, including hospitals and polyclinics (primary healthcare organisations offering health promotion, prevention, diagnostics and care services, vaccination and free medicines programs; including care for non-severe COVID-19 patients). They also disseminate most of the information about COVID-19 care and vaccination in the regions.[26]

Private healthcare organisations. These include laboratories, which usually provide PCR and other tests for COVID-19, along with communication and information about COVID-19, clinics, which deliver medical care and circulate communications and information about COVID-19, and some hospitals. [27]

Kazinform. This is the foremost state news agency in Kazakhstan, which has achieved international recognition. It has launched a mobile application, a messenger channel on Telegram entitled 'Coronavirus2020kz' and the popular official web platform https://www.coronavirus2020.kz/.[27]

Citizens' headquarters for COVID-19 vaccination. Created by an economist and a public figure Rakhim Oshakbayev, this is an innovation that has attracted the support of nearly one hundred activists – people from different segments of the economy who joined efforts since summer 2021 to enhance the on-going communication campaign aimed at promoting COVID-19 vaccination.

[5] https://www.gov.kz/memleket/entities/kkkbtu/about/structure/departments/activity/5537/1?lang=en

They operate through a WhatsApp group and a crowd-funded secretariat. They have devised and enacted a range of communication events and materials such as prizes and valuable items awarded to those receiving a COVID-19 vaccine at dedicated vaccination points in shopping centres; billboards throughout the nation featuring famous people expressing their support for the of COVID-19; hosted discussions among stakeholders such as the MoH and non-state actors in order to make joint decisions on ways of enhancing communications about COVID-19 vaccinations; and interviews, reports, and appearances on social media platforms and the mass media promoting the COVID-19 vaccination.

Below is the illustration of involved international or foreign agencies:

United Nations Children's Fund (UNICEF) Kazakhstan. UNICEF has provided support for a plethora of activities and developed communication materials pertaining to COVID-19 and vaccination (reports, studies, infographics, expert opinions, recommendations, guidelines, education) for health workers, policymakers, and the public .The first digital strategy has also been made a priority by the country, increasing the overall number of followers on social media from 20,000 in 2019 to 72,376 in 2020. Such an increase is largely the result of engagement with policymakers and social media influencers via #KidsTakeover, #LearningAtHomeChallenge, and the mobilisation of online volunteers, the circulation of information vital to reducing COVID-19 mortality rates, and the creation of content for the Instagram account that is growing most rapidly.[28]

World Health Organization (WHO). The WHO stepped up public messaging on COVID-19 in 2021 to support efforts by the Government of Kazakhstan to communicate accurate and dependable information to the general population. To magnify core messages aimed at minimising risks and facilitating evidence-based and decision-making responses, a risk communications group comprising UN agencies in Kazakhstan has also been established. This team launched national information campaigns in 2021 that engaged the local media, communities and influencers as well as the MoH. With the guidance and assistance of the WHO, recommendations and informational materials were created by the MoH in both the Russian and Kazakh languages for the general public, different target groups, and healthcare workers.[29]

United Nations Development Programme (UNDP) Kazakhstan. To support efforts in the health sector and help the government meet the needs of those who are the most disadvantaged, a whole-of-government and whole-of-society approach were promoted by the UNDP response. In terms of its response to COVID-19, UNDP is spearheading work aimed at evaluating the economic and social effects of COVID-19 along with associated impacts on those groups who are most vulnerable in order to assist in recovery actions once the pandemic has subsided.[30]

UNFPA country office in Kazakhstan. The role of this organisation is to carry out activities and deliver essential information to assist vulnerable populations such as people with disabilities, those living with HIV, girls who have been subjected to sexual violence during the pandemic, and older persons. Their approach includes providing the media, health workers and other relevant stakeholders with information and communication training, while also creating a guiding portfolio of standard operating procedures regarding the provision of services.[31]

Centers for Diseases Control and Prevention (CDC), Central Asia office located in Kazakhstan. In 2019, the CDC helped establish a Public Health Emergency Operations Center in Kazakhstan. Situated within the National Centre for Public Health, this subsequently became the Situational Centre for COVID-19 statistics. To ameliorate the impact of COVID-19, the CDC has conducted a series of research investigations, donated supplies and equipment to laboratories, assisted in the creation of clinical guidelines and bolstered the public health emergency response capacity.[32]

6 https://baigenews.kz/news/kampaniyu_protiv_antivakserov_nachinayut_v_kazakhstane/

United States Agency for International Development (USAID). The objective of USAID programmes has been to assist in preventing the transmission and containing the spread of infectious diseases such as HIV/AIDS, TB, and COVID-19 through the development of key services. To tackle the COVID-19 pandemic in Kazakhstan, USAID has worked in conjunction with the MoH to strengthen the testing capacity of laboratories, promote hygiene practices that help to prevent the transmission of COVID-19, and furnish medical providers with technical assistance and training.[33]

Public figures. Several respected public figures, usually from the private sector, offer a high degree of credibility when discussing COVID-19 and expressing support for vaccination. These include Drs. Almaz Sharman, Vyacheslav Lokshin, Mynzhylky Berdikhodzhayev and others.

Findings indicate that the focus group respondents were uncertain when it came to the particular responsibilities and roles of different stakeholders. However, they believed that the MoH has been placed in an effective position to collaborate with health sector stakeholders as a result of well-managed work between sectors within the Government of Kazakhstan via the 'Commission on Preventing the Spread of Coronavirus Infection'.

Following are some key gaps as identified from the focus group interviews: One perceived gap is that managing the multitude of stakeholders involved in COVID-19 communication necessitates clear channels of communications and effective coordination mechanisms. There is no such well-established and clear system of communication channels across the various above-mentioned stakeholders.

Another gap identified during the study was that the level of awareness about the level of support provided by international organizations to the Ministry of Health in the field of communications was low.

Finally, there was the mismatch in messaging elicited by different stakeholders on the same subject matter, which was seen as a gap. It was the expressed opinion of a number of respondents that the content of COVID-19 information circulated by other stakeholders should be rigidly controlled by the MoH to ensure people receive the correct, consistent and reliable information from various sources.

4. Discussion and Policy Recommendations

4.1 Communication performance related to demand generation and community engagement functions of the public health sector

After its initial emergence in China in 2019, the rapid spread of COVID-19 understandably became the primary topic of news in Kazakhstan. Strenuous efforts were made by MoH to employ communication on a national scale to inform the public of the risks posed by the disease and the preventive measures that needed to be taken. Although initially there was uncertainty, and clear plans were lacking, as time progressed the MoH improved the way in which it communicated with the public.

To increase the level of information provided and instigate behavioural change, multiple channels of communication were used, such as Instagram, Facebook, the official website of the MoH, and TV channels. Thus far, its achievements have been substantial and merit praise.

Nevertheless, the current findings indicate that the MoH has not been successful enough to engage with communities and build sufficient levels of trust with the general public. Respondents emphasised the need for effective communications in forming relationships and building trust while inconsistent communication can create levels of confusion and uncertainty among the public that render a message ineffective.

It is important to note that as time has progressed, the relationship between healthcare service providers and service users has become increasingly difficult, due to easier access to medical information, advances in medical care, and changing societal trends.[34] It used to be the case that management of patients was based on the premise that the providers were the recognised holders of all medical knowledge. This has changed in the contemporary era. The management of disease is now adapted to the needs of the individual, and medical knowledge now exists as a commodity between the service provider and service users.[35] Thus, sufficient capacity is need to establish a reliable and trusting relationship between public health sector and the public in order to ensure high quality care for users.

Therefore, this assessment recommends that the MoH should develop a communication strategy and standard operating procedures (SOPs) on healthcare communication function at the central and regional levels. This should be supported by easy access to information that underpins the decisions, ensures that these decisions are seen as legitimate, and ensures that citizens feel that leaders are accountable and believe in the necessity of measures taken and that they conform to the guidelines and rules. Conversely, non-conformance is more likely to be the outcome when authorities withhold information, refuse to deal with the problems that arise, or deny that any problems exist.[36]

On the other hand, although this research recognises the enormous volume of information available on COVID-19 in Kazakhstan, it notes that within such information may lie a number of myths and a certain amount of misinformation. This phenomenon is known as an infodemic and denotes the fact that the existence of an enormous body of information about a particular issue can be seen as impeding the identification of an appropriate solution.[37] The rapid proliferation of social media and usage of the internet mean that information can now circulate much more quickly to fill gaps in information, but this can also magnify damaging messages.[38] Thus, an infodemic can result in risk-taking behaviour and confusion that can be potentially damaging to health, increase levels of mistrust in health authorities, and compromise the public health response.[39] To combat this issue with respect to COVID-19, the 'Stopfake.kz' Internet portal was created by the Kazakhstan Government in conjunction with the MoH. Its purpose is to decrease misconceptions and uncertainty, prevent fake information from circulating on the Web, and elucidate the sources and perpetuators of this information.[10] However, there are no available data on the effectiveness of this website, and further evaluation is required of the extent to which it is being accessed and utilised. Importantly, the management of an infodemic requires the methodical use of evidence-based approaches and risk analysis to mitigate the effect of fake information on health behaviour.[40]

Among the useful steps the MoH could take with this regard are the following: listen to the concerns and questions raised by the community; engage and empower communities to take positive action; increase people's resilience to misinformation; and identify and understand online infodemic-related conversations, regularly aggregate online search data, web analytics, and publicly accessible social and news media; and perform visual network analyses to identify the ecosystems in which misinformation is most likely to flourish.

This assessment recommends to evaluate public awareness of, and demand for services, as well as to engage in strategic planning to enhance its relationship with the public. The MoH at the national and subnational level will need to carry out additional research in this area and implement reliable surveys on levels of public awareness and public satisfaction.

4.2 Communication Structure of MoH and Resources

The findings indicated, despite the large volume of communication activities, the MoH did not possess sufficient capacity to ensure effective communications. As an example, our analyses of the MoH website and social networks showed that the MoH communication campaign on vaccination would have been more impactful if it had not lacked the vital information on details of vaccination process and outcome. That means raising awareness was strong in general, but the explanatory work failed when it came to details of information sought by people. Thus, the current under budgeted Public Relations Department of MoH has clearly reflected on the quality of communication plans and poor translation of plans into action. Likewise, limited number of staff responsible for all PR and media including the COVID-19 related issues is another challenge that the Department has encountered.

The PR Department carries on an extensive list of responsibilities, which exclusively focus on 'image management' and 'relationship management' of MoH. Generally, within an organisation, there should be four primary responsibilities assigned to a PR department as a recommendation: (i) relationship management – which involves developing strategies to form and sustain relationships with the public; (ii) image management – which involves conveying a view of the organisation as caring, socially responsible, and engaged in the life of the community, most notably. In the event of negative news or a crisis, the function of the PR role is to minimise any damage and avoid any negative fallout; (iii) resource management – which involves reviewing and then maximising the budget and resources needed to support the PR of the organisation; and (iv) crisis management – which involves handling emergencies. It is usually the role of PR departments to devise policies for coping with crises, emergencies, which includes the way in which management shares information with its workers, and who is selected to engage with the media.

Therefore, this assessment recommends that the structure and extent of the work undertaken by the MoH PR Department and regional PR units should be reviewed to ensure that PR is concentrating as much on resource management and crisis management as it is on relationship and image management.

Furthermore, given the reduction of risk in an emergency scenario can be substantially composed of inaccurate or misleading communications[41] and a few missteps can result in unanticipated and extreme consequences for the wider population,[42,43] **this assessment recommends employing a sufficient number of communication specialists, investing in the professional development of PR, and offering capacity building courses for officials on effective communications. Furthermore, the Government should allocate greater financial support to the PR departments at the central and regional levels and grant it a higher degree of autonomy, albeit with a more focused remit.**

4.3 Communication framing in public health sector related to demand generation for vaccination against COVID-19

Framing was located in this study within a procedure that will connect the MoH and health policymakers to the public, principally via mass media and communication. However, there are no frameworks in the MoH that enable a frame in communication to be identified. No respondents stated they were aware of any such methods. Furthermore, no resources were accessed by the desk review to demonstrate the existence and implementation of framing to shape public opinion.

Framing denotes how a person comes to conceptualise an issue in a particular way or changes in the way that they think about this issue.[44] Their frame in thought consists of the set of dimensions that impact the evaluation they undertake. Such framing takes place when insubstantial changes in how an issue or event that is presented results in (often much more substantial) changes in opinion.[45,46] Though our findings show that a promising process of dialogue with relevant stakeholders and the general public has been initiated by the recent MoH initiative titled '100 days - 100 questions', it is important to note that inability to incorporate communication framing during the planning, response, and recovery stages of a crisis can undermine even the most optimal strategies.[47]

Therefore, this assessment recommends that a communication framing strategy and a standard operating procedure (SOP) should be developed to generate motivation among the community in order to engage them in positive health seeking behaviour.

4.4 COVID-19 related communication policy and guidelines in public health sector

This study found that the only communication policies and guidelines available and accessed by the research team were those related to MoH's national communication strategy for routine immunisation. The strategy was developed by UNICEF in partnership with the MoH and NCPH to support advocacy to increase demand for routine vaccination. Although this document is based on well-considered evidence-based interventions, it was not focused on COVID-19.

Besides, the findings of the study demonstrate that some communications of the MoH do not always reach and assist those who are most vulnerable. Furthermore, the communication approaches of MoH do not take into account gender, age and social characteristics of the target population. Also, there are regional differences as each region of the country has its own features, which should be addressed when developing messages and communications. These findings are in line with the global level situation in which the virus is having a particularly severe impact on minority groups,[48] those who are poor,[49] older adults, people living in an unstable housing situation, and those with pre-existing health conditions.[50] **This study therefore recommends developing comprehensive COVID-19 communication policy and a SOP to have ability to be integrated with various approaches for behaviour change, social mobilisation, and advocacy.** The policy and SOP should have clear indication on the need for capacity development of MoH on communications including research and analysis, planning, managing, monitoring, and evaluating communication programmes for behavioural and social change. Such documents must also clearly indicate ways in which financial resources can be increased and resource planning made more effective in order to yield better outcomes from communication, collaboration with donors, and form public-private partnerships. The latter will help to increase the reach of communication programmes, support learning across sectors, and help secure additional resources for development programmes. **Additionally, to motivate vulnerable groups to seek healthcare, the communication SOP must be clear as to the type of services available, who should carry on seeking healthcare, and the precautions that are being enacted to reduce the spread of COVID-19 to prevent the coronavirus transmission.**

4.5 Organizational Communication Relations

This study has elucidated the roles and responsibilities of core stakeholders. A large number have been involved in helping to manage COVID-19 in Kazakhstan alongside the MoH and the government. The findings, however, suggest that the role of key stakeholders (e.g. UN agencies, donors) regarding COVID-19 communication in Kazakhstan is poorly understood and managed within the context of MoH. It is therefore essential for both MoH and stakeholders to enhance their communication and collaboration. To avoid overlapping and ensure interventions are both effective and efficient, activities need to be properly harmonised and resources are aligned. **To facilitate this, this assessment recommends utilising a working group dedicated to communications in health care.** A win-win approach for the MoH and its partners is to ensure compliance with the strategic plans and national policies of the government regarding the management and prevention of COVID-19.

5. Conclusion

In conclusion, this study revealed that enormous efforts have been made by the MoH of the Government of Kazakhstan and partners to deal with the challenges posed by COVID-19, including the use of a variety of different forms of communication. Nevertheless, difficulties arose and several challenges needed to be addressed. **To ameliorate what has taken place, sufficient capacity, resources, framing methodology, suitable policy, strategy and SOPs, and an effective coordination mechanism are required to support communication.**

The MoH needs to listen to the concerns and questions raised by the community, engage and empower communities to take positive action, and increase people's resilience to misinformation. Even minor failures in communication can cause the public to lose trust in the ability of their government to deal with major threats to public health, which can give rise to adverse and unanticipated consequences.

Further research is required on the different elements of communication associated with COVID-19 in Kazakhstan. This should be multidisciplinary in nature to ensure it is both diverse and inclusive and it should involve public consultation from beginning to end. To enhance responsiveness to the current crisis and beyond the current pandemic, it is essential to learn from the lessons that have been faced.

Last but not least, while collecting data we encountered limitation of information in online sources concerning the MoH's work. The research team was unable to find any documents on communication strategies, planning and implementation guidelines, structure of the PR Department, and budgetary information. During the direct contact with the PR Department, we were informed that all data and official documents at MoH were confidential. **In order to ensure transparency, access to information should be guaranteed. The MoH should adopt new procedures to make the electronic dissemination of MoH information on communication work an imperative.**

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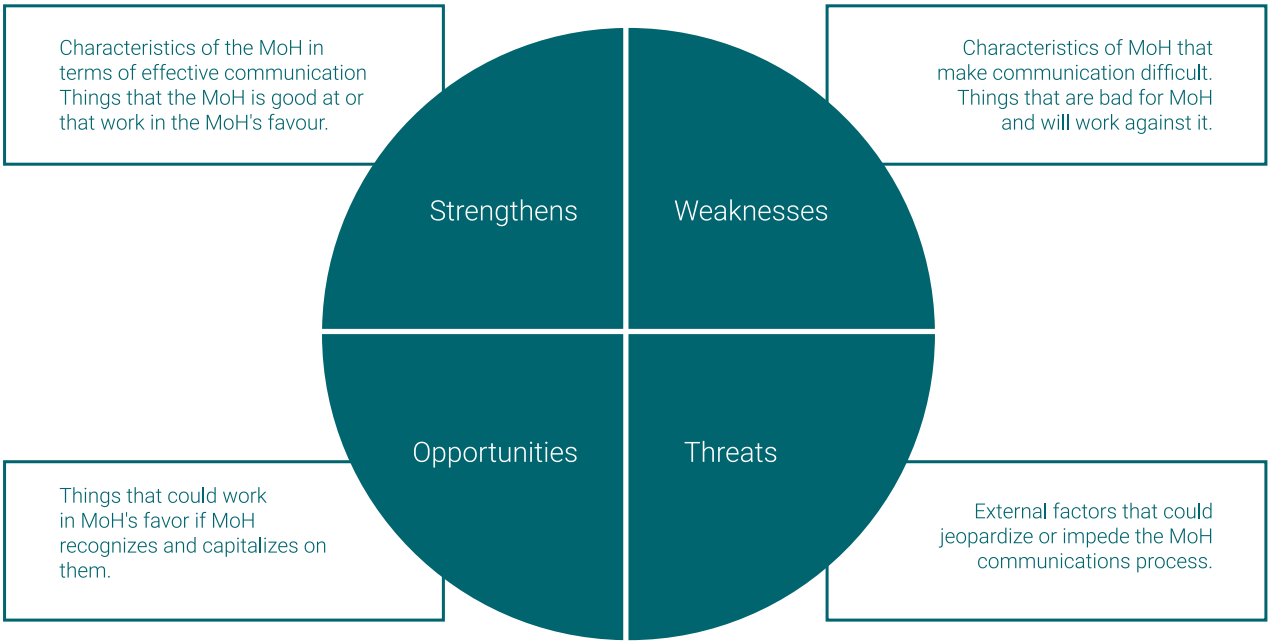
Annex 1. SWOT analysis matrix



SWOT analysis results for communication capacity, demand generation and community engagement functions of the public health sector at the national level under coordination of the MoH.

Strenghts	Weaknesses
• Well-organised framework to disseminate information within the hierarchy of the health system • Ability to produce and handle COVID19 information, e.g. health and safety guidelines, epidemiological statistics, instruction on how to access medical care and vaccination, work and entertainment measures, specific information on restrictions	• Sub-standard communication plans at the national level that were inadequately implemented, some of which did not reach the implementation stage • Insufficient budget to facilitate communication plans • Inadequate staff, skills, and opportunities for research & development • Insufficient ability to stop inaccurate information being spread to the public by a variety of sources • No precise plan to combat myths, fears, and antivaccine feelings in order to promote vaccine safety

Opportunities	Threats
• Coordinated intersectoral work by different sectors within the Government of Kazakhstan– 'Commission on preventing the spread of coronavirus infection in Kazakhstan' • Capability to increase communications capacity within the MoH and with outside organisations and health agencies • Potential for the MoH to play an overarching role in approving/disapproving the communication messages • Capacity to enhance activities pertaining to marketing, promotion, and generating vaccine demand generation by working with non-state actors • Better engaging with the public by demonstrating more transparency and quick reaction to sensitive issues raised by the public	• Poor communication by senior personnel • Insufficient awareness of mutual roles and responsibilities with respect to stakeholders • Insufficient understanding among external organisations. of the role of MoH public relations • MoH officials reluctant to disseminate public relations guidelines and policies

Annex 2. FGD questions

1. How would you describe and assess the current COVID-19 situation in Kazakhstan?
2. What are the strengths and successes of Ministry of Health in fight against COVID-19 in Kazakhstan?
3. How would you describe the MoH's communication process with the population regarding the COVID-19 pandemic?
4. What are the challenges and barriers to communication the Ministry of Health faces in its fight against COVID-19 in Kazakhstan?
5. What were the various key messages used by government health communications to combat and address issues associated with Kazakhstan's coronavirus pandemic?
6. Were the characteristics of different target groups taken into account? How did this affect the messages and their effectiveness?
7. Were there any instances of negative effects of messages? What messages had the most negative effect?
8. What framing was used by the heath sector to influence public perception in order to combat the coronavirus pandemic in Kazakhstan? Were any theoretical frameworks relating to health behaviour utilised in the development of messages aimed at combating the COVID-19 pandemic?
9. How effectively were various online and offline media platforms, actors, and public communication resources used to prioritise specific agenda-setting efforts in support of the pandemic response?

10. What communication channel used by MoH was the most effective?
11. Please evaluate the MoH's current structure and the location of the communication unit within the structure of the MoH?
12. What other resources the MoH needs in order to effectively communicate?
13. How do you assess external assistance for communications currently in place in order to combat the COVID-19 pandemic in Kazakhstan?
14. What specific official coordination and collaboration mechanisms are in place?
15. How effectively has the COVID-19 response communication addressed the needs of minorities, disadvantaged communities, and vulnerable populations?
16. Is a health communications planning and implementation guideline available?
17. Are there annual plans/rolling plans available? What do they consist of?
18. How frequently and by whom is the guide used? Is all communication created in accordance with the guide? How up-to-date is the guide? When and by whom was it developed? Is the guide still relevant in today's media landscape?
19. How can be improved the health communication of MoH? What suggestions do you have?

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