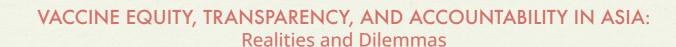




# ABUNDANT ACCESS AND INSUFFICIENT TRANSPARENCY:

Vaccine Accountability in Mongolia





#### PUBLISHED BY INNOVATION FOR CHANGE - EAST ASIA



2023

# **Rights and Permissions**

This work is available under the Creative Commons Attribution - ShareAlike 4.0 International license (CC BY-SA 4.0). By using the content of this publication, you agree to be bound by the terms of this license. This CC license does not apply to non-Innovation for Change - East Asia copyright materials in this publication. If the material is attributed to another source, please contact the copyright owner or publisher of that source for permission to reproduce it. Innovation for Change - East Asia cannot be held liable for any claims that arise as a result of your use of the material.

# TABLE OF CONTENTS

PART I: INTRODUCTION page 5 PART II: INFORMATION ACCESSIBILITY page 11 PART III: ENSURING EQUITY page 15 PART IV: ENSURING SELF-RELIANCE, TRANSPARENCY, AND ACCOUNTABILITY page 21 PART V: CONCLUSION page 27 REFERENCES page 29

# PART I: INTRODUCTION

#### 1.1. State and trends of COVID-19 and vaccination in Mongolia

#### 1.1.1. COVID-19 in Mongolia

Mongolia's Ministry of Health (MoH) first implemented public measures to prevent COVID-19 on 22 January 2020, more than a month before the first registered case of COVID-19 in the country (Minister of Health, 2020a).¹ On 12 February 2020, the Government of Mongolia (GoM) moved to a State of Emergency (SoE) (Minister of Health, 2020b; GoM, 2020c), which remained in place until 14 February 2022 (GoM, 2022).² Under the SoE, all types of transportation and flights, first between Mongolia and China, and later with other countries, were suspended (SEC, 2020; GoM, 2020b). In 2020, the Head of the State Emergency Commission (SEC)³ also took measures to restrict public movement such as: closing kindergartens, schools, universities, and vocational training centers; and banning Mongolian Lunar New Year celebrations. UN (2020) defined the government responses as "a series of strict, prompt, and decisive preventive measures at the beginning of the pandemic" and concluded that these government responses contributed to preventing infection among the domestic population until November 2020.

After the initial response, the GoM began broader policy responses and introduced a new legislative framework. For example, in April 2020, the State Great Khural (the parliament of Mongolia) approved the Law on Preventing and Combating the Spread of the Coronavirus (COVID-19), and Reducing Its Negative Impact on Society and the Economy (the COVID-19 Law). The government announced economic and social measures, including income tax reductions for enterprises and citizens working in the private sector, and increased allowances and monetary assistance for vulnerable citizens (Open Society Forum, 2021). On 14 May 2020, amendments were made to the Law on Disaster Protection, and other laws, in connection with the COVID-19 Law. The changes provided a legal basis for the GoM to plan and implement pandemic response measures.

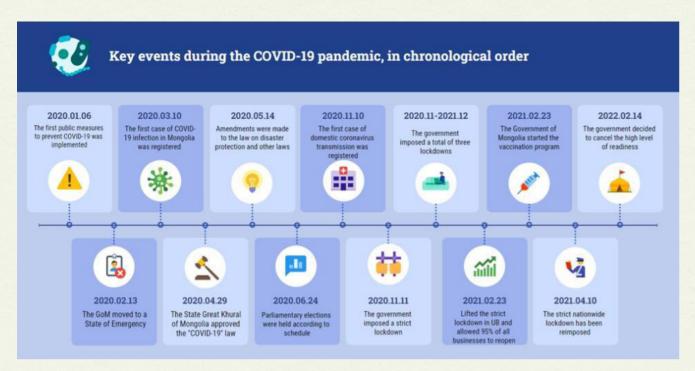
<sup>&</sup>lt;sup>1</sup> The first COVID-19 infection in Mongolia was registered on 10 March 2020, when a foreigner traveled to Mongolia and tested positive.

<sup>&</sup>lt;sup>2</sup> This time from 13 February 2020 - 14 February 2022 is considered to be the pandemic period in Mongolia.

<sup>&</sup>lt;sup>3</sup> A regular government agency responsible for responding to emergency situations, including pandemics and public health emergencies. The Emergency Staff — a response group to coordinate the implementation of the decisions of the GoM and the SEC, and ensure integrated management for the pandemic response — was established under the SEC on 12 March 2020, by Order Number 6 of the Head of the SEC, and later demoted to an operational team on 11 March 2022, by Order Number 3 of the Head of the SEC.

<sup>&</sup>lt;sup>4</sup> For example, the Law on Legal Acts was amended, enabling fast track approval of laws and policies by parliament, as was the Law on Infringement, prohibiting disinformation (which in practice limited press freedom and — more concerning — good governance, civic space, and accountability issues) (ICNL, 2022).

Figure 1: Key events during the COVID-19 pandemic in Mongolia

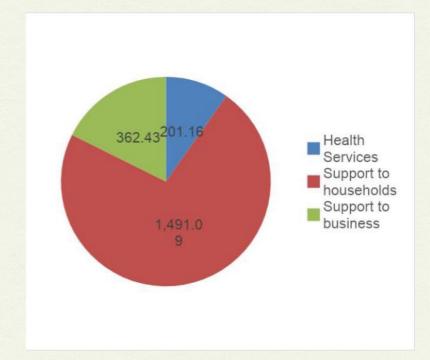


Source: ICNL, 2022

Despite these efforts, the first case of domestic COVID-19 transmission was registered on 10 November 2020, and the government imposed a strict lockdown on 11 November 2020 (GoM, 2020a), the first of three lockdowns between November 2020 and February 2021. On 23 February 2021, the government started its vaccination program (UNICEF, 2021a). After setting several quarantines, on 14 February 2022, the government decided to cancel the high level of readiness (GoM, 2022).<sup>5</sup> As of 28 February 2023, a total of 1,007,899 cases of COVID-19 had been registered,6 and 2,136 patients had died from COVID-19 (Ministry of Digital Development and Communications, 2022).

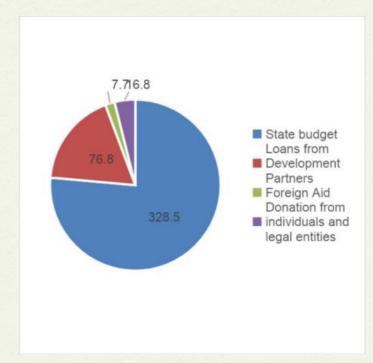
The GoM introduced a MNT5.1 trillion (USD1.7 billion) package to address the pandemic in April 2020, and a MNT10 trillion (USD3.5 billion) comprehensive plan to protect health and restore the economy in February 2021 (both COVID-19 relief and a health response package). A significant part of this COVID-19 relief was spent on supporting the finances of households and businesses (see Figure 2). According to a GoM statement on January 20, 2023 (the most recent statement at time of writing), MNT1.2 trillion (USD4 billion) was spent on the health response in 2020-2022 (see Figure 3).

Figure 2: Total COVID-19 response expenditures, as of June 2021 (USD, millions)



Source: Open Society Forum; Fiscal analysis, 2021

Figure 3: Health sector expenditures on COVID-19 during 2020-2021 (USD, millions)



Source: Open Society Forum; Fiscal analysis, 2021 Source: NHRCM, 21st Status report on human rights, 2022

Overall, there were mixed opinions on the effectiveness of the GoM's COVID-19 response. While the World Health Organization (WHO) and independent researchers regarded Mongolia's early containment strategy as successful (WHO, 2020; Baigalimaa 2020), some experts, CSOs, lawyers, media, and others perceived the GoM's overall

<sup>&</sup>lt;sup>5</sup> A State of Emergency in Mongolia can have one of three levels: "everyday readiness", "high-level readiness", or "all-out readiness". https://legalinfo.mn/mn/detail/12458.

<sup>&</sup>lt;sup>6</sup> According to the National Statistics Office, the population of Mongolia was 3,409,939 as of 31 December 2022. www.nso.mn.

pandemic response as poorly planned and inadequately communicated to the public (ICNL, 2022).

It should be mentioned that Mongolia held parliamentary, local, and presidential elections during the pandemic, as scheduled — a positive indicator according to the report of the National Human Rights Commission of Mongolia (NHRCM) (2022), despite violations of the rights of voters in quarantine (NHRCM, 2021) and unfair advantages for the ruling party (Sansar, 2022). The presidential election of 2021 was likely one of the key drivers to speed up the nationwide vaccination program (apart from the obvious public health and economic reasons).

#### 1.1.2. Vaccination

Vaccination was considered by all stakeholders, including civil society and government representatives, as one of the most successful response measures taken by the GoM (ICNL, 2022; NHRCM, 2022; Advisor to the Minister of Health, 15 January 2023). The NHRCM concluded that the GoM achieved its duty to vaccinate citizens for COVID-19 with equal access. Vaccine equity will be discussed further in Chapter 3, below, based on the findings of this study.

Following the first domestic transmission in November 2020, a rapid increase of local infections, and a series of strict lockdowns, the GoM changed its strategy. It moved from efforts to contain and prevent domestic transfer to vaccination of a target population within a short period of time, in order to relieve the stress of COVID-19 on public health and the economy. Consequently, the SEC approved the National Plan for Vaccination Against COVID-19 on 5 January 2021, based on the readiness assessment and target population calculations of the National Statistics Office.

Table 1: Vaccine types and doses received as of January 2022

Vaccine type	Planned	Total received	Donated	Purchased
Sputnik V	>1,020,000	120,000	>10,000	N/A
Pfizer	>3,714,750	3,714,750	3,714,750	0
AstraZeneca	262,800	262,800	262,800	0
Vero Cell	4,300,000	4,300,000	300,000	4,000,000
Total	>9,277,250	8,397,550	>4,000,000	N/A

Source: NHRCM, 2022; GoM, 2021; Ministry of Finance [MoF], 2021.

Based on the information available (as compiled in Table 1), four types of vaccines were initially available in Mongolia. According to its early plan, the GoM planned to vaccinate the entire adult population (2,067,292 people), which is 60% of the total

population (GoM, 2021). For this purpose, the GoM obtained at least 8,397,550 doses by January 2022, including donations of over four million doses from five countries and the COVAX facility:

- India: 150,000 AstraZeneca (GoM, 2021a)
- China: 300,000 Vero Cell (GoM, 2021a; GoM, 2021b)
- Russia: at least 10,000 Sputnik V (MoH, 2021a)
- COVAX: 112,800 AstraZeneca; 126,360 Pfizer (Mongolian National News Agency, 2021a)
- US: at least 1.1 million Pfizer (Eguur.mn, 2021)
- Japan: 2.5 million Pfizer (UNICEF, 2021b)

The NHRCM report states that Mongolia received 1,327,260 doses through COVAX and 450,000 through other donations as of January 2022 (NHRCM, 2022). This discrepancy in the data can possibly be explained by the report considering the US vaccine aid as part of the COVAX facility and excluding vaccine aid from Japan. The procurement contract for 2.35 million Pfizer doses donated by Japan was facilitated by UNICEF and made between the GoM and Pfizer (UNICEF, 2021b);8 the NHRCM report might have thus considered it as procured, rather than donated.

In addition to the international aid, Mongolia contracted procurement of at least one million doses of Sputnik V (from Russia) — though this was not delivered (as seen in Table 1) — and four million doses of Vero Cell (from China).

The vaccination program kicked off on 22 February 2021, with the receipt of the first batch of 150,000 doses of AstraZeneca vaccine, produced in India and donated by the Indian government (GoM, 2021b). As of 28 February 2022, 2,185,482 people were fully vaccinated, of whom 1,056,683 had received one booster and 139,048 had received two boosters (Ministry of Digital Development and Communications, 2022).

<sup>&</sup>lt;sup>7</sup> The initial plan was to vaccinate 60% of the population within approximately four months.

<sup>&</sup>lt;sup>8</sup> By different accounts it is 2.5 or 2.7 million doses.

#### 1.2. Research methodology

This research relied on key informant interviews (listed in Table 2), statistical information, and a desk review of existing documents and reports available on vaccination.

Table 2: List of interviews

Name	Position	Organization	Date of interview	Method of interview
Lkhagva-Ochir P.	Governor	Khutag-Undur soum <sup>9</sup>	14 Dec 2022	Online
Anonymous 1	Advisor to the Minister of Health	Ministry of Health	15 Jan 2023	Online
Dr. Gerelmaa D.	President	Women in Medicine Mongolia (CSO)	20 Dec 2022	Online
Anonymous 2	Staff	Ministry of Foreign Affairs		Online
Ayush D.	Chief of Sector	Parliamentary Research Institute	9 Jan 2023	In-person
Anonymous 3	Staff	Parliament Secretariat	12 Dec 2022	In-person
Sugarmaa P.	Public health specialist	None	15 Dec 2022	In-person

Other data sources for the research were: legal acts (such as regulations, decrees, orders from the GoM, the MoH, the SEC, and other relevant agencies); and relevant reports and data (from the GoM, the MoH, the National Center for Communicable Diseases [NCCD], the Health Development Center, the NHRCM, the Ministry of Finance [MoF], and others). To complement information gaps — and cross-check the obtained information — relevant press releases (public statements, interviews, and news articles) published during the COVID-19 period were reviewed. Even so, the lack of official, accurate, and complete data on the topic was a critical limitation of the research.

While the GoM's COVID-19 response received mixed appraisals, access to information related to COVID-19 was heavily criticized and considered inadequate by the public, civil society, governance experts, and the media (NHRCM, 2021), despite government efforts to provide prompt and accurate information on COVID-19 and government responses. Multiple agencies and pandemic units operated toll-free numbers, <sup>10</sup> to disseminate decisions of the SEC, the MoH, and other government agencies; and to transmit to the public other relevant information on the COVID-19 situation, such as pandemic prevention measures. These numbers received a total of 784,923 calls and complaints in 2020 (NHRCM, 2021).

COVID-19 information was integrated and published on the E-Mongolia integrated public service portal,<sup>11</sup> which contained information on COVID-19 symptoms, guides, and statistics on COVID-19 infections and vaccination. As an integrated public service platform available in phone application format, it was one of the most used and downloaded applications in Mongolia, with over 1.3 million users. It served as a basis for providing all COVID-19 related information. Other government agencies also introduced sections for COVID-19 related information on their websites, including the MoH,<sup>12</sup> the NCCD,<sup>13</sup> and the Health Development Center.<sup>14</sup>

None of the above-mentioned channels, however, published detailed information on vaccine procurement (distribution, availability, expiration, or wastage) or on the different vaccines available. Limited information on vaccine procurement, distribution, and availability was included in the statements of government officials, but only statistics on vaccination centers and the progress of vaccination progress was available publicly, such as: the total number of vaccinations administered and the daily vaccination rate (Figure 5);<sup>15</sup> the number of shots given with each available COVID-19 vaccine in Mongolia (Figure 4); and the vaccination rate by province, published on the Health Statistics Database of the Health Development Center.

<sup>&</sup>lt;sup>9</sup> A soum is a sub-provincial administrative unit in Mongolia.

<sup>&</sup>lt;sup>11</sup> https://e-mongolia.mn/home

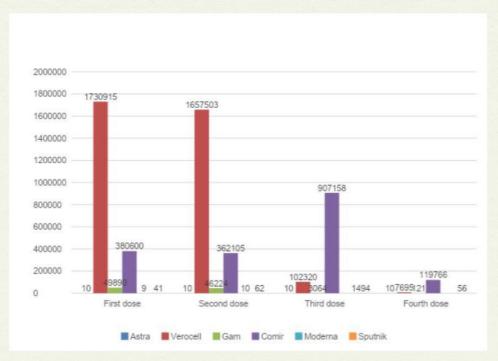
<sup>12</sup> https://moh.gov.mn/p/147

<sup>&</sup>lt;sup>13</sup> https://www.nccd.gov.mn/index.php/2020-01-25-09-02-10/2020-01-30-02-47-48

<sup>&</sup>lt;sup>14</sup> https://1313.mn/mn/newsDetail/16469836894608

<sup>&</sup>lt;sup>15</sup> www.e-mongolia.com/covid-19

Figure 4: COVID-19 vaccinations by vaccine type, January 2023



Source: Health Statistics Database, Health Development Center, 2023 (https://1313.mn/mn/ newsDetail/16469836894608)

Information on vaccines, vaccination plans, and policies were distributed through television, <sup>16</sup> and social media, <sup>17</sup> channels. Information posters on vaccination centers and operating hours, announcements of commencement of vaccination for various population groups, vaccine factsheets, and other information were developed and distributed by various agencies, including the MoH, the NCCD, the National Center of Public Health, the WHO, UNICEF, and others. Posters were also placed in vaccination centers. The contents of the posters mainly covered the locations and time tables of vaccination centers, precautions to be considered before and after vaccination, and possible side effects.

According to the CSO and MoH interviews, there was nonetheless a lack of information on the effectiveness and side effects of each of the available vaccines in Mongolia. According to a representative of the CSO Women in Medicine Mongolia, there was no comprehensive and integrated information provided to the public on vaccines; rather, government agencies only provided responses to requests or questions, resulting in an insufficient understanding of vaccines among the wider public (Dr Gerelmaa, personal communication, 20 December 2022).

An official from the MoH acknowledged the challenge of effectively facilitating information accessibility on vaccines, and pointed out that the government organized various activities to better communicate vaccine information. For example, on the initiative of the Prime Minister, the GoM budgeted MNT500 million (USD140,000) and cooperated with media organizations to promote vaccination in August 2021, with funding from UNICEF. Awareness-raising and training — for the public and medical staff working on vaccination — was undertaken in 2022 (Anonymous 1, personal communication, 15 January 2023).

The NHRCM also highlighted — as the main shortcomings of Mongolia's vaccination plan — the insufficiency of information on: the vaccination plan, the certification status of vaccines used in Mongolia by the WHO and Mongolian authorities, the benefits of vaccination, trials of COVID-19 vaccines, vaccine efficacy, potential symptoms and serious side effects after vaccination, steps to be taken in case of serious side effects, and other relevant issues (NHRCM, 2022). Another NHRCM report — carried out in the second guarter of 2021 — found that despite the high demand for vaccine information (73.3% of participants), most participants (77.5%) did not receive sufficient information (NHRCM, 2022b).

Early research conducted by the Parliamentary Research Institute in February 2021 showed there was no prevalent vaccine misinformation (Ayush D., personal communication, 9 January 2023). However, other accounts suggested that vaccine disinformation was widespread. For example, negative information on vaccines prevailed, such as 'vaccines causing death' (Dr. Gerelmaa, Women in Medicine Mongolia, 20 December 2022). Fake news about vaccine ineffectiveness and negative effects was widespread on social media, and there is suspicion that vaccine disinformation was organized (Anonymous 1, personal communication, 15 January 2023). However, there was no comprehensive assessment of the prevalence of vaccine disinformation in Mongolia to support this. There are existing provisions against "distributing false information" in the COVID-19 Law and the Law on Disaster Protection, but not much information is available on their utility in limiting vaccine disinformation.

Government public communication on vaccines concentrated on speeding up the vaccination rate, while providing no comprehensive data on vaccines, such as about their procurement or doses administered by type. For example, one of earliest vaccine promotion campaigns during the COVID-19 pandemic was the GoM's "Covid Free Summer" media campaign (News Agency, 2021a). This campaign did not provide substantial information on clinical features of vaccines, or any information on vaccine procurement, distribution, or logistics; it mainly distributed promotional content for vaccination, in collaboration with influencers and artists.

The GoM's communication of COVID-19 related information to the public was considered inadequate by the main human rights monitoring body of the government (NHRCM, 2022); an independent research team (ICNL, 2022) also opined that information on vaccines and vaccination were not effectively communicated to the public. Government organizations operated a number of websites where COVID-19 related information was published, and later in 2021 the GoM organized information

<sup>&</sup>lt;sup>16</sup> The MoH provided information at 11:00AM daily, including about decisions, the COVID-19 situation, vaccinations, and all COVID-19 related information. All television channels broadcast this live, and major news outlets and websites also broadcast it through their social media channels.

<sup>&</sup>lt;sup>17</sup> The MoH, the NCCD, the SEC, local administrations, and others posted COVID-19 related information on their official social media pages.

communication campaigns on vaccination, some in cooperation with UNICEF or other organizations. Despite this, detailed information and data on vaccination plans, and vaccine procurement is still not available. The public received limited information, including on vaccine procurement, plans, and distribution, mainly through statements from government officials distributed through various media outlets. In 2021, study results revealed that three quarters of the population did not receive sufficient information (NHRCM, 2022b), showing that the public had a serious shortage of information about vaccines.

# PART III: ENSURING EQUITY

#### 3.1. Vaccination plan

The GoM rolled out its vaccination plan in February 2021, initially aiming to vaccinate all adults in Mongolia (60% of the population) by July 2021 (GoM, 2021a). It later extended its vaccination targets to children ages 16-17 (from 16 June 2021), and children ages 12-15 (with the Pfizer vaccine, from 28 June 2021). In August 2021, it authorized booster doses for anybody 18 years and older.

The vaccination plan was allegedly approved by Order No. 05 of the Head of SEC on 5 January 2021, but this document is not publicly available. In preparation, the following were undertaken:

- 4,553 doctors and health workers nationwide were trained through 18 online sessions;
- stationary and mobile vaccination units were established;
- · calculations of target populations for vaccination were conducted; and
- a vaccination strategy was identified (GoM, 2021a).

In addition, a preparedness assessment (for vaccine logistics and cold chain management) was conducted. Vaccination ultimately began on 23 February 2021, after Mongolia received 150,000 AstraZeneca vaccines through humanitarian support from India (GoM, 2021b).

#### 3.2. Vaccination strategy

#### 3.2.1. General

Minister of Health Order A/108, approved on 9 March 2021, defined the following target groups for priority vaccination:

- health workers (public and private sectors);
- people with chronic illness;

<sup>&</sup>lt;sup>18</sup> Order No. A/363, MoH, 15 June 2021, https://moh.gov.mn/uploads/files/c9877f1d23927ec24c347328bc3949959828cd6e.pdf

<sup>&</sup>lt;sup>19</sup> Order No. A/404, MoH, 23 June 2021, https://moh.gov.mn/uploads/files/70a1fe697258d25f62ff8bc4a9ba97a05fd074f8.pdf

- homeless adults and adults living in nursing houses;
- · staff working in disaster response agencies and first responders;
- · teachers and staff of kindergartens, schools, TVETs, and universities; and
- staff of organizations whose operations could not be halted.<sup>20</sup>

However, target groups in the ministerial order were different from the priority target groups advertised through media. News website Ikon, referring to the Twitter post of the MoH spokesperson, published the following target groups for vaccination by priority (IKON.MN, 2021). The adviser to the Minister of Health acknowledged that the prioritization of target groups for vaccination could have given more attention to the most vulnerable groups, such as the elderly (Advisor to the Minister of Health, 15 January 2023).

Table 3: Target groups prioritised for vaccination

Target group priority	People in the group (number)	% of total population
Health sector workers	56,047	1.7
Emergency response staff	52,750	1.6
People above 50 years old	583,545	17.7
People with disabilities	230,781	7.0
People with chronic diseases	276,937	8.4
People who could be mobilized for emergency response measures	65,937	2.0
Employees in strategically important sectors	329,687	10.0
Employees in the education sector	69,234	2.1
Others	313,202	9.5
TOTAL	1,978,120	60.0

Source: Plan: Priorities for administration of vaccines against Covid-19 starting from February 23 [2021] (ikon.mn)

Although the GoM identified priority groups for vaccination, there is no detailed data or statistics on the implementation and results of vaccination of these groups. For example, there is no detailed information on the percentage of people with disabilities who were vaccinated, whether they were vaccinated according to the intended priority, the types of vaccines administered, or who was not vaccinated and why.

In terms of vaccine equity and target groups for vaccination, the CSO representative interviewed noted concerns that migrants and people in Ulaanbaatar city who were not registered in their district of residence might have been left out or had limited access to vaccination (Dr. Gerelmaa, personal communication, 20 December 2022).

#### 3.2.2. Urban first strategy

Vaccination started in the capital city, Ulaanbaatar, and proceeded to priority target groups in the provinces a month later, starting from late March and early April 2021 (see Table 4). That is, vaccination started in urban areas, where the number of active COVID-19 cases and the risk of infection was highest due to the higher concentration of people (Anonymous 1, personal communication, 15 January 2023). Mass vaccination of the general population started in late April 2021, when vaccines became abundant (see Chapter 4.2) after the procurement of the Vero Cell vaccine by the GoM.

Table 4: Start of vaccination in provinces, and rate of vaccination, by January 2023

Province <sup>21</sup>	Starting date of vaccination	Vaccine type (and doses) available on starting date	% of target population vaccinated by Jan 2023
Ulaanbaatar	23 Feb 2021	AstraZeneca (150,000)	92.19
Arkhangai	6 Apr 2021	Vero Cell (4,040)	77.15
Bayankhongor	6 Apr 2021	Vero Cell (4,000)	78.91
Bayan-Olgii	7 Apr 2021	Vero Cell (5,461)	78.81
Bulgan	5 Apr 2021	N/A	81.50
Darkhan-Uul	27 Mar 2021	Vero Cell (1,000)	80.24
Dornod	7 Apr 2021	Vero Cell (8,500)	83.60
Dornogobi <sup>22</sup>	31 Mar 2021	Vero Cell (2,000)	86.36
Dundgobi	N/A	N/A	72.11
Govi-Altai	6 Apr 2021	Vero Cell	81.85
Govisumber	6 Apr 2021	Vero Cell (1,363)	88.09
Khentii	5 Apr 2021	Vero Cell (4,585)	84.11
Khovd	7 Apr 2021	Vero Cell (5,463)	77.72
Khuvsgul	8 Apr 2021	Vero Cell (5,788)	76.38
Orkhon	26 Mar 2021	Vero Cell (2,000)	79.40
Umnugobi <sup>23</sup>	18 Mar 2021	N/A (13,000)	99.70
Uvurkhangai	7 Apr 2021	Vero Cell (5,577)	73.04
Selenge	4 Apr 2021	N/A	77.79

<sup>&</sup>lt;sup>20</sup> The list is not in order of priority. In the document, all groups in the list are mentioned under the first priority population for a vaccination.

<sup>&</sup>lt;sup>21</sup> Ulaanbaatar is the capital city, and all other provinces are considered to be rural areas.

<sup>&</sup>lt;sup>22</sup> Vaccination here started from the main (China) border port, unlike in other provinces where it started from the province center.

<sup>&</sup>lt;sup>23</sup> Vaccination here started from the main (China) border port, unlike in other provinces where it started from the province center.

Sukhbaatar	5 Apr 2021	Vero Cell (4,503	88.36
Tuv 22 Apr 2021		Vero Cell (1,000)	78.93
Uvs	N/A	N/A	75.67
Zavkhan	7 Apr 2021	Vero Cell (4,716)	81.55

Source: Health Development Center, 2023; GoM, 2021; Emergency Department of Govi-Altai Province, 2021; Zindaa, 2021; Ulsturch.mn, 2021; Citizen Representative Khural of Tuv Province, 2021; Selenge Province Administration, 2021; Bayan-Olgii Province Governor's Office, 2021; Mongolian National News Agency, 2021b; Kehntii Province Administration, 2021; Darkhan-Uul Province Governor's Office, 2021; Uvurkhangai Province Governor's Office, 2021; Bulgan Province Citizen Representative Khural, 2021; Dornod Province Governor's Office, 2021; Dornogovi Province Governor's Office, 2021; Mongolian National News Agency, 2021c; Khovd News, 2021; Mongolian National News Agency, 2021d; Mongol Content, 2021a.

Shortly after vaccination began in the provinces, an increased focus was placed on ensuring vaccination in soums (sub-provincial administrative units). In each soum, vaccination was carried out through one stationary and two mobile vaccination units (Lkagva-Ochir P., personal communication, 14 December 2022). The CSO representative and the public health expert confirmed that vaccine equity and accessibility were sufficient, in terms of geographical coverage, despite the slight delay of vaccination commencement in comparison to Ulaanbaatar city (Dr. Gerelmaa, personal communication, 20 December 2022; Sugarmaa P., personal communication, 15 December 2022).

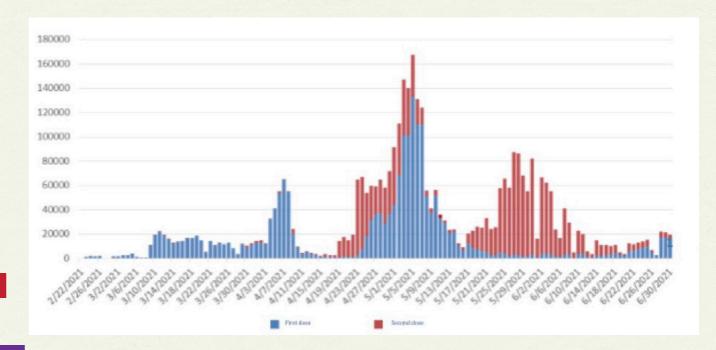
#### 3.3. Lack of knowledge as a possible cause for vaccine hesitancy

Due to the lack of knowledge and information on various types of COVID-19 vaccines during the early stages of the vaccination program, people were hesitant to be vaccinated. For instance, according to a poll carried out in October 2020, just 46.4% of participants were strongly or somewhat supportive of vaccination (MoH, 2020), despite the government initiating various promotion and communication activities to accelerate the rate of vaccination (as discussed in Chapter 2, above). This might be related to the vaccination program being mainly dependent on vaccines from China in its first months (see Table 6). For example, a small group of people protested against Chinese vaccines in front of the MoH office (Anonymous 1, personal communication, 15 January 2023). The Vero Cell vaccines attracted concerns related to: the vaccine being in the Phase III clinical trial stage (and not yet approved by the WHO) when Mongolia started using it; and negative information — distributed in some online groups — suggesting the vaccine was not approved by the WHO, and messages such as "Chinese vaccines received through humanitarian aid will be used to vaccinate the military personnel" that raised suspicions and nationalist sentiments (Parliamentary Research Institute, 2021).

In fact, according to content analysis of the information related to COVID-19 vaccines posted on social media (conducted by the Parliamentary Research Institute in February 2021, the first month of the vaccination), only a few social media pages distributed negative information on COVID-19 vaccines. Some only promoted the Russian Sputnik-V vaccine. Overall, information related to COVID-19 vaccines

posted on most influential social media channels was positive (Ayush D, personal communication, 12 December 2022).

Figure 5: Number of daily vaccinations in Mongolia, February to June 2021



Source: E-Mongolia, 2022.

To accelerate vaccination — in part motivated by the presidential election campaign in June 2021 — the GoM issued Decree No.122 on 5 May 2021, providing an incentive of MNT50,000 (USD18) for people who received a first dose of vaccine. The government also organized several communication campaigns. As a result, the daily vaccination rate doubled, as can be seen in Figure 5. The incentive policy might have helped with mitigation of vaccine hesitancy, along with promotional campaigns such as the "Covid Free Summer".

The MoH official suggested that the COVID-19 vaccination was carried out efficiently overall due to:

- vaccine availability (discussed further in Chapter 4.2, below);
- sufficient logistics and cold chain preparations; and
- government measures to promote vaccination (Parliament Secretariat staff member, 11 December 2022).

The CSO representative generally agreed, saying the vaccination plan was implemented successfully and equitably, despite:

- some concerns about the target group prioritization and vaccine access for unregistered residents in Ulaanbaatar; and
- not enough attention and effort given to recording, monitoring, and responding to vaccine side effects (Dr. Gerelmaa, personal communication, 20 December 2022).

Vaccination started with the most 'at risk' groups and areas, rapidly scaling up to cover — and become accessible to — all of the eligible population. Despite Mongolia's reliance on Chinese vaccines in the first months of the vaccination, availability of the Pfizer and AstraZeneca vaccines increased in the second half of 2021. MoH representatives considered availability of different types of vaccines as a positive factor in achieving vaccination objectives (Anonymous 1, personal communication, 15 January 2023).

# PART IV: ENSURING SELF-RELIANCE, TRANSPARENCY, AND ACCOUNTABILITY

#### 4.1. Context of budget transparency of COVID-19 response

The GoM approved a COVID-19 response package totaling MNT15.1 trillion (USD5 billion), but details of the package and expenditures related to it had not been published at the time of writing.

Under the COVID-19 Law, the government secured the right to rearrange budget expenditures, within given amounts, without parliamentary oversight. Consequently, COVID-19 related fiscal transparency and accountability was criticized by independent experts from civil society and politicians (Open Society Forum, 2021). Their concerns may have been legitimate: an audit conducted by the Mongolian National Audit Office identified infringements related to MNT3.6 trillion (USD1.3 billion) in expenditures in 2020 (Mongol Content, 2021c), and MNT10.4 trillion (USD3.7 billion) in state budget expenditures in 2021 (Mongolia National Audit Office, 2022).

Issues around public procurement, healthcare budgeting, and spending as part of the COVID-19 response have been highly criticized and questioned. For instance, the tender for the purchase of 20,000 N95 masks (announced by the Capital City Health Department on 5 February 2021) was cancelled due to citizens' complaints about the procurement tender.<sup>24</sup> The main criticisms were:

- The total budget for the procurement was MNT400 million, putting the cost of one mask at around USD7 (significantly higher than the market price); and
- The window for submitting proposals was for three days, two of which were the weekend.

This 'big' budget procurement — announced for a very short period of time — caused concerns among the public, and raised questions about the integrity of the process.

<sup>&</sup>lt;sup>24</sup> https://ikon.mn/n/24fn

Table 5: Fiscal support received from development partners from 2020 to 2021

Development partner	Funding (USD, millions)
Asian Development Bank	200.0
International Monetary Fund	99.5
Asian Infrastructure Investment Bank	100.0
Japan	242.3
European Union	18.0
Total	659.8

Source: MoF, 2021

The MoF reported that the GoM received USD659.8 million worth of fiscal support (Table 5) from development partners to combat COVID-19 during the pandemic. On top of this, USD111.7 million worth of projects started in 2021 (for vaccine procurement, and to strengthen cold chain management capacity), of which USD90.7 was a loan (MoF, 2021). However, agreements for these loans and aid were not published.

#### 4.2. Vaccine procurement

Mongolia did not have domestic capacity and preparedness for vaccine development and production. Consequently, Mongolia was the first country to firmly support the TRIPS Waiver proposal that India and South Africa submitted to the WTO in October 2020, and it joined the proposal on 16 December 2020 (WTO, 2022). Meanwhile, the GoM approved a COVID-19 vaccine procurement plan on 23 December 2020 (Mongolia National News Agency, 2020).

The parliament of Mongolia commissioned the GoM to establish an agreement with relevant international organizations to purchase COVID-19 vaccines (by Decree No 36/2020). Regardless, the GoM was obliged to provide the population with necessary health services, other vaccines and medicines, and equipment during the pandemic (under Section 7.1.23 of the COVID-19 Law). According to Section 34.1.9 of the Procurement Law of Mongolia, the GoM can directly purchase internationally certified vaccines from producers in case of emergency vaccination needs. Consequently, there is no selection process for vaccine procurement.

In February 2021, the GoM rolled out its ambitious plan to vaccinate the target population of over two million people, or 60% of Mongolia's population, by July 2021. To achieve this goal, the plan relied on successful and timely delivery of vaccines. However, during the initial vaccine campaign, the volume of vaccines delivered under COVAX and other bilateral aid was low, and there was a lack of vaccines available from other sources, resulting in a high dependency on Chinese vaccines. For example, although only 50,000 doses of the Sputnik V vaccine were received by May 2021 (despite the vaccine procurement contract having been made for one

million doses), 2.3 million doses of Vero Cell were received between 22 April and 6 May 2021, allowing the vaccination campaign to intensify.

Availability of Chinese vaccines in the early months of vaccination was a result of effective negotiations between the GoM and its Chinese counterparts, and rapid delivery of large quantities of vaccines from China within a brief period of time (Ministry of Foreign Affairs staff member, 9 January 2023). As of 6 May 2021, about 90% of all vaccines administered were from China (GoM, 2021a). This is considerably high compared to later in the pandemic; as of early 2023, just 65.9% of vaccines administered were from China (Health Development center, 2023).

When comparing the daily vaccine administration statistics presented in Chapter 3 (Figure 5) with the vaccine delivery timeline in Table 6, one can see that the vaccination rate increase overlaps with the receipt of Vero Cell vaccines. For example, there were fewer than 20,000 vaccinations per day in Mongolia until April 2021, but the vaccination rate increased to over 50,000 in early April, which coincided with the delivery of the first batch of Vero Cell vaccines. From Table 4, it can be seen that vaccination in most provinces started in early April, using Vero Cell vaccines. The vaccination rate peaked in May (Figure 5), before the receipt of a substantial amount of Pfizer and AstraZeneca in June 2021.

Table 6: Timeline for vaccine delivery to Mongolia

Date	Doses	Type of vaccine	Funding	
22 Feb 2021	130,000	AstraZeneca	Aid from India	
23 Feb 2021	100,000	Vero Cell	Aid from Ministry of Defense of China to the Mongolian Ministry of Defense	
27 Feb 2021	10,000	Sputnik V	Government procurement	
12 Mar 2021	14,400	AstraZeneca	COVAX	
2 Apr 2021	300,000	Vero Cell	Government procurement	
22 Apr 2021	600,000	Vero Cell	Government procurement	
1 May 2021	40,000	Sputnik V	N/A	
6 May 2021	334,400	Vero Cell	Government procurement	
6 Jun 2021	48,000	AstraZeneca	COVAX	
16 Jun 2021	84,240	Pfizer	Aid from Japan	
23 Jun 2021	85,410	Pfizer	Aid from Japan	
30 Jun 2021	85,410	Pfizer	Aid from Japan	
4 Jul 2021	20,000	Sputnik V	N/A	
8 Jul 2021	30,420	Pfizer	Aid from Japan	
21 Jul 2021	92,490	Pfizer	Aid from Japan	
11 Aug 2021	117,000	Pfizer	Aid from Japan	

25 Aug 2021	113,490	Pfizer	Aid from Japan
7 Oct 2021	899,730	Pfizer	COVAX (US aid)
18 Jun 2022	302,400	Pfizer for children	COVAX (US aid)

Source: GoM, 2021b; UNICEF, 2021a; US Embassy in Mongolia, 2022; UNICEF, 2021b; Ministry of Defence, 2021; MoF, 2021; MoH, 2021a; MoH, 2021b; Peak News, 2021; Eguur.mn, 2021; Urug Mongolian Independent Media, 2021; Mongol Content, 2021b; Daily News, 2021; Mongolian National News Agency, 2021a; Mpress, 2021.

It is worth noting that Table 6 presents only the available information on specific, dated vaccine deliveries to Mongolia; it excludes deliveries about which there is missing information. For example, Table 6 provides the timeline of delivery for only 1,334,400 Vero Cell doses, though as of 6 May 2021 Mongolia had received 2,924,940 doses, including 2,634,400 Vero Cell (300,000 through aid, and 2,334,400 through procurement) (GoM, 2021a). The GoM's report also stated that by 6 May 2021, Mongolia had received 214,800 AstraZeneca and 25,740 Pfizer doses (GoM, 2021a), the timeline of which is not fully traceable. In other words, there is no publicly available, complete timeline of vaccine delivery. News records also do not fully cover all vaccines delivered, which limits the provision of complete information on vaccine delivery here.

Mongolia's reliance on Vero Cell vaccines purchased from China, especially until June 2021, was due to Mongolia not producing vaccines domestically, and to vaccines from other countries not being accessible (Advisor to the Minister of Health, 15 January 2023).

Overall vaccine access in Mongolia, including through the purchase of four million Chinese Vero Cell doses in April 2021, was made possible by effective diplomacy. The latest information on the volume of vaccines received, as of January 2022, indicates a total of 8.4 million doses received (NHRCM, 2022). Although Mongolia relied on Vero Cell vaccines during the early stages of vaccination, from June 2021 onward it started to receive a large number of Pfizer doses through aid from Japan and the US. In total, Mongolia received at least 4.2 million doses through foreign aid (see Table 7), including over 3.7 million Pfizer doses. Media source The Diplomat concluded that the relatively successful vaccination program in Mongolia was partly driven by its activities to secure and obtain access to a sufficient amount of vaccines through various diplomatic efforts (The Diplomat, 2021).

Table 7: Vaccine aid to Mongolia

Funder	Funding	Doses covered	Delivery channel
Japan	Aid	Approximately 2.35 million	Facilitated by the UNICEF
US	Aid	Over 1.4 million	Facilitated by UNICEF through COVAX
India	Aid	150,000	Direct
China	Aid	300,000 <sup>25</sup>	Direct
COVAX	Aid	To be clarified	Facilitated by the UNICEF
Russia	Aid	10,000 <sup>26</sup>	Direct

Source: MoF, 2021; GoM, 2021a; NHRCM, 2022.

Almost all of the vaccines received were either provided through the COVAX Facility or aid from partner countries, or were financed through loan agreements with international organizations including:

- Support Rollout of COVID-19 Vaccines in Mongolia with the Asian Development Bank (ADB);
- Support for COVID-19 Vaccine Delivery in Mongolia with the Asian Infrastructure Investment Bank (AIIB); and
- the Mongolia COVID-19 Emergency Response and Health System Preparedness Project with the World Bank (MoF, 2021).

However, none of these agreements are publicly available yet. As with the vaccine receipt timeline, information on means of funding vaccines cannot be considered complete, as not all vaccine procurement agreements were publicised. From an MoF statement, it is understood that vaccine procurements were funded (or refinanced) with loans from international development partners (see Table 8) (MoF, 2021).

Table 8: Development partners funding vaccine procurement in Mongolia

Partner	Amount (USD, millions)			
Partifet	Total	Pfizer	Vero Cell	
Government of Japan	21.0	15.8		
Asian Development Bank	19.0	1.0	5.7	
World Bank Group	50.7		N/A	
Asian Infrastructure Investment Bank	21.0	11.0	10.5	

<sup>&</sup>lt;sup>25</sup> It is unclear whether aid of 100,000 Vero Cell vaccines from the PRC (China) Ministry of Defense is included in the total amount of 300,000 vaccines donated.

<sup>&</sup>lt;sup>26</sup> Russia pledged to donate 20,000 Sputnik V vaccine doses to Mongolia, but no information is available on the delivery of the second lot (of 10,000 doses).

Source: MoF, 2021

There is no complete and accurate information on the total amount of money allocated for vaccine procurement, or sources of funding for this. Overall, complete information on vaccine procurement (including selection, negotiation, procurement, and expenditure) were not made public. Moreover, existing (incomplete) information is contradictory, posing a further challenge to conducting a comprehensive analysis and monitoring vaccine transparency. The lack of information may be partially related to the fact that procurement of Pfizer vaccines was facilitated by UNICEF, and the GoM was not involved directly (Advisor to the Minister of Health, 15 January 2023); the Vero Cell procurement agreements also have a confidentiality clause incorporated (Anonymous 2, personal communication, 9 January 2023).

In general, Mongolia recognized its lack of vaccine self-reliance early, and showed firm support for the vaccine TRIPS Waiver for better access to vaccines for developing countries. Mongolia has also used active foreign relations and diplomatic efforts to ensure sufficient access to vaccines. Around half of the total 8.4 million vaccines were provided through donations from partner countries and the COVAX facility. The other half were directly procured by the GoM, four million of which are Chinese Vero Cell vaccines. Considering that by June 2021, 74.1% of the target population was fully vaccinated (Ministry of Digital Development and Communications, 2022), it can be concluded that Mongolia's efforts to secure access to vaccines were effective. Mongolia also succeeded in raising funds to finance vaccine procurement. Unfortunately, transparency and accountability regarding procurement and access to vaccines have left gaps in public information.

# PART V: CONCLUSION

Mongolia rolled out its vaccination program in February 2021 as a rapid response to increased domestic infections. The initial objective was to vaccinate 60% of the population (around two million people) by July 2021. As of 30 June 2021, Mongolia had fully vaccinated 74.1% of the target population; as of 1 November 2022, 2,283,122 people (65.9% of the total population) were fully vaccinated (MoH, 2022). In this regard, the vaccination program can be seen as relatively successfully implemented.

A crucial factor enabling vaccination progress in Mongolia was access to vaccines, as Mongolia did not have vaccine-self-reliance capacity. In total, Mongolia received around 8.4 million doses (as of January 2022), of which over 2.9 million were received by 6 May 2021 — within three months of commencement of the vaccination plan. Access to vaccines was made possible due to substantial foreign aid and diplomacy. Approximately 4.2 million doses were received through donations and aid from COVAX, Japan, the US, China, India, and Russia. Also, over USD90 million worth of financial support for vaccination was received from the ADB, the AIIB, the World Bank, and UNICEF. Support on ensuring vaccine logistics and cold chain played a crucial role in facilitating the vaccination program.

Although Mongolia had access to four types of COVID-19 vaccines, Vero Cell (4.3 million doses) from China and Pfizer (over 3.7 million doses) from the US were the most common. Availability of various types of vaccines, allowing a degree of choice, was an advantage and a factor in the success of the vaccination program (as concluded by the MoH advisor). However, the first four months of vaccination overwhelmingly relied on the Chinese Vero Cell vaccine (around 90% of available vaccines until June 2021). Due to a lack of access to vaccines in the beginning of the vaccination program, and no domestic capacity to produce vaccines, the GoM had to purchase four million doses of Chinese Vero Cell vaccines to keep the vaccination program running and to achieve its targets. Even though procurement and timely receipt of Vero Cell was made possible by intensive diplomatic efforts, it was criticized as a rushed move, given that this vaccine was in clinical trials and not yet approved by the WHO. Even after the increased availability of Pfizer and AstraZeneca vaccines, Vero Cell remained the main vaccine used in Mongolia, constituting 65.9% of total vaccines administered.

Although the GoM secured sufficient access to vaccines and successfully implemented its vaccination plan, it has failed to ensure transparency and accountability regarding vaccine procurement, vaccine finance, pandemic response expenditures from the GoM, and foreign aid for pandemic response. Confidentiality provisions in vaccine procurement agreements further obscured transparency of vaccine procurement. Complete, accurate, and up-to-date information on vaccine procurement, vaccine price, amount contracted, and amount received was not available. Overall pandemic response expenses — despite totaling over USD5 billion over two years of the

pandemic — were not properly disclosed or reported to the public. A state audit identified infringements related to fiscal expenditures summing to over USD4 billion during 2020-2021, which points to a lack of fiscal transparency in pandemic governance.

During the vaccination program, vaccine information access and effective communication were insufficient, not only for Vero Cell, but for all types of vaccines and the vaccination plan in general. Database records on vaccine efficiency, side effects, and vaccine equity were weak, preventing the ability to effectively monitor and respond to potential problems in these regards. The GoM's information and communication efforts were mainly directed toward tracking the rate of vaccination (and vaccine promotion activities), rather than substantial and effective vaccine information communication. The GoM spent substantial efforts and funding in vaccine promotion campaigns, but it remains unknown how effective they were.

The followings are the recommendations for Mongolia:

- The government should provide access to complete information on vaccination and COVID-19 response in general, for various stakeholders, including independent experts, CSOs, and media.
  - This will enable further analysis of the COVID-19 response and its results, reflection on lessons learned, and concrete recommendations for improvement of the legal environment, operational mechanisms, and implementation practices for better emergency response in future.
  - Organization of extensive discussion of vaccination in Mongolia, including challenges and results, would allow better understanding about the vaccination campaign and challenges in implementation.
- As Mongolia successfully secured access to vaccines in early stages of vaccination, it should compile its experience of vaccine diplomacy, and share the lessons and guidance with stakeholders domestically and in other developing countries.
- The GoM and the SEC should review their emergency response management and vaccine communication experience and identify and analyze key factors that prevented their efficiency. In doing so, they should look into emergency response management structure, operational procedures and tools, and results assessment. This could give better understanding into limiting factors of effective vaccine communication in Mongolia.

### REFERENCES

- Amnesty International Mongolia. (2021). Covid-19 pandemic and law enforcement. Ulaanbaatar.
- Baigalimaa, G. (19 May 2020). Lessons from Mongolia's COVID-19 Containment Strategy. https://fsi.stanford.edu/news/lessons-mongolia%E2%80%99s-covid-19-containment-strategy
- Bayan-Olgii Province Governor's Office . (7 April 2021). Vaccination started in the province. https://bayan-olgii.gov.mn/test/
- Bulgan Province Citizen Representative Khural. (6 April 2021). Vaccination started in Bulgan province. http://bulgan.khural.mn/n/210118
- Citizen Representative Khural of Tuv Province. (22 April 2021). Vaccination started in Tuv province. http://tov.khural.mn/n/210595
- Daily News. (5 July 2021). First vaccine arrival at the new airport. https://dnn.mn/%D1%88%D0%B8%D0%BD%D1%8D-%D0%BD%D0%B8%D1%81%D1%8D%D1%85-%D0%B1%D1%83%D1%83% D0%B4%D0%B0%D0%BB%D0%B4-%D0%B0%D0%BD%D1%85%D0%BD%D1%8B-%D0%B2%D0%B0%D0%BA%D1 %86%D0%B8%D0%BD-%D0%B1%D1%83%D1%83%D0%BB%D0%B0%D0%B0/
- Darkhan-Uul Province Governor's Office. (27 March 2021). Covid-19 vaccination started in Darkhan-Uul province. http://darkhan.gov. mn/%D0%BC%D1%8D%D0%B4%D1%8D%D1%8D/1/JgLckxXeEvXMjPLsT
- Dornod Province Governor's Office. (5 April 2021). Vaccination started in Dornod Province. https://dornod.gov.mn/n/1067
- Dornogovi Province Governor's Office. (31 March 2021). Vaccination started in Zamiin-Uud. https://www.dornogovi.gov.mn/home/218? id=1128
- Eguur.mn. (8 October 2021). Received 1.1 million Pfizer vaccine from the US government. https://eguur.mn/253563/
- Emergency Department of Govi Altai Province. (6 April 2021). Vaccination started. http://ga.nema.gov.mn/n/87543/
- Globe International Center. (2022). Media Freedom Report 2021. Ulaanbaatar: GIC.
- Government of Mongolia. (11 November 2020a). Decree No.178. On Instigating Public

- Preparedness Level. Ulaanbaatar.
- Government of Mongolia. (31 January 2020b). Decree No.39. On Temporary Closure of Border Points and Suspending Arrivals. Ulaanbaatar.
- Government of Mongolia. (12 February 2020c). Decree No.62. Instigating a Level of Preparedness. Ulaanbaatar.
- Government of Mongolia. (2021a). Activity Report of 100 Days. Ulaanbaatar: Government of Mongolia.
- Government of Mongolia. (23 February 2021b). Government of Mongolia. Retrieved from Vaccination against the pandemic started in Mongolia. https://mongolia.gov.mn/news/view/25753
- Government of Mongolia. (14 February 2022). Decree No.66. On Lifting the High Level of Preparedness. Ulaanbaatar.
- Head of State Emergency Commission. (13 February 2020). Order No.04. Guideline for Undertaking Activities During Partial Instigation of High Level of Preparedness. Ulaanbaatar.
- Health Development center. (18 January 2023). Covid-19 vaccination statistics. https://1313.mn/mn/newsDetail/16469836894608
- International Center for Not-for-Profit Law. (2022). Lessons From Pandemic Civic Space Resiliency in Mongolia. Ulaanbaatar.
- IKON.MN. (15 February 2021). IKON. https://ikon.mn/n/24ps
- Khentii Province Administration. (05 April 2021). Covid-19 vaccination started in Kehntii Province. https://khentii.mn/d/news/3263
- Khovd News. (7 April 2021). Vaccination against Covid-19 started. http://khovdnews.mn/?id=205035
- Minister of Health. (22 January 2020a). Decree No.19. https://moh.gov.mn/uploads/files/cd5fb4626df7860c1c95dc803a947c295fe35ebf.pdf
- Minister of Health. (13 February 2020b). Decree No.A/93. https://moh.gov.mn/uploads/files/627fcf0446a10ac8cefce8917fc43987e4f0ff5c.pdf
- Ministry of Digital Development and Communications. (13 February 2022). Covid-19 Infections in Mongolia. https://e-mongolia.mn/covid-19
- Ministry of Finance. (2021). Received foreign aid and loan related to Covid-19. Ulaanbaatar: Ministry of Finance.

- Ministry of Foreign Affairs. (30 April 2021). Vaccination of foreign citizens started. https://mfa.gov.mn/59817
- Ministry of Health. (2020). Study on Public Perception, Social Psychology and Behaviour During Covid-19 Pandemic. Ulaanbaatar.
- Ministry of Health. (27 February 2021a). Received Sputnik-V vaccines. https://www.moh.gov.mn/news/4994
- Ministry of Health. (12 December 2021b). Received recurrent batch of Pfizer vaccine. https://moh.gov.mn/











