COVID-19 VACCINES AND ACCESS TO HEALTH IN RURAL TUNISIA

A CASE STUDY IN GHARDIMAOU, JENDOUBA (NORTH-WESTERN TUNISIA)

The Covid-19 pandemic exposed the weakness of right to health protections in Tunisia and particularly when it came to vaccine rollout programmes and the marginalization of historically underserved rural regions of Tunisia.

Amnesty International conducted field research in Ghardimaou, one of the country's most marginalised regions located in a north-western mountainous area by the Tunisian-Algerian border and found many barriers preventing residents from getting their vaccines.

Cover photo: Hospital in Ghardimaou, Tunisia © Amine Ghrabi

AMNESTY INTERNATIONAL

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1. EXECUTIVE SUMMARY

> **"Health is a right for every human being. The state shall guarantee preventative health care and treatment for every citizen and provide the means necessary to ensure the safety and quality of health services."**
> Article 38 of the Tunisian Constitution

The Tunisian authorities' response to the Covid-19 pandemic and particularly their management of the vaccine rollout programme is the most recent stark illustration of disparities in access to health for marginalized communities in rural Tunisia.

The Covid-19 pandemic exposed the weakness of right to health protections in Tunisia and particularly when it came to vaccine rollout programmes and the marginalization of historically underserved rural regions of Tunisia.

Covid-19 struck Tunisia hard since December 2020, infecting at least 1 million people and killing more than 28,000 from a population of about 11.7 million, according to official data.[1] Delays in vaccine rollout and the relaxation of social distancing measures lead to uncontrolled spread of Covid-19 in the summer of 2021, with Tunisia reporting 42.3 new Covid-19 deaths per 100,000 inhabitants, the highest mortality rate in the Eastern Mediterranean region and the African continent by July.[2] The failure of the Tunisian government in handling the pandemic exacerbated popular discontent and

[1] Agence Tunis Afrique Presse, Tweet, 20 March 2022. Available at: https://twitter.com/TapNewsAgency/status/1506243378324942861 ; and National Institute of Statistics, "January 1st population estimates, 25 March 2021", Available at: http://www.ins.tn/en/statistiques/111

[2] The WHO Regional Office for the Eastern Mediterranean, "COVID-19 Data and statistics", Available at: http://www.emro.who.int/health-topics/corona-virus/data-and-statistics.html; The WHO Regional Office for the Eastern Mediterranean, "COVID-19 situation critical in WHO's Eastern Mediterranean Region", 13 July 2021, Available at: http://www.emro.who.int/media/news/covid-19-situation-critical-in-whos-eastern-mediterranean-region.html

deepened an ongoing political crisis. This in turn served as a pretext for President Kais Saied to claim exceptional powers, suspend the parliament and dismiss then Prime Minister Hichem Mechichi, on 25 July 2021.[3]

The impact of the pandemic amplified long-standing inequalities between wealthier coastal regions and less developed interior regions. Tunisia's interior rural regions, mostly located across the western part of the country, are known for a disproportionate concentration of the country's poverty.[4] Official data shows that in the north-west and centre-west regions, 3 out of 10 residents live below the poverty line.[5] Historically, the Tunisian health system was marked by uneven distribution of health services, with access to health in rural settings often limited or difficult.[6]

Tunisian health officials must urgently address structural barriers to access to vaccines, and more generally improve health infrastructures in rural areas to prevent a future increase in Covid-19 cases and hospitalizations, especially with the emergence of new variants. To successfully reach a maximal number of rural residents, national authorities should reinforce the neglected primary health centers, build effective partnerships with community leaders and local organizations and prioritize expanding vaccination sites in rural areas.

Tunisia's national vaccination campaign officially started in March 2021, with the stated objective of vaccinating 50% of the population in less than 8 months. While the country' vaccination campaign was initially marred by significant delays in securing shipments leading to shortages, controversy over favouritism incidents and a lack of transparency over prioritization of vulnerable groups, the vaccine roll-out accelerated markedly from August 2021 onwards, with more than three million doses administered in that month alone. However, to date about half of the Tunisian population (45.84%) remain unvaccinated.

In this briefing paper, Amnesty International has uncovered significant disparities in vaccination coverage between costal urban regions and interior rural regions.[7] During the fourth wave of the pandemic, between June and July 2021, residents of rural areas, which account for 32.3% of the Tunisian population, were among the hardest hit by infection surges because of long-standing health inequalities and an associated lack of access to vaccines.[8]

Overall, Amnesty International found that in their design of the national vaccination campaign, national authorities had failed to ensure that members of all population groups enjoyed an equal opportunity to get vaccinated, regardless of where they live and of socio-economics disparities.

Amnesty International reviewed open data from the national vaccination campaign and found significant inequality in vaccination coverage between the country's rural and urban regions, meaning

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[3] BBC News, "Tunisia's PM sacked after violent Covid protests", 26 July 2021, Available at: https://www.bbc.com/news/world-africa-57958555

[4] Brookings, "Promoting inclusive growth in Arab countries: rural and regional development and inequality in Tunisia", February 2014. Available at: https://www.brookings.edu/wp-content/uploads/2016/06/Arab-EconPaper5Boughzala-v3.pdf

[5] National Office of Statistics of Tunisia (Institut National de la Statistique), Tunisia Poverty Map, September 2020. Available at: **Error! Hyperlink reference not valid.** www.ins.tn/sites/default/files/publication/pdf/Carte%20de%20la%20pauvreté%20en%20Tunisie_final_0.pdf

[6] Association Tunisienne de défense du droit à la sante, « Rapport sur le droit à la sante en Tunisie », October 2016. Available at ftdes.net/rapports/ATDDS.pdf

[7] Business News, "Appel à généraliser la vaccination anti-Covid à tous les centres de santé de base", 16 August 2021. Available at https://www.businessnews.com.tn/lettre-ouverte-au-arge-du-ministere-de-la-sante,520,111260,3

[8] Le Monde, «En Tunisie, la région de Kairouan est sinistrée par la pandémie de Covid-19 », 26 juin 2021. Available at: https://www.lemonde.fr/afrique/article/2021/06/26/en-tunisie-la-region-de-kairouan-est-sinistree-par-la-pandemie-de-Covid-19_6085812_3212.html; Arab Reform Initiative, « Tunisie : La COVID-19 accroît la vulnérabilité des femmes rurales », 25 Novembre 2020. Available at https://www.arab-reform.net/fr/publication/tunisie-la-Covid-19-accroit-la-vulnerabilite-des-femmes-rurales/

that the proportions of people who completed their vaccination protocol were significantly lower in rural regions compared to urban ones. Vaccination coverage was lower in rural governorates (first level administrative divisions - wilayah) and districts (second level administrative divisions- mutamadiyah) than in urban ones. As of 17 April 2022, less than 40% of the local population was fully vaccinated in the interior and predominately rural governorates of Tataouine (38.20%) and Kairouan (37.79%), while more than 60% of the population is fully vaccinated in some urban and costal governorates such as Tunis (65.25%) and Ben Arous (62.57%). Regional vaccine inequalities were also more extreme at district level. Several urban districts had rates exceeding 90% whereas rural and interior districts had significantly lower rates around 20%, such as the districts of Beni Khedache (20.52%) and Balta-Bouaouene (15.64%).

In its national Covid 19 strategy, the ministry of health describes the strategic approach of the country's national vaccination plan as primarily built on the key principle of "equitable access to free, efficient, safe vaccines with scientifically validated quality".[9]

However, the official strategy does not even refer to systemic factors that have been historically associated with health inequalities between urban and rural areas. Tunisia's national vaccination strategy is based on strict age and occupational prioritization and considers health workers, older people, and those with chronic comorbidities as the top priorities for vaccinations. While these are important criteria, socio-economic disparities and the associated historic lack of access to healthcare were not taken into consideration during the development of the national strategy.

In January 2021, the Tunisian government launched the country's electronic vaccination platform Evax, where people can register remotely for free Covid-19 vaccination appointments by using SMS service, calling a telephone number, or using the website www.evax.tn.[10] However, the electronic registration process did not include any questions about social determinants of health - such as education, employment or income – meaning that factors related to social vulnerabilities were missed when assessing vaccination eligibility.

To identify major contributing factors to the lack of access to vaccines in rural communities, Amnesty International conducted field research in July 2021 in the Ghardimaou region, one of the country's most marginalised regions located in a north-western mountainous area by the Tunisian-Algerian border. The organization reviewed official decrees, documents, and governmental statements regarding the national vaccination campaign and interviewed 33 rural residents, 3 local health professionals, and 4 representatives of local civil society organizations.

Ghardimaou is a predominantly rural district where inhabitants are disproportionately affected by long-standing socio-economic disparities including poverty, lower educational indicators, limited mobility within mountainous areas, and precarious health infrastructures. Ghardimaou has a high share of rural population (70% compared to a national average of 32.3%) and one of the highest average poverty rates in Tunisia (24.8% compared to a national average of 15.3%).[11]

The case study conducted by Amnesty International in the rural district of Ghardimaou, where less than half of the population is fully vaccinated (45.88%) explores the major contributing factors which

[9] Ministry of Health," Stratégie vaccinale contre la COVID-19 en Tunisie", January 2021. Available at: http://www.santetunisie.rns.tn/images/strategie-vaccination-Covid-19.pdf

[10] Webmanagercenter, « La Tunisie lance l'application "e-vax" pour organiser la vaccination anti-Covid-19 », January 2021, Available at : https://www.webmanagercenter.com/2021/01/09/461942/une-application-baptisee-e-vax-sera-lancee-prochainement-en-vue-dorganiser-la-vaccination-anti-covid-en-tunisie-louzir/

[11] National Office of Statistics of Tunisia (Institut National de la Statistique), Tunisia Poverty Map, September 2020. Available at: http://ins.tn/en/publication/tunisia-poverty-map-septembre-2020

explain such a disparity in access to vaccines. Amnesty International found barriers preventing residents of this rural region from getting their vaccines included the following four reasons:

LACK OF ACCESS TO PUBLIC HEALTH FACILITIES AND VACCINATION CENTRES:

One of the major barriers to accessing Covid-19 vaccines in the rural area of Ghardimaou is the insufficient number of local public health facilities and the lack of public transportation services, which can significantly increase the financial cost of travelling to the region's only vaccination centre. 13 (39.4%) out of the 33 interviewed rural residents, all of whom live 15 to 30 km from the city of Ghardimaou where the vaccination centre is located, confirmed that the site is not easily accessible from their home, and 87.9% said that the availability of free and safe transportation would provide further motivation for them to get vaccinated.

While rural residents mentioned a short visit in July or August to their villages by a mobile vaccination clinic led by the national army to provide first and second vaccine doses, they also highlighted the limitations of this intervention in terms of coverage.[12] Interviewees spoken to in November 2021 said that no additional mobile vaccination clinics had been deployed in their region.

- Vaccine delivery mechanisms should prioritize giving additional resources to existing local health providers and adopt flexible and innovative approaches that offer accessible vaccination opportunities for rural residents at the closest proximity possible.

LACK OF ACCESS TO INFORMATION ABOUT COVID-19 VACCINES:

Amnesty International found a concerning level of vaccine misinformation among the interviewees. In contrast with the large national outreach campaigns that the state conducted in the capital Tunis and other major cities where the government had extensively used billboards and other communication materials in strategic public spaces such as streets, highways, commercial centres, etc., insufficient information, education, and communication activities regarding the national vaccination campaign were observed during Amnesty International's fieldwork research conducted in rural Ghardimaou.

- Amnesty International recommends that governments develop tailored public awareness campaigns in partnership with local community leaders to ensure rural communities receive information in the most appropriate formats and languages. To this end, the scientific benefits, including the safety and effectiveness, of Covid-19 vaccines must be explained and disseminated through targeted messaging that is adequately understandable based on accessible vaccine information for people living in rural settings, so that they can make the best-informed decisions about their health.

LACK OF ACCESS TO EDUCATION, TECHNOLOGY AND LEGAL STATUS:

Barriers to access to education and to the internet are significant obstacles to obtaining a Covid-19 vaccine. Only 21.2% of the residents interviewed by Amnesty International were registered on "Evax",

[12] Direction Regionale de la Sante de Jendouba, Facebook post, 27 July 2021. Available at https://www.facebook.com/136230279889013/posts/1997885953723427/ ; Direction Regionale de la Sante de Jendouba, Facebook post, 28 August 2021. Available at https://www.facebook.com/story.php?story_fbid=2023180034527352&id=136230279889013

the national platform where people in Tunisia must register online or by phone in order to receive a vaccination appointment, and about two thirds of interviewees (75.8%) said they faced difficulties registering for vaccine appointments. In a country where 51,5% of households are connected to the internet,[13] older, rural residents tend to be less familiar with using mobile phones or the internet. One rural resident also mentioned the absence of a national ID number as a barrier to accessing Evax.

- Registration and confirmation processes for vaccine appointments should be made more accessible to rural residents by providing further assistance by phone and allowing on-site registration support to ensure effective access to vaccination appointments.

LACK OF PARTICIPATION OF RURAL COMMUNITIES IN PLANNING THE NATIONAL VACCINATION CAMPAIGN:

While some rural residents had the opportunity to volunteer for vaccination efforts, representatives from the community were not directly involved in the planning process of the campaign. Given the relatively low level of trust in national authorities among rural residents, the national vaccination campaign should offer more opportunities for participatory dialogue and invest in a more inclusive planning mechanism to ensure that the national vaccination campaign is more responsive to the human rights of rural communities.

- Authorities should identify and empower locally trusted leaders and messengers to better understand the magnitude and nature of the obstacles they face, to combat misinformation, provide support for the registration process, and correctly answer questions in order to increase public knowledge about the vaccine in a unified way with state and local stakeholders.

CONCLUSION

The United Nations' Special Rapporteur on the right to physical and mental health highlighted that in the absence of "broader public health and human rights inputs", vaccines against Covid-19 "will fail to reach everyone, and groups in more vulnerable, remote, disadvantaged or discriminated situations will be less likely to receive them".[14] Therefore, states must pay particular attention to human rights laws and standards to make vaccine allocation plans accessible, equitable, inclusive, and non-discriminatory.[15]

As Article 38 of the 2014 Tunisian Constitution guarantees the right to health for all citizens, national authorities should fulfil their constitutional responsibilities and human rights responsibilities by ensuring availability, accessibility, affordability, acceptability, and quality of vaccines for all people regardless of where they live.[16]

While the sense of crisis associated with Covid-19 may have waned, including as broader fatigue sets in, this briefing shows that the vaccination drive was a missed opportunity to address structural inequities in access to health in Tunisia's poorest regions, as the case of Ghardimaou shows.

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[13] National Institute of Statistics, "Percentage of households connected to internet (2001-2019)", Available at: dataportal.ins.tn/en/

[14] Final report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Dainius Pūras, 16 July 2020, doc. ONU A/75/163, undocs.org/A/75/163

[15] Amnesty International, "A Fair Shot: Ensuring universal access to COVID-19 diagnostics, treatments and vaccine", 8 December 2020. Available at: https://www.amnesty.org/en/documents/pol30/3409/2020/en/

[16] https://www.constituteproject.org/constitution/Tunisia_2014.pdf; Amnesty International, Tunisia: Authorities must halt implementation of overly restrictive vaccine pass, 21 December 2021. Available at: https://www.amnesty.org/en/latest/news/2021/12/tunisia-must-halt-covid-vaccine-pass/

However, there is still time to rectify this uneven situation by opting for fairer vaccine distribution plans so that everyone who needs to get vaccinated could enjoy an equal opportunity to access vaccines.

If the Tunisian authorities truly wish to ensure the right to health for Tunisians, they must as a matter of urgency, approach the provision of public health service to citizens through a human rights perspective with a particular focus on the constitutionally recognized “right to health for every human being”. The persistent socio-economic disparities between rural and urban regions that had been revealed by the Covid-19 crisis underscore the urgent need to emerge with more inclusive and equitable health policy reforms aiming to strengthen the access to health services and their effective utilization for the most disadvantaged population groups, especially rural communities.

2. METHODOLOGY

This briefing compares vaccination rates between rural and urban regions based on Tunisia's administrative subdivision into 24 governorates and 264 districts. The paper summarizes main trends on vaccine inequality between urban and rural regions based on official and open-source data, and sets out the major contributing factors to vaccine inequality based on findings from fieldwork conducted in the rural and medically underserved district of Ghardimaou, Jendouba, situated in north-west Tunisia, which serves as an illustrative case study.

Amnesty International reviewed official decrees, documents, and governmental statements regarding the national vaccination campaign. Governorate-level and district-level data about the Covid-19 vaccination roll-out as published online by the national vaccination campaign "Evax" on 22 November 2021 was also retrieved.[17] Data on the proportion of rural populations in specific administrative divisions as well as total population estimates for 2020 at governorate and district levels was obtained from the National Office of Statistics of Tunisia website to allow comparisons of vaccination coverage between rural and urban regions.[18]

In the rural district of Ghardimaou, Amnesty International conducted 33 interviews in August 2021 with unvaccinated rural residents who were all keen to be vaccinated. The organization also spoke to three health professionals working at the local vaccination facility, in addition to four representatives from local civil society organizations who volunteered to support the national vaccination campaign in vaccine distribution in Ghardimaou.

Amnesty International sent a letter to the Ministry of health on 12 April, asking questions about the steps undertaken by the Ministry to address inequality between regions in accessing Covid-19 vaccines (Annex I). To this writing, it has received no answer.

[17] Ministry of Health, National campaign for vaccination against Covid-19, Website. Available at: https://evax.tn/

[18] National Office of Statistics of Tunisia, website. Available at: http://www.ins.tn/en

3. BACKGROUND: COVID-19 IN TUNISIA

In Tunisia, the Covid-19 pandemic has had unprecedented social and economic consequences for the population, causing more than 28,000 deaths for a total population of 11.7 million people.[19] In June and July 2021, the fourth wave of the pandemic had a particularly lethal effect as the country recorded the highest Covid-19 mortality rate per capita compared to all African and Middle Eastern countries.[20]

In June 2021, highly alarming infection rates that exceeded 400 cases per 100,000 inhabitants in lower-income and predominately rural regions of Kairouan, Siliana, Zaghouan, and Beja meant that they were among the first in the country to reinstate full lockdowns.[21]

About one third of the Tunisian population (3.5 million people) live in rural areas, which were severely affected by a shortage of oxygen supply and low vaccine availability throughout the last two years of the pandemic.[22] Although it had become abundantly clear that rural communities were among the hardest hit by the fourth wave of the pandemic, vaccination rates in rural interior regions remained consistently low compared to the capital, which in turn increased the risk of devastating infections surges as Covid-19 variants emerge and public health related restrictions eased.[23]

With a peak record of 7,930 new daily cases officially reported on 13 July 2021 across the country, the controversial handling of the Covid-19 response, which was undermined by a lack of transparency, delays in vaccine shipments and a failure to take into consideration human rights vulnerabilities in selection of priority groups in addition to the slow pace of the national vaccination campaign deepened Tunisia's political crisis.[24] This led to the dismissal of Prime Minister Hichem Mechichi and the suspension of Parliament by the President Kais Saied, who announced several emergency measures on 25 July 2021.[25] At the same time, Tunisia continued to receive urgent aid from several Western and Arab countries, including oxygen supplies and a total of 6 million vaccine doses.[26] Thanks to significant international support, Tunisia's once faltering vaccination campaign accelerated. During the month of August 2021, three successive "open vaccination days" were held

[19] Ministry of Health, Facebook post, 8 October 2021. Available at: https://www.facebook.com/santetunisie.rns.tn/photos/pcb.4573228692716199/4573228312716237/ ; Based on the National Office of Statistics of Tunisia (Institut National de la Statistique) estimates for population size on 1st January 2020 (11,708,370 people). National Office of Statistics of Tunisia, 25 March 2021. Available at: http://www.ins.tn/en/statistiques/111#

[20] World Health Organization, Regional Office for the Eastern Mediterranean, "COVID-19 situation critical in WHO's Eastern Mediterranean Region", 13 July 2021. Available at: http://www.emro.who.int/media/news/Covid-19-situation-critical-in-whos-eastern-mediterranean-region.html

[21] All Africa, "Tunisia: Covid-19 - Four Govenorates Affected by Full Lockdown (Prime Ministry)", 27 June 2021. Available at: https://allafrica.com/stories/202106280115.html

[22] Associated Press News, "As COVID-19 surges in Tunisia, oxygen is in short supply", 4 August 2021. Available at: https://apnews.com/article/africa-business-health-tunisia-coronavirus-pandemic-a27cc8af436a974e5091bc30140fd1cf ; Financial Times, "Delta variant deepens crisis for Tunisia's fragile democracy", 22 July 2021. Available at: https://www.ft.com/content/2e7de0c4-d9ad-4150-a163-05795cd91584

[23] Le Monde, «En Tunisie, la région de Kairouan est sinistrée par la pandémie de Covid-19 », 26 juin 2021. Available at: https://www.lemonde.fr/afrique/article/2021/06/26/en-tunisie-la-region-de-kairouan-est-sinistree-par-la-pandemie-de-Covid-19_6085812_3212.html ; Arab Reform Initiative, « Tunisie : La COVID-19 accroît la vulnérabilité des femmes rurales », 25 Novembre 2020. Available at: https://www.arab-reform.net/fr/publication/tunisie-la-Covid-19-accroit-la-vulnerabilite-des-femmes-rurales/

[24] Amnesty International press release, Tunisian authorities must accelerate fair access to vaccines, as Covid-19 cases soar, 15 July 2021, https://www.amnesty.org/en/latest/news/2021/07/tunisia-must-accelerate-fair-access-to-vaccines-as-covid19-cases-soar/

[25] The Washington Post, "Tunisia's president fires prime minister, dismisses government, freezes parliament", 26 July 2021. Available at: https://www.washingtonpost.com/world/2021/07/25/tunisia-saied-mechichi-parliament/

[26] France 24, «Donations seek to save Tunisia from Covid catastrophe », 25 July 2021. Available at: https://www.france24.com/en/live-news/20210725-donations-seek-to-save-tunisia-from-covid-catastrophe

in more than 300 vaccination centres across the country, allowing people to walk in for a vaccine without having to register for an appointment, as per the prior system. More than half a million individuals received their vaccine dose on 08 August 2021 alone. By 25 March 2022, 54.2% of the population had been fully vaccinated.

Despite these advances in vaccination efforts in urban areas, in August 2021, 88 renowned public health professionals and experts published a joint open letter, warning that large populations in interior regions would remain unvaccinated if no action was taken to ensure a more equitable distribution of vaccines across the country.[27] They urged national authorities to opt for more decentralized management of the national vaccine campaign at the local level.

On 16 November 2021, the ministry of health admitted a concerning drop in vaccine uptake.[28] Although large proportions of the rural population had yet to receive their primary vaccine dose, in December 2021, President Saied enacted a new decree-law making Covid-19 vaccine passports mandatory to access public spaces and certain private businesses for all adults aged 18 years and above.[29] Given that rural communities are disadvantaged in terms of socio-economic status and access to health services, national authorities should ensure that these groups do not face barriers to accessing Covid-19 prevention tools, including vaccines.

[27] Business News, "Lettre ouverte au chargé du ministère de la Santé", 16 August 2021. Available at: https://www.businessnews.com.tn/lettre-ouverte-au-arge-du-ministere-de-la-sante,520,111260,3

[28] Tunisie Afrique Presse (TAP News Agency), Tweet, 16 November 2021. Available at: https://twitter.com/TapNewsAgency/status/1460655409279213569

[29] Associated Press, Critics abound as Tunisia demands mandatory vaccination pass, 22 December 2021. Available at: https://apnews.com/article/coronavirus-pandemic-health-africa-tunisia-tunis-6654cdf86d82fcbd0b575e4e87d9271b

4. VACCINE INEQUALITY BETWEEN RURAL AND URBAN REGIONS IN TUNISIA

The impact of the pandemic amplified the long-standing inequalities between wealthier coastal regions and less developed interior regions. Tunisia's interior rural regions, mostly located across the western part of the country, are known for a disproportionate concentration of the country's poverty.[30] Official data shows that in the north-west and centre-west regions, 3 out of 10 residents live below the poverty line.[31] Historically, the fragility of the Tunisian health system is largely due to its uneven distribution of health services, since access to services in rural settings is often limited or difficult. This disparity is also reflected in the vaccination strategy and campaign. Official data published by the national vaccination campaign since June 2021 shows significant disparities in vaccination coverage between rural and urban governorates.

Tunisia's national vaccination strategy is based on strict age-based prioritization and considers health workers, older populations, and individuals with chronic comorbidities as highest priorities for vaccination. While these are important criteria, socio-economic disparities were not taken into consideration during the development of the national strategy. This in turn means that the national campaign was not designed to address or factor in systemic factors that had been historically associated with health inequalities between urban and rural areas.

For example, the country's electronic platform Evax, where people can register for vaccine appointments, did not include any question about the socio-economic health determinants of the registered people, therefore factors related to social vulnerabilities were missed while assessing eligibility. This in turn had a negative impact on the equitable access to vaccines for groups under socio-economic disadvantage. As Amnesty International found below, access to vaccines in urban areas was higher than rural areas, which are historically associated with poverty, lack of health services and lack of access to education.

Figure 1 below shows both the share of fully vaccinated population and the share of total rural population for each of Tunisia's 24 governorates. Clearly, governorates with higher shares of rural population also had significantly lower vaccination rates.

Data from April 2022 shows that less than 40% of the local population was fully vaccinated in the interior and predominately rural governorates of Tataouine (38.20%) and Kairouan (37.79%), at a time when more than 60% of the population was fully vaccinated in some urban and costal governorates such as Tunis (65.25%) and Ben Arous (62.57%).

The vertical red dashed line in the first image of Figure 1 represents the national vaccination coverage of 54.16% as of 17 April 2022. The first image shows that 11 out of the country's 24 governorates (all those behind the dashed line), including the north-western governorate of Jendouba which had a vaccination rate of 52.31%, had vaccination rates below the national average. All of these 11 governorates have high shares of rural populations exceeding 20% of their total local population.

[30] Brookings, "Promoting inclusive growth in Arab countries: rural and regional development and inequality in tunisia", February 2014. Available at: https://www.brookings.edu/wp-content/uploads/2016/06/Arab-EconPaper5Boughzala-v3.pdf

[31] National Office of Statistics of Tunisia (Institut National de la Statistique), Tunisia Poverty Map, September 2020. Available at: http://ins.tn/en/publication/tunisia-poverty-map-septembre-2020

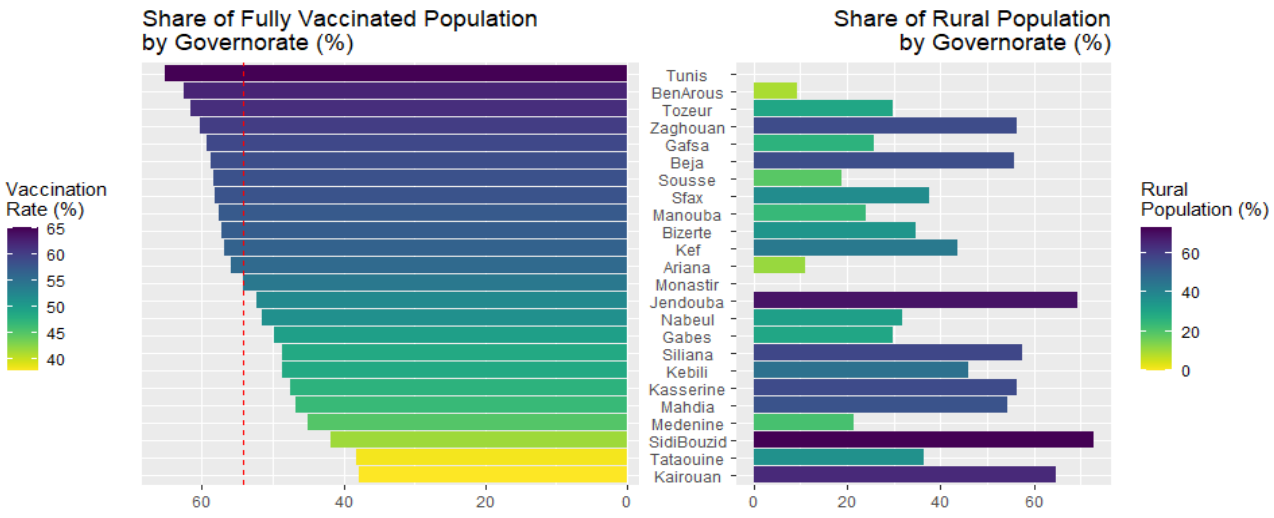


Figure 1: Share of fully vaccinated population and share of total rural population in Tunisia's 24 governorates as of 17 April 2022. Data sources: evax.tn & ins.tn

Inequalities in vaccine coverage were also observed in districts with higher shares of rural populations, as they had significantly lower vaccination rates compared to districts with lower shares of rural population.

Figure 2 (below) illustrates the statistically significant negative association between shares of rural population and shares of fully vaccinated populations at district level. Furthermore, regional vaccine inequalities were more extreme at district level, as several urban districts had rates nearing - and sometimes exceeding - 100%, whereas rates around 20% were reported with the rural and interior districts of Balta-Bouaouene (15.64%) and Beni Khedeche (20.52%).

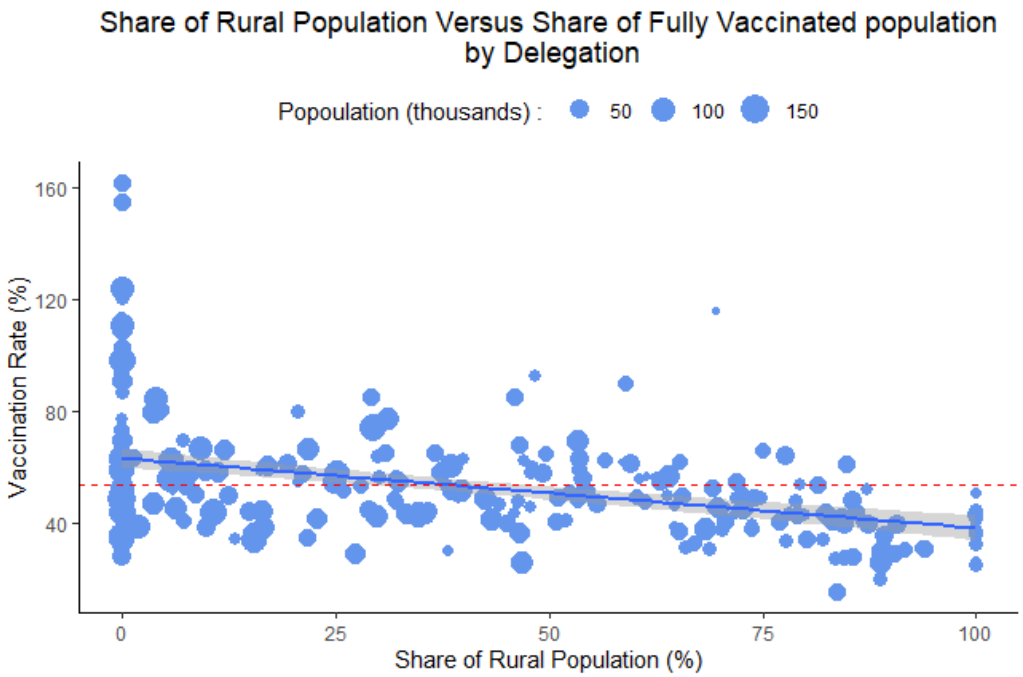
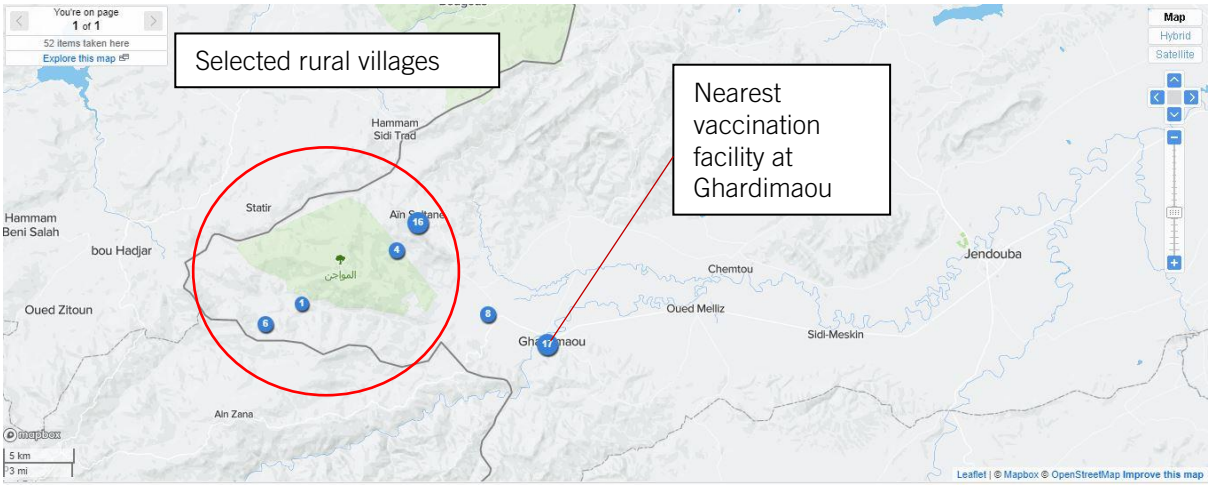


Figure 2: Share of Rural Population VS Vaccination rates by district. Data Sources: evax.tn & ins.tn

As the Ministry of Health started offering third Covid-19 vaccine booster shots since September 2021, about 10% of the population (1.18 million people) received their third vaccine dose so far. Less than 5% of local populations received their third dose in the rural and interior governorates of Tataouine (4.06%), Kairouan (4.1%), and Sidi Bouzid (4.9%), while about 15% got their third doses in the urban governorates of Ben Arous (14.7%) and Tunis (17.2%). Notably, the district of El Menzah in the Governorate of Tunis had the highest uptake of third booster shots (57%). In contrast, the lowest uptake rates for booster shots were reported by the district of Menzel El Habib within the governorate of Mahdia (0.88%) and by the district of El Alaa within the governorate of Kairouan (1.01%). In the district of Ghardimaou, about 4.54% of the local population received a third booster shot.

5. CASE STUDY IN GHARDIMAOU

Amnesty International decided to conduct a case study at the rural district of Ghardimaou given recent demographic data and economic indicators that showed a significant level of socio-economic vulnerability in rural Ghardimaou compared with national averages. Indeed, Ghardimaou is described as a predominantly rural and underserved region where inhabitants are disproportionately affected by lower educational opportunities, poverty, limited mobility within mountainous areas, and precarious health infrastructure that are often correlated with poorer health outcomes.



Road to Ghardimaou © Amine Ghrabi

Poverty rates in Ghardimaou

In the 2020 poverty map report, developed by the National Institute of Statistics with the support of the World Bank, it was estimated that 15.3% of the Tunisian population suffer from insufficient income and inadequate access to basic resources such as water, education, healthcare .[32] The mapping of poverty rates at national level highlighted an important concentration of poverty in rural areas of North-Western region of Tunisia, including the district of Ghardimaou that was classified among the poorest districts with a poverty rate of 24.8%.[33]

The district of Ghardimaou covers a total surface of 516km² and a total population of 64170 people. Rural areas are home to 44675 people (69.6% of Ghardimaou's total population). About 47.57% of rural Ghardimaou residents cannot read or write (compared to the national average of 19.34%), 26.65% were unemployed (the national average is 14.82%), and less than 3% had a university level of education (national average is 4.84%) (2014).[34] Of 12307 rural households, only 2.03% are connected to the internet (compared to the national average of 28.75%), and 65.2% are located over 2km from the nearest primary healthcare facility (the national average is 23.06%).[35]

With the support of local civil society representatives, a list of six mountainous villages located at 560-890 meters of altitude were selected.[36] All selected villages were located less than 5km from the closed Algerian border, and 15 - 30km from the city of Ghardimaou, where the region's unique local vaccination centre is located.[37]

While the selected population sample cannot be considered representative of the whole rural population of Ghardimaou, all interviewees came from underserved, remote, and mountainous rural areas where access to health services and transportation to bigger cities are more difficult and challenging.

[32] "The poverty indicators presented in this report were calculated on the basis of data from the General Census of Population and Housing (RGPH) of 2014 and the National Survey on Budget, Consumption and Living Standards of households (ENBCNV 2015). The calculation methodology, developed by C. Elbers, J. Lanjouw and P. Lanjouw (ELL 2000), makes it possible to estimate poverty and inequalities linked to consumption at fairly fine levels of disaggregation, by combining information from censuses and surveys on household consumption." National Office of Statistics of Tunisia (Institut National de la Statistique), Tunisia Poverty Map, September 2020. Available at: http://ins.tn/en/publication/tunisia-poverty-map-septembre-2020

[33] According to the poverty mapping report, poverty is defined in reference to two main dimensions: insufficient income and lack of access to basic infrastructure and services including health, water, electricity, and education. National Office of Statistics of Tunisia (Institut National de la Statistique), Tunisia Poverty Map, September 2020. Available at: http://ins.tn/en/publication/tunisia-poverty-map-septembre-2020

[34] National Office of Statistics of Tunisia (Institut National de la Statistique), JENDOUBA A travers le Recensement Général de la Population et de l'Habitat 2014, 4 April 2016. Available at: http://ins.tn/publication/jendouba-travers-le-recensement-general-de-la-population-et-de-lhabitat-2014

[35] National Office of Statistics of Tunisia (Institut National de la Statistique), JENDOUBA A travers le Recensement Général de la Population et de l'Habitat 2014, 4 April 2016. Available at: http://ins.tn/publication/jendouba-travers-le-recensement-general-de-la-population-et-de-lhabitat-2014

[36] It included Ain Soltane, Mwajen, Feija, Messiwa, Sraya, and Bourihane.

[37] Overall, 33 unvaccinated adults aged 40 and older, including ten women, were included in this study. The most represented age group was from 60 to 69 years old. The majority were married (90.9%), unemployed (54.5%), and were living in a household with five or more persons (63.6%). More than two thirds of interviewees (69.7%) had at least one person with a serious health condition in their household. Furthermore, 60.6% declared that they are taking care of at least one child aged less than 18 years, and 45.5% had at least one adult over 18 who needs close support and medical assistance.

HEALTH INEQUALITIES IN THE UNDERSERVED REGION OF JENDOUBA, BY THE NUMBERS

Medical doctors: 7.0 per 10,000 residents; national average: 13.2 per 10,000 residents in 2019
Primary care physicians: 5.1 per 10,000 residents; national average: 6.61 per 10,000 residents in 2019
Pharmacists: 1.66 per 10,000 residents; national average: 2.36 per 10,000 residents in 2019
Dentists: 2.72 per 10,000 residents; national average: 4.78 per 10,000 residents in 2019
Medical specialists: 1.8 per 10,000 residents; national average: 6.63 per 10,000 residents in 2019
Source:
http://www.santetunisie.rns.tn/images/statdep/Carte-sanitaire-2019-finale.pdf

OVERALL STATISTICS AND SOCIO-ECONOMIC DISPARITIES IN THE DISTRICT OF GHARDIMAOU, BY THE NUMBERS (2014 CENSUS)

Total population: 64170 people in 2014
Total households: 16049 households in 2014
Rural population: 44675 people (70.0%); national average: 32.2% in 2014
Rural households: 10656 households (66.39%); national average: 29.91% in 2014
Poverty rate: 24.8%; Grand Tunis average: 6.1% in 2014-2015
Illiteracy rate: 40.95% [rural: 47.41%]; national average: 19.27% [rural 32.59%] in 2014
Unemployment rate: 25.64% [rural: 23.93%]; national average: 14.82% [rural: 14.39] in 2014
Access to drinking water supply: 59.85% [rural: 39.62%]; national average: 89.27% [rural: 54.3%] in 2014
Access to internet: 10.31% of households [rural: 2.03%]; national average: 28.75% [rural: 7.33%] in 2014: 4.78 per 10,000 residents in 2019
Sources:
A. http://ins.tn/publication/jendouba-travers-le-recensement-general-de-la-population-et-de-lhabitat-2014 - (2014 census data)
B. http://ins.tn/publication/carte-de-la-pauvrete-en-tunisie-septembre-2020 (2014-2015 poverty map)

6. OBSTACLES TO ACCESS TO COVID-19 VACCINES IN RURAL GHARDIMAOU

In the rural district of Ghardimaou, 45.88% of the total population had been fully vaccinated while the vaccination average for all 264 districts was equal to 54.15%. This section examines the barriers that rural residents in Tunisia are facing to access vaccines, using the district of Ghardimaou as an example.

6.1 LACK OF ACCESS TO VACCINE INFORMATION

While 72.7% of the interviewed individuals confirmed their readiness to get the Covid-19 vaccine when it would be available to them, 21.2% admitted being unsure about getting the vaccine or not ("vaccine hesitants") and 6.1% declared that they do not want to be vaccinated ("vaccine refusers").

Furthermore, most rural residents interviewed said they had very little information about vaccines and about the national vaccination campaign. Only 15.2% declared that they have enough information about how the state is deciding who gets priority for the vaccine.

Some residents declared that having someone who can answer their questions (63.6%), seeing someone they trust getting the vaccine (57.6%), or having more information about the vaccines (51.5%) would motivate them further to get the Covid-19 vaccine.

> **"In the village where I live, I feel that we don't have a link with the national vaccination campaign. Since I've volunteered in the national vaccination campaign, many people are now asking me about the vaccine every day, but most of the times I have no idea how to answer their questions and to provide them with the answers they are looking for. I wish we had some representatives from the national health campaign who can meet and discuss directly with us here."**
> A resident of Ain Soltane, Ghardimaou

During the organization's visit to rural areas of the district of Ghardimaou in August 2021, no public information, education, or communication activities were observed in the context of the national vaccination campaign. For instance, Amnesty International noted that there were no communication or information signs related to the vaccination campaign at the weekly local market of Sraya village.

> **"Here is what I've observed. Maybe youth get some information from social media but for older adults like me, most information**

about vaccines, including wrong statements, are continuously spread through word of mouth. One day, at the local café, I saw a paper written by the local officer "Omda" [of Ain Soltane] informing the population about the organization of an open vaccination day at our village. I don't remember having seen any other communication action from the national vaccination campaign in our village."

A resident of Ain Soltane, Ghardimaou

6.2 LACK OF ACCESS TO EDUCATION, TECHNOLOGY AND LEGAL STATUS

"I'm not registered in the vaccination campaign because when I tried to do so, I was asked for a national ID number, which I don't have."

A resident of Ain Soltane, Ghardimaou

Having a low education level is a significant obstacle to vaccine registration in rural areas since information dissemination and registration both occur online. In fact, about half of interviewees had no schooling and the rest had an education level that does not exceed primary education while only 6% completed secondary education.

When asked how they could register for a vaccine appointment, rural residents mentioned their lack of access to cell phones or computers as a barrier. Only 21.2% of those interviewed had managed to register on the "Evax" platform to get their vaccine appointment within the framework of the national vaccination campaign. In addition, about two thirds of interviewees (75.8%) affirmed facing difficulties to register for vaccine appointment due to the challenging nature of the electronic registration process which requires access to technology-based devices like cell phones or computers. Obtaining a vaccination appointment in rural areas can be complicated by the lack of access to technology through a working cell phone since large mountainous rural areas are not covered by mobile networks. Few residents mentioned also that they rarely use their cell phones and do not use text messages. Other interviewees reported that they do not own a computer or a tablet, and do not know how to use them

"On the radio, I heard that everyone could register to get a vaccine by using a mobile phone or a computer. I do have a mobile phone, but I have no idea about how to register. This is complicated for me since I never went to school."

A 54 year-old woman, district of Messiwa, Ghardimaou

online. Generally, older rural residents were less familiar with the process of appointment scheduling through cell phones or online, which had been exclusively selected as the primary methods to get a Covid-19 vaccine. In addition, rural residents were more likely to live relatively isolated from social networks that might potentially support them in making vaccine appointments. One rural resident, who does not possess an officially recognized ID, was not able to register for vaccine appointment through the Evax platform. Requiring the provision of an officially recognized ID to prove legal identity can be a barrier to access vaccines for rural residents who never possessed an official identification card.

> **"A few weeks ago, I met by chance a health professional working with the Ministry of Health. When I said I was not registered to get a vaccine he asked for my phone to make an appointment registration on my behalf. But, at that time, there was no mobile network to do so. We have a very bad mobile network coverage here, and most of the time it is very hard to communicate."**
> A 40-year-old farmer, resident of Sraya, Ghardimaou

6.3 LACK OF ACCESS TO HEALTH FACILITIES AND VACCINATION CENTERS

The limited accessibility of health facilities for rural residents has a negative impact on their fundamental right to enjoyment of the highest attainable standard of health for all, regardless of where they live. It also makes access to health services in general, and to vaccine centres in particular, more difficult for lower income residents from remote rural areas.

In Ghardimaou, health facilities are limited to one regional hospital with a maximum capacity of 57 beds for a total population of 64,170 people (0.88 beds per 1000 population compared with a national average of 2.18 beds/1000) and 13 primary health centres (centres de santé de base)[38]. Yet none of these 14 health facilities was designated as a vaccine centre. In fact, the region of Ghardimaou had one unique vaccination facility, a local center for maternal and child health protection, which was enabled to provide vaccines for local populations on weekends (Saturday-Sunday).

Accessing affordable and reliable transportation to vaccination facilities is a critical issue for rural residents who live in underserved regions. Because of high poverty levels and poor public transportation systems, rural residents' access to the unique vaccine centre in Ghardimaou has a higher financial cost compared to residents of urban areas where several vaccination facilities are operating. Furthermore, primary health centres in rural areas are usually affected by a low efficiency in service delivery due to their insufficient resources and discontinued operations making them unable

[38] Ministry of Health, "Carte sanitaire 2019", April 2021. Available at: http://www.santetunisie.rns.tn/images/statdep/Carte-sanitaire-2019-finale.pdf ; World Health Organization, The Global Health Observatory, 2021. Available at: https://www.who.int/data/gho/data/indicators/indicator-details/GHO/hospital-beds-(per-10-000-population)

to respond to rural communities' health needs.39 The limited number of well-equipped health facilities including retail pharmacies in rural Ghardimaou reduce opportunities to access vaccines locally at low costs.

Overall, 13 out of 33 interviewees (39.4%) confirmed that the Covid-19 vaccination site located in Ghardimaou was not easily accessible from their home. For some, attending a vaccination appointment in Ghardimaou would involve a full day trip due to the lack of public transportation services. When asked about what would motivate them further to get vaccinated, the majority of interviewees mentioned the availability of free and safe transportation (87.9%) in addition to the availability of a vaccination site that is closer to their homes (84.8%).

> **"I live up in the mountain and to get to the bus station I must walk for one hour through the woods. Sometimes in rainy days I can't even leave my house. Even if I register to get a vaccine appointment, I am not sure if I will be able to get it in Ghardimaou one day."**
> A 40 year-old resident, Ain Soltane

Precarious public health infrastructure (primary healthcare centre) in rural Ghardimaou (Source: Facebook page of the regional directorate of Jendouba).[40]

[39] Arfa, Chokri, and Heba Elgazzar. "Consolidation and Transparency: Transforming Tunisia's Health Care for the Poor." (2013). Available at: https://openknowledge.worldbank.org/handle/10986/13313

[40] Regional Directorate of Health of Jendouba, Facebook post, 17 September 2021. Available at: https://www.facebook.com/136230279889013/posts/2039833486195340/

6.4 LACK OF PARTICIPATION OF RURAL COMMUNITIES IN THE PLANNING OF THE NATIONAL VACCINATION CAMPAIGN

In rural Ghardimaou, the management of the national vaccination campaign remains highly centralized, with little opportunities for local rural communities to get involved with national authorities in building local solutions that are more responsive to their own needs based on a more collaborative and participatory approach.

Some vaccinated adults living in the village of Ain Soltane confirmed that they got their first vaccination jab on 27 July 2021 at the local camping centre, where the army was temporary deployed for one day to administer vaccines for rural residents.[41] During the period August-November 2021, 7 massive open vaccination days in more than 300 vaccination centres across the country were organized by the Ministry of Health.[42] However, no additional vaccination opportunity was provided at the village of Ain Soltane due to the fact that the vast majority of the involved vaccination centers was located in urban areas. Furthermore, rural residents and their direct representatives were not openly involved in the choice of vaccination days frequency, dates, locations, or strategies.

Amnesty International spoke to public health professionals and volunteers working with the national vaccination campaign. While the visit of the army's mobile vaccination clinic initiative was very welcomed by local residents, its impact on expanding access to vaccine was relatively limited. In fact, some volunteers mentioned the fact that only individuals living close to the camping centre received their first vaccine dose on that day, but residents of more remote areas were left unvaccinated as they were not aware of the upcoming visit of the vaccination clinic. Even when the army came back to provide second vaccine jabs on 4 September 2021, one volunteer mentioned that more than 50 out of 337 previously vaccinated individuals did not show up because they were not aware it was happening. He also added that while it had been possible to volunteer and help with several organizational tasks, there was no opportunity to participate in the planning phase of the roll-out process to decide the best dates, locations, communication tools, and vaccination schedules for local communities.[43]

In contrast, an association providing medical services shared with Amnesty International a successful example of how representatives of rural communities and local civil society can help to optimize Covid-19 vaccination in rural areas within the neighbouring governorate of Beja. Thanks to a direct partnership with members from the local union of farmers, it was jointly agreed with the Ministry of Health to deploy mobile vaccination clinics at weekly open fairs where farmers used to trade their livestock and farming products with the local rural population. While a total of 774 individuals received their first vaccine dose at one of the eight open markets across Beja's rural villages, this eight-day innovative partnership was a valuable opportunity to coordinate a more accessible and optimized vaccine delivery for rural residents in a way that is more responsive to their own needs and expectations.[44]

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[41] Regional Directorate of Health of Jendouba. Facebook post, 27 July 2021. Available at: https://www.facebook.com/136230279889013/posts/1997885953723427/

[42] Xinhua, "Tunisia starts 7th national open day for COVID-19 vaccination", 22 November 2021. Available at: http://www.news.cn/english/2021-11/22/c_1310324392.htm

[43] Short interview conducted on 25 November 2021 with Ibrahim (pseudonym), a volunteer who supported the organizational operations of the mobile clinic at the Ain Soltane camping centre on 27 July 2021 and 4 September 2021.

[44] Médecins Sans Frontieres, "Report Vaccination campaigns Epool Tunisia Mission", 8 October 2021.

7. INTERNATIONAL HUMAN RIGHTS STANDARDS

International law and standards establish that everyone has the right to health, including preventative, curative and palliative health care. The International Covenant on Economic, Social and Cultural Rights (ICESCR), to which Tunisia is a party, establishes that states must "take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources with a view to achieving progressively the full realization of the rights recognized in the Covenant." The Committee on Economic, Social and Cultural Rights (CESCR), the body that provides authoritative interpretation of the Covenant's articles, established in General Comment 14 that this means that states must work towards ensuring that all health facilities, goods and services (including information) must be available, accessible (physically and financially), acceptable and of good quality.[45]

Both Article 27 of the Universal Declaration of Human Rights and Article 15 of the ICESCR establish the right to enjoy the benefits of scientific progress and its applications.[46] The CESCR General Comment (2020) on Science and Economic, Social and Cultural Rights specifies that these benefits include medical technologies such as vaccinations.[47] In April 2020, the CESCR also highlighted that "pandemics are a crucial example of the need for scientific international cooperation to face transnational threats. Viruses and other pathogens do not respect borders...[48]" The CESCR states that scientific progress must be available, accessible, acceptable and of good quality to all individuals and communities. To this end, states must take steps to invest in science and all people should have equal access to the applications of scientific progress, without discrimination.[49]

Among the critical components of the right to health that states must consider is the principle of non-discrimination and equality. Addressing and remedying discrimination in access to health care and the underlying, social determinants of health is an immediate obligation, irrespective of the resources available. The Office of the High Commissioner for Human Rights (OHCHR) has explained that "states must recognize and provide for the differences and specific needs of groups that generally face particular health challenges, such as higher mortality rates or vulnerability to specific diseases… Positive measures of protection are particularly necessary when certain groups of persons have continuously been discriminated against in the practice of states parties or by private actors."[50]

In addition, states are obliged to ensure the right to active, informed and effective participation in decision-making that affects the population or groups of people.[51] To this end, health laws, policies and practices should be designed and implemented with the meaningful oversight and participation of civil society, especially by those most affected by these measures, at the community, national and international levels. Moreover, states must ensure people's participation to guarantee effective provision of health services.

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[45] Amnesty International, A Fair Shot, ENSURING UNIVERSAL ACCESS TO COVID-19 DIAGNOSTICS, TREATMENTS AND VACCINES, 8 December 2020, https://www.amnesty.org/en/wp-content/uploads/2021/05/POL3034092020ENGLISH.pdf

[46] CESCR, General Comment 25 on Science and Economic, Social and Cultural Rights (article 15 (1) (b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights, E/C.12/GC/25, 30 April 2020, para 45.

[47] CESCR, General Comment 25, para 8.

[48] CESCR, "Statement on the Coronavirus Disease (COVID-19) Pandemic and Economic, Social and Cultural Rights", E/C.12/2020/1, 17 April 2020, http://docstore.ohchr.org/SelfServices/FilesHandlerashx?enc=4slQ6QSmlBEDzFEovLCuW1AVC1NkPsgUedPIF1vfPMKXidSV%2FGyVFSAvr6nizxSlX6zd%2Bu5KD26NraabiJKaWMnkFhhMb4MahybE5l%2F oU5sQSh6PCbcepqzl0iCYkIyq

[49] CESCR, General Comment 25, para 17.

[50] OHCHR/WHO, Factsheet No. 31: The Right to Health, https://www.ohchr.org/documents/publications/factsheet31.pdf

[51] CESCR, General Comment 14, paras 11, 17 and 54

In October 2020, WHO SAGE issued its Roadmap for Prioritizing Uses of Covid-19 Vaccines (Roadmap), which lays out three stages of prioritization and explains how each country's epidemiologic setting will determine when these vaccines should be distributed, and to which priority groups. WHO SAGE recommends a matrix of these three stages to make up a country's allocation plan.

THE WHO SAGE ROADMAP INCLUDES THE FOLLOWING PRIORITY GROUPS

Health workers are included according to risk, per the interim guidance from WHO/ILO, and includes those engaged in routine and Covid-19 immunization delivery.

Essential workers include police officers, municipal services, child-care providers, agriculture and food workers, transportation workers, and government workers essential to critical functioning of the state.

Older adults are defined by age-based risk and may vary by country/region. This includes older adults in high risk living situations, such as those in long-term care facilities or unable to physically distance.

Groups with comorbidities or health states such as diabetes or pregnancy that carry higher risk; WHO recommends countries pay attention to disadvantaged groups and the under-diagnosis of comorbidities.

Groups under socio-economic disadvantage include ethnic, racial, gender, and religious groups and sexual minorities; people living with disabilities; people living in extreme poverty, homeless and those living in informal settlements; low-income migrant workers; refugees, internally displaced persons, asylum seekers, people in conflict /humanitarian emergencies, migrants in irregular situations; nomadic populations; populations in rural/remote areas.

Groups unable to physically distance include people living/working in detention facilities, dormitories, informal settlements, low-income dense areas; people in occupations such as mining/meat processing.

Travellers include those at risk of bringing infection on return (students, business travellers, migrant/aid workers); WHO states the economically/politically powerful should not unduly benefit from this group.

Border personnel includes border protection staff and those for outbreak management such as isolation, quarantine and immunization staff.

Teachers and school staff depend on the country context and specific needs. For example, preschool teachers may be included due to the critical developmental stage and challenges of distance learning.

States must ensure that they fully abide by their human rights obligations to ensure non-discrimination and a specific focus on marginalized, at-risk groups, including those that face obstacles to health services such as the rural district of Ghardimaou. A human rights perspective is particularly important to consider how systemic discrimination has affected the access to health services of marginalized and at-risk groups.

8. CONCLUSION AND RECOMMENDATIONS

Data from the national vaccination campaign points to discrepancies in vaccination coverage between the country's governorates and districts. The case study conducted in the rural district of Ghardimaou identifies and describes several contributing factors to this trend.
Amnesty International found limited access to vaccine information, low education levels, technology barriers, lack of transportation services, and insufficient public health infrastructure to be the most problematic barriers to access Covid-19 vaccines in rural settings.
To achieve greater access to vaccines in rural areas, Amnesty International makes the following recommendations to the Tunisian authorities.

- Ensure access to accurate and evidence-based information, in formats that are accessible to everyone, about the availability, safety and effectiveness of Covid-19 vaccines. The right to be adequately informed about Covid-19 vaccines is a crucial component of the right to health because individuals can only make informed decisions about their health when they are given accurate, evidence-based, timely and accessible information. In this regard, states must ensure that they disseminate credible, reliable, accessible, objective and evidence-based information, including to address misinformation related to Covid-19 vaccines.
- Ensure that Covid-19 vaccines are available, accessible, affordable and of good quality for everyone without discrimination and that health systems have sufficient health workers across geographic areas. These workers must be adequately trained to work with individuals and communities, particularly those identified as priority populations for Covid-19 health efforts. This is especially important in situations when historical marginalization and discrimination against particular groups have led to mistrust in health systems and workers.
- Increase rural targeted messaging to ensure that communication interventions are effectively reaching people in rural settings, where access to radio, mobile phones, smartphones, and internet might be very limited.
- Identify and empower locally trusted leaders and messengers to better understand the magnitude and nature of the obstacles they face, to combat misinformation, provide support for the registration process, and correctly answer questions in order to increase public knowledge about the vaccine in a unified way with state and local stakeholders.
- Offer regular free transportation to vaccination centres or sustaining an increased activity for mobile vaccination clinics can be used to reach the most remote rural populations and improve coverage by providing people with chronic conditions, individuals with disabilities, or homebound individuals with a meaningful and equitable opportunity to get vaccinated.
- Invest in institutionalized collaboration mechanisms allowing more participatory dialogue between rural communities, civil society actors, and national authorities to build meaningful and inclusive partnership focused on health equality considerations based on rural community's inputs.
- Develop the health sector in rural areas by strengthening the neglected network of rural primary health centers with advantageous incentives for local health professionals, adequate resources, and digital technology to reinforce their effective integration within the overall health system response in a way that contributes to the

fundamental right of enjoyment of the highest attainable standard of health for all regardless of where they live.

ANNEX I. LETTER TO THE MINISTRY OF HEALTH

Reference: TG MDE 30/2022/2868

Doctor Ali Mrabet
Minister of Health
Djbel Lakhdhar Street
Bab Saadoun
Tunis 1006
Tunisia

April 12, 2022

Dear Minister,

I am writing this letter to kindly ask you to provide me with some information related to the national anti-COVID-19 vaccination plan in Tunisia. Amnesty International will soon release a report on the rollout of the vaccination program through a case study conducted in Ghardimaou, in northwestern Tunisia. The report is based on a series of interviews with 33 Ghardimaou residents as well as with three health professionals, and it relies on the analysis of public data that is mainly published on the Evax platform. Through the study, we have come to note a wide disparity between rural regions and urban centers in terms of access to anti-COVID-19 vaccines, with a much lower coverage rate in the disadvantaged inner regions of the country compared to the national average. What's more, this study allowed us to detect several reasons behind this low coverage rate in Ghardimaou. We have found several difficulties at the level of access to public health facilities and vaccination centers amid the lack of access to information and a missing participatory approach in the implementation of the vaccination campaign.

In this regard, we would like to ask you for further information on the anti-COVID-19 vaccination campaign with respect to the social and economic disparities observed by the organization in a bid to incorporate your answers in our report and refine our analyses.

• First, with regard to the national COVID-19 strategy, the Ministry of Health describes the strategic approach of the country's national vaccination plan as being primarily based on the key principle of "equitable access to free, effective and safe vaccines with scientifically validated quality." However, this very strategy fails to refer to systemic factors that have historically been associated with health disparities between urban and rural areas. **What approach has the Ministry adopted in order to integrate socio-economic determinants into the choice of vaccination priorities?**

• One of the main hindrances to accessing COVID-19 vaccines in the rural area of Ghardimaou is the insufficient number of local public health facilities and the lack of public transport services, which can significantly increase the cost of travel to the only vaccination center in the region. Several residents have stated that the site is not easily accessible from their homes, and a majority said the availability of free and safe transportation would further motivate them to get vaccinated. **Have the authorities taken into consideration the fact that local populations are located far from vaccination centers, and how have they proceeded to facilitate their access to vaccination sites in Ghardimaou and elsewhere?**

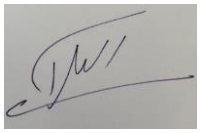
• Amnesty International found respondents to have a worrying level of misinformation about vaccines. The government has conducted major national awareness campaigns in the capital Tunis, among other major cities, where the government has widely used billboards and other communication media in strategic public spaces such as the main streets of cities, highways and malls. **What communication actions have the health authorities carried out in the rural regions, namely in Ghardimaou? Could you share with us the dates of the awareness campaigns that the authorities launched in this region as well as the adopted communication medium?**

• We have noted that the management of the national vaccination campaign remains highly centralized, with few opportunities for local rural communities to engage with national authorities in building local solutions that are better suited to their own needs based on a more collaborative and participatory approach. **Have the authorities taken any steps to involve the local populations in the rollout of the vaccination campaign and by which means?**

Please note that we are committed to including your answers in our report, should we receive them by April 24, 2022.

We remain at your disposal for any further information. Feel free to contact me either by email on Amna.guellali@amnesty.org or by fax 0021658545730.

Regards,



Amna Guellali
Deputy Regional Director
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Amnesty International

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