December 2021

A report of

# The Delta Wave of the COVID-19 Outbreak

In Northwest Syria

## COVID-19 surveillance

The four months (August to November 2021) are like no others on the "COVID-19 outbreak" timeline in northwest Syria. Along with the rest of the world, with some delay, Northwest Syria was faced with the third wave of Covid-19, which began at the beginning of August 2021. The wave likely peaked in mid-September when daily cases hit nearly 1500.

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# INTRODUCTION

The four months (August to November 2021) are like no others on the "COVID-19 outbreak" timeline in northwest Syria. Along with the rest of the world, with some delay, Northwest Syria was faced with the third wave of Covid-19, which began at the beginning of August 2021. The wave likely peaked in mid-September when daily cases hit nearly 1500.

More than 4.2 million people living in this area have been heavily affected by the pandemic during this wave. This was mainly due to the high number of COVID-19 deaths and limited health resources, especially the oxygen supply. Some COVID-19 patients were admitted at health facilities non designated to COVID-19. These health facilities reported deaths with COVID-19 like symptoms in their wards while they were waiting for a place in the ICU.

From 09 July 2020 (the first confirmation of the COVID-19 outbreaks in northwest Syria) till the date of preparing the report, there have been 92,229 confirmed COVID-19 cases and 2,224 reported deaths. The conducted PCR tests are 317,785. This report will describe the epidemiological characters of the delta wave and present a comparison against an earlier period of the outbreak.

The figure below summarizes the total numbers of the COVID-19 outbreak in Northwest Syria, up to 30 November 2021.

**92,229**

Confirmed cases

**62,366**

Recoveries

**2,224**

Deaths

**317,785**

PCR tests

# THE KEY FINDINGS

**The confirmed cases:**

The most significant findings during the dealt wave are following:

This number of confirmed COVID19 cases during the last wave (delta) is 3.2 times that recorded in the first wave last year.

Afrin district recorded the highest incidence rate per 100,000.

An increase in the incidence rate at the age groups (under-5-years, 5 to 14-year, and 15 to 24-year)

An increase in the females' proportion among confirmed COVID-19 cases.

**The COVID19 mortality:**

There was a significant increase in the case-fatality ratio from 1.9% at the end of 2020 to 3.44% at the end of November 2021.

Jarablus recorded the highest number of deaths per 100,000, while Harim district was at the 6th line after Jisr Ashugur district.

A deviation in the mortality to younger age groups.

Most of the deaths were unvaccinated (98.52%).

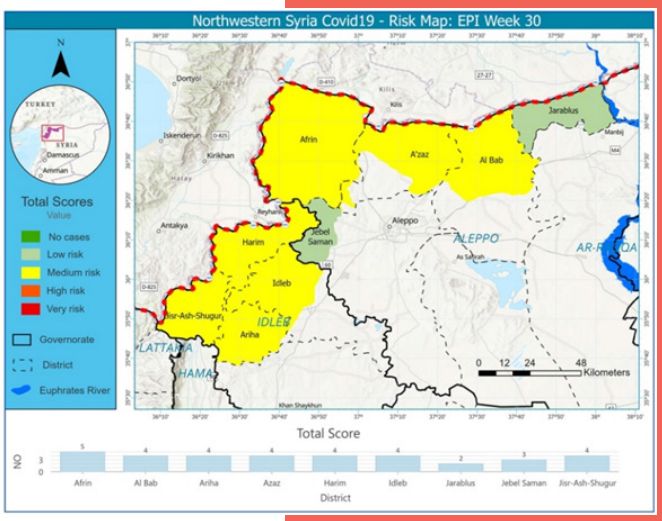
# COVID-19 RISK MAP

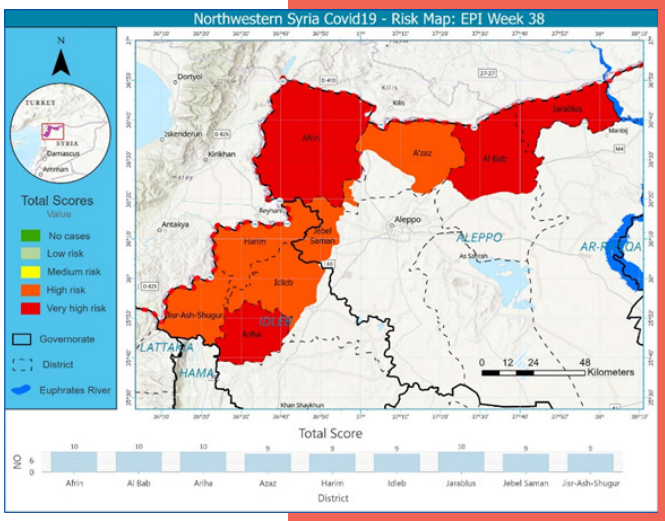
This dramatic increase in the incidence rate has been reported from all the areas in northwest Syria.
The following risk map of COVID-19 shows the change in the COVID-19 transmission over the epidemiological weeks from the Epi week 30 (before the wave) through Epi week 38 (the peak), ending the lock by the epi week 48.

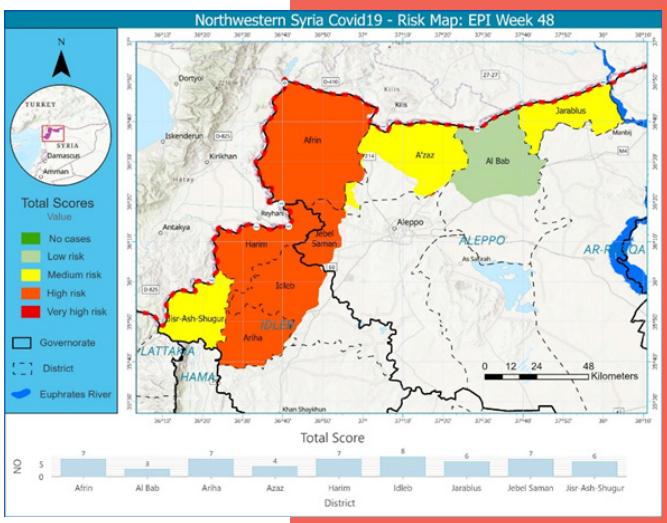
This risk map is calculated by scoring three variants at the district level, allowing the understanding of the transmission level of the virus, and as a helpful tool for decision making.

The three monitored variables are:

- COVID19 case incidence rate per 100K
- COVID19- related deaths per 100K
- Testing positivity rate.

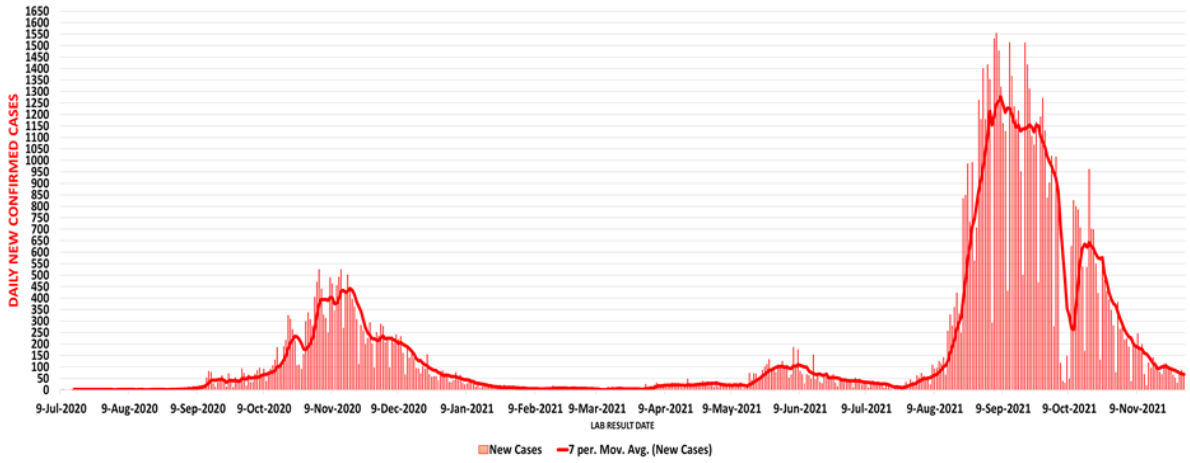


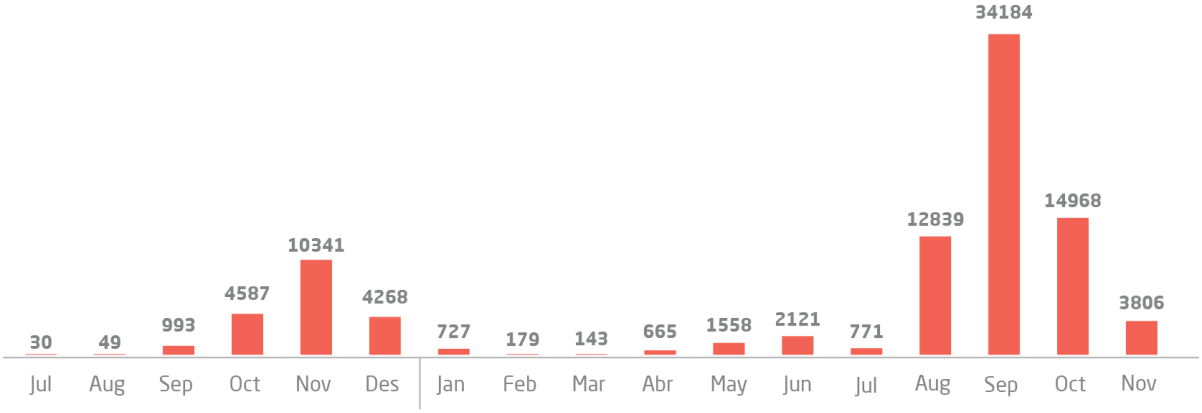
# CONFIRMED COVID-19 CASES:

fiuger 01: Daily new confirmed COVID-19 cases by lab result date North West Syria- Up to 30 NOV 2021




The above figure demonstrates the epidemiological curve of the new daily confirmed COVID19 cases **during the period between Jul 2020 and Nov 2021.** It shows that there are two apparent waves in the timeline of the outbreak. The first was in late 2020, while the 3rd one (delta wave) started in the 3rd quarter of 2021 and lasted approximately four months like the first wave. There is a slight increase in the cases observed in June 2021; it can be attributed to the circulation of the alpha variant at that time. The number of the confirmed cases from 1 August to 30 November 20201 is 65,797. This number presents the cases during the last surge of delta cases. It is 3.2 times the confirmed cases recorded between 1 September

fiuger 02: Confirmed COVID-19 cases Northwest Syria

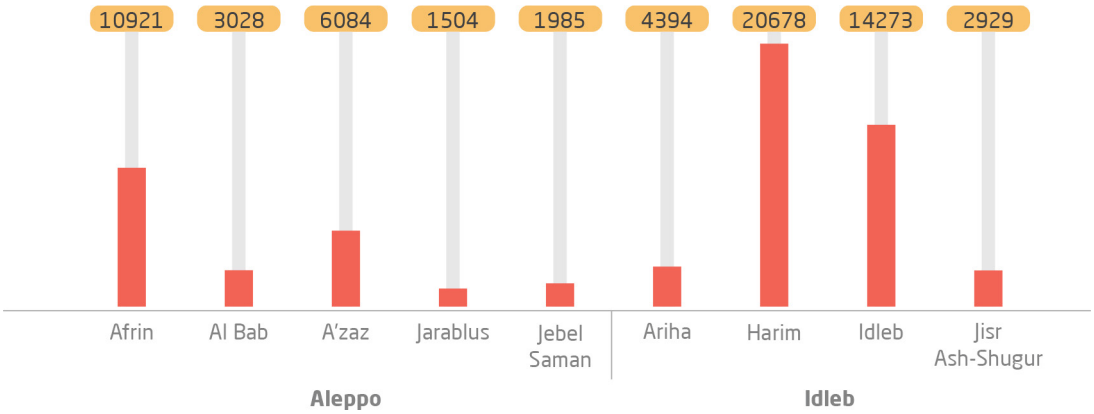



2020 and 31 January, which gives the 1st wave. The chart below shows the monthly numbers of the new confirmed COVID19 cases.

# THE EPIDEMIOLOGICAL DESCRIPTION OF THE CONFIRMED COVID-19 CASES

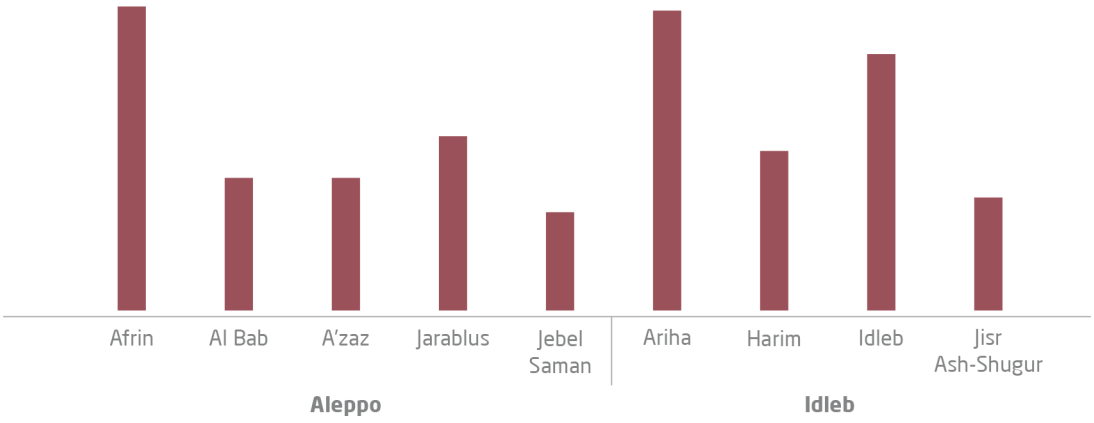
## (GEOGRAPHICAL, SEX, AND AGE GROUP DISTRIBUTION):

fiuger 03: Confirmed COVID-19 cases in Northwest Syria from 1 August to 30 November 2021




Harim district recorded the highest number of cases, with the highest population density. At the same time, it goes down to the fifth line of ranking by the case

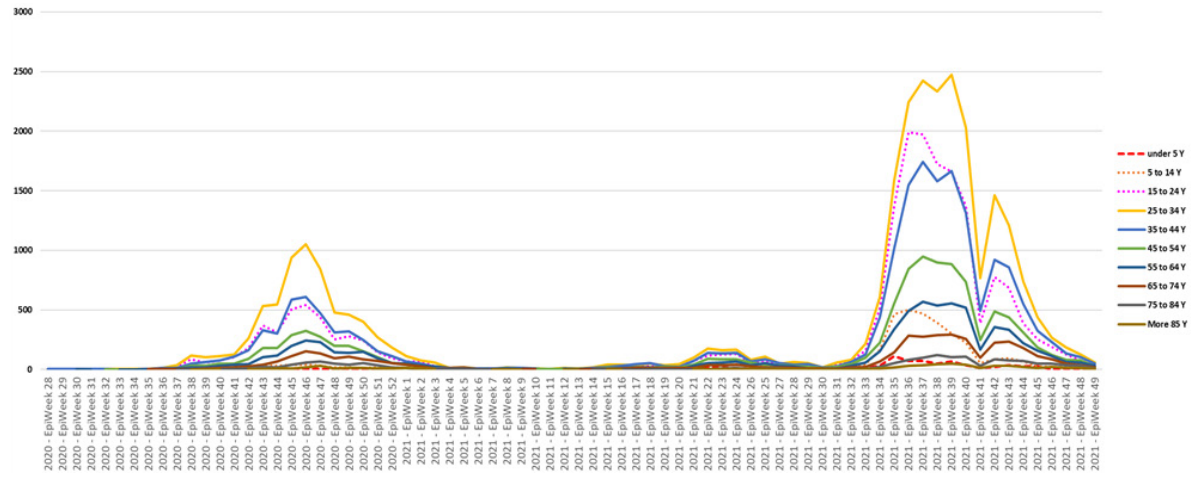
fiuger 04: Cases incidence rate per 100,000 in Northwest Syria from 1 August to 30 November 2021




incidence per 100,00 population after Afrin (at first), Ariha, Idleb, Jarablus, respectively. As it is shown in the below figure:

# THE AGE GROUP OF THE CONFIRMED CASES:

fiuger 05: Age group of COVID-19 confirmed cases Northwest Syria

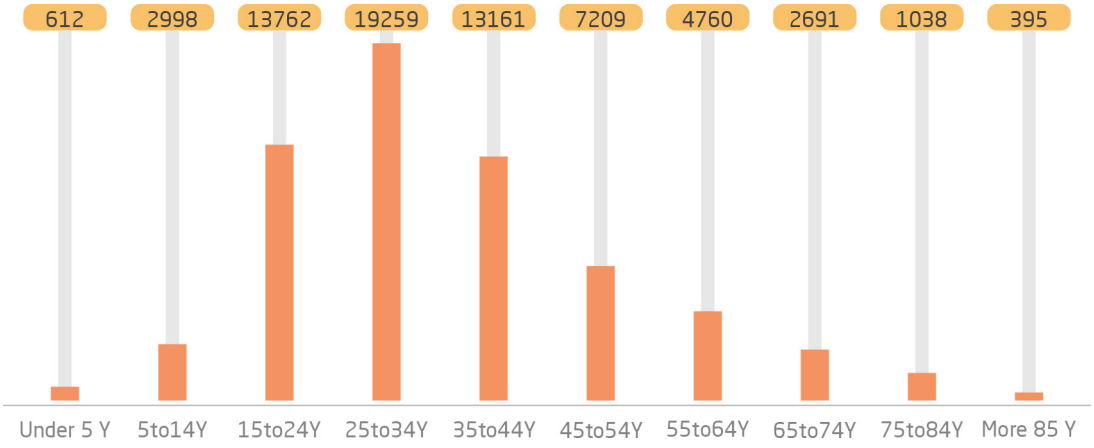



One of the observations that have been noticed during the delta wave is the increase in the incidence rate at the age groups (under-5-years, 5 to 14-year, and 15 to 24-year). They are shown as dotted lines in the curve below. The age group, 15 to 24-year, has moved from the third to the second-highest group in this wave. The results are broadly similar across countries that faced the delta wave.

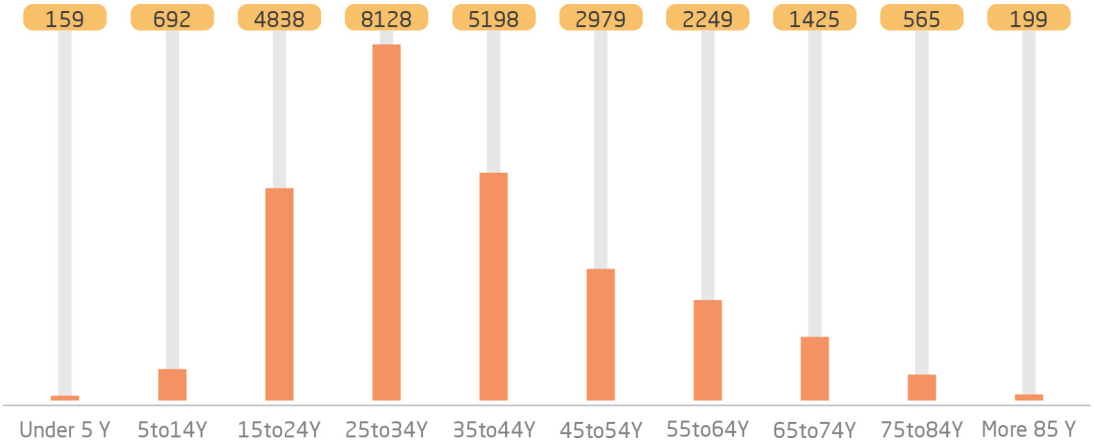
**During the last recent wave between Aug 2021 and Nov 2021,** 612 confirmed cases under the age-5 year, representing 0.93% of the total cases in this period. This percentage was 0.6% in the previous period. Similarly, the proportion of the cases in the age group 15 to 24 years moved up (from 18.33% to 20.88% of the total confirmed cases). The change in the trends that have emerged during the delta wave was more worrying because of limited hospital capacity and almost non-existent intensive care units for the pediatrics at the early stage of the wave. These findings were raised to the COVID19 Task Force, and pediatrics' ICU beds supported the health system capacity.

The below charts **compare the number of the confirmed cases regarding the age groups between the last wave (Aug 2021 - Nov 2021) and the period before (Jul 2020 - Jul 2021):**

fiuger 06: the Age group of the confirmed COVID-19 cases 1 August to 30 November 2021



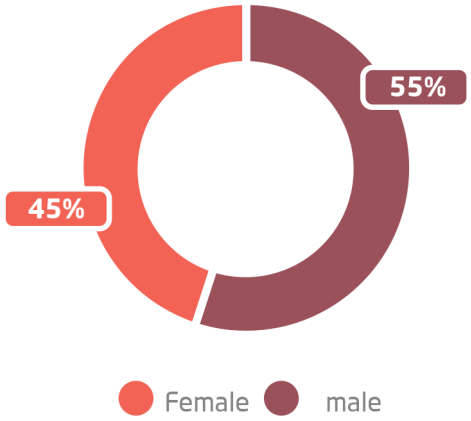

fiuger 07: the Age group of the confirmed COVID-19 cases July 2020 to July 2021



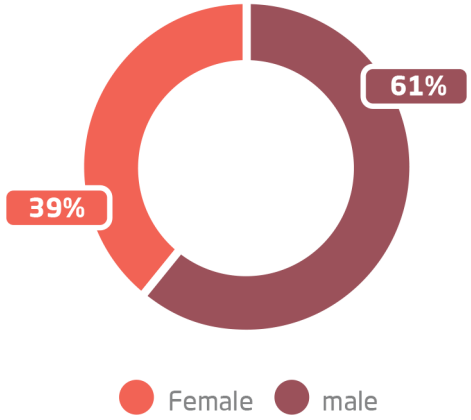
# THE SEX-WISE OF THE CONFIRMED COVID19 CASES:

There was a noticeable increase in the percentage of females among the new confirmed cases during the delta wave. The pie charts below show the sex wise in the two periods, the delta wave and the previous period.

fiuger 08: Sex distribution of the confirmed COVID-19 cases 1 August to 30 November 2021




fiuger 09: Sex distribution of the confirmed COVID-19 cases July 2020 to July 2021



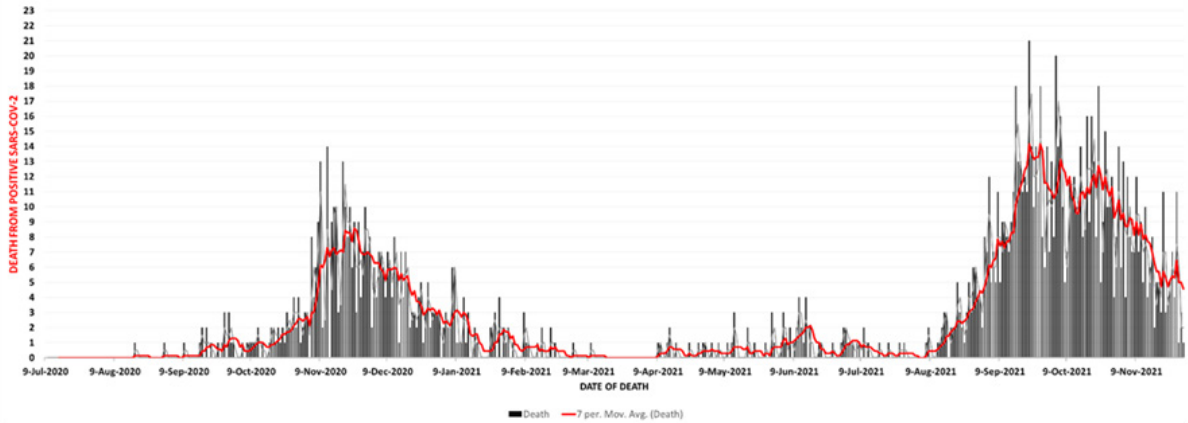
# THE COVID19 MORTALITY:

Before we proceed, it is interesting to define the deaths relate to COVID-19 briefly. According to WHO, A COVID-19 death is defined for surveillance purposes as a death resulting from a clinically compatible illness in a probable or confirmed COVID-19 case unless there is a clear alternative cause of death that cannot be related to COVID-19 disease (e.g., trauma). Furthermore, there should be no period of complete recovery between illness and death. This definition does not require a SARS-COV-2 positive PCR to define deaths attributable to COVID-19. The classification of the COVID-19 deaths is being reviewed by the Health Information System Unit.

The explored data here is just for the deaths with SARS-COV-2 PCR positive cases; therefore, it does not include all the classified COVID-19 deaths, The number of the total COVID19 deaths was 2224 with a positive result were 1,437. The reported deaths in the last four months with positive PCR results are 906, which presents 63% of the total deaths with positive results. The number of recorded deaths classified as COVID19 deaths during the delta wave is 1502, 67% of the total reported COVID19 deaths since the beginning of the outbreak. They may exclude people who did not die in a hospital.

The case-fatality ratio is 3.44%. It was 1.9% at the end of 2020. Considering that the outcome of many confirmed cases has not been identified due to difficulties in contacting and following up the cases. The following curve shows the COVID19 deaths from cases with positive PCR results.

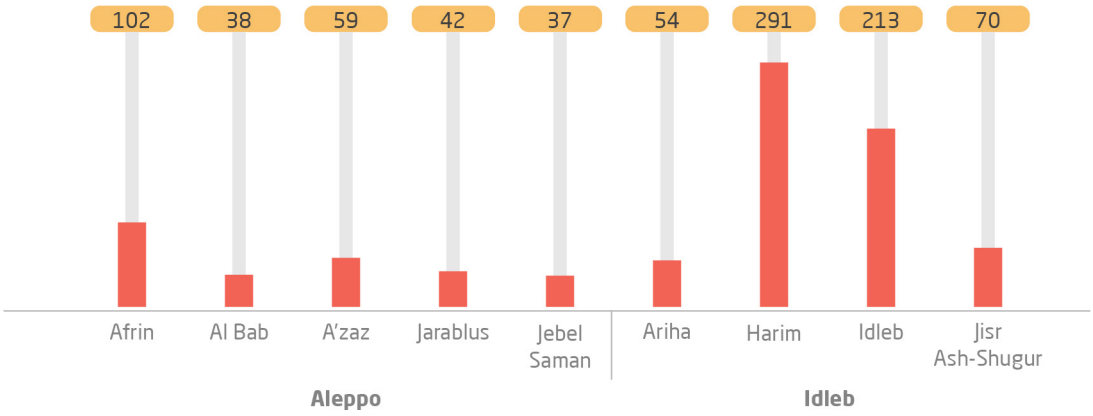
fiuger 10: Daily new Deaths from SARS-COV-2 positive cases by date of death North West Syria-Up to Nov 2021



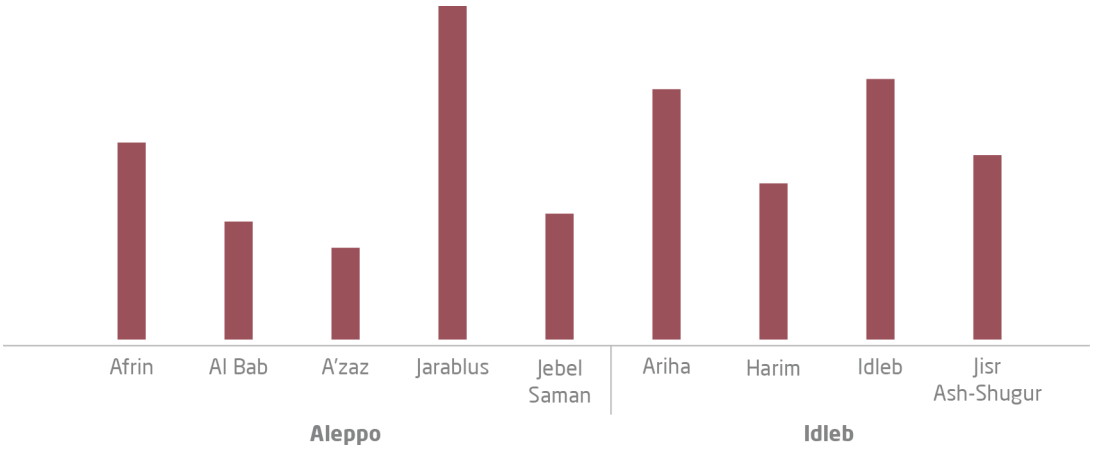
# THE EPIDEMIOLOGICAL DESCRIPTION OF THE COVID-19 DEATHS WITH A POSITIVE PCR RESULT

## (GEOGRAPHICAL SEX AND AGE GROUP DISTRIBUTION):

fiuger 11: COVID-19 deaths from positive PCR cases in Northwest Syria from 1 August to 30 November 2021



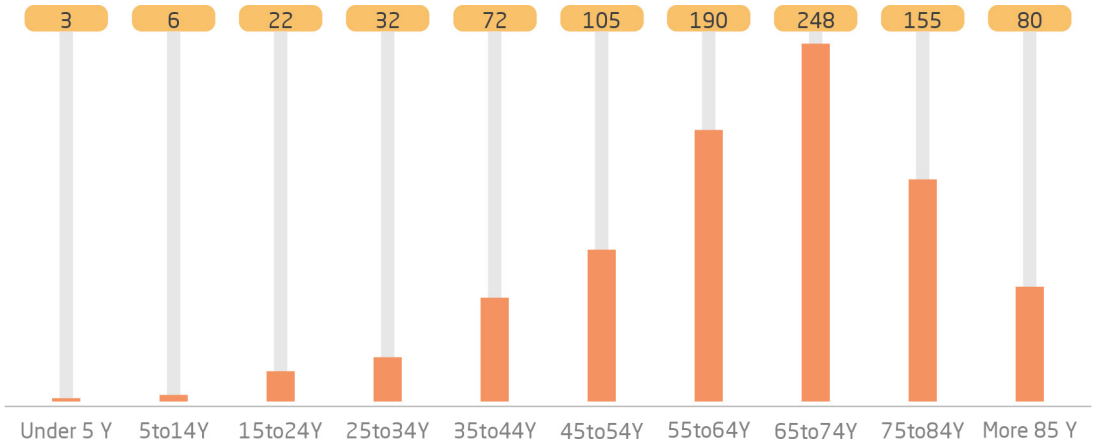

fiuger 12: COVID-19 deaths from positive PCR cases, per 100,000 Northwest Syria from 1 August to 30 November 2021



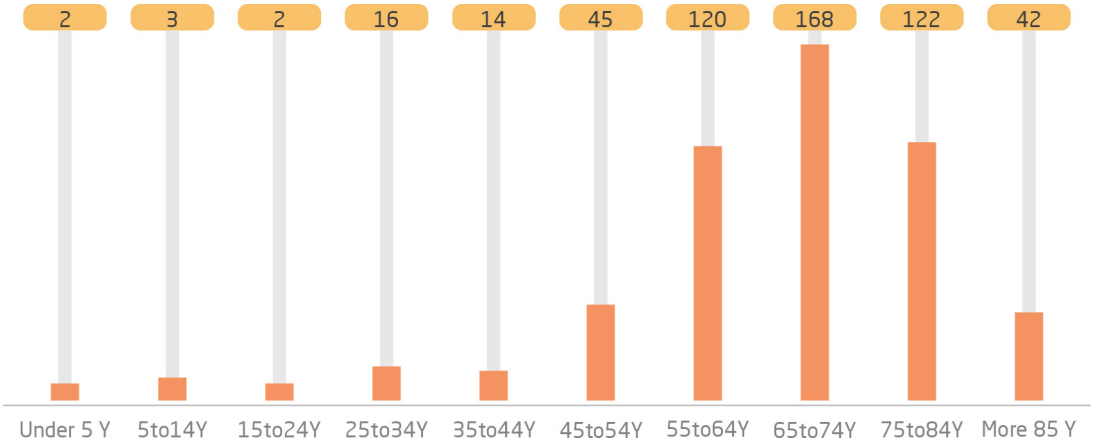

Jarablus recorded the highest number of deaths (41 per 100,000) in the period from August to November 2021. As the above charts show, It is worth noticing that Jisr Ashugur district, which has a low reported incidence rate, was at the 5th line in ranking the deaths per 100,000.

# THE AGE GROUP DISTRIBUTION OF THE COVID-19 DEATHS WITH A POSITIVE PCR RESULT

fiuger 13: the Age group of deaths from the confirmed COVID-19 cases 1 Aug to 30 Nov 2021




fiuger 14: the Age group of deaths from the confirmed COVID-19 cases July 2020 to July 2021

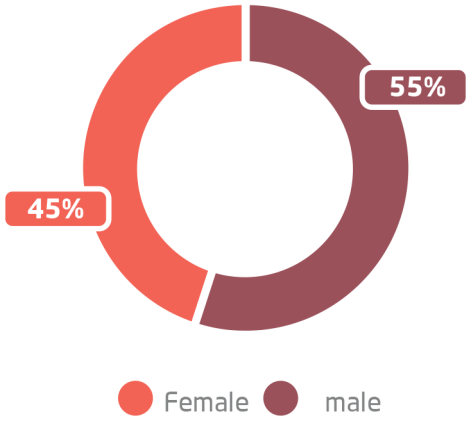



One of the reported deaths during the delta wave under the 5-year age group was for infants, seven months. Their infant was suffering from malnutrition as a comorbidity. A comparison for the age group of the COVID-19 deaths between the two periods, the delta wave and the previous one, shows a deviation in the mortality to younger age groups within the delta wave. On the other hand, there is also a decrease in deaths in the older age groups during the delta wave. For example, deaths among 45 to 54 years have increased from 8.4% of the total deaths to 11.5% during the delta wave. This increase was more obvious at the age group 15 to 24-years (from 0.37% to 2.4% during the delta wave). On the other side, there was a significant decrease in the deaths in the 75-84 year-age group (from 22.84% to 18.3% during the delta wave). Two possible reasons may explain this. The first is the higher cases incidence rate among the younger age groups during the delta wave—the second, the vaccination activities that targeted the older age groups at its priority. One may focus on these findings when performing future studies to be employed in the practical application of COVID19 vaccination activities.

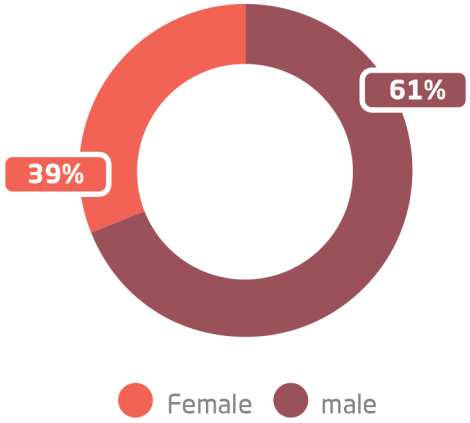
# SEX DISTRIBUTION OF THE DEATHS FROM POSITIVE COVID-19 CASES

There is no difference in the sex distribution for the case incidence and the mortality during the delta wave. While there is a significant increase in the proportion of deaths from females in the delta wave compared to the previous period. As it is shown in the below charts:

fiuger 15: Sex distribution of the deths from positive COVID-19 cases in Northwest Syria 1 Aug to 30 Noember 2021



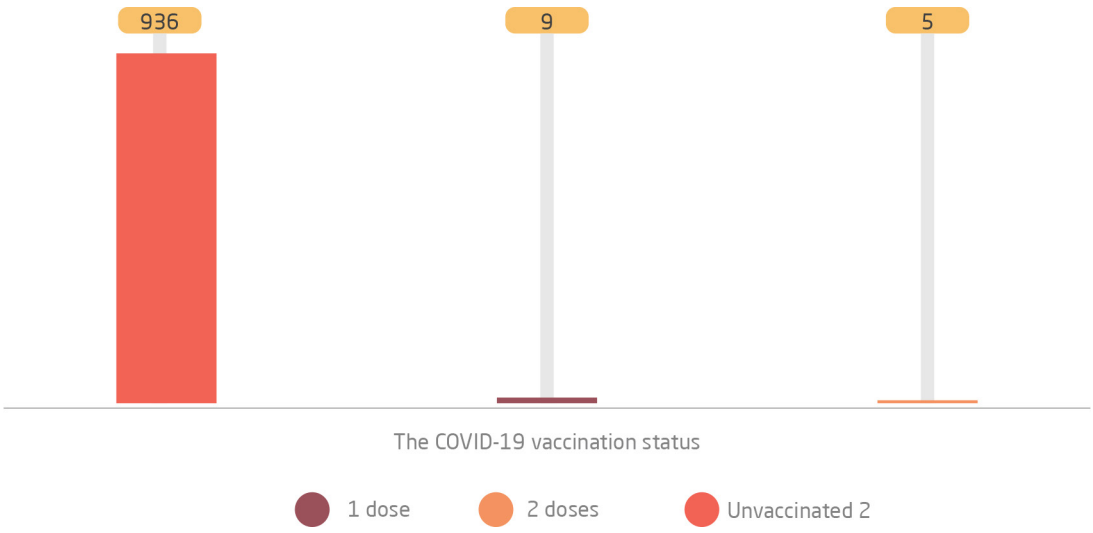

fiuger 16: Sex distribution of the deths from positive COVID-19 cases in Northwest Syria July 2020 to July 2021



# THE COVID-19 VACCINATION STATUS FOR THE DEATHS WITH POSITIVE PCR RESULT

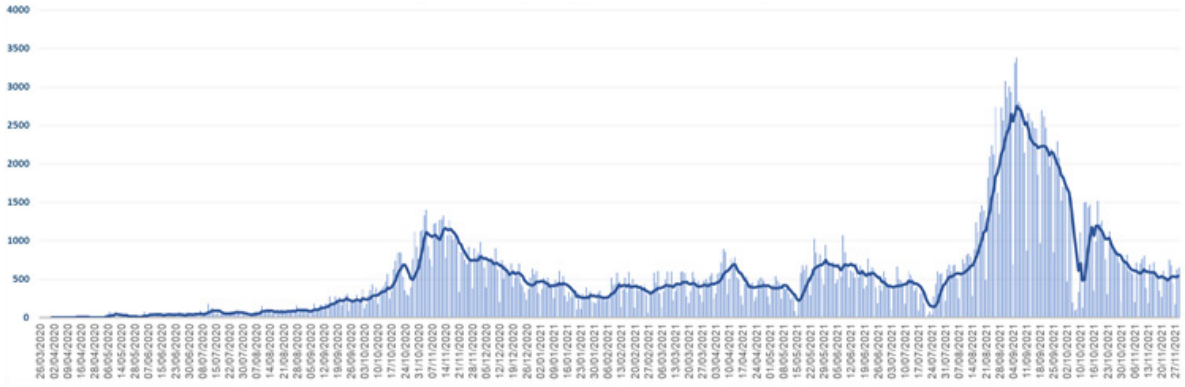
The COVID19 vaccination started in May 2021, prioritizing health care workers and older people with comorbidity at the early stage of the campaign. The target of the campaign was expanded to involve more high-risk categories. During the period from 1 June to 30 November 2021, an important finding by reviewing the vaccination status of the deaths with a positive PCR result is that most of the deaths were unvaccinated (98.52% of the total reported deaths in the same period). This finding provides further evidence that more deaths can be prevented by increasing the vaccinated coverage, especially for the vulnerable and high-risk groups.

fiuger 17: The COVID-19 vaccination status for the deths with positive PCR result, NWS from 1 June to 30 Noember 2021



# THE TESTING FOR COVID-19 IN NORTHWEST SYRIA

fiuger 18: Daily new PCR tests for COVID-19 Northwest Syria - up to 30 Noember 2021




As of 30 November 2021, the number of tests carried out in the PCR labs in the northwest was 317,785. The daily testing rate doubled six times during the delta wave compared to before August 2021. The COVID-19 Genomic Surveillance system in its PCR labs in Northwest Syria was established in August 2021. The method is through detecting a specific mutation that the provided kit can detect.

The detection of these mutations is by the PCR machine. On 15 August 2021, the results of sequencing of positive specimens confirmed the presence of the mutation L452R, which is compatible with the Delta variant. The testing after that showed that the delta variant is dominant over the areas.

The shown drop in the testing in early October 2021 was due to a temporal limitation in the testing capacity. There was a shortage in PCR consumables, which was reflected by this drop.

# CONCLUSION

The early detection and response for the COVID-19 outbreak are still crucial in containing the spread of the virus. Adjusting the public health measures according to the epidemiological situation provided by the COVID-19 surveillance system is fundamental to flatten the curve of the disease, which gives the health care workers the ability to manage the infected cases and prevent the overwhelming or the failure of the health system. Lessons have been hard-learned where measures were not applicable in Northwest Syria, especially where vaccination coverage remains low. Vaccines continue to be highly protective, even in the face of the Delta variant.

The emergence of the Omicron COVID-19 variant gave more evidence for the statement " no one is safe until we're all safe." Northwest Syria has been suffering from a humanitarian crisis for more than ten years. From this, it can be concluded that enhancing the COVID19 response in such areas is not a concern for the population living in NWS, and it can be said it is a global health concern.

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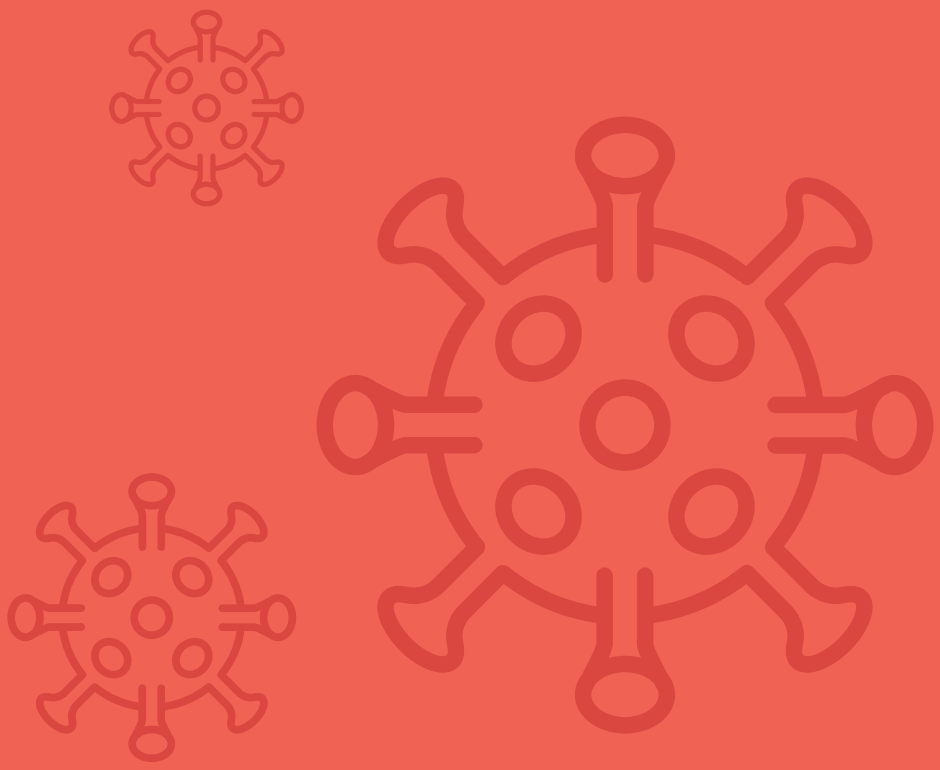

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