EPHI, NATIONAL DATA MANAGEMENT CENTER FOR HEALTH (NDMC):- QUICK UPDATE ON COVID-19, 065th

This update summarizes:

- **Ethiopia's Covid-19 Situation Updates**
- **Global and Regional Burden Of Covid-19**
- **Coronavirus Cases (Covid-19) in Ethiopia**
- **COVID-19 in Children**

Ethiopia's Covid-19 Situation Updates

- Since the last brief (July 1, 2021), 509 new confirmed corona virus disease 2019 (COVID-19) cases and 18 new deaths have been reported nationally. To date, a total of 276,683 COVID-19 cases and 4,338 related deaths (case fatality rate (CFR): 1.57, which is similar compared to the last week's rate) have been reported from 9 regions and 2 city administrations in the country. Compared to the cases and deaths reported a week ago, the national cumulative case and death reported this week remained nearly stable without increment.

- There are 10,720 active cases currently, of which 126 (1.17%, slightly reduced rate compared to last week's report) of them are critical. The number of active cases and critical cases have shown reduction by 905 and 19 cases respectively compared to the last week. So far 261,749 cases have recovered from COVID-19, out of which 1,377 recoveries were over the last one-week period which is minimal compared to the last week's report.
- The proportion of active cases among the total cases so far has decreased slightly while that of recoveries increased by the similar rate compared to the last week. However, the proportion of death remained nearly the same over the last one-week period (Fig 1).

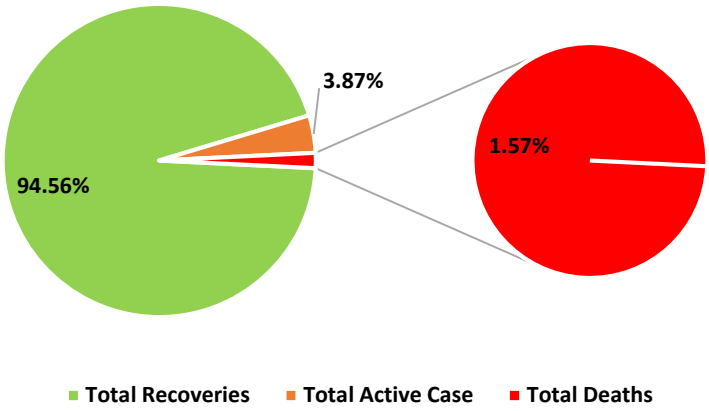


Fig 1: Proportions of active cases, recoveries and death as of July 8, 2021.

- The total number of tests done to date is 2,899,263. Among 32,691 laboratory samples tested over the last one-week duration, 509 of them tested positive for COVID-19, yielding a positivity rate of 1.6%; showing a 0.3% reduction from the last week's positivity rate.

Case Management and Infection Prevention Control (Ipc)

- This week, July 1- July 7, 2021, there are **1377** newly recovered cases bringing the total number of COVID-19 recovered cases to **261, 749**
- There are **126** patients in severe condition as of July 7, 2021, and all the other patients are on medical care in stable condition

Home Based Isolation and Care (HBIC)

Since Home Based Isolation and Care (HBIC) is started in Ethiopia:

- A total of **206,402** COVID-19 confirmed cases are followed in the HBIC as of July 7, 2021
- **206, 579** of them have recovered in the HBIC as of July 7, 2021.
- **1076** cases are currently on HBIC.
- **33** COVID-19 related deaths have occurred in the HBIC.
- **2,184** cases have been transferred from treatment centers to HBIC.
- **898** cases have been transferred from HBIC to treatment centers.

EPHI and FMOH COVID 19 response highlights of the week /trainings and supply

- There is the on-going distribution of PPE, Viral Transport Media (VTM), swabs, pharmaceuticals, and other medical supplies to isolation and treatment centers.

References

1. *Public Health Emergency Operations Centers (PHEOC), Ethiopia.*

2. *https://twitter.com/lia_tadesse.*
3. *http://www.covid19.et/covid-19/.*
4. *EPHI's PHEM daily COVID-19 SITREP report.*

Global and Regional Burden of Covid-19

- Globally the total number of cases is extended to 185,853,841 as of July 8, 2021. A total of 170,100,608 cases recovered and 4,017,816 people died since the beginning of the outbreak. Globally, in a week time, from July 1 to July 8, 2021, COVID-19 cases increased by 1.6% and deaths by 1.4%. In the past week, Asia is the leading in terms of cases followed by Europe and North America. Europe continued to be became a lead in terms of the number of deaths followed by South and North America (Table 1).

Table 1. Global cases and deaths reported as of July, 2021.

	COVID cases	Weekly % change	deaths	Weekly % change
Global	185,853,841	1.6	4,017,81	1.4
Europe	48,531,047	1.1	1,109,35	0.6
North America	40,833,394	0.5	922,400	0.5
Asia	56,931,492	2.0	809,290	2.2
South America	33,652,238	2.3	1,026,33	2.1
Africa	5,826,422	4.9	149,120	4.0
Oceania	78,527	5.4	1,307	2.1

- USA has recorded the highest number of cases 0.3% (34,543,991 to 34,643,902 cases) and 0.3% (620,234 to 621,873 deaths) that accounts 18.6% of the total global cases and carried 15.5% of global deaths as of July 8, 2021, showed declining trend.
- India is the 2nd highest in terms of cases in a week time by 1% (30,410,577 to 30,709,557) and deaths by 1.4% (399,475 to 405,057).
- Brazil became the 3rd rank worldwide with increased number of cases in a week time by 1.9% (18,559,164 to 18,909,037) and the 2nd by deaths with 2% (518,246 to 528,611).
- Ferance ranked 4th globally with 5,794,665 cases and 111,259 deaths.

- Russia ranked 5th globally with 5,682,634 cases and 140,041 deaths.

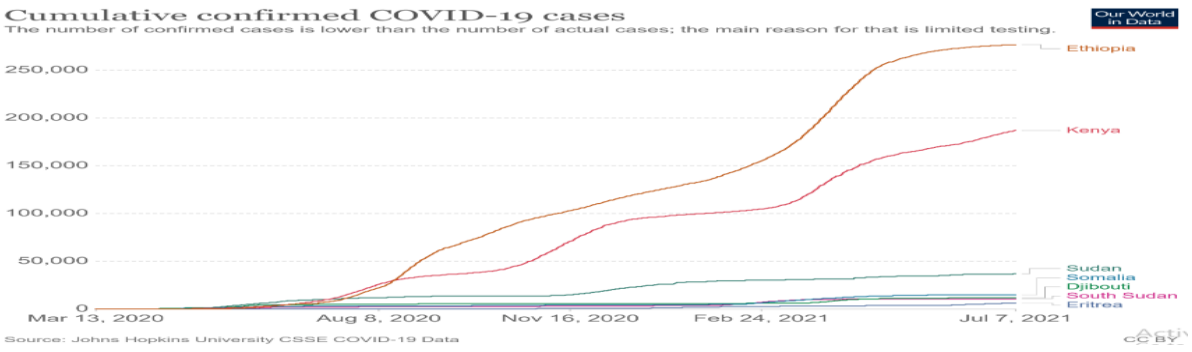
➢ The line share of Africa to the global COVID-19 pandemic was 3.1% and 3.7% of the global cases and deaths as of July 8). The cases in the continent have increased by 4.9% in a week time (5,554,034 to 5,826,422 cases). Similarly, the total number of deaths in Africa has increased from 143,355 to 149,120 showing 4%. Total recoveries stand at 5,038,523.

- South Africa is the leading in the continent with 2,112,336 cases and 63,039 deaths. Morocco (537,253 cases, 9,341 deaths), Tunisia (464,914 cases, 15,735 deaths), Egypt (282,582 cases, 16,332 deaths) and Ethiopia continued to be the 5th rank with (276,683 cases, 4,338 deaths). These are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

Table 2: Case and death reported in selected African countries as of July 2021

Africa	July 1		July 8	
	Cases	Deaths	Cases	Deaths
South Africa	1,973,972	60,647	2,112,336	63,039
Morocco	531,361	9,296	537,253	9,341
Tunisia	420,103	14,959	464,914	15,735
Egypt	281,282	16,169	282,582	16,332
Ethiopia	276,174	4,320	276,683	4,338

- In East African, COVID-19 cases and deaths have shown fast progress. As of March, Ethiopia and Kenya continued to be the major drivers of the COVID 19 burden in east African countries.



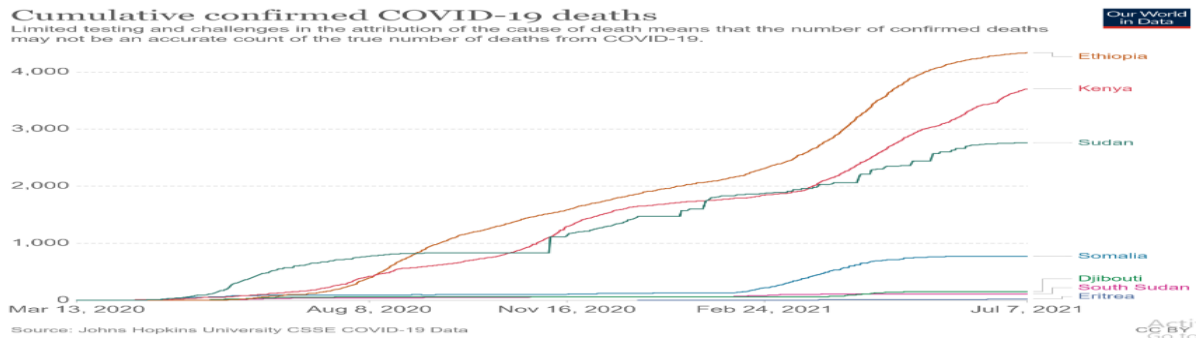


Figure2: The burden of COVID-19 in Eastern African countries

References

1. *John Hopkins, Corona Virus Resources https://coronavirus.jhu.edu/map.html*
2. *Worldometer, Corona Virus https://www.worldometers.info/coronavirus/*
3. *Africa CDC: COVID 19 Surveillance; https://au.int/covid19*
4. *Our World: https://ourworldindata.org/covid-cases*

Coronavirus Cases (Covid-19) in Ethiopia

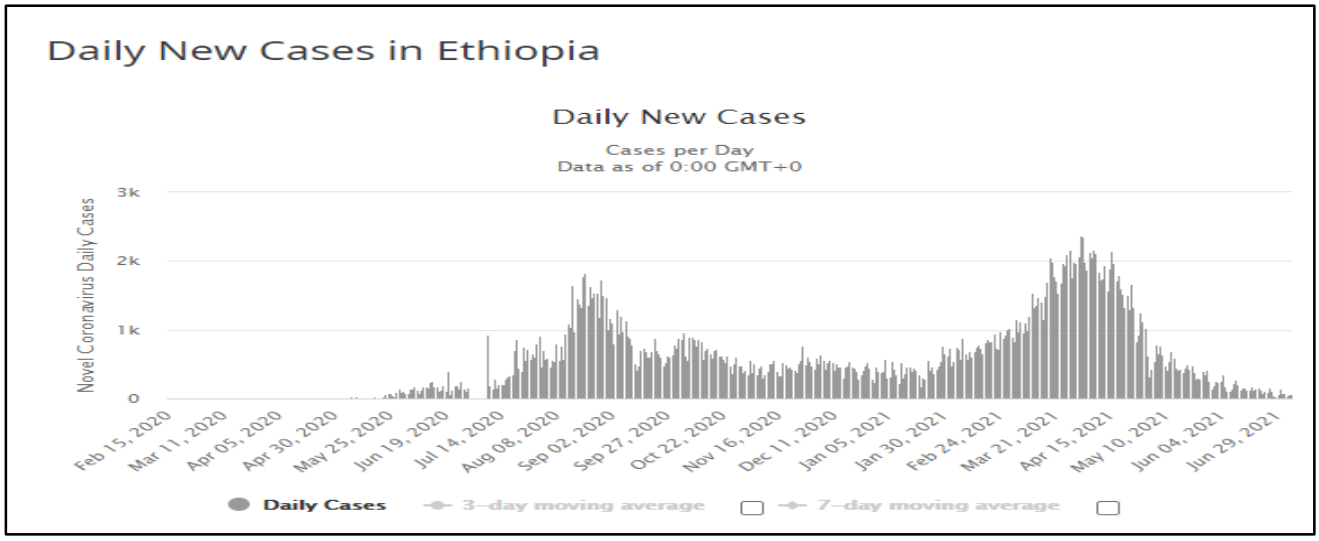
Global numbers of cases and deaths continued to decrease over the past week (14-20 June 2021) with just over 2.5 million new weekly cases and over 64 000 deaths, a 6% and a 12% decrease respectively, compared to the previous week. While the number of cases reported globally now exceeds 177 million, the lowest weekly case incidence since February 2021 was reported last week. Globally, mortality remains high with more than 9000 deaths reported each day over the past week, however, the number of new deaths reported in the past week decreased across all Regions except for the Eastern Mediterranean and the African Regions.

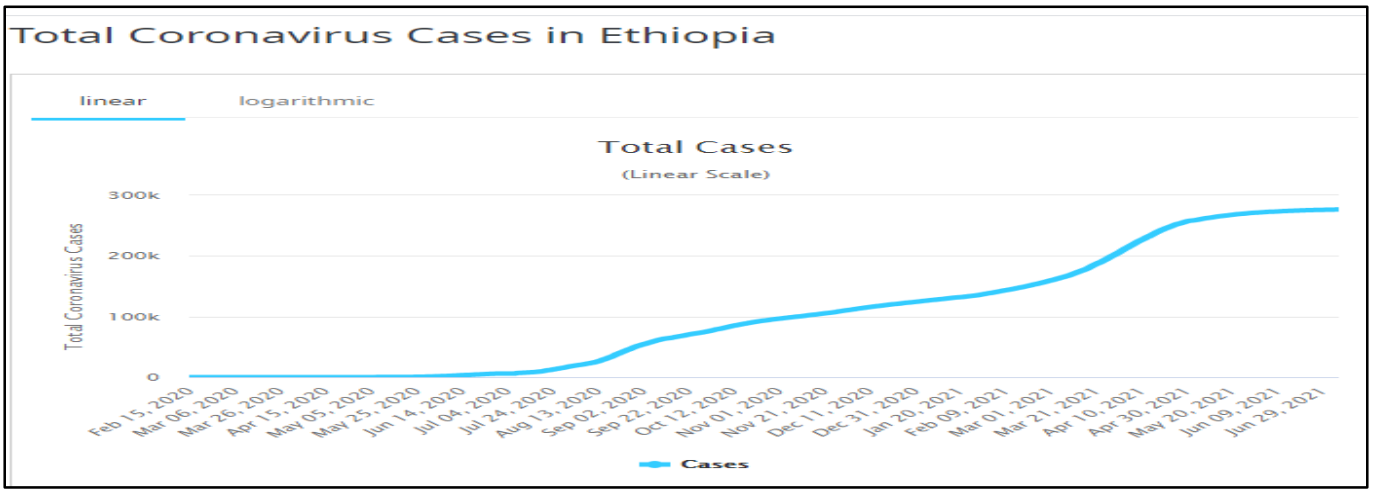
The African Region reported over 132 000 new cases and over 1900 new deaths, a 39% and a 38% increase respectively compared to the previous week, the highest percentage increase reported globally. The region reported a marked increase in weekly case incidence for the past month, with the largest increases in countries in the Southern and Eastern parts of Africa. The highest numbers of new cases were reported from South Africa (70 739 new cases; 119.3 new cases per 100 000 population; a 48% increase), Zambia (16 641 new cases; 90.5 new cases per 100 000; a 54% increase), and Uganda (9926 new cases; 21.7 new cases per 100 000; a 16% increase). The highest numbers of new deaths were reported from South Africa (937 new deaths; 1.6 new deaths per 100 000 population; a 29% increase), Zambia (230 new deaths; 1.3 new

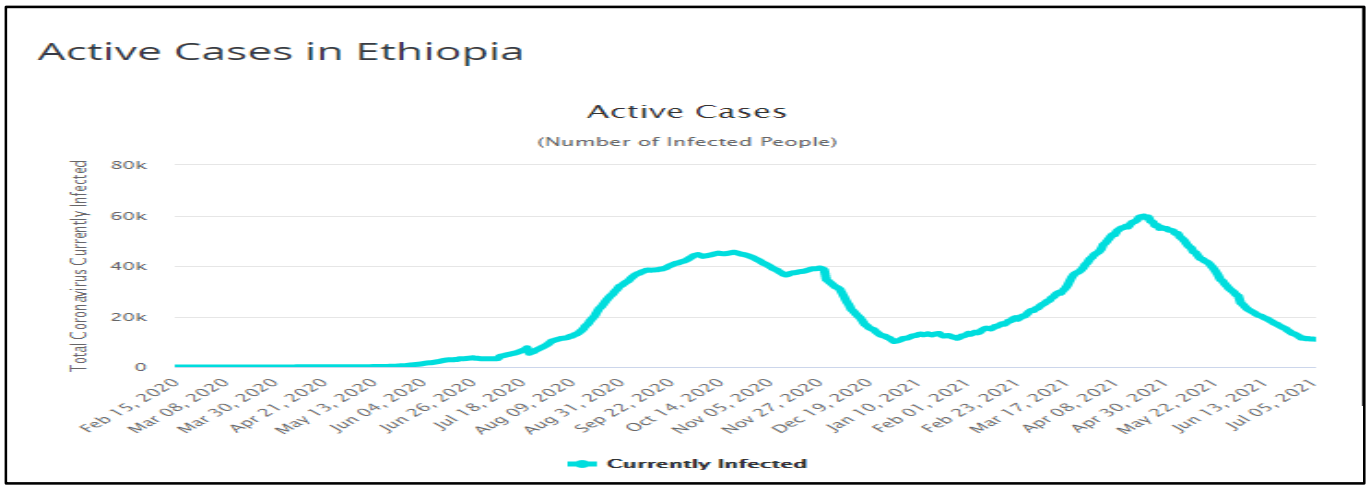
deaths per 100 000; a 271% increase), and Uganda (203 new deaths; 0.4 new deaths per 100 000; a 314% increase).

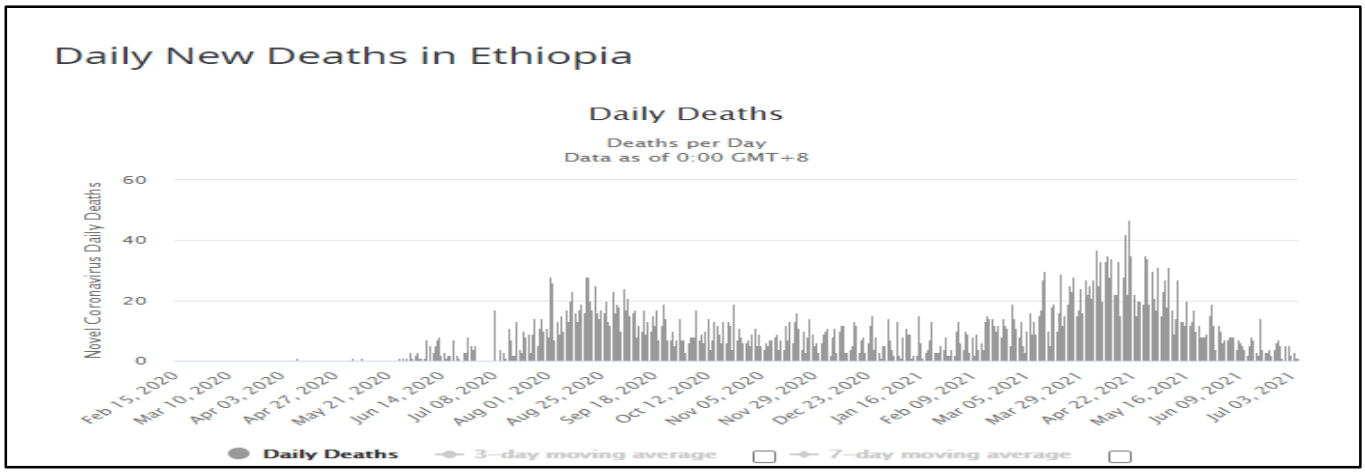
The Worldometer's graphs on COVID-19 in Ethiopia showed the following figures. The graphs were run up to July 06, 2021. The figures showed, there are 276,503 COVID-19 cases, 4332 COVID-19 deaths and 261,156, COVID-19 recovered. When it compared with June 22, 2021 COVID-19 data, there are 1001 new cases; 0.36% new cases from the total cases, of 276503 population, 40 new deaths; 0.92% new deaths from the total deaths, of 4332 population; and 4369 new recovered; 1.67% from the total recovered of 261,156).

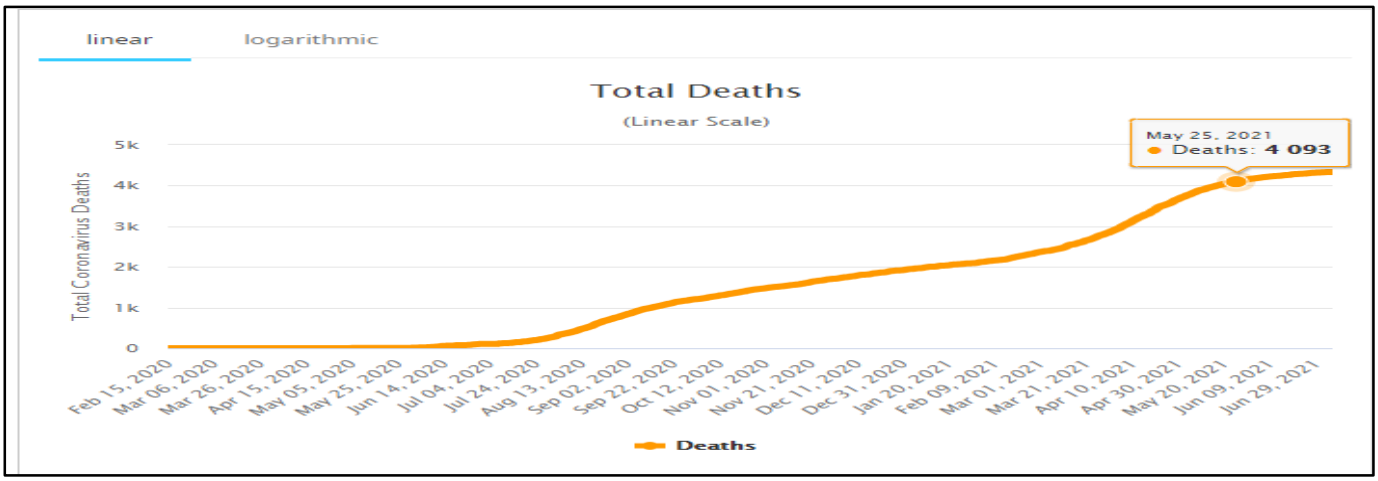
•The figures which have been analyzed and mapped by World meter's seam a linear logarithmic function which manifests the COVID-19 cases, deaths and recovered situations (see below).




Total Coronavirus Cases in Ethiopia
linear
logarithmic
Total Cases
(Linear Scale)
Total Coronavirus Cases
300k
200k
100k
0
Feb 15, 2020
Mar 06, 2020
Mar 26, 2020
Apr 15, 2020
May 05, 2020
May 25, 2020
Jun 14, 2020
Jul 04, 2020
Jul 24, 2020
Aug 13, 2020
Sep 02, 2020
Sep 22, 2020
Oct 12, 2020
Nov 01, 2020
Nov 21, 2020
Dec 11, 2020
Dec 31, 2020
Jan 20, 2021
Feb 09, 2021
Mar 01, 2021
Mar 21, 2021
Apr 10, 2021
Apr 30, 2021
May 20, 2021
Jun 09, 2021
Jun 29, 2021
Cases


Active Cases in Ethiopia
Active Cases
(Number of Infected People)
Total Coronavirus Currently Infected
80k
60k
40k
20k
0
Feb 15, 2020
Mar 08, 2020
Mar 30, 2020
Apr 21, 2020
May 13, 2020
Jun 04, 2020
Jun 26, 2020
Jul 18, 2020
Aug 09, 2020
Aug 31, 2020
Sep 22, 2020
Oct 14, 2020
Nov 05, 2020
Nov 27, 2020
Dec 19, 2020
Jan 10, 2021
Feb 01, 2021
Feb 23, 2021
Mar 17, 2021
Apr 08, 2021
Apr 30, 2021
May 22, 2021
Jun 13, 2021
Jul 05, 2021
Currently Infected


Daily New Deaths in Ethiopia
Daily Deaths
Deaths per Day
Data as of 0:00 GMT+8
Novel Coronavirus Daily Deaths
60
40
20
0
Feb 15, 2020
Mar 10, 2020
Apr 03, 2020
Apr 27, 2020
May 21, 2020
Jun 14, 2020
Jul 08, 2020
Aug 01, 2020
Aug 25, 2020
Sep 18, 2020
Oct 12, 2020
Nov 05, 2020
Nov 29, 2020
Dec 23, 2020
Jan 16, 2021
Feb 09, 2021
Mar 05, 2021
Mar 29, 2021
Apr 22, 2021
May 16, 2021
Jun 09, 2021
Jul 03, 2021
Daily Deaths
3-day moving average
7-day moving average



Reference

1. https://www.worldometers.info/coronavirus/country/ethiopia/.
2. https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---22-june-2021

COVID-19 in Children

- Children with SARS-CoV-2 infection are mostly asymptomatic or mildly symptomatic.
- The true prevalence of SARS-CoV-2 infection in childhood is most likely underestimated, as asymptomatic children are less frequently tested.
- Serologic surveys indicate that half of children tested positive for SARS-CoV-2 report no symptoms. Anosmia/ageusia is not frequent in children but it is the strongest predictor of a positive SARS-CoV-2 test.
- Among symptomatic children, altered smell or taste, nausea or vomiting, and headache were more strongly associated with SARS-CoV-2 than other symptoms. However, cough, nasal congestion, sore throat, and fever are non-specific symptoms, since they are frequently encountered in children with COVID-19 as well as with other infectious disease.
- In general, children with COVID-19 are at lower risk of hospitalization and life-threatening complications.
- The study found that the proportion of severe and critical cases was 10.6 and 7.3,4.2,4.1, and 3% for the age groups <1 years, 1–5 years, 6–10 years, 11–15 years, and >15 years, respectively.

- Of the children who have developed severe illness from COVID-19, most have had underlying medical conditions (chronic respiratory illness including moderate-to-severe asthma, obesity, diabetes, sickle cell disease or cancer).
- Rarely children with severe COVID-19 develop neurologic complications.
- In terms of outcome, most children recover and there is no evidence of excess childhood mortality. Different studies showed that , case fatality rate in children with COVID-19 was less than 1% (0% to 0.69 %)
- School closures have a limited impact on SARS-CoV-2 transmission, much less than other social distancing measures.
- Preliminary results from COVID-19 vaccine trials indicate very good efficacy and tolerability in children.
- The United States Centres for Disease Control and Prevention and other public health authorities recommend vaccination of children 12 years or older to protect them but mostly to contribute to the achievement of herd immunity.

Why Children have Milder SARS-CoV-2 Infection?

- May be related to the fact that children have a lower prevalence of co-morbidities such us hypertension, diabetes and chronic lung disease that have been associated with severe disease
- On the other hand Angiotensin converting enzyme 2 (ACE2) is the main receptor for the entry of SARS-CoV-2 into human cells. The expression of ACE2 in nasal and lung epithelium increases during childhood and further during adulthood. Furthermore, it has also been postulated that children have ACE2 receptors with a lower affinity for SARS-CoV-2 and a different distribution across body sites, making the entry of SARS-CoV-2 into cells more difficult.
- Another explanation for the less severe symptoms in children is that children are mainly infected by the adult members of their families. So children are infected with a second or a third generation of the virus, which may have decreased pathogenicity. Furthermore, children have a stronger innate immune system and may respond to pathogens differently from adult.

Reference

1. *Georgia B. Nikolopoulou, Helena C. Maltezou, COVID-19 in children: where do we stand?, Archives of Medical Research, 6 July, 2021, ISSN 0188-4409, https://www.sciencedirect.com/science/article/pii/S018844092100148X*
2. *Zimmermann P, Curtis N. Why is COVID-19 less severe in children? A review of the proposed mechanisms underlying the age-related difference in severity of SARS-CoV-2 infections. Archives of Disease in Childhood 2021;106:429-439.*