



NATIONAL PUBLIC HEALTH EMERGENCY OPERATION CENTER (PHEOC), ETHIOPIA

COVID-19 PANDEMIC PREPAREDNESS AND RESPONSE IN ETHIOPIA

WEEKLY BULLETIN

Dates covered by this Bulletin: July 13–July 19, 2020

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I. HIGHLIGHTS

- The highest number of weekly COVID-19 confirmed cases, recoveries and deaths are reported in WHO-Epi-Week-29 compared to previous weeks. In addition, the highest number of COVID-19 laboratory samples are tested in the same week.
- A total of two-thousand-four-hundred-forty-one (2,441) new confirmed COVID-19 cases and forty-two (42) COVID-19 related deaths was reported during the WHO Epi-Week-29.
- As of July 19, 2020, a total of 10,207 COVID-19 confirmed cases and 170 deaths have been reported in Ethiopia so far.
- Three-thousand-seven-hundred-fifteen cases have newly recovered from COVID-19 during the WHO Epi-Week-29 bringing the total number of recovered cases to 5,137.
- A total of 57,707 contacts of confirmed cases have been identified as of July 19, 2020. Of these, 9,895 contacts are identified during the WHO Epi-week-29.
- Africa CDC has supported two genome sequencing machines in support of COVID-19 response efforts.

II. BACKGROUND

The Ministry of health (MOH) and Ethiopian Public Health Institute (EPHI) in collaboration with partners have intensified response efforts to prevent the spread and severity of Corona Virus Disease 2019 (COVID-19) in Ethiopia. The central and the regional Public Health Emergency Operation Centers (PHEOC) have been activated and laboratory diagnosis capacity has been expanded to other national institutions, subnational and private laboratories.

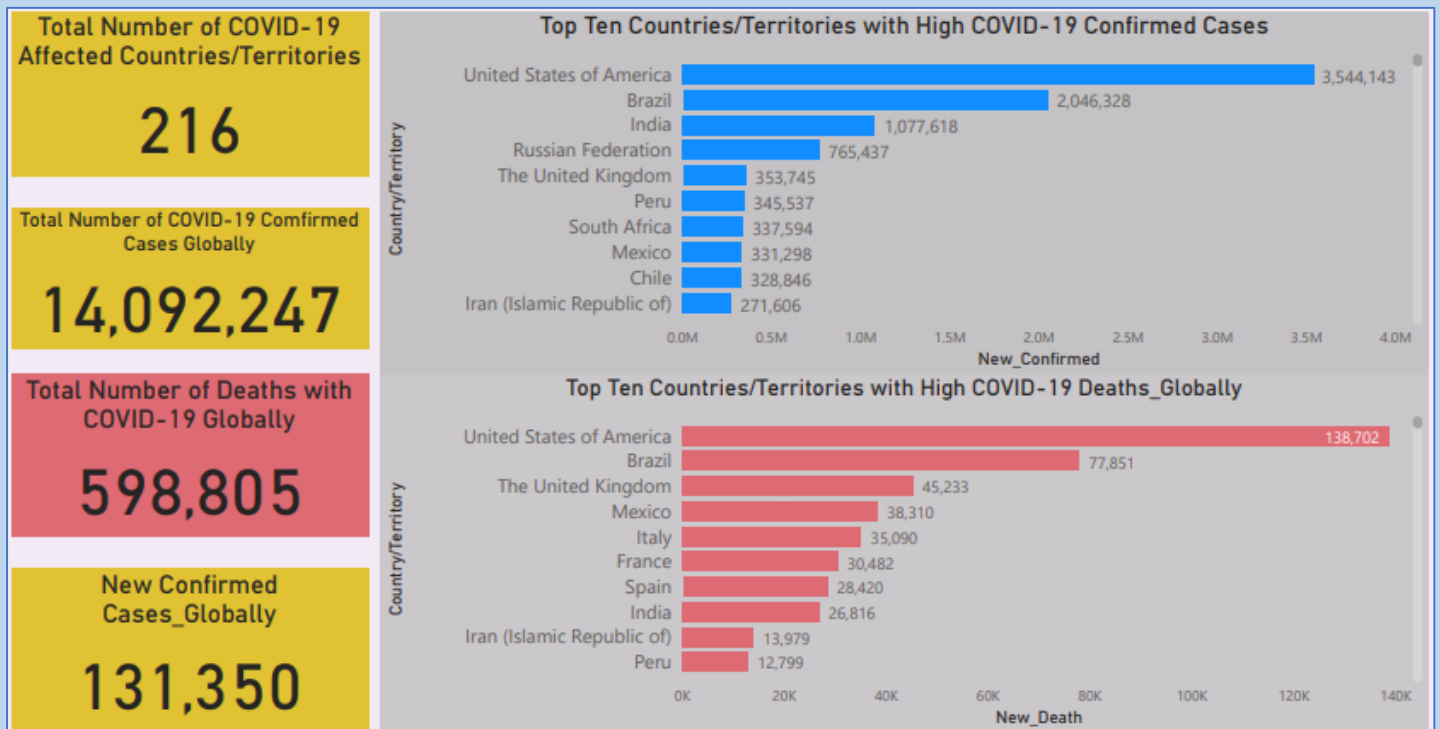
The national and regional PHEOC are playing a pivotal role in coordinating resources from different responding agencies and coordinating COVID-19 related information through a regular EOC meetings and partners' coordination forums. The MOH and EPHI are providing information to the general public and stakeholders on a regular and uninterrupted manner using different means of communication modalities.

The WHO and other partners are currently supporting in scaling-up preparedness and response efforts and implementation of related recommendations suggested by the IHR Emergency Committee.

III. EPIDEMIOLOGICAL SITUATION

Global Situation

- Between December 2019 to July 19, 2020, COVID-19 pandemic affected 216 countries/territories causing 14,092,247 cases and 598,805 deaths (CFR=4.25%) globally.
- Of the total cases and deaths reported since the beginning of the outbreak, 1,455,026 cases and 35,490 deaths were reported during the WHO Epi-Week-29.
- The United States of America (USA) reported the highest number of cases (3,544,143) and deaths (138,702) with CFR of 3.91% followed by Brazil (2,046,328 cases and 77,851 deaths with a CFR of 3.80%). Among the confirmed cases the highest proportion of death occurred in the United Kingdom with CFR of 12.79%.
- In Africa, 56 countries/territories have reported COVID-19 cases.
- As of July 19, 2020, a total of 688,440 cases and 14,836 deaths were reported across the continent (CFR=2.16%).
- During the WHO-Epi-Week-29, a total of 108,769 cases and 1,806 deaths were reported across the continent.
- More than half of the COVID-19 cases (60%) and deaths (59%) in Africa were reported from South Africa and Egypt. See the summary dashboard below.



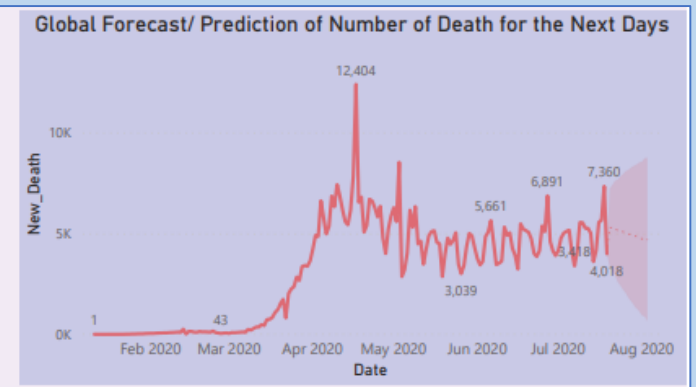
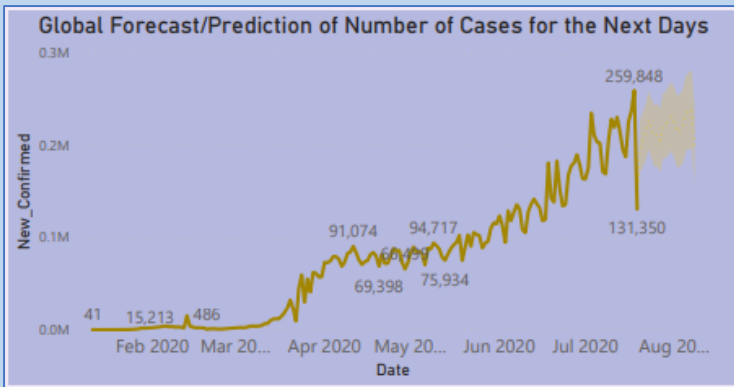
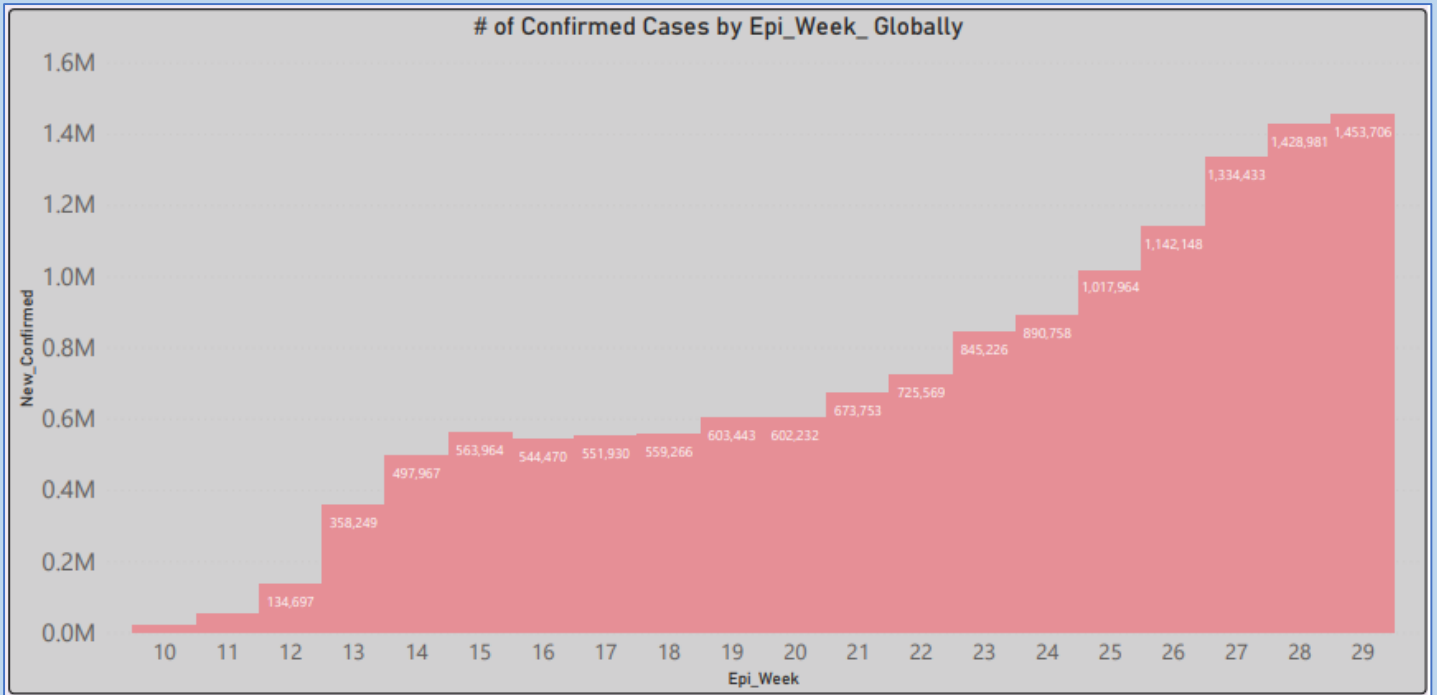


Fig. 1: Global Situation Update as of May July 19, 2020 (Source: WHO)

of African Countries/Territories with COVID-19 Confirmed Cases

56

Total Number of Cases Confirmed in Africa

688,440

New Confirmed Cases in Africa with COVID-19

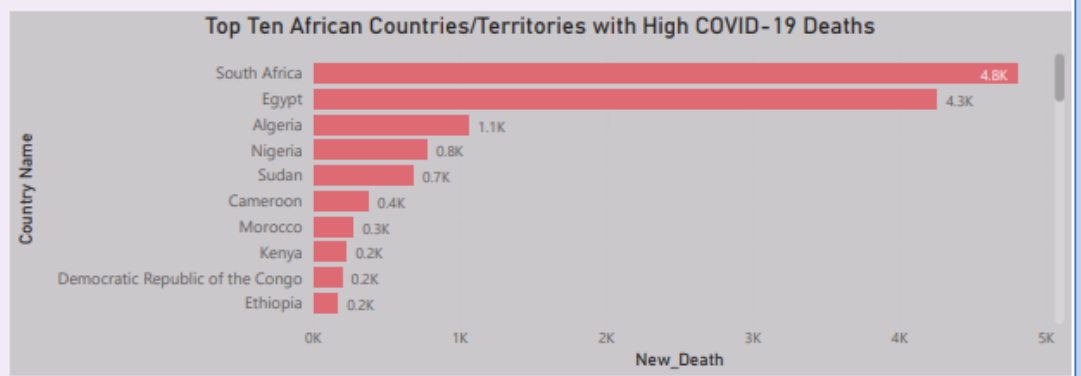
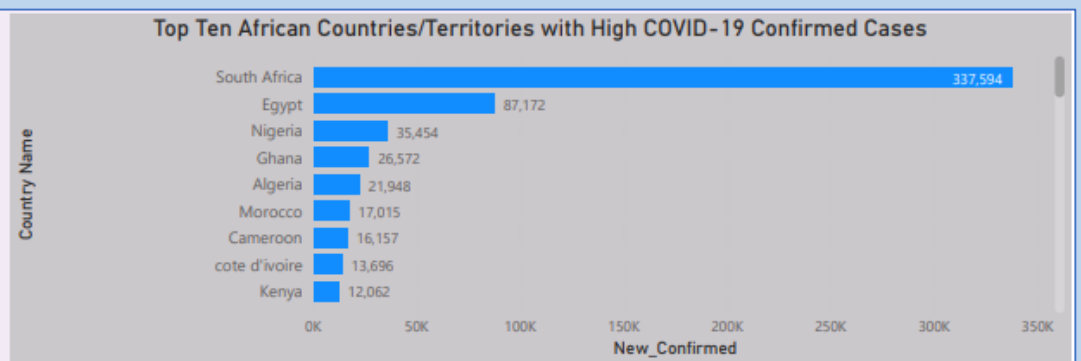
19,299

Total Number of Deaths in Africa with COVID-19

14,836

New Deaths in Africa with COVID-19

289



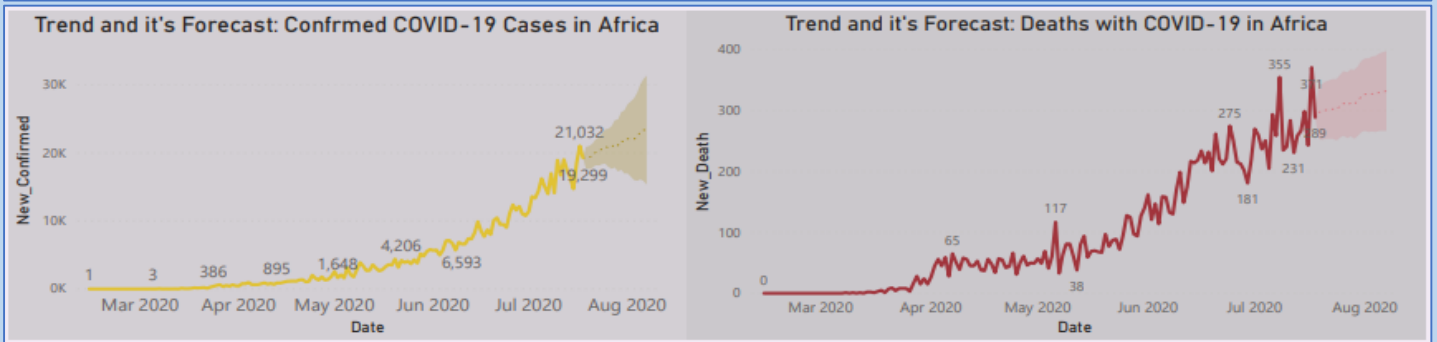
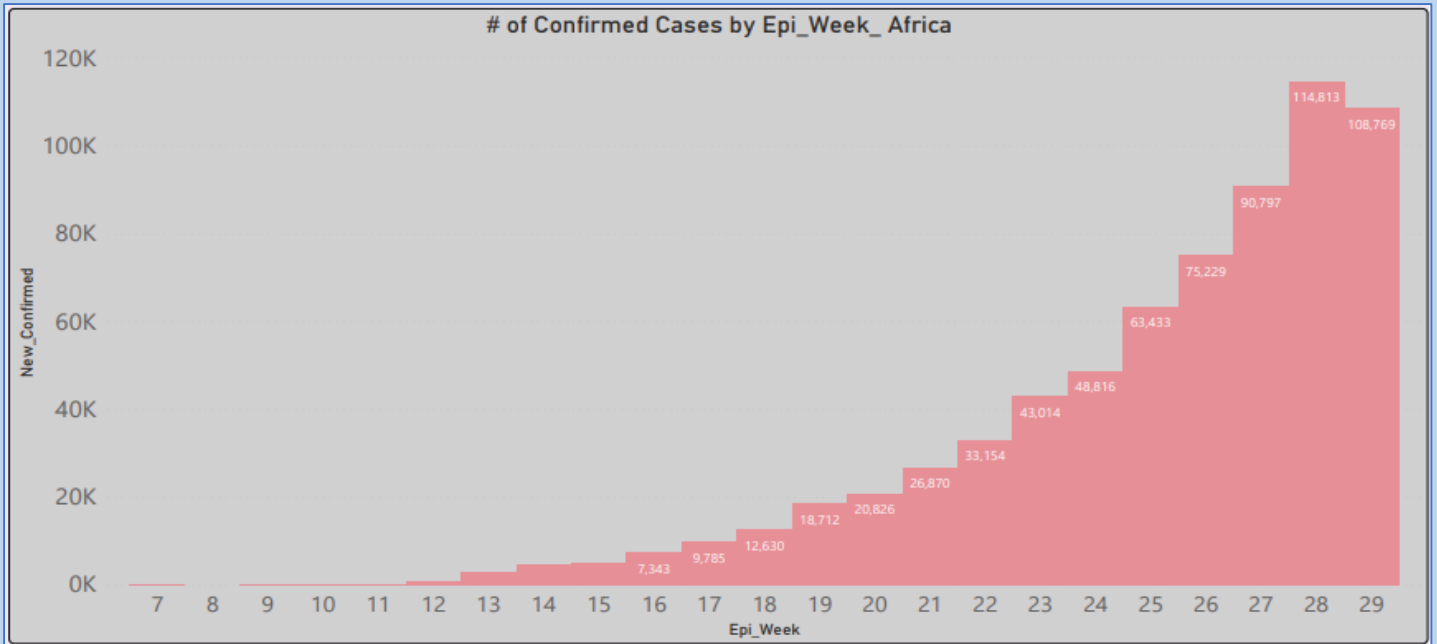
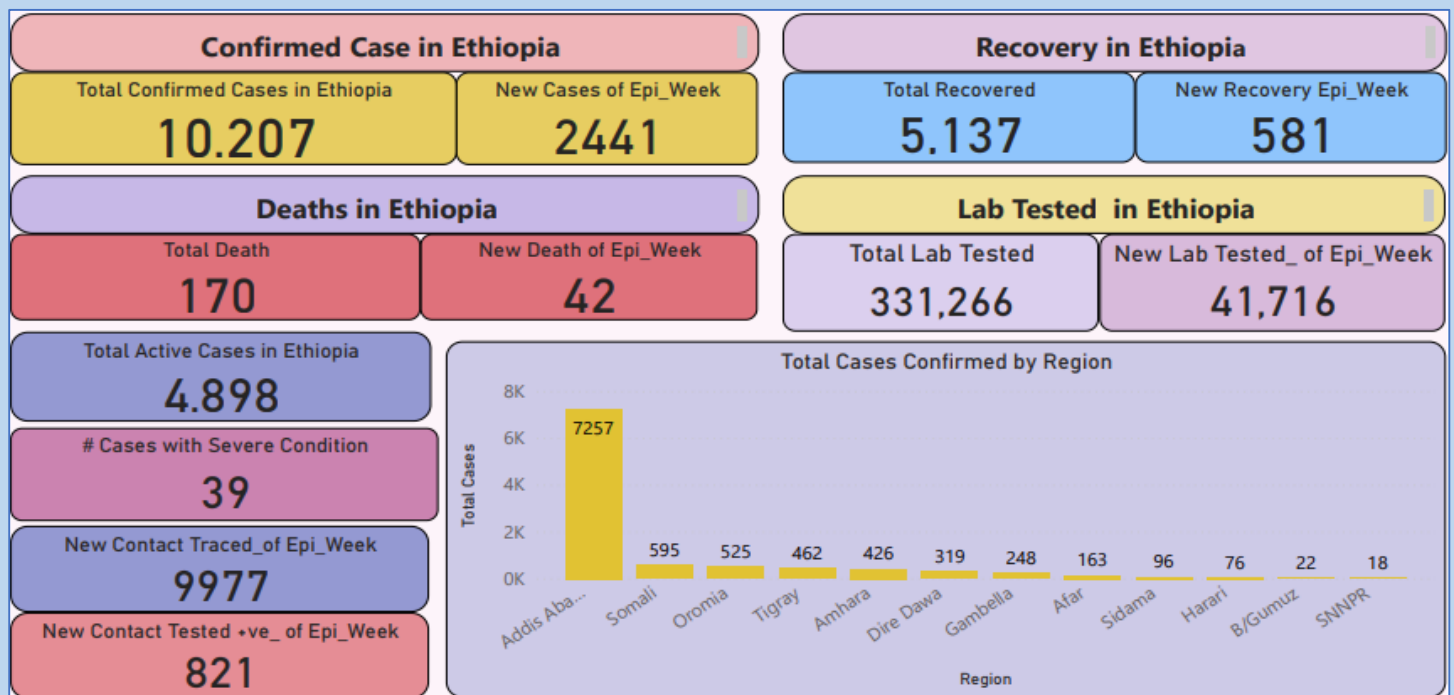


Fig. 2: Africa Situation Update as of July 19, 2020 (Source: WHO)

National COVID-19 situation

- Two-thousand-four-hundred-forty-one (2,441) new confirmed COVID-19 cases and forty-two (42) COVID-19 related deaths were reported during the WHO Epi-Week-29.
- So far, a total of 10,207 confirmed COVID-19 cases and 170 deaths are recorded in the country.



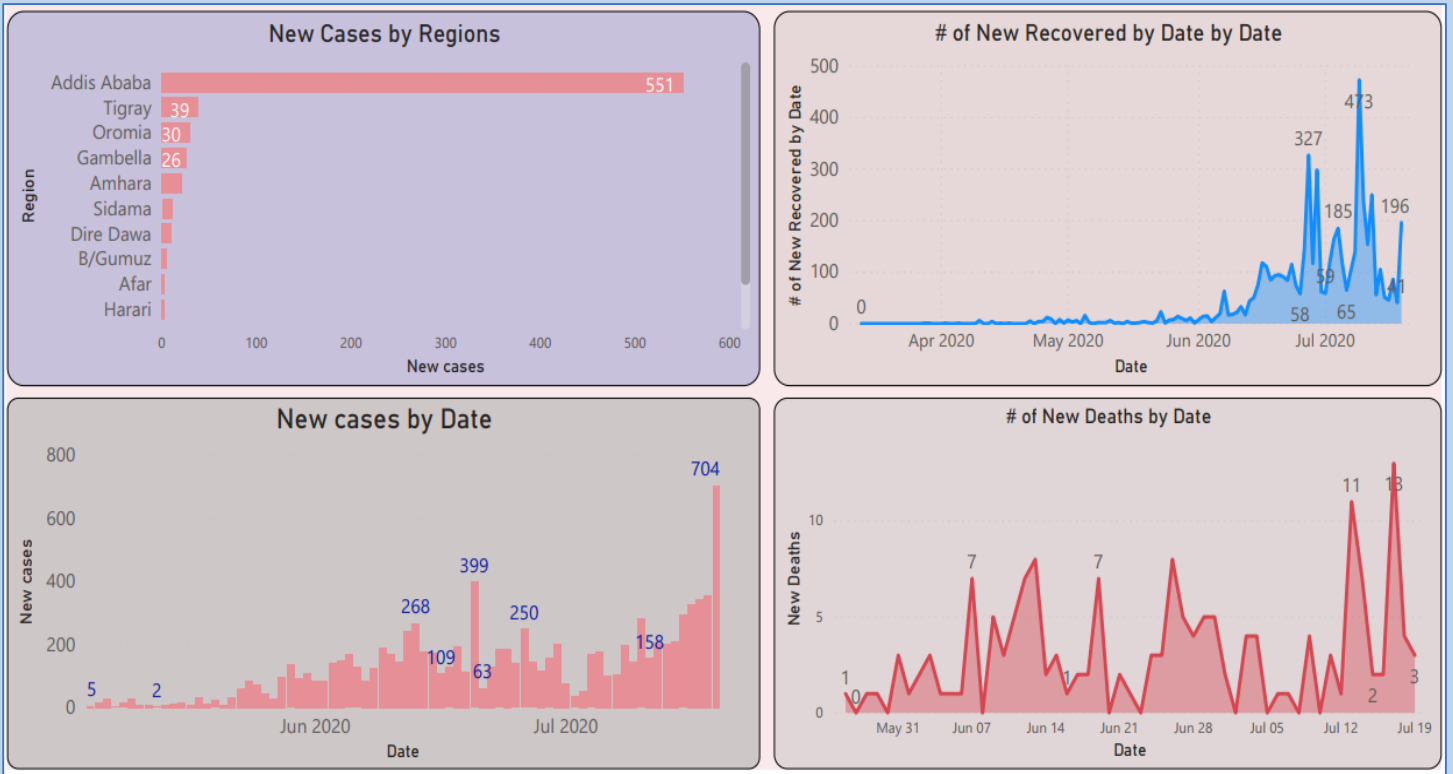


Fig. 3: Trends of new COVID-19 cases, deaths and recoveries in Ethiopia, July 19, 2020

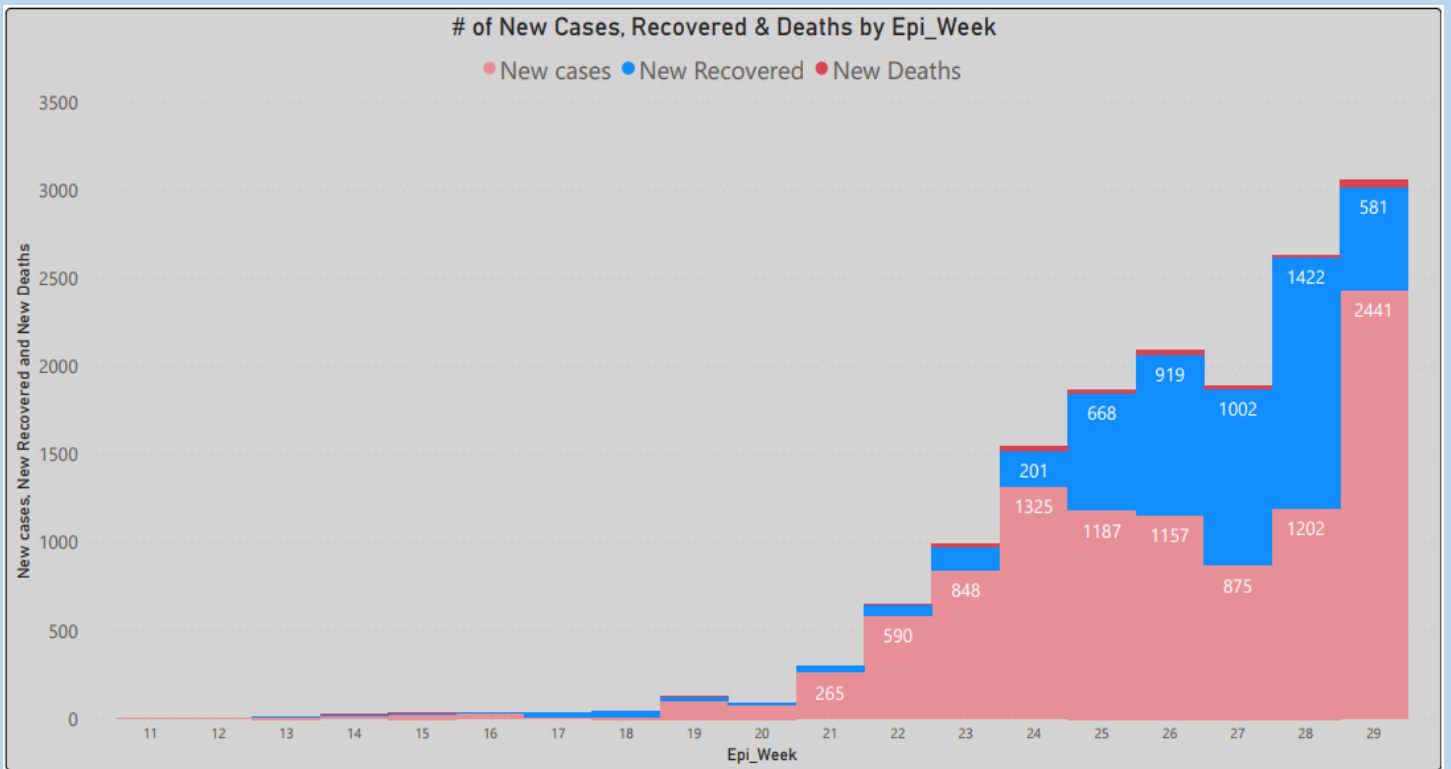


Fig. 4: COVID-19 confirmed cases, recovery and death by WHO Epi-Week as of July 19, 2020, Ethiopia

- An epidemic progression forecast done by an ARIMA model shows that the number of daily confirmed cases may increase (see the figure below).

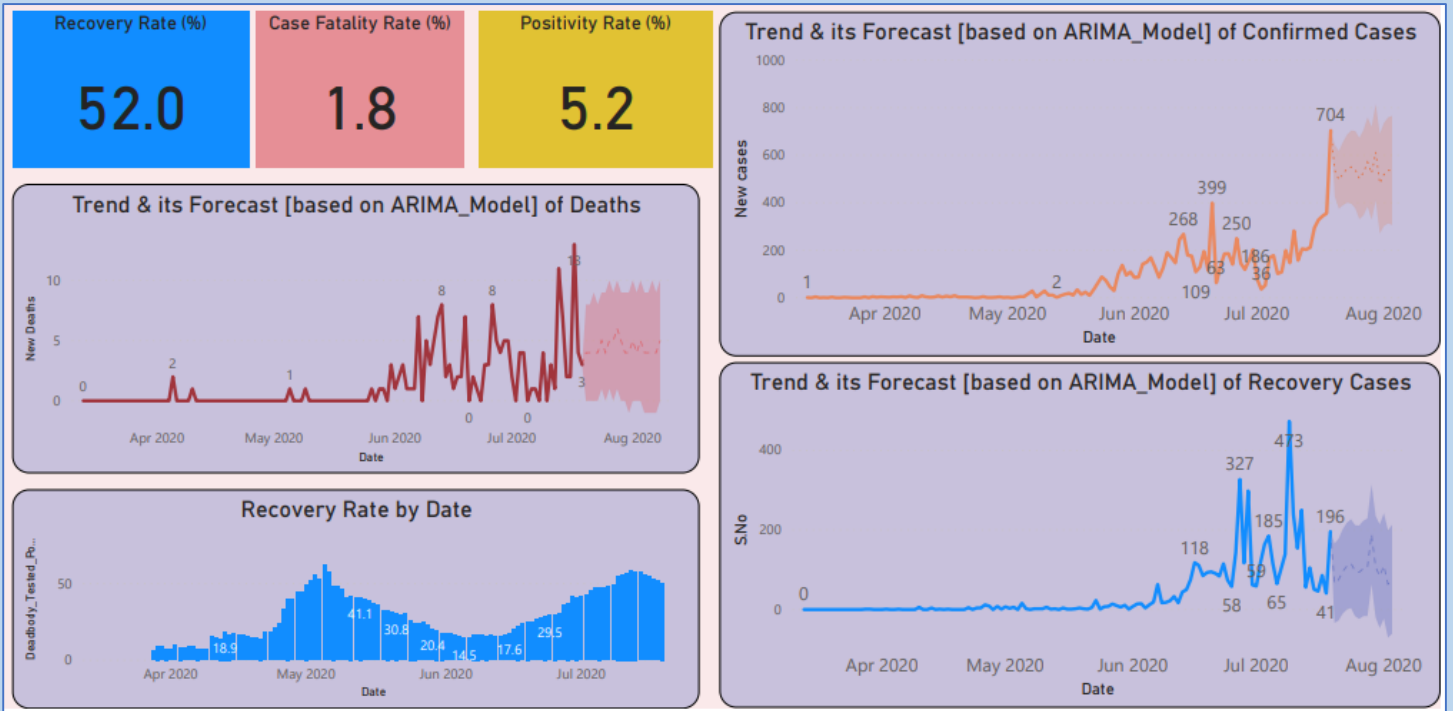


Fig. 5: Summary of forecast on COVID-19 epidemiologic progression in Ethiopia

Epi Surveillance and Laboratory Related Activities

There is ongoing travelers' health screening at point of entries (POEs), follow-up of international travelers, mandatory quarantine of passengers coming to Ethiopia, rumor collection, verification and investigation and information provision via toll free call center, active case detection by house to house search, contact listing, tracing and follow-up of persons who had contact with confirmed cases and laboratory investigation of suspected cases, quarantined individuals, SARI/pneumonia cases and community members.

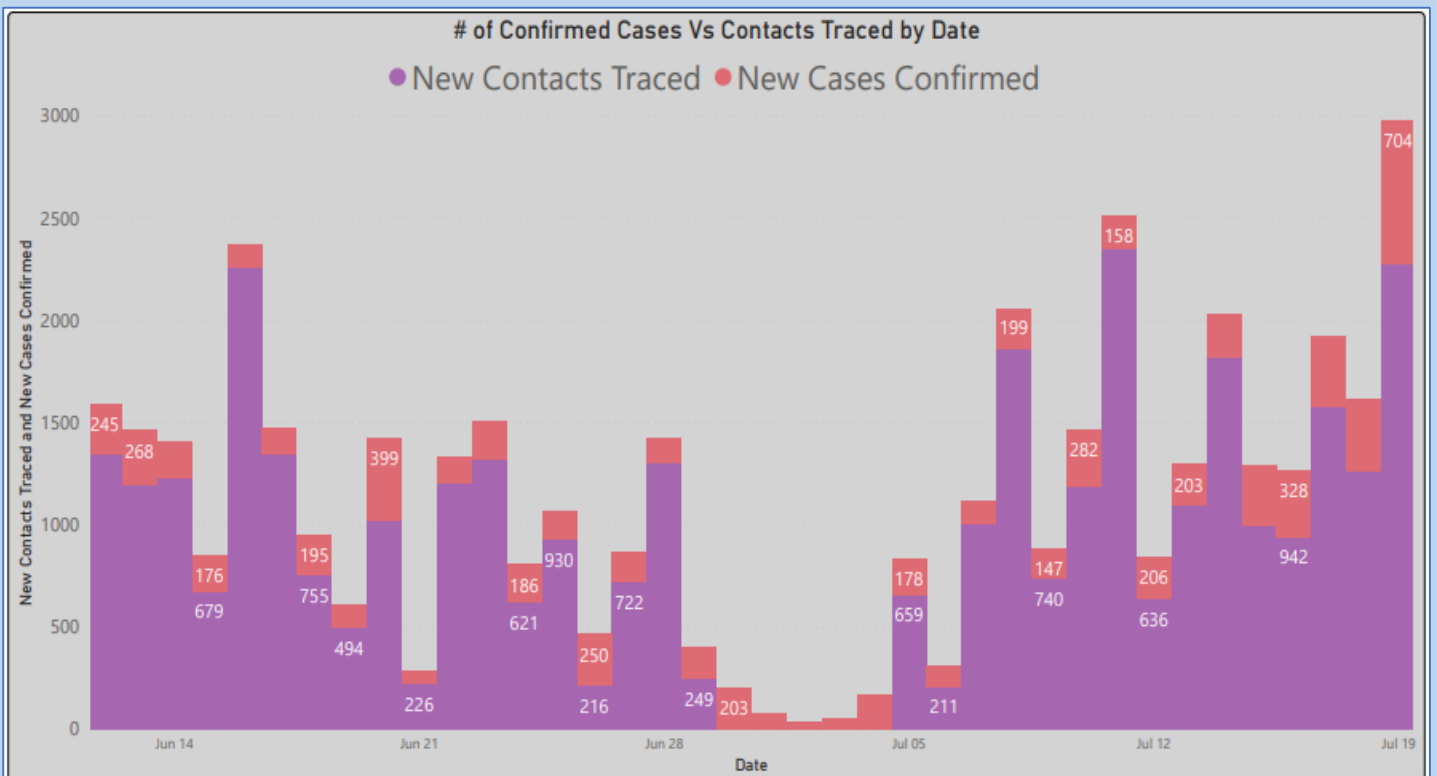


Fig. 6: Contact tracing summary dashboard as of July 19, 2020

Laboratory related activities

- As of July 19, 2020, a total of 331,266 samples have been tested for COVID-19 by laboratories in the country.
- A total of 41,716 of the total laboratory tests are done during the WHO Epi-Week-29 (63% increment compared to that of Epi-Week-28).

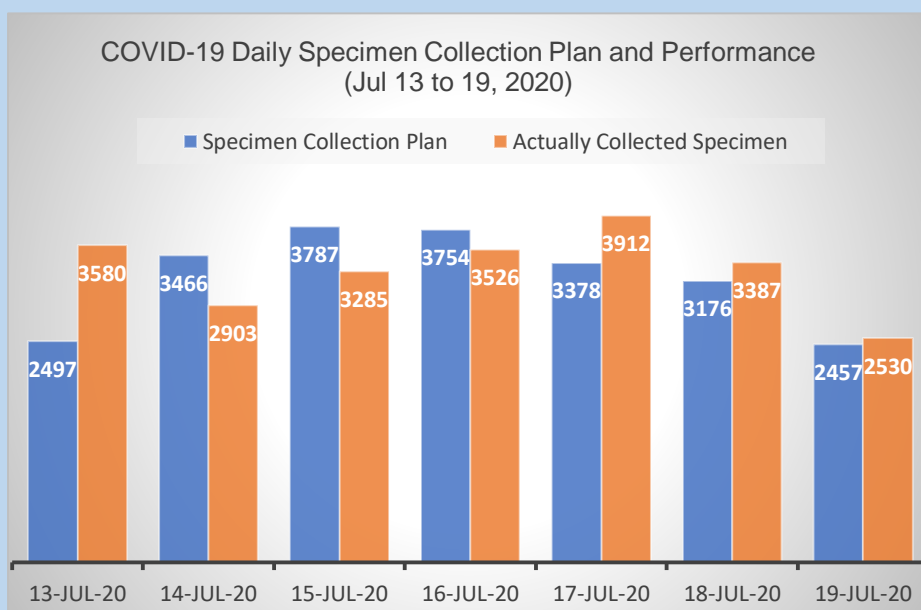
Laboratory testing capacity and expansion

- Africa CDC has supported two COVID-19 genome sequencing machines. Which create a capacity to conduct genomic characterization and sequencing locally.

Table 1: Details of laboratory testing capacity and expansion in Ethiopia

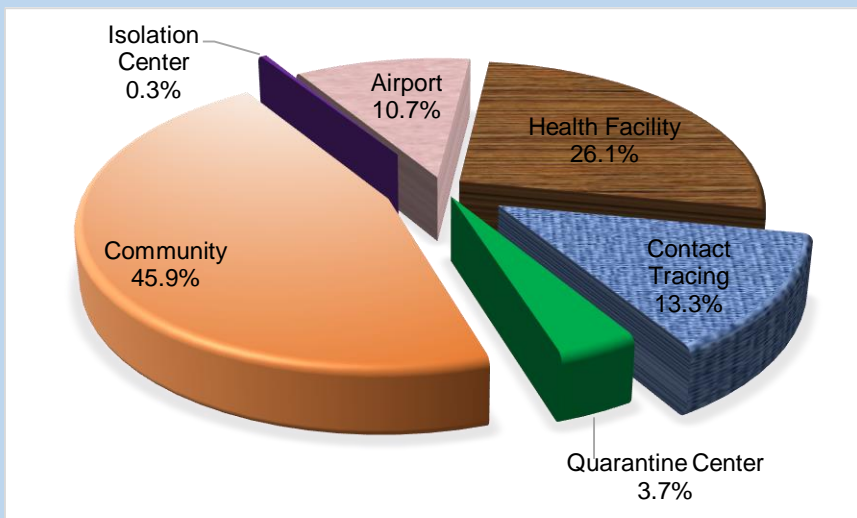
Status	Number of Laboratories	Number of Machine	Testing Capacity	Remark
Functional/Reporting Laboratories	46	59	11,448	At least one laboratory in all regions (4 at EPHI)
Ready to conduct test	3	3	220	
Under Verification Process	1	1	100	
Waiting for Verification	2	3	300	
Candidates	12	13	5032	
Total	64	78	16,800	

Daily Specimen Collection



- Weekly sample collection performance achieved is 102.7%.
- In average 3303 specimen were collected per day by EPHI sample collectors.

Specimen Collection by Site



- 70% and 72% of the specimen were collected from the community and health facility respectively.
- Specimen collected from contact tracing activity account for 13.3%.

Testing Performance

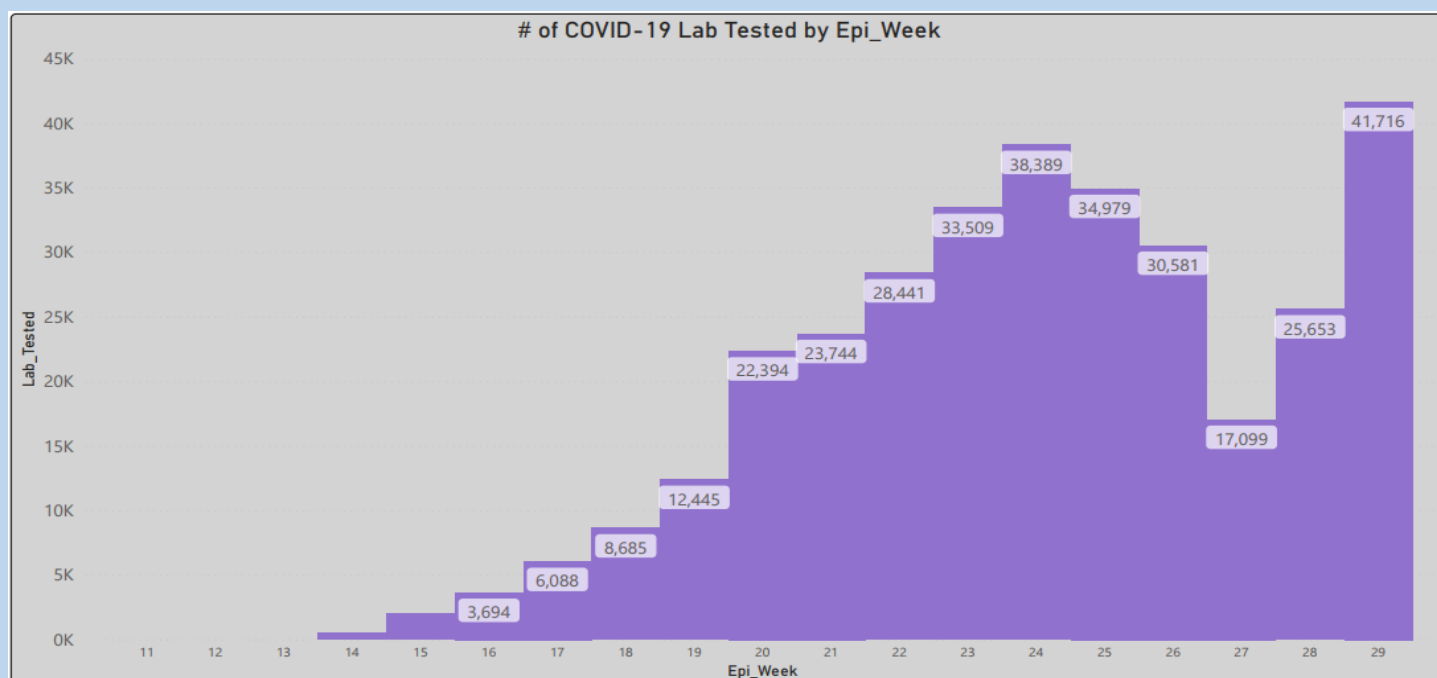


Fig. 7: Trend COVID-19 laboratory testing by WHO Epi-Week as of July 19, 2020, Ethiopia

IV. Coordination and Leadership

- Since its activation, the national PHEOC is collaboratively working with stakeholders: government agencies, partner organizations, UN agencies, embassies, hospitality sector, Industrial parks and others.
- Morning briefing of IMS core staffs and key partners' representatives is being conducted on daily basis.
- Weekly virtual (zoom) meeting being conducted with technical working group members, which comprises members from subnational level focal, key partners and stakeholders.
- Weekly leadership and strategic virtual (zoom) meeting, chaired by the H.E MOH Minister being conducted.
- Supports (financial, logistic and technical) are being received from partners, private institutions, individuals and donors.

V. Case Management and IPC

- There are a total of 4,898 active COVID-19 cases in the country currently.
- There are thirty-nine patients in severe condition and all the other patients are on medical care in stable condition.

VI. Risk Communication and Community Engagement (RCCE)

- Different poster, brochures, audio and video messages focusing on COVID-19 risk perception and practice developed.
- Daily press statement is being provided on COVID-19 situation on daily basis through Mass Media.
- There is ongoing production of COVID-19 informative audio and video messages.

VII. Logistic and Supplies

- There are ongoing distribution of pharmaceuticals and medical supplies to quarantine, isolation and treatment centers.
- Number of governmental and Non-Governmental Organizations, individuals and partners have donated different medical supplies and infrastructures for COVID-19 response.
- Customs clearance for donations' shipment is ongoing.

VIII. Training and Orientation Activities

- There is ongoing virtual and in person training and orientation the public and health professionals on COVID-19.
- Mobile based training for Health Extension Workers (HEWs) is ongoing.

IX. Challenges and Way Forward

Challenges

- Failure to adhere to physical distancing and other preventions advises among the public.
- The occurrence of super spreaders events in the previous week could contribute for the increasing of the new cases.
- Competing priorities due to superimposed disease outbreaks like cholera in some areas of the countries.
- Increasing number of community deaths and late confirmation of COVID-19 by forensic investigation.
- Low face mask stock and personal protective equipment for the health workers.

Way Forward

- Conduct intensive testing of high-risk areas for COVID-19.
- Enhance technical support, coordination and timely and accurate information sharing at all levels.
- Strengthened collaboration and coordination with key stakeholders and partners.
- Intensify risk communication and community engagement activities.
- Enhance active surveillance for COVID-19 such as house-to-house case search and detection in the community.
- Intensification of a capacity building trainings and orientation including through virtual/online platforms.
- Identify and establish additional case treatment centers and quarantine sites, especially in regions.
- Strengthen and sustain essential health services other than COVID-19.

X. Public Health Policy Recommendation

Advice for the Public:

- The number of COVID-19 cases are increasing rapidly due to the presence of community transmission. Anyone of Can be the next person to acquire COVID-19, but we can prevent it if we act now. We need to practice all of the COVID-19 prevention methods in order to stay alive and healthy.
- It is important to be informed of the situation and take appropriate measures to protect yourself and your family.
 - Stay at home
 - Wash hands frequently
 - Don't touch your mouth, nose or eye by unwashed hands
 - Keep physical distancing; avoid mass gathering, shaking hands and
- For most people, COVID-19 infection will cause mild illness however, it can make some people very ill and, in some people, it can be fatal.
- Older people, and those with pre-existing medical conditions (such as cardiovascular disease, chronic respiratory disease or diabetes) are at risk for severe disease.
- If anybody had contact with a COVID-19 confirmed patient, he/she should call 8335 or 952 or report to regional toll-free lines or to the nearby health facilities.

National/Regional official websites, social media pages and toll-free hotline for COVID-19 information

MOH/EPHI/Region	Facebook page	Toll-free hotline
Ethiopian Public Health Institute Main Website	https://www.ephi.gov.et/	8335
Ethiopian Public Health Institute COVID-19 Website	https://covid19.ephi.gov.et/	
Ethiopian Public Health Institute Facebook Page	https://www.facebook.com/ephipage/	
Ethiopian Public Health Institute Twitter Page	https://twitter.com/EPHIEthiopia	
Ministry of Health, Ethiopia Website	www.moh.gov.et	952
Ministry of Health, Ethiopia Facebook Page	https://www.facebook.com/EthiopiaFMoH/	
Afar Regional Health Bureau	https://www.facebook.com/afarrhb.org/	6220
Amhara Regional Health Bureau	https://www.facebook.com/Amhara-Healthbureau-682065755146948/	6981
Benishangul Gumuz Regional Health Bureau	https://www.facebook.com/Benishangul-Gumuz-Health-Bureau-1676282159265517/	6016
Gambela Regional Health Bureau	https://fb.me/gambellaregionhealthbureau	6184
Harari Regional Health Bureau	https://www.facebook.com/Harari-Regional-Health-Bureau-1464182130355007/	6864
Oromia Regional Health Bureau	https://www.facebook.com/OromiaHealth/	6955
Somali Regional Health Bureau	https://www.facebook.com/srhbdotcom/...	6599
SNNP Regional Health Bureau	https://www.facebook.com/snnprhealthbureau/?ref=br_rs	6929
Tigray Regional Health Bureau	https://www.facebook.com/tigrayrhb/	6244
Dire Dawa city Administration Health Bureau	https://www.facebook.com/Dire-Dawa-Administration-Health-Bureau-1371606266279524/	6407
Addis Ababa City Administration Health Bureau	https://www.facebook.com/aahb.gov.et/	6406

Health Evidence summary

Articles/Comment/Correspondence/Editorials	Summary
Machine Learning Approaches in COVID-19 Survival Analysis and Discharge Time Likelihood Prediction using Clinical Data. https://doi.org/10.1016/j.patter.2020.100074	<ul style="list-style-type: none"> • In this study, several computational techniques are implemented to analyze the survival characteristics of 1182 patients. • The computational results agree with the outcome reported in early clinical reports released for a group of patients from China that confirmed a higher mortality rate in men compared to women and in older age groups. • The discharge time prediction of COVID-19 patients was also evaluated using seven different machine learning and statistical analysis methods. • The results indicate that the Gradient Boosting survival model outperforms other models for patient survival prediction in this study.
COVID-19 causing HELLP-like syndrome in pregnancy and role of angiogenic factors for differential diagnosis. (preprint)	<ul style="list-style-type: none"> • This study evaluated the prevalence of hemolysis, elevated liver enzymes, and low platelet count (HELLP) -like signs in pregnant women admitted for COVID-19 and the value of angiogenic factors to rule out preeclampsia. • A consecutive series of 27 pregnant women beyond 20 weeks of gestation, with symptomatic COVID-19. • Clinical and analytical features were recorded and those cases with signs of HELLP syndrome were tested for sFlt-1/PIGF ratio. • Seven patients (25.9%) presented at least one sign of suspected HELLP syndrome, of which 2 (7.4%) were diagnosed clinically with PE because of hypertension and high

<p>https://doi.org/10.1101/2020.07.10.20133801</p>	<p>transaminases and 5 (18.5%) had only elevated transaminases. sFlt-1/PlGF ratio was normal in 6 of 7.</p> <ul style="list-style-type: none"> • In conclusion, symptomatic COVID-19 may simulate severe preeclampsia in pregnancy and angiogenic factors may be essential to avoid false diagnosis and needless interventions.
<p>An mRNA Vaccine against SARS-CoV-2 - Preliminary Report. https://doi.org/10.1056/nejmoa2022483</p>	<ul style="list-style-type: none"> • A phase 1, dose-escalation, open-label trial including 45 healthy adults, 18 to 55 years of age, who received two vaccinations, 28 days apart, with mRNA-1273 in a dose of 25 µg, 100 µg, or 250 µg was conducted. • After the first vaccination, antibody responses were higher with higher dose. • After the second vaccination, the titers increased (day 57 GMT, 299,751, 782,719, and 1,192,154, respectively). • After the second vaccination, serum-neutralizing activity was detected by two methods in all participants evaluated, with values generally similar to those in the upper half of the distribution of a panel of control convalescent serum specimens. • Solicited adverse events that occurred in more than half the participants included fatigue, chills, headache, myalgia, and pain at the injection site. • Systemic adverse events were more common after the second vaccination, particularly with the highest dose, and three participants (21%) in the 250-µg dose group reported one or more severe adverse events. • In conclusion, the mRNA-1273 vaccine induced anti-SARS-CoV-2 immune responses in all participants, and no trial-limiting safety concerns were identified and these findings support further development of this vaccine.
<p>Comparing dynamics and determinants of SARS-CoV-2 transmissions among health care workers of adult and pediatric settings in central Paris. https://doi.org/10.1093/cid/ciaa977</p>	<ul style="list-style-type: none"> • This prospective study compared a 1,500-bed adult and a 600-bed pediatric setting of a tertiary-care university hospital located in central Paris. • All symptomatic HCW were screened for severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) on a nasopharyngeal swab. • Among 1344 HCW tested, 373 were positive (28%) and 336 (90%) corresponding questionnaires were completed. • Three hospitalizations and no death were reported. Most HCW (70%) had patient-facing occupational activities. • The total number of HCW cases peaked on March 23rd, then decreased slowly, concomitantly with a continuous increase of compliance to preventive measures (including universal medical masking and personal protective equipment (PPE) for direct care to COVID-19 patients. • Attack rates were of 3.2% and 2.3% in the adult and pediatric setting, respectively. • In the adult setting, HCW more frequently reported exposure to COVID-19 patients without PPE (25% versus 15%). • Report of contacts with children attending out-of-home care facilities dramatically decreased over the study period. • In conclusion, universal masking, reinforcement of hand hygiene, and PPE with medical masks for patients' care allowed protection of HCW and containment of the outbreak. Residual transmissions were related to persistent exposures with undiagnosed patients or colleagues and not to contacts with children attending out-of-home care facilities.
<p>Remdesivir Inhibits SARS-CoV-2 in Human Lung Cells and Chimeric SARS-CoV Expressing the SARS-CoV-2 RNA Polymerase in Mice. https://doi.org/10.1016/j.celrep.2020.107940</p>	<ul style="list-style-type: none"> • This study reports that remdesivir (RDV) potently inhibits SARS-CoV-2 replication in human lung cells and primary human airway epithelial cultures. • Weaker activity is observed in Vero E6 cells because of their low capacity to metabolize RDV. • To rapidly evaluate in vivo efficacy, authors engineered a chimeric SARS-CoV encoding the viral target of RDV, the RNA-dependent RNA polymerase of SARS-CoV-2. • In mice infected with the chimeric virus, therapeutic RDV administration diminishes lung viral load and improves pulmonary function compared with vehicle-treated animals. • These data demonstrate that RDV is potently active against SARS-CoV-2 in vitro and in vivo, supporting its further clinical testing for treatment of COVID-19.

<p>Smart Pooling: AI-powered COVID-19 testing. https://doi.org/10.1101/2020.07.13.20152983</p>	<ul style="list-style-type: none"> • Massive molecular testing for COVID-19 has been pointed as fundamental to moderate the spread of the disease. • Pooling methods can enhance testing efficiency, but they are viable only at very low prevalence of the disease. • Authors propose Smart Pooling, a machine learning method that uses sociodemographic data from patients to increase the efficiency of pooled molecular testing for COVID-19 by arranging samples into all-negative pools. • Authors show efficiency gains of 42% with respect to individual testing at disease prevalence of up to 25%, a regime in which two-step pooling offers marginal efficiency gains. • Additionally, the possible efficiency gains of one- and two-dimensional two-step pooling strategies and present the optimal strategies for disease prevalence was calculated as up to 25%.
<p>Lessons for COVID-19 immunity from other coronavirus infections. https://doi.org/10.1016/j.immuni.2020.07.005</p>	<ul style="list-style-type: none"> • A key goal to controlling COVID-19 is developing an effective vaccine. • Development of a vaccine requires knowledge of what constitutes a protective immune response and also features that might be pathogenic. • Protective and pathogenic aspects of the response to SARS-CoV-2 are not well understood, partly because the virus has infected humans for only 6 months. • However, insight into coronavirus immunity can be informed by previous studies of immune responses to non-human coronaviruses, to common cold coronaviruses, and to SARS-CoV and MERS-CoV.
<p>Lung ultrasound for early diagnosis and severity assessment of pneumonia in patients with coronavirus disease 2019. https://doi.org/10.3904/kjim.2020.180</p>	<ul style="list-style-type: none"> • Six patients with confirmed COVID-19 by reverse transcription-polymerase chain reaction were enrolled. • All had undergone chest X-ray and chest computed tomography (CT) on the day of admission and underwent multiple point-of-care lung ultrasound scans over the course of their hospitalization. • Lung ultrasound detected early abnormal findings of representative B-lines in a patient with a normal chest X-ray, corresponding to ground-glass opacities on the chest CT scan. • The ultrasound findings improved as her clinical condition improved and her viral load decreased. • In another minimally symptomatic patient without significant chest X-ray findings, the ultrasound showed B-lines, an early sign of pneumonia before abnormalities were detected on the chest CT scan. • In two critically ill patients, ultrasound was performed to assess for evaluation of disease severity. • In both patients, the clinicians conducted emergency rapid sequence intubation based on the ultrasound findings without awaiting the laboratory results and radiological reports. • In two children, ultrasound was used to assess the improvement in their pneumonia, thus avoiding further imaging tests such as chest CT.
<p>Cytokine biomarkers of COVID-19. https://doi.org/10.1101/2020.05.31.20118315</p>	<ul style="list-style-type: none"> • Authors used a new strategy to screen cytokines associated with SARS-CoV-2 infection. • Cytokines that can classify populations in different states of SARS-CoV-2 infection were first screened in cross-sectional serum samples from 184 subjects by 2 statistical analyses. • The resultant cytokines were then analyzed for their interrelationships and fluctuating features in sequential samples from 38 COVID-19 patients. • Three cytokines, M-CSF, IL-8 and SCF, which were clustered into 3 different correlation groups and had relatively small fluctuations during SARS-CoV-2 infection, were selected for the construction of a multiclass classification model. • This model discriminated healthy individuals and asymptomatic and non-severe patients with accuracy of 77.4% but was not successful in classifying severe patients. • Further searching led to a single cytokine, hepatocyte growth factor (HGF), which classified severe from non-severe COVID-19 patients with a sensitivity of 84.6% and a specificity of 97.9% under a cutoff value of 1128 pg/ml. • The level of this cytokine did not increase in nonsevere patients but was significantly elevated in severe patients. • Considering its potent antiinflammatory function, authors suggest that HGF might be a new candidate therapy for critical COVID-19.

	<ul style="list-style-type: none"> • In addition, our new strategy provides not only a rational and effective way to focus on certain cytokine biomarkers for infectious diseases but also a new opportunity to probe the modulation of cytokines in the immune response.
<p>Histopathology and ultrastructural findings of fatal COVID-19 infections in Washington State: a case series. https://doi.org/10.1016/S0140-6736(20)31305-2</p>	<ul style="list-style-type: none"> • In this case series, patients with a positive antemortem or post-mortem SARS-CoV-2 result were considered eligible for enrolment. • Post-mortem examinations were done on 14 people who died with COVID-19 in negative-pressure isolation suites during February and March, 2020. • Clinical and laboratory data were reviewed. Tissue examination was done by light microscopy, immunohistochemistry, electron microscopy, and quantitative RT-PCR. • All patients had clinically significant comorbidities, the most common being hypertension, chronic kidney disease, obstructive sleep apnoea, and metabolic disease including diabetes and obesity. • The major pulmonary finding was diffuse alveolar damage in the acute or organizing phases, with five patients showing focal pulmonary microthrombi. • Coronavirus-like particles were detected in the respiratory system, kidney, and gastrointestinal tract. Lymphocytic myocarditis was observed in one patient with viral RNA detected in the tissue. • The primary pathology observed in the cohort was diffuse alveolar damage, with virus located in the pneumocytes and tracheal epithelium. • Although other non-pulmonary organs showed susceptibility to infection, their contribution to the pathogenesis of SARS-CoV-2 infection requires further examination.
<p>A vulnerability index for the management of and response to the COVID-19 epidemic in India: an ecological study. https://doi.org/10.1016/S2214-109X(20)30300-4</p>	<ul style="list-style-type: none"> • A composite index of vulnerability at the state and district levels based on 15 indicators was computed across the following five domains: socioeconomic, demographic, housing and hygiene, epidemiological, and health system. • Authors used a percentile ranking method to compute both domain-specific and overall vulnerability and presented results spatially with number of positive COVID-19 cases in districts. • A number of districts in nine large states located in every region of the country except the northeast, were found to have high overall vulnerability (index value more than 0.75). • These states also had high vulnerability according to most of the five domains. • Although the intention was not to predict the risk of infection for a district or a state, authors observed similarities between vulnerability and the current concentration of COVID-19 cases at the state level. • The index aims to help planners and policy makers effectively prioritise regions for resource allocation and adopt risk mitigation strategies for better preparedness and responses to the COVID-19 epidemic.
<p>Extracorporeal membrane oxygenation and COVID-19: The causes of failure. https://doi.org/10.1111/jocs.14867</p>	<ul style="list-style-type: none"> • Here, seven patients with COVID-19-induced ARDS who underwent VV-ECMO introduced and causes of VV-ECMO failure discussed. • Medical records of seven COVID-19 patients treated with VV-ECMO were retrospectively evaluated to determine the clinical outcomes of VV-ECMO. • Oxygenator failure occurred in four patients whom needed oxygenator replacement. • Successful VV-ECMO decannulation was done in three patients, however finally one patient survived. • In conclusion, Hypercoagulability state and oxygenator failure were the most main etiologies for VV-ECMO failure in our study. • All patients with COVID-19 undergoing VV-ECMO should be monitored for such problems and highly specialized healthcare team should monitor the patients during VV-ECMO.

<p>Psychosocial and coping responses towards 2019 coronavirus diseases (COVID-19): a cross-sectional study within the Chinese general population. https://doi.org/10.1093/qjmed/hcaa226</p>	<ul style="list-style-type: none"> • Participants were recruited from the community through snowball sampling with anonymous online questionnaires, using 28-item General Health Questionnaire (GHQ-28), 22-item Impact of Events Scale-Revised (IES-R) and 28-item Brief Coping Inventory (COPE) to measure their psychiatric disorders, PTSD level, and coping strategies. • Of the total 1109 participants, 42.65% and 67.09% self-reported psychiatric disorders and high PTSD level, respectively. • Age, occupation, and education level were significantly associated with psychological status. • The status of psychiatric disorders was also significantly related to high PTSD level. • Using both emotion and problem coping was better for psychiatric status and problem-focused coping was significantly associated with high PTSD level. • In conclusion, negative psychological outcomes were common among the general people during the COVID-19 outbreak, and the findings may provide references for intervention guidelines of mental health for the community population.
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COVID-19 updates and sources of evidence:

Source	Link
WHO Coronavirus (COVID-19) dashboard	https://covid19.who.int/
COVID-19 CORONAVIRUS PANDEMIC Worldometer	https://www.worldometers.info/coronavirus/
Johns Hopkins University, Coronavirus Resource Center	https://coronavirus.jhu.edu/map.html
Africa CDC Dashboard, COVID-19 Surveillance Dashboard	https://au.int/en/covid19
WHO COVID-19 daily situation reports	https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports
BMJ's Coronavirus (covid-19) Hub	https://www.bmj.com/coronavirus
The Lancet COVID-19 Resource Centre	https://www.thelancet.com/coronavirus
Elsevier's Novel Coronavirus Information Center	https://www.elsevier.com/connect/coronavirus-information-center
Wiley Covid-19: Novel Coronavirus Content	https://novel-coronavirus.onlinelibrary.wiley.com/
The New England Journal Of Medicine	https://www.nejm.org/coronavirus
Cochrane library- special collection	https://www.cochranelibrary.com/collections/doi/SC000040/full
JBI COVID-19 Special Collection	https://joannabriggs.org/ebp/covid-19
PLOS	https://plos.org/blog/announcement/plos-one-publishes-additional-coronavirus-related-papers/
Cell press Coronavirus	https://www.cell.com/COVID-19
WHO Academy mobile learning app for health workers, COVID-19 information	Android- https://play.google.com/store/apps/details?id=org.who.WHO.A Apple- https://apps.apple.com/us/app/who-academy/id1506019873
NIH coronavirus information center	https://www.nih.gov/coronavirus
COVID-19 Evidence Network to Support Decision-making (COVID-END)	https://www.mcmasterforum.org/networks/covid-end
WHO Academy mobile learning app for health workers, COVID-19 information	Android: https://play.google.com/store/apps/details?id=org.who.WHO.A

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Call-Centers
FOR MORE INFO and
ALERT NOTIFICATION on
COVID-19



The above presented Quick Reader (QR) code takes you to a portal that you can access updates and all COVID-19 related information available (<https://www.ephi.gov.et/index.php/public-health-emergency/novel-corona-virus-update>)

DISCLAIMER

This weekly bulletin is produced based on figures pulled from official releases of the World Health Organization and activities and reports of all the sections under the Incident management System. This Weekly Bulletin series of publications is published by the Ethiopian public health Institute (EPI), public health emergency operation center (PHEOC). The aim of this bulletin is to inform decision makers within the institute and FMOH, UN agencies and NGOs about COVID-19 preparedness and response activities. All interested health and other professionals can get this bulletin at the Institute website; www.ephi.gov.et

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