



NATIONAL PUBLIC HEALTH EMERGENCY OPERATION CENTER (PHEOC), ETHIOPIA

COVID-19 PANDEMIC PREPAREDNESS AND RESPONSE IN ETHIOPIA

WEEKLY BULLETIN

WHO Epi-Week-33 (August 10-August 16, 2020)

BULLETIN №: 16

Issue Date: August 17, 2020

I. HIGHLIGHTS

- More than 1,000 COVID-19 cases recorded in a day in Ethiopia for the first time in the WHO Epi-Week-33.
- Community Based activities and Testing (COMBAT) campaign increased the number of COVID-19 laboratory tests and cases detected.
- Among a total of 111,492 samples tested in the WHO-Epi-Week-33, 7058 turned positive with a positivity rate of 6.33%.
- The number of COVID-19 confirmed cases and deaths in Ethiopia have increased by 72% and 25%, respectively, in the WHO-Epi-Week-33 compared to the reports in the Epi-Week-32.
- A total of 7,058 new confirmed COVID-19 cases and 121 COVID-19 related deaths was reported during the WHO Epi-Week-33.
- As of August 16, 2020, a total of 29,876 COVID-19 confirmed cases and 528 deaths have been reported in Ethiopia.
- There were total of 1,831 newly recovered COVID-19 cases during the WHO Epi-Week-33 bringing the total number of recovered cases to 12,037.
- A total of 2850 COVID-19 confirmed cases are on home-based isolation and care.
- A total of 22,658 contacts were identified during the WHO Epi-week-33.
- Ethiopia joins the WHO “WEAR A MASK” Challenge.
- Discussion conducted on COVID-19 Preparedness and Response Intra-Action Review findings.



IMS staff plenary session on the COVID-19 Preparedness and Response Intra-Action Review

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 31, 2019 and August 16, 2020, COVID-19 pandemic affected 216 countries/territories causing 21,260,760 cases and 761,018 deaths (CFR=3.58%) globally.
- Of the total cases and deaths reported since the beginning of the outbreak, 1,798,648 cases and 38,733 deaths were reported during the WHO Epi-Week-33.
- The United States of America (USA) reported the highest number of cases (5,258,565) and deaths (167,201) with CFR of 3.18% followed by Brazil (3,275,520 cases and 106,523 deaths with a CFR of 3.25%). The highest proportion of death occurred in Yemen with CFR of 28.41%.
- In Africa, 56 countries/territories have reported COVID-19 cases.
- As of August 16, 2020, a total of 1,110,684 cases and 25,351 deaths were reported across the continent (CFR=2.28%).
- During the WHO-Epi-Week-33, a total of 71,158 cases and 2,392 deaths were reported across the continent.
- More than half of the total COVID-19 confirmed cases, 583,653 (53%) and more than one third of the deaths, 11,677 (46%) in Africa were reported from South Africa (CFR=2.00%). See the summary dashboard below.

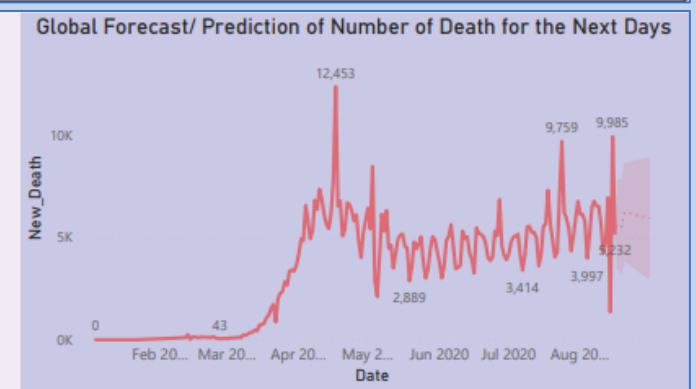
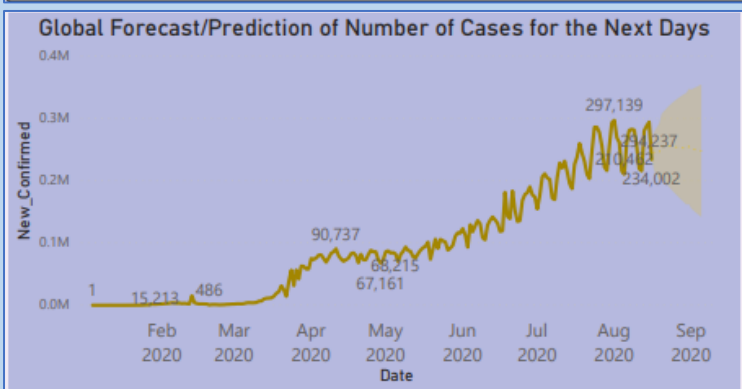
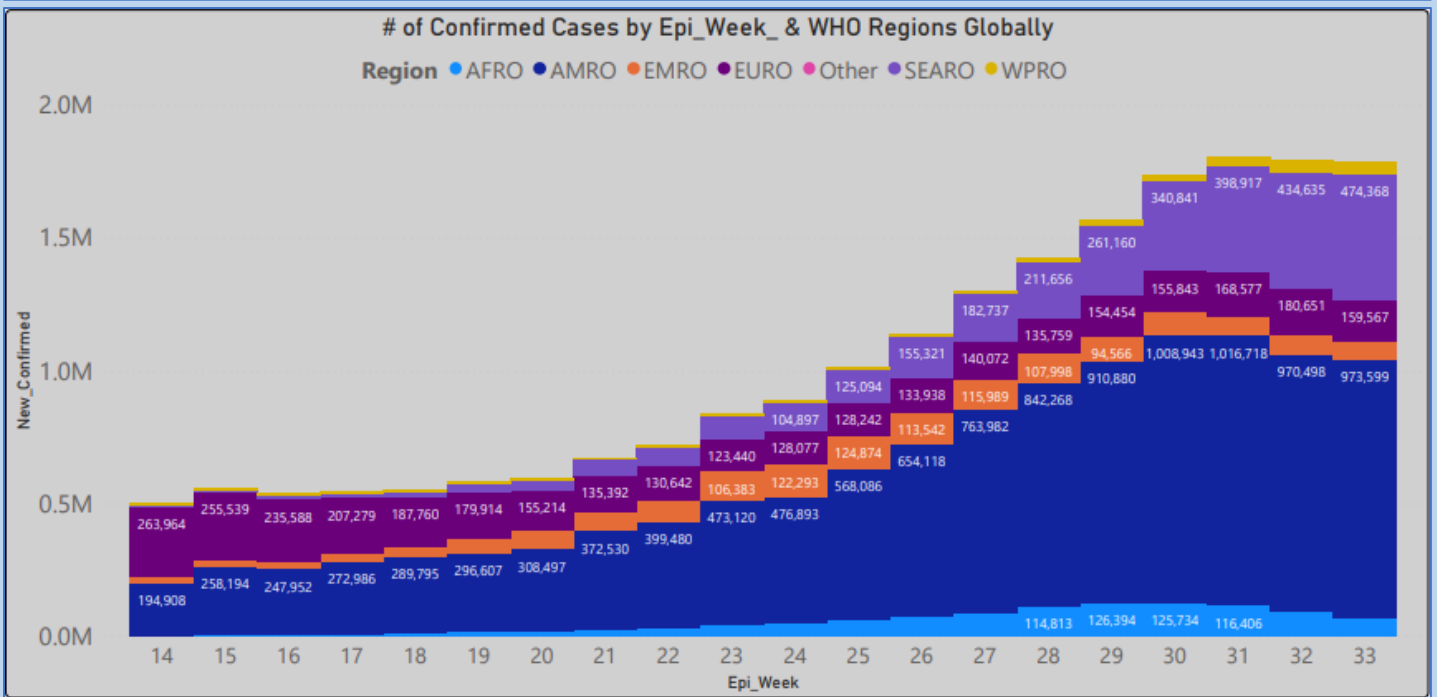
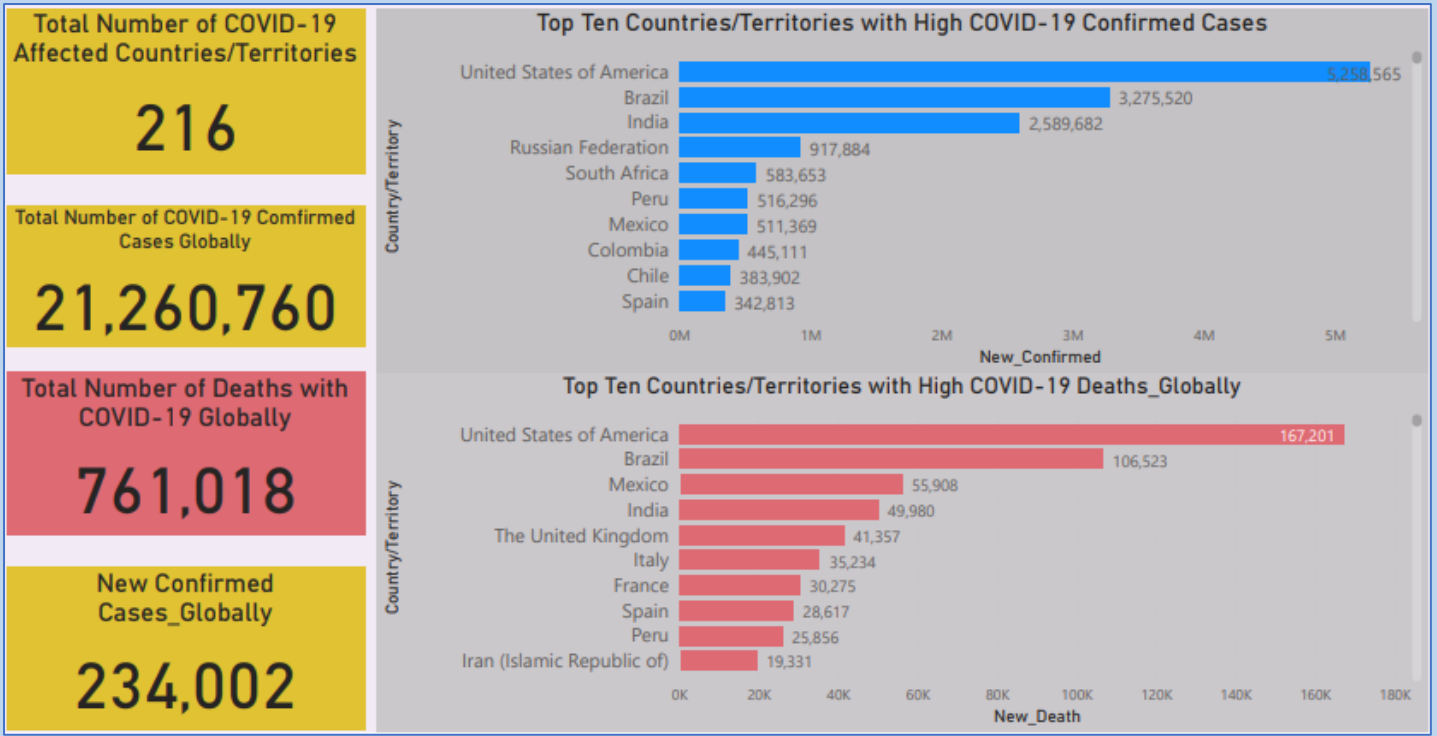


Fig. 1: Global Situation Update as of August 16, 2020 (Source: WHO)

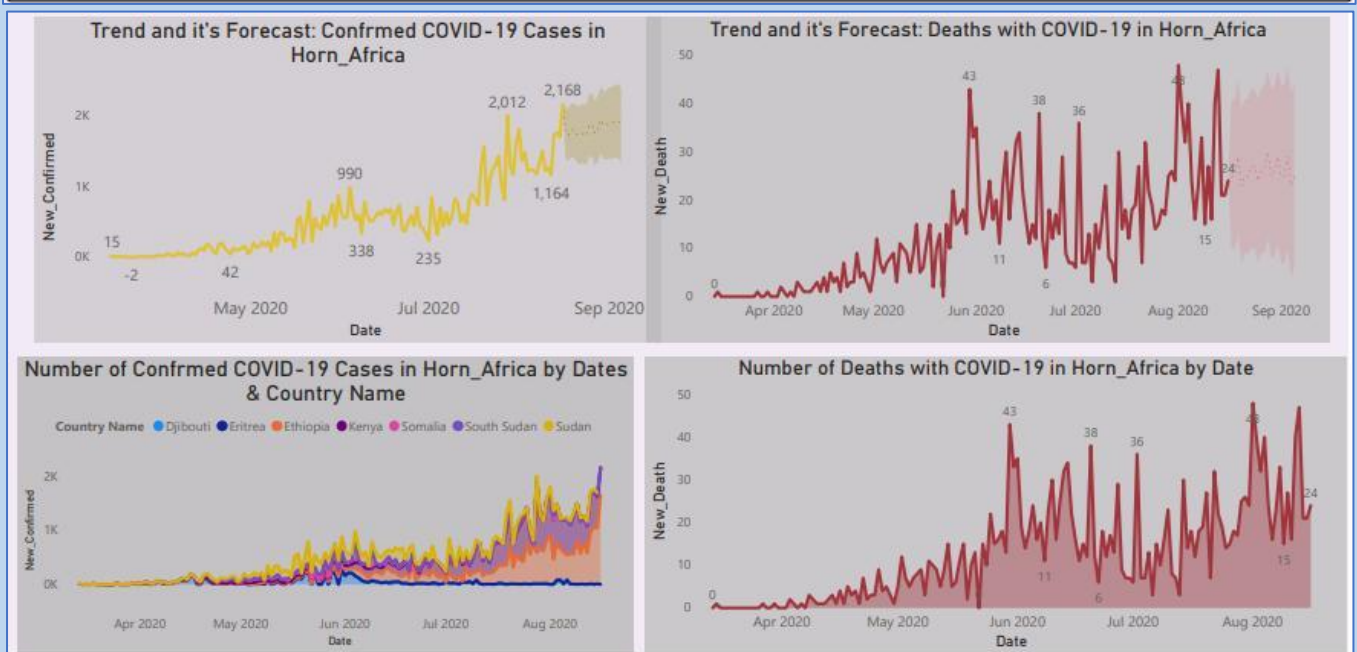
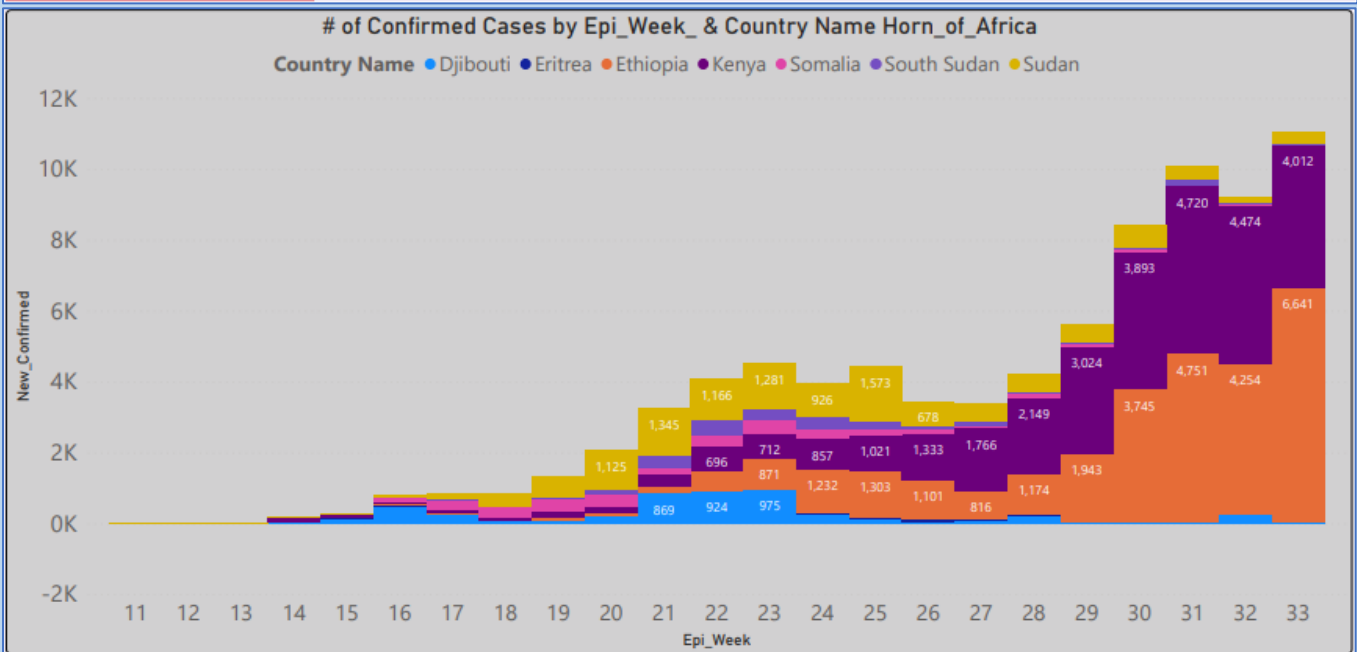
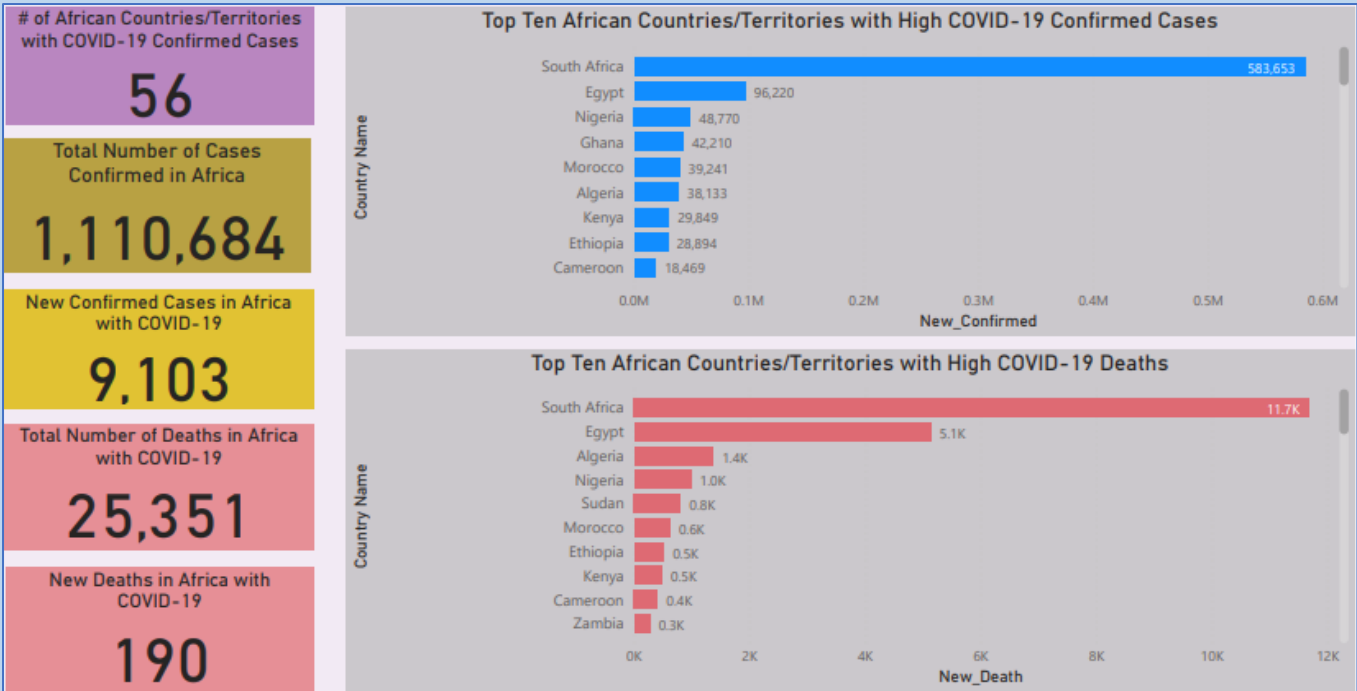


Fig. 2: Africa Situation Update as of August 16, 2020 (Source: WHO)

National COVID-19 situation

- More than 1000 COVID-19 cases recorded in a day in Ethiopia for the first time in the WHO Epi-Week-33. On August 13, 14 and 15, a total of 1,086, 1,038 and 1,652 confirmed cases, respectively, were reported in the country.
- Seven-thousand-fifty-eight (7,058) newly confirmed COVID-19 cases (72% increment compared to that of Epi-Week-32) and 121 COVID-19 related deaths (25% increment compared to that of Epi-Week-32) were reported during the WHO Epi-Week-33.
- As of August 16, a total of 29,876 confirmed COVID-19 cases and 528 deaths were recorded in the country (see the summary dashboard below for detail).

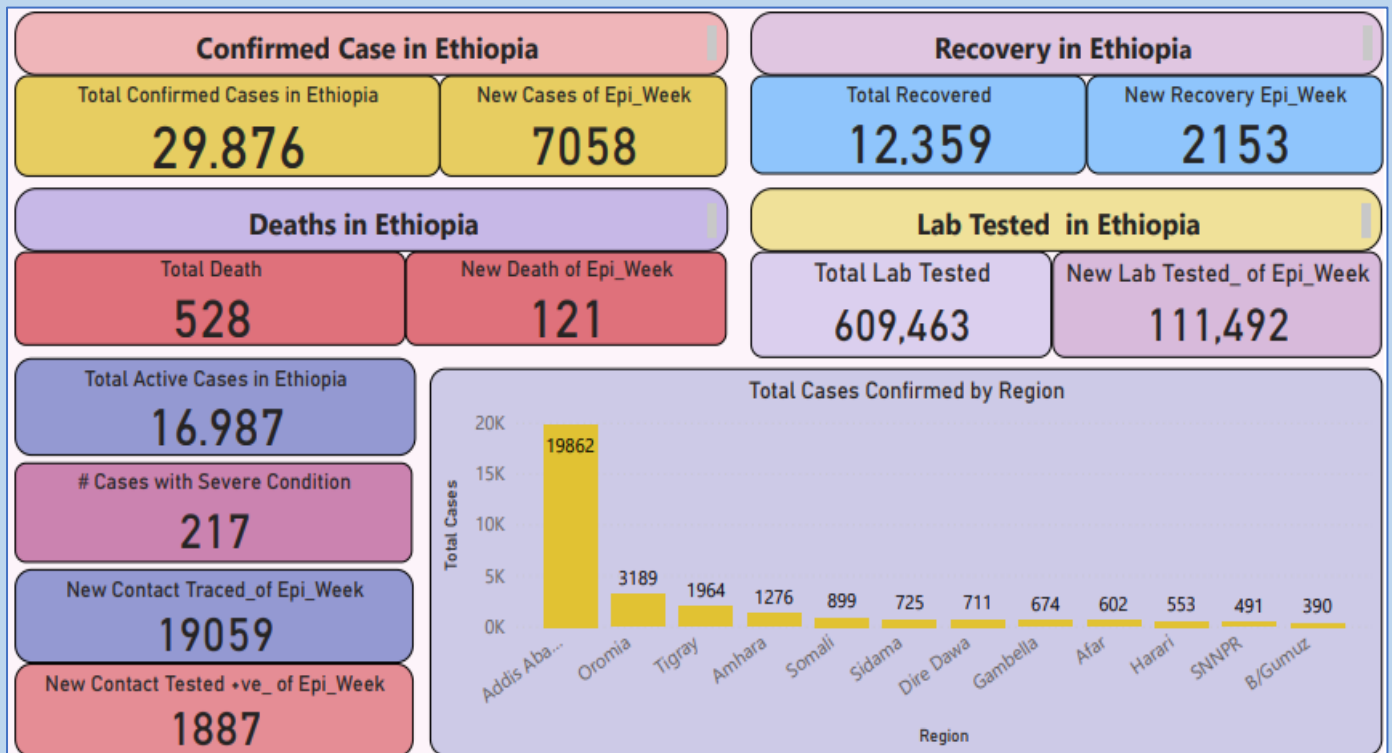


Fig. 3: Weekly Summary of the COVID-19 situation in Ethiopia, August 16, 2020

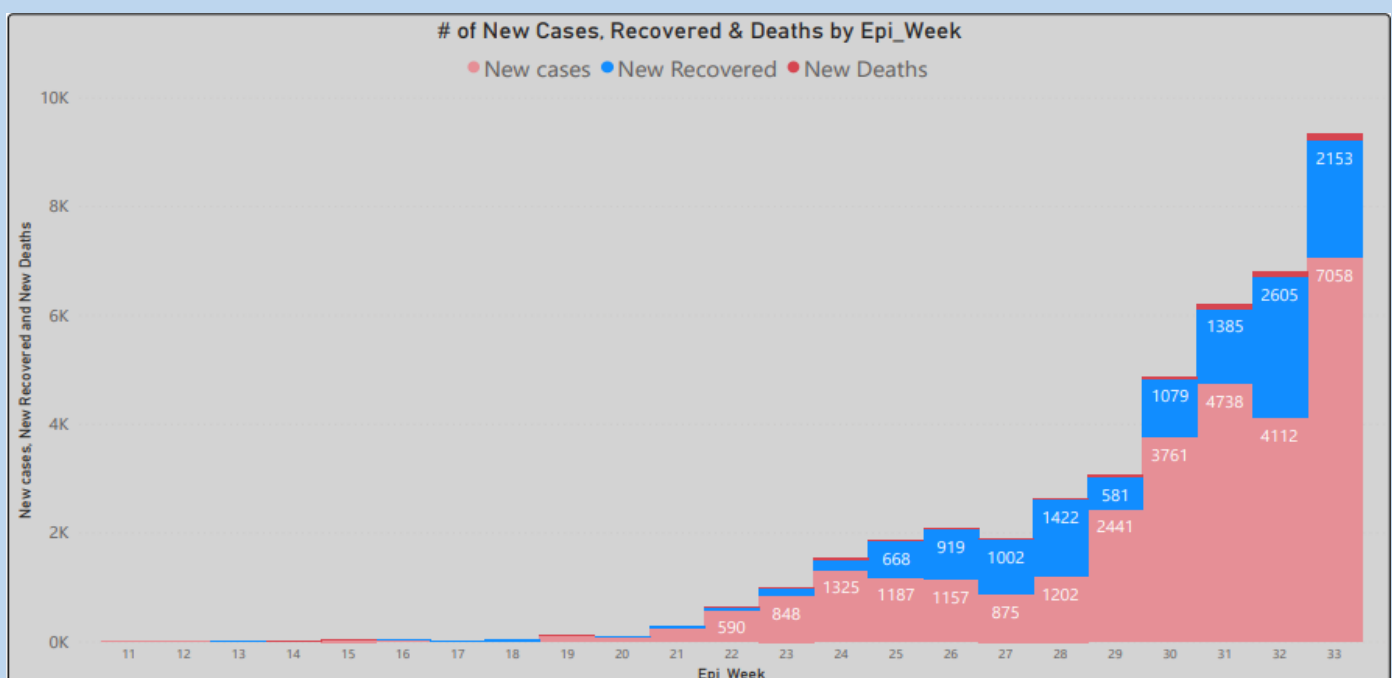


Fig. 4: COVID-19 confirmed cases, recovery and death by WHO Epi-Week as of August 16, 2020, Ethiopia

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, contacts of confirmed cases, random SARI/pneumonia cases and community members.

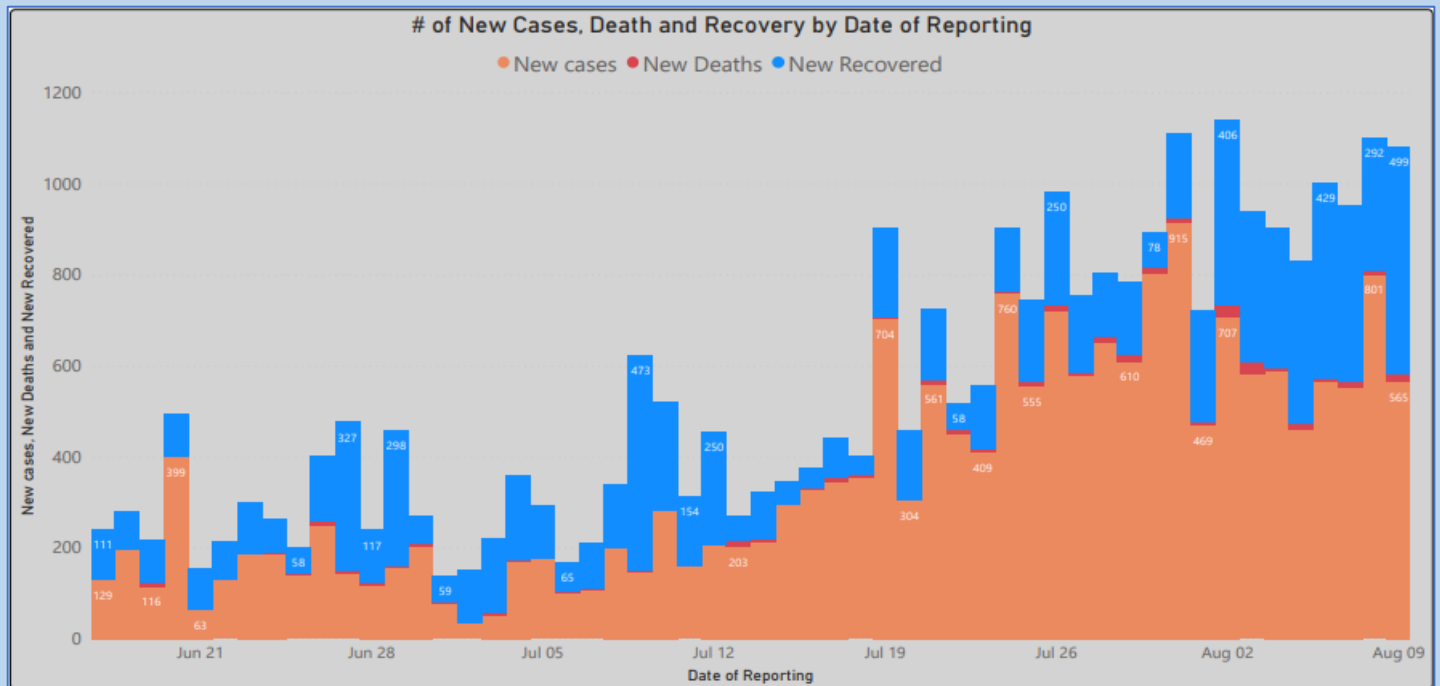


Fig. 5: COVID-19 case contact tracing summary dashboard as of August 16, 2020

Contact tracing and follow-up:

- As of August 16, 2020:
 - A total of 137,326 contacts of confirmed cases have been identified. Of these 22,658 contacts were identified in the WHO-Epi-Week--33.
 - 93,313 (67.95%) have completed 14 days follow-up, while 36,331 contacts are still on follow-up.
 - Only 293 (0.21%) contacts developed COVID-19 suggestive symptoms. Of these, 257 (87.71%) were tested positive.
 - Overall, 7648 (5.57%) of the contacts (symptomatic plus asymptomatic) were tested positive, which are among the currently existing confirmed positive cases.

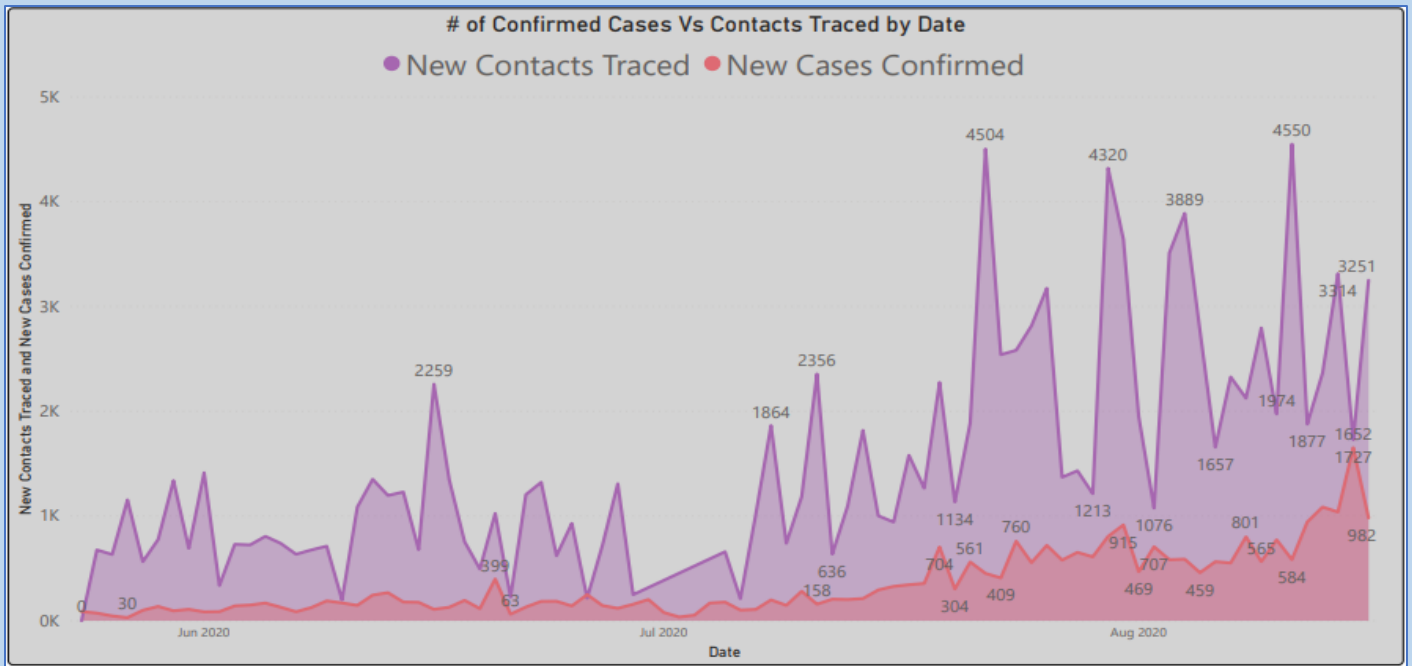


Fig. 6: Summary of COVID-19 cases contact tracing update in Ethiopia as of August 16, 2020

Rumors collection and verification from all sources

- As of August 16, 2020:
 - 113,248 rumors/alerts have been received and investigated. Of these, 45013 rumors were reported in the WHO-Epi-Week-33.
 - 81,379 (71.86%) of the rumors/alerts have fulfilled the suspected case definition.

Laboratory related activities

- As of August 16, 2020, a total of 609,463 samples have been tested for COVID-19 by laboratories in the country.
- 111,492 laboratory tests were processed during the WHO Epi-Week-33, which is 84% increment compared to that of Epi-Week-32.

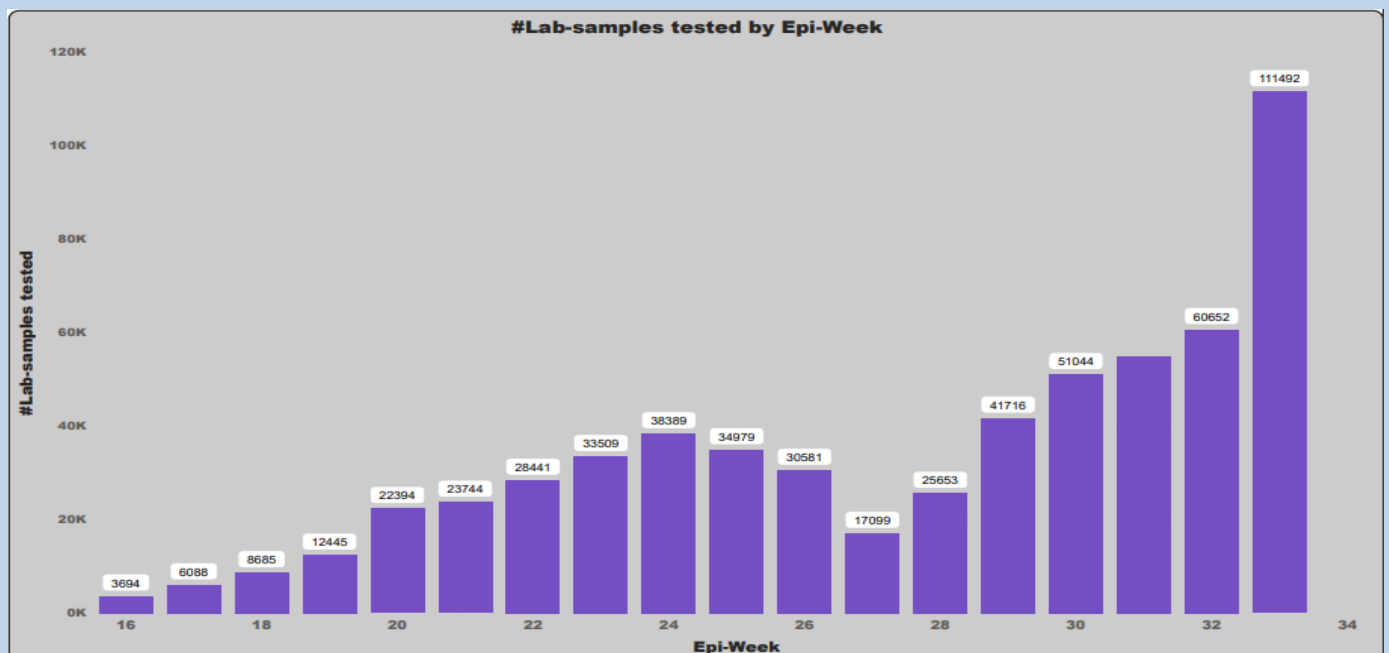


Fig. 7: Trend of COVID-19 laboratory testing by WHO Epi-Week as of August 16, 2020, Ethiopia.

- The number of positive cases in regions vary from region to region which might be mainly determined the total number of tests done in each region.

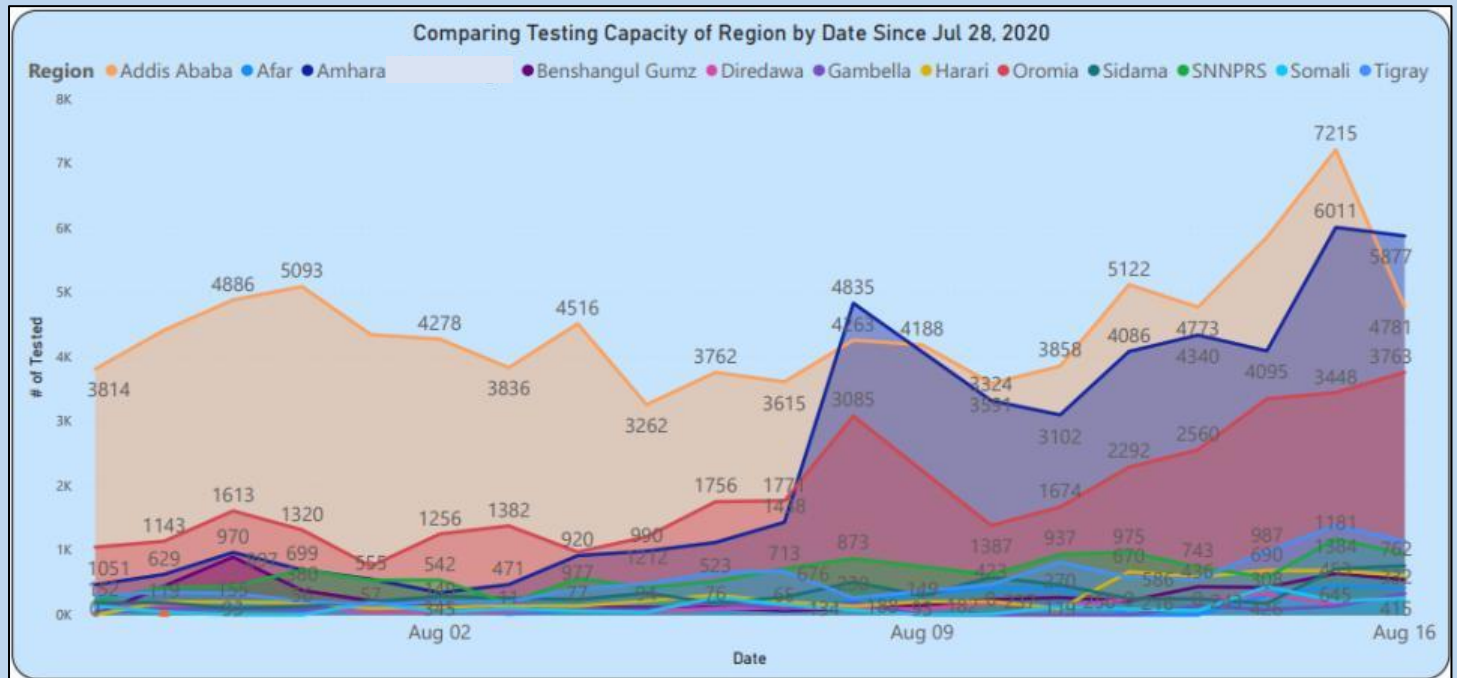
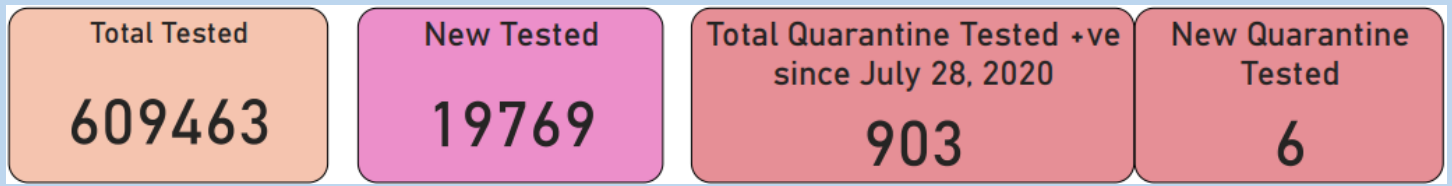


Fig. 8: Summary of trend of new cases and testing capacity in regions as of August 16, 2020

- Community Based Activities and Testing has a great impact on number of COVID-19 cases detected in the country.
 - A total of 151,048 specimens collected.
 - A total of 131,848 samples were processed in nine days since the start of COMBAT.
 - It took 114 days to reach first 8,000 cases whereas it took only 7 days (August 7-16) to confirm more than 8000 cases after the launching COMBAT.
 - Silent zones/woredas started reporting cases.
 - Since the launch of the COMBAT, >90% of cases were detected from the community.

IV. Coordination and Leadership

- Since its activation, the national PHEOC is collaboratively working with stakeholders: government agencies, partner organizations, UN agencies, embassies, hospitals, Industrial parks and others.
- Morning briefing of IMS is being conducted daily by core IMS staffs and key partners' representatives
- Weekly leadership and strategic virtual (zoom) meeting, chaired by the H.E MoH Minister, is being conducted.
- Supports (financial, logistic and technical) are being received from partners, private institutions, individuals and donors.
- Ethiopia has joined the "WearAMask" challenge initiated by the WHO.

- H.E. President Sahle-Work Zewde has called-up on the public to promote proper use of face mask while announcing official launch of MaskEthiopia Campaign in response to WHO WearAMask Challenge.



- Ethiopia has followed suit by launching MaskEthiopia Campaign in line with joining WearAMask Challenge launched by World Health Organization (WHO) in fighting the spread of COVID 19, the president stated.

- Discussion conducted on COVID-19 preparedness and response Inter-Action Review (IAR) chaired by The Incident Manager and Deputy Incident Manager. All sections within the PHEOC Incident Management System presented the IAR findings (strengthen, good practices, challenges and recommendations) on the COVID-19 preparedness and response efforts that has been done so far.



Fig. 9: IMS staff discussion on the COVID-19 Preparedness and Response Inter-Action Review, August 15, 2020

V. Regional Support

- Team deployed to all regions from EPHI and MOH to support COMBA and other routine COVID-19 activities.
- Testing site supervisor deployed to all COVID-19 testing sites with daily follow up and challenges addressed every day with Regional Health Bureau.
- Trainings were given to all team members who deployed to all regions on DHIS-2.

VI. Case Management and IPC

- Currently there are a total of 16,987 active COVID-19 cases in the country.
- There are 217 patients in severe condition and the rest are in stable condition.
- 216 cases newly recovered during the week and a total of 12,938 cases have been covered so far.

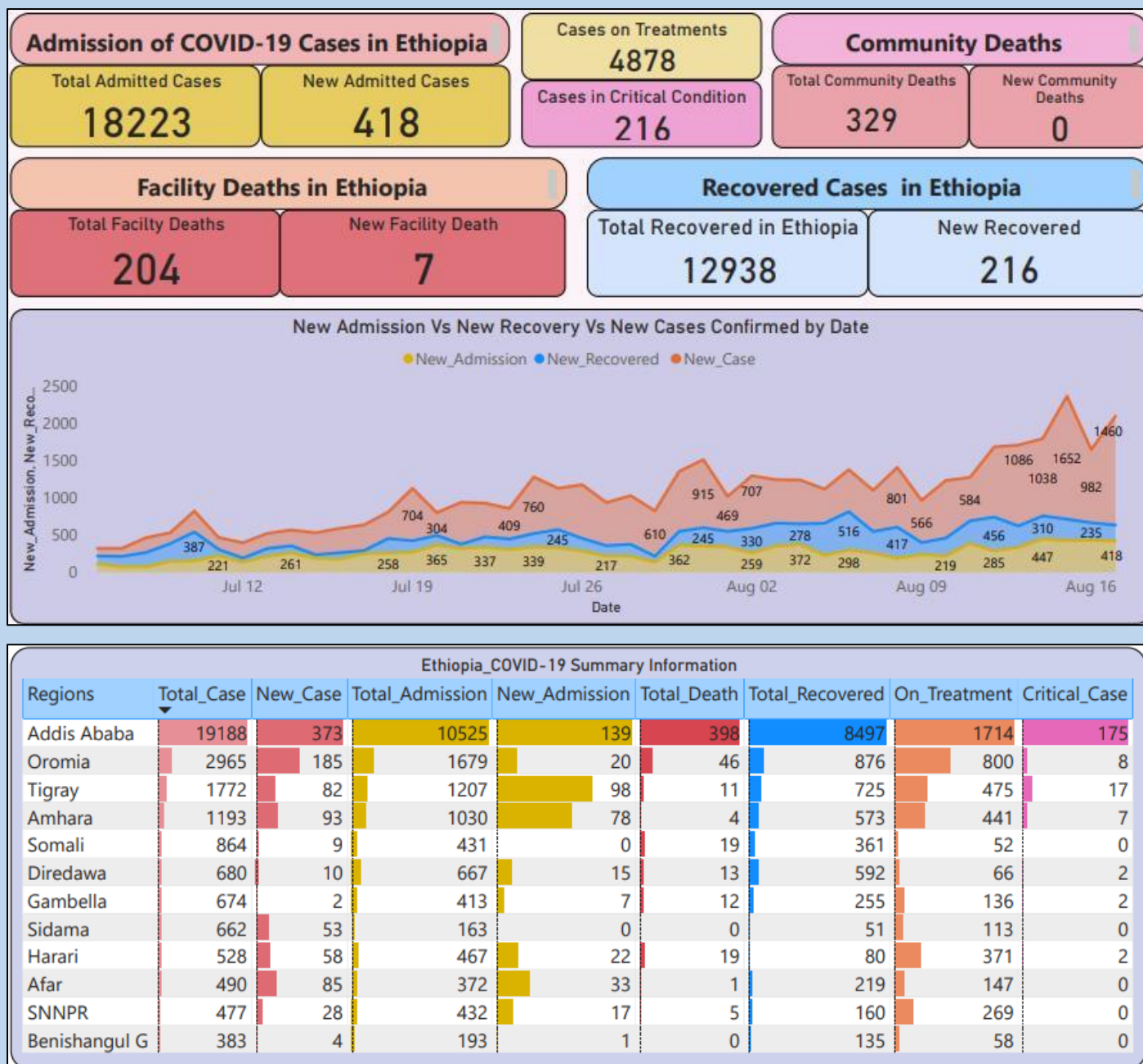


Fig. 10: Summary of case management update as of August 16, 2020.

Home Based Isolation and Care:

- Since Home Based Isolation and Care (HBIC) was started in Ethiopia:
 - The two city administrations (Addis Ababa and Dire Dawa) and two regional states (Oromia and Benishangul Gumuz) have started HBIC
 - A total 2,850 COVID-19 confirmed cases have been enrolled for the HBIC
 - 620 of them have been recovered.
 - 2,239 cases are currently on HBIC.
 - One COVID-19 related death has occurred.
 - 40 cases have been transferred from treatment centers to HBIC.
 - 37 cases have been transferred from HBIC to treatment centers.

VII. Risk Communication and Community Engagement (RCCE)

- Daily press statement is being provided on COVID-19 situation on daily basis through Mass Media and social media portals.
- Different poster, brochures, audio and video messages focusing on COVID-19 risk perception and practice developed and disseminated.
- Article on home quarantine published on social media and website.
- Idea pool for media houses on important and new information prepared.



- Different materials designed for Addis Ababa Health Bureau (message for police offices, traffic police man, public transportation, taxi drivers).



VIII. 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.

IX. Training and Orientation Activities

- There is ongoing training and orientation for the health professionals on COVID-19.
- In the WHO Epi-Week-33:
 - WASH-IPC TOT provided in SNNPR and Benishangul Gumuz regions.
 - IPC and dead body management basic training provided in Amhara region.
 - Orientation for Health Extension Program officers and Zonal heads of Oromia Regional state at Adama Town.
 - Four days TOT on Home-Based Isolation and Care provided for group II Health Care Workers from Addis Ababa city and sub-cities Health office (22 in number) is completed.



Fig. 13: Health care workers from Addis Ababa training on Home-Based Isolation and Care, August 10, 2020

X. Challenges and Way Forward

Challenges

- Weak adhere to physical distancing and other preventions advises among the public.
- Increasing number of community deaths and late confirmation of COVID-19 by dead body surveillance and testing.
- Happening of super spreading events that could contribute to the increment of number and distribution of COVID-19 cases.
- Low stock status of personal protective equipment.
- There is critical shortage of beds for COVID-19 cases admission.

Way Forward

- Advocate and strengthen Home Based Isolation and Care (HBIC).
- Enhance response efforts by implementing Community-based Actions and Testing strategy.
- Conduct intensive testing of high-risk areas for COVID-19.
- Enhance technical support, coordination and timely and accurate information sharing at all levels.
- Strengthen collaboration and coordination with key stakeholders and partners.
- Intensify risk communication and community engagement activities.
- Intensification of a capacity building trainings and orientation and develop virtual/online platforms for trainings.
- Identify and establish additional case treatment centers and quarantine sites at subnational level in particularly.
- Strengthen and sustain essential health services other than COVID-19.

XI. Public Health Policy Recommendation

Advice for the Public:

- For any individual confirmed to have COVID-19 and who is candidate for Home Based Isolation and Care:
 - Properly isolate from other family members.
 - Take full responsibility in prevention of transmission
 - Strictly adhere to the National Directive of Home-Based Isolation& Care.
 - Provide reliable information during regular follow up either by phone or home visit.
 - Report to nearest health facilities/follow up team in case of any emergency, appearance of new symptoms or worsening of existing symptoms.
- 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 and shaking hands.
- Adhering to all these precaution measures is also highly recommended during planting trees in this summer season.
- 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/	8335/952
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	
Ethiopian Public Health Institute Telegram Channel	https://t.me/EthPHI	
Ethiopian Public Health Institute YouTube Channel	https://www.youtube.com/channel/UCvvTzeY-IJiQfEFBULH9Mkw	
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
Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis https://doi.org/10.1016/S0140-6736(20)31142-9	<ul style="list-style-type: none"> Transmission of viruses was lower with physical distancing of 1 m or more, compared with a distance of less than 1 m (n=10 736, pooled adjusted odds ratio [aOR] 0·18, 95% CI 0·09 to 0·38; risk difference [RD] -10·2%, 95% CI -11·5 to -7·5; moderate certainty); protection was increased as distance was lengthened (change in relative risk [RR] 2·02 per m; pinteraction=0·041; moderate certainty). Face mask use could result in a large reduction in risk of infection (n=2647; aOR 0·15, 95% CI 0·07 to 0·34, RD -14·3%, -15·9 to -10·7; low certainty), with stronger associations with N95 or similar respirators compared with disposable surgical masks or similar (eg, reusable 12–16-layer cotton masks; pinteraction=0·090; posterior probability >95%, low certainty). Eye protection also was associated with less infection (n=3713; aOR 0·22, 95% CI 0·12 to 0·39, RD -10·6%, 95% CI -12·5 to -7·7; low certainty). Unadjusted studies and subgroup and sensitivity analyses showed similar findings.

<p>The role of isolation rooms, facemasks and intensified hand hygiene in the prevention of nosocomial COVID-19 transmission in a pulmonary clinical setting https://doi.org/10.1016/S0140-6736(20)31142-9</p>	<ul style="list-style-type: none"> • The findings indicate that the isolation rooms, the facemasks, and intensified hand hygiene seemed to prevent nosocomial transmission of SARS-CoV-2. These nonpharmaceutical interventions are important for preventing nosocomial transmission of pandemic respiratory diseases.
<p>The potential public health consequences of COVID-19 on malaria in Africa https://www.nature.com/articles/s41591-020-1025-y</p>	<ul style="list-style-type: none"> • The burden of malaria is heavily concentrated in sub-Saharan Africa (SSA) where cases and deaths associated with COVID-19 are rising. • In response, countries are implementing societal measures aimed at curtailing transmission of SARS-CoV-2. • Despite these measures, the COVID-19 epidemic could still result in millions of deaths as local health facilities become overwhelmed. • Advances in malaria control this century have been largely due to distribution of long-lasting insecticidal nets (LLINs), with many SSA countries having planned campaigns for 2020. • In the present study, we use COVID-19 and malaria transmission models to estimate the impact of disruption of malaria prevention activities and other core health services under four different COVID-19 epidemic scenarios. • If activities are halted, the malaria burden in 2020 could be more than double that of 2019. • In Nigeria alone, reducing case management for 6 months and delaying LLIN campaigns could result in 81,000 (44,000–119,000) additional deaths. • Mitigating these negative impacts is achievable, and LLIN distributions in particular should be prioritized alongside access to antimalarial treatments to prevent substantial malaria epidemics.
<p>Evaluation of the Test Combination Strategies for the Management of COVID-19 Phase 2 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3631300</p>	<ul style="list-style-type: none"> • Background: Many countries started the phase 2 of the COVID-19 pandemic with different strategies to contain the spread of virus including the combination of serological test followed by the molecular exam for positive cases. There are currently no evaluations of these strategies and it is necessary to take into account that any test foresees false negatives. • Methods: A simulation study, based on combining two serial tests: the serological test, firstly administered to the whole population sample, and the molecular test administered to the subjects that were positive to the first test in order to evaluate the negative predictive value and false negatives of the serial diagnostic testing across reasonable population prevalence values. • Findings: Assuming a sample size of 10,000 subjects we could expect from 15 to over 200 false negatives by considering population COVID-19 prevalence values from 1% to 20% as potential scenarios. Applying the simulation to over 51,000 subjects, with reference to the testing already carried out in the provinces of Milan and Lodi in Lombardy (Italy), and its sample stratification, by considering a population prevalence of 1%, 68 healthcare workers and 6 other persons could be false negatives. • Interpretation: Considering that the immune antibody response and persistence of the viral load are not yet known, the evaluation of the proportion of false negatives, generated by the application of sequential tests, is relevant if extended to the general population and even more as part of the strategies of surveillance of the healthcare workers.

<p>From containment to harm reduction from SARS-CoV-2: a fabric mask for enhanced effectiveness, comfort, and compliance https://doi.org/10.1080/0405000.2020.1805971</p>	<ul style="list-style-type: none"> • Although the COVID-19 pandemic shows no signs of abating, public health strategies have transitioned from containment to harm reduction. In light of this paradigm shift, it is critical that individuals take steps to prevent the spread of SARS-CoV-2, the virus that causes COVID-19. In the United States, the CDC recommends that individuals wear face coverings in public places, such as grocery stores. As lockdowns are being phased out around the world, authorities are requiring the use of such masks in public places while maintaining social distance. • Individuals (including healthcare professionals outside of their clinical settings) and manufacturers are following the CDC's recommendation. But, many currently available masks are not form-fitting, are not customizable, and are uncomfortable with even short-term use, thereby undercutting their effectiveness. Moreover, because cotton absorbs and retains the moisture found in an exhaled breath masks made of cotton have the potential to increase the wearer's risk of infection. Thus, as we shift to harm reduction and social distancing measures relax, it is imperative that these shortcomings in fabric masks are addressed and that is the motivation for this research. • The overall objective of the research is to design, develop, and test a <i>fabric mask</i> that is effective while being comfortable during continuous use over long periods of time. As the first step in the design process, we reviewed the modes of transmission of SARS-CoV-2 virus. We analyzed a medical mask and a fabric mask in the market and identified their shortcomings. We carried out an in-depth analysis of user needs and developed the performance requirements of the proposed mask. We defined the architecture of the mask comprising the following principal components: <i>Barrier, Form-Fitting, Positioning, and Fastening</i>. We tested and evaluated candidate materials for the components and developed the design specifications and construction details for the mask. We produced the mask and carried out subjective testing on a user in a typical workplace setting; we demonstrated that the mask was <i>form-fitting, customizable, washable, and could be worn continuously and routinely over extended periods of time by individuals and therefore could serve as an effective means to reduce the harm from SARS-CoV-2</i>.
<p>Predictors of Severity and Mortality Among Patients with Coronavirus Disease 2019: A Systematic Review and Meta-Analysis https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3633158</p>	<ul style="list-style-type: none"> • Among 15680 articles obtained from the literature search, 109 articles were included in the analysis. Increasing age and male gender were associated with higher mortality rates and severe disease. The risk of mortality was higher in patients presenting with dyspnea (RR 2.55, 95% CI 1.88–2.46) and hemoptysis (RR 1.62, 95%CI 1.25–2.11). Co-morbidities such as diabetes (RR 1.59, 95%CI 1.41–1.78), hypertension (RR 1.90, 95%CI 1.69–2.15), cardiovascular diseases (RR 2.27, 95% CI 1.88–2.79) and chronic obstructive pulmonary disease (RR 2.29, 95% CI 1.90–2.75) were associated with a higher risk of death. In-hospital complications such as acute respiratory distress syndrome (ARDS), sepsis, shock and acute cardiac injury had adverse outcomes, with ARDS having the highest risk ratio (RR 20.19, 95% CI 10.87–37.52). Lung consolidation on computed tomography (CT) had significant association with death (RR 2.07, 95% CI 1.35–3.16). Congestive heart failure (OR 4.76, 95% CI 1.34–16.97) had greater odds of developing severe disease. Among the radiological features, hilar lymphadenopathy (OR 8.34, 95%CI 2.57–27.08), bilateral lung involvement (OR 4.86, 95%CI 3.19–7.39) and reticular pattern (OR 5.54, 95%CI 1.24–24.67) were more frequently seen in patients with severe disease. Patients with leukocytosis, lymphopenia, elevated C-reactive protein and D-dimer levels had higher odds of severe disease and greater risk of mortality. • Our study identified several important predictors of disease severity and mortality among patients with COVID-19. Knowledge of these predictors might help in the prioritization and management of these patients.

<p>Factors Associated with Death in Critically Ill Patients with Coronavirus Disease 2019 in the US</p> <p>doi:10.1001/jamainternmed.2020.3596</p>	<ul style="list-style-type: none"> • In a cohort of 2215 adults with COVID-19 who were admitted to intensive care units at 65 sites, 784 (35.4%) died within 28 days, with wide variation among hospitals. • Factors associated with death included older age, male sex, obesity, coronary artery disease, cancer, acute organ dysfunction, and admission to a hospital with fewer intensive care unit beds.
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COVID-19 updates and sources of evidence:

Source	Link
WHO Coronavirus (COVID-19) dashboard	https://covid19.who.int/
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
WHO Academy mobile learning app for health workers, COVID-19 information	Android- https://play.google.com/store/apps/details?id=org.who.WHOA Apple- https://apps.apple.com/us/app/who-academy/id1506019873

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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 (EPHI), 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

PREPARED BY

Fantu Lombamo (MD, MPH) - Situation Unit Lead
Negusse Yohannes (PhD in Statistics) - Situation Unit Member
National COVID-19 Response PHEOC, Planning Section

CONTRIBUTORS

Zelalem Kebede (MPH) - Situation Unit Member
Haftom Taame (MPH-Field Epi) - Africa CDC
Lehageru Gizachew (MD, MPH) - Situation Unit Member

EDITED AND REVIEWED BY

Shambel Habebe (MPH-Field Epi) - Planning Section Chief
Zewdu Assefa (MPH- Field Epi) - Deputy Incident Manager
Aschalew Abayneh (RN, BSc, MPH) - DDG-EPHI, Incident Manager

FOR MORE INFORMATION and NOTIFICATION

Web: www.ephi.gov.et

Follow us on Twitter: @EPHIethiopia

Call: 8335/952 (TOLL FREE LINE) or 011 276 5340

Email: ephieoc@gmail.com or pheodatacenter@gmail.com