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 MINISTRY OF HEALTH - ETHIOPIA
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 HEALTHIER CITIZENS FOR PROSPEROUS NATION



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PUBLIC HEALTH EMERGENCY OPERATION CENTER (PHEOC), ETHIOPIA

COVID-19 PANDEMIC PREPAREDNESS AND RESPONSE IN ETHIOPIA

WEEKLY BULLETIN

BULLETIN No. 1
Issue Date: May 03, 2020

Dates Covered by this Bulletin: January 21, 2020 to May 03, 2020

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I. HIGHLIGHTS

- A total of 135 COVID-19 confirmed cases reported in Ethiopia as of May 03, 2020.
- Nine new cases confirmed during WHO Epi-Week 18.
- Three COVID-19 deaths are recorded in the country.
- A total of 75 COVID-19 confirmed cases have been recovered.
- 2,827 contacts of confirmed cases have been identified.
- 19 laboratories are conducting COVID-19 testing in the country.
- A Millennium Hall with about 1,000 bed capacity being prepared for COVID-19 isolation and treatment as surge capacity.



II. BACKGROUND

Corona Virus Disease 2019 (COVID-19) is a viral respiratory disease caused by a virus called SARS-COV-2. It was first originated in December, 2019 in Hubei Province of China and then on it spread to almost all countries in the world. On January 30, 2020 and on March 11, 2020, World Health Organization (WHO) declared this disease outbreak as a Public Health Emergency of International Concern (PHEIC) and a Pandemic respectively.

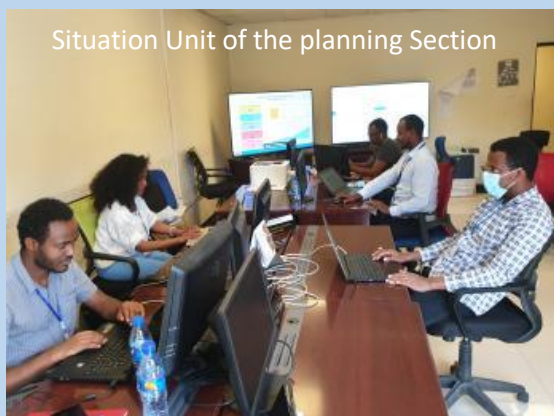
Ethiopia activated its Public Health Emergency Operation Center (PHEOC) on January 27, 2020 to coordinate the preparedness and response efforts for the novel corona virus (2019-nCov) using an Incident Management System (IMS). WHO and other partners are currently supporting in scaling up preparedness and response efforts and implementation of related recommendations suggested by the IHR Emergency Committee.

The first COVID-19 case in Ethiopia was detected and reported on March 13, 2020. As of May 03, 2020, total of 135 cases including three deaths and 75 recoveries were recorded in the country. The cases were detected among the contacts of the confirmed cases, mandatory quarantined passengers, health screening at the points of entry and rumors received from the community and health facilities. Since February 8, 2020 Ethiopia has been conducting laboratory investigation at the Ethiopian Public Health Institute (EPHI) influenza reference laboratory which later on expanded to three more laboratories within the EPHI, National Animal Health Diagnostic and Investigation Center (NAHDIC), Armauer Hansen Research Institute (AHRI), International Clinical laboratories (ICL), Ethiopian Biotechnology Institute and regional and university laboratories with simultaneous capacity building trainings provided for the laboratory technicians. The laboratory expansion is intended to reach the total daily diagnostic capacity of 13,597 after all candidate laboratories for expansion capacitated throughout the country.

As of May 03, 2020, a total of 22,330 laboratory samples were tested among the suspected cases, contacts, quarantined passengers, randomly collected samples from severe pneumonia cases in selected referral hospitals in Addis Ababa and from the community.

A number of decisions have been passed by the government to mitigate the spread of the disease in the country. Schools were closed; mass gatherings were prohibited; borders were closed; flights suspended to around 80 countries, a national high-level committee led by the Prime -Minister was established to mobilize resources for COVID-19 response, and state of emergency was declared.

Operational research initiative is started with establishing national COVID-19 research task force which is led by EPHI. The research initiative is to support the pandemic preparedness and response activities. It involves advisory council and professional associations, government/private research institutes, key teaching hospitals and health science colleges.



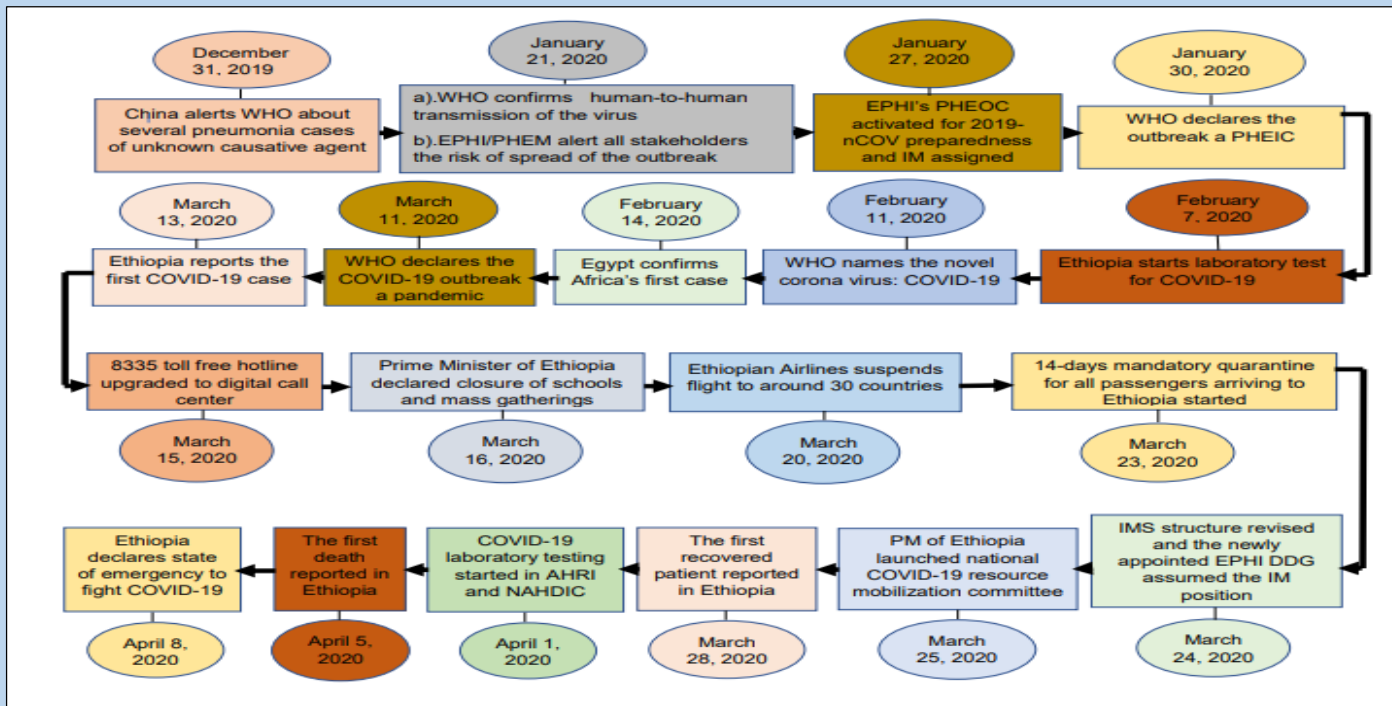


Figure: Ethiopia COVID-19 response timeline and events

III. EPIDEMIOLOGICAL SITUATION

a. Global Situation

Between December 2019 and May 03, 2020, COVID-19 pandemic affected 215 countries/territories causing 3,349,786 cases and 238,628 deaths (CFR (7.12%) globally. The United States of America (USA) reported the highest number of cases (1,093,880) and deaths (62,406) followed by Spain (216,582 cases and 25,100 deaths).

In Africa, 55 countries/territories have reported COVID-19 cases. As of May 03, 2020, a total of 43,807 cases and 1,771 deaths were reported across the continent. The Highest number of cases were reported from South Africa, 6,336 (14.5%) cases followed by Egypt, 6,193 (14.1%) cases and Morocco, 4,729 (10.8%). See the summary dashboard below.

Dashboard: Global Situation Update as of May 3, 2020 Source: WHO

Total Number of COVID-19 Affected Countries/Territories

215

Total Number of COVID-19 Confirmed Cases Globally

3,349,786

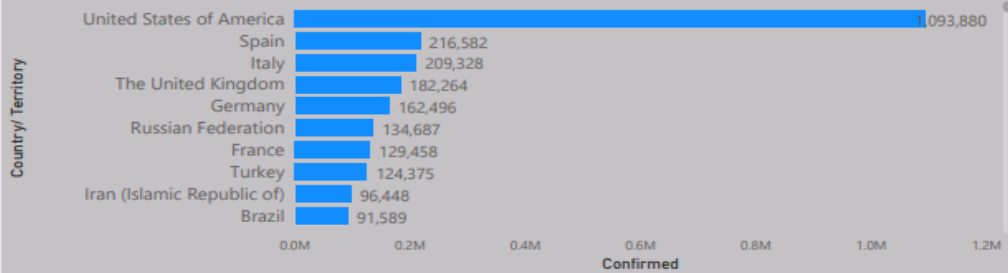
Total Number of Deaths with COVID-19 Globally

238,628

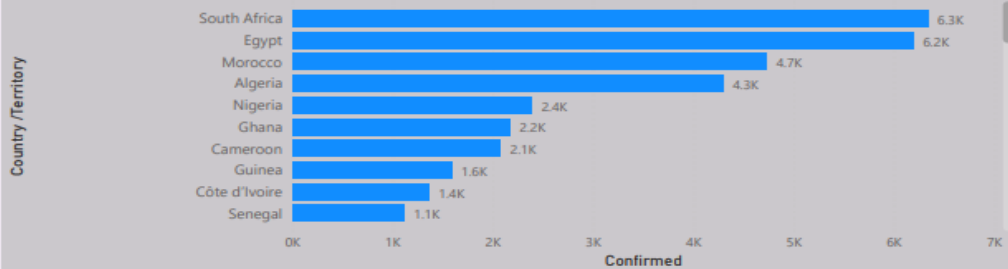
New Confirmed Cases Globally

77,745

Top Ten Countries/Territories with COVID-19 Confirmed Cases



Top Ten African Countries/Territories with COVID-19 confirmed Cases



Dashboard: Africa Situation Update as of May 3, 2020 Source: WHO

Total Number of Cases Confirmed in Africa

43,807

of African Countries/Territories with COVID-19 Confirmed Cases

55

Total Number of Deaths in Africa with COVID-19

1,771

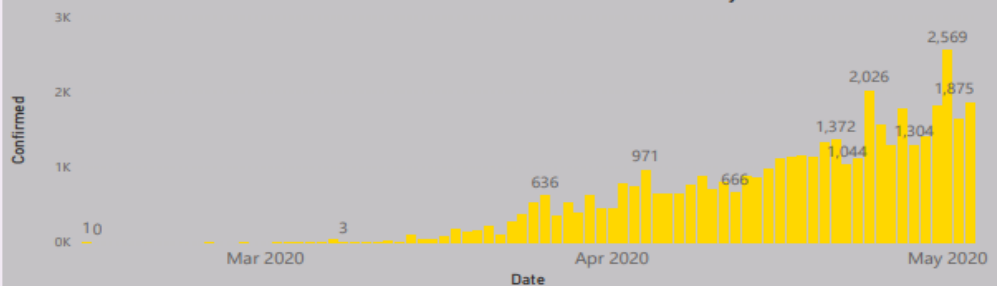
New Confirmed Cases in Africa with COVID-19

1,875

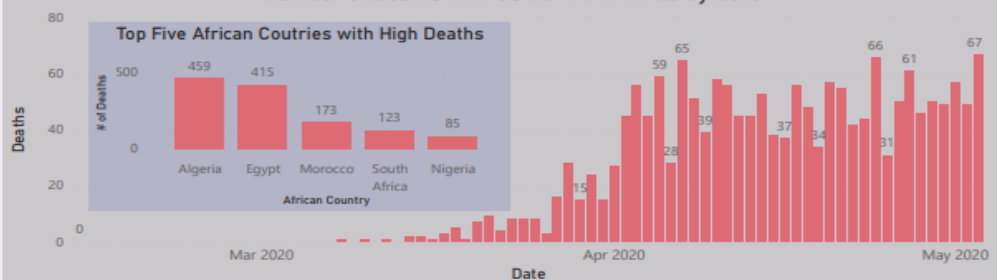
New Deaths in Africa with COVID-19

67

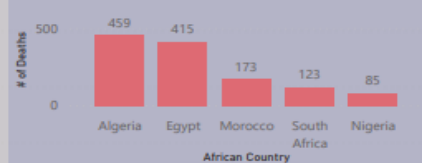
Number of Confirmed COVID-19 Cases in Africa by Dates



Number of Deaths with COVID-19 in Africa by Date

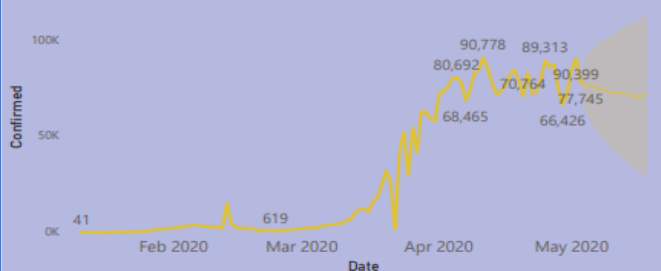


Top Five African Countries with High Deaths

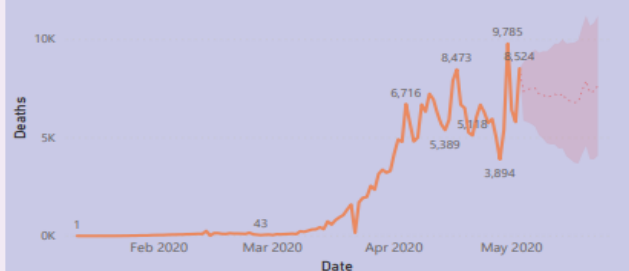


Dashboard: Global Situation Update as of May 3, 2020 [Forecast] Source: WHO

Global Forecast/Prediction of Number of Cases for the Next Days



Global Forecast/ Prediction of Number of Death for the Next Days



National COVID-19 situation

In Ethiopia, the first COVID-19 case was reported on March 13, 2020. The case was a 48-years old Japanese national who came from Burkina Faso on March 4, 2020. The number of cases then increased from contacts of confirmed cases and newly imported cases. Among the 135 cases reported, 81 (60%) are imported, 31 (22.96%) are close contacts of confirmed cases, and the source of infection not yet determined for 23 (17%) cases. Among the total confirmed cases, 70 (51.85) cases are detected from mandatory quarantine.

National COVID-19 update

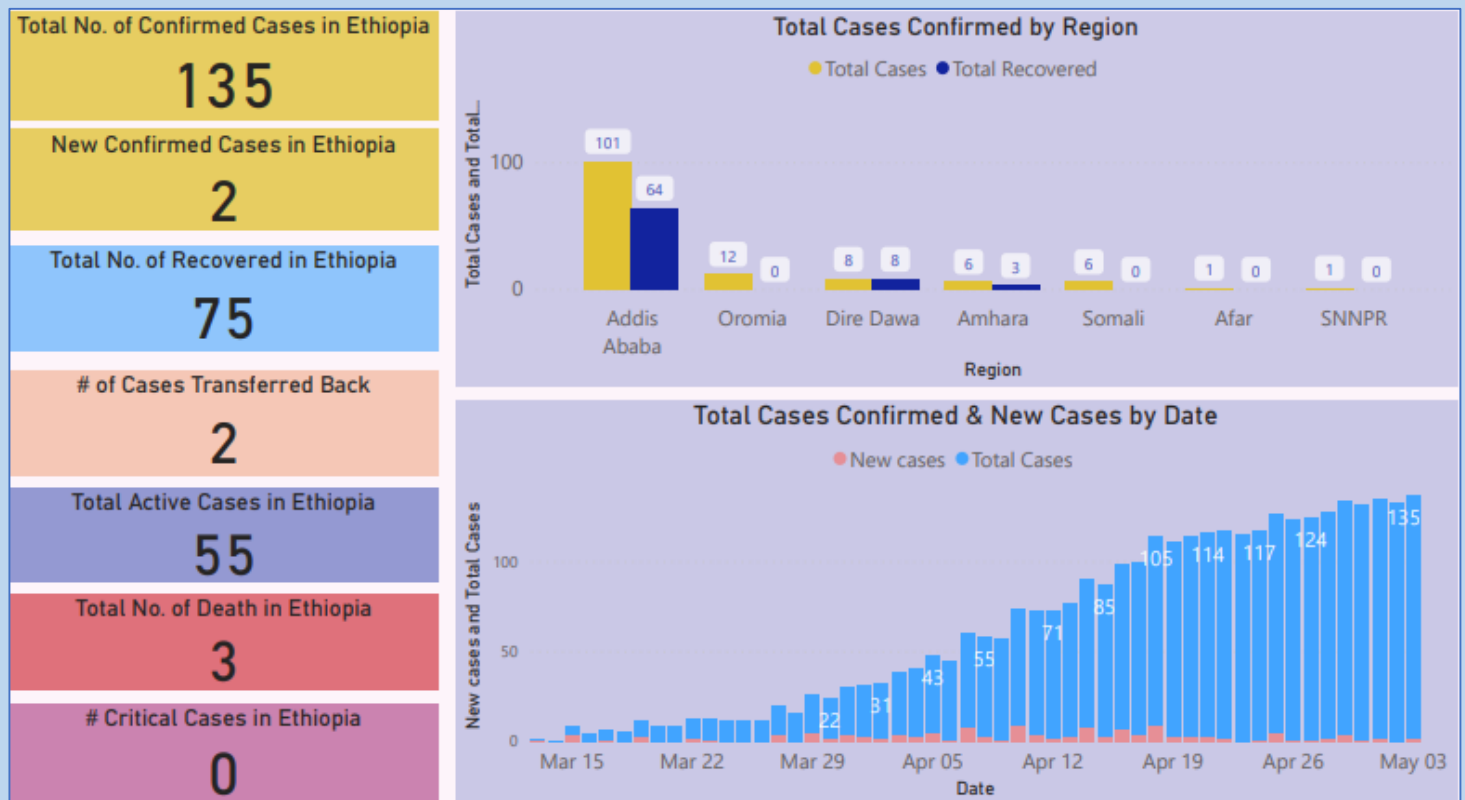
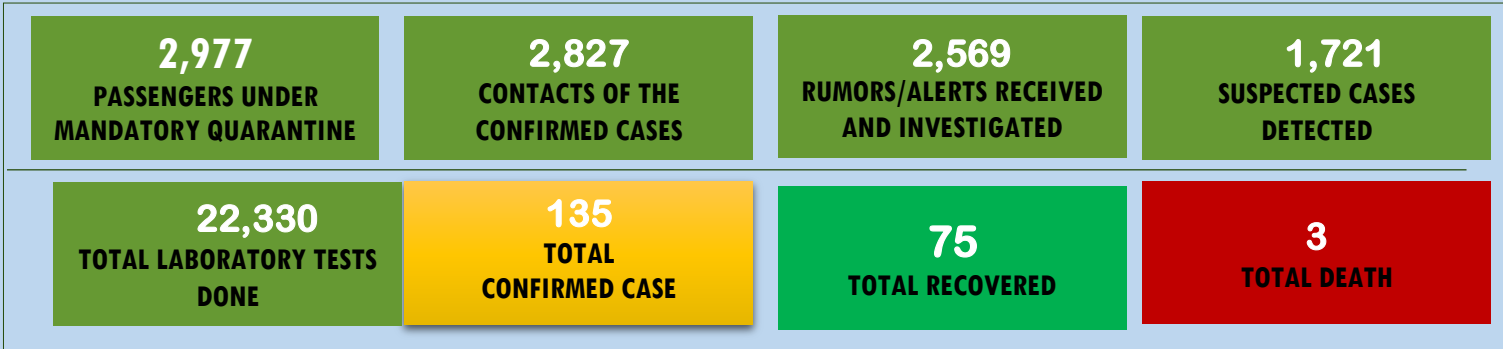


Fig 1: Summary of the death, recovered and confirmed cases by location and date of confirmation, Ethiopia, May 03, 2020

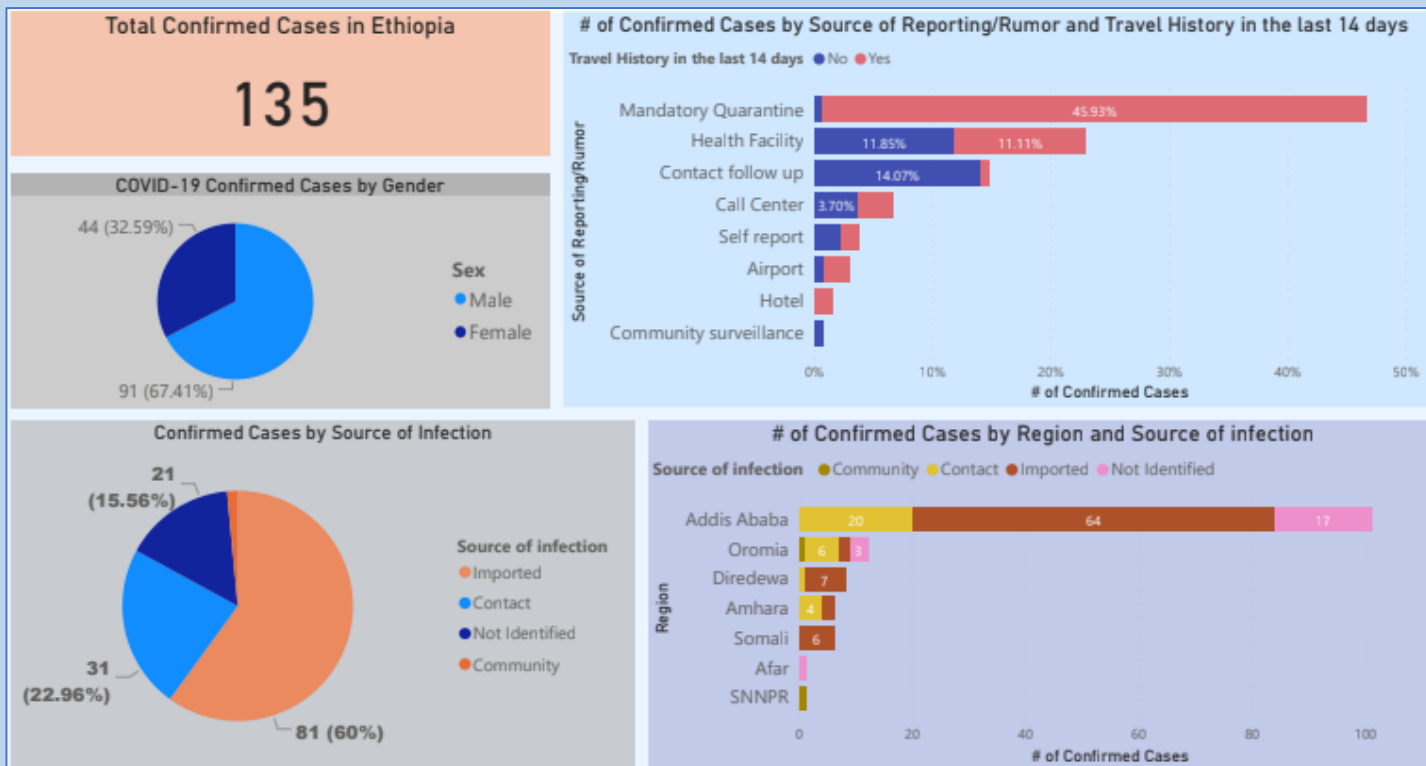


Figure 2: COVID-19 confirmed cases summary dashboard as of May 03, 2020, Ethiopia

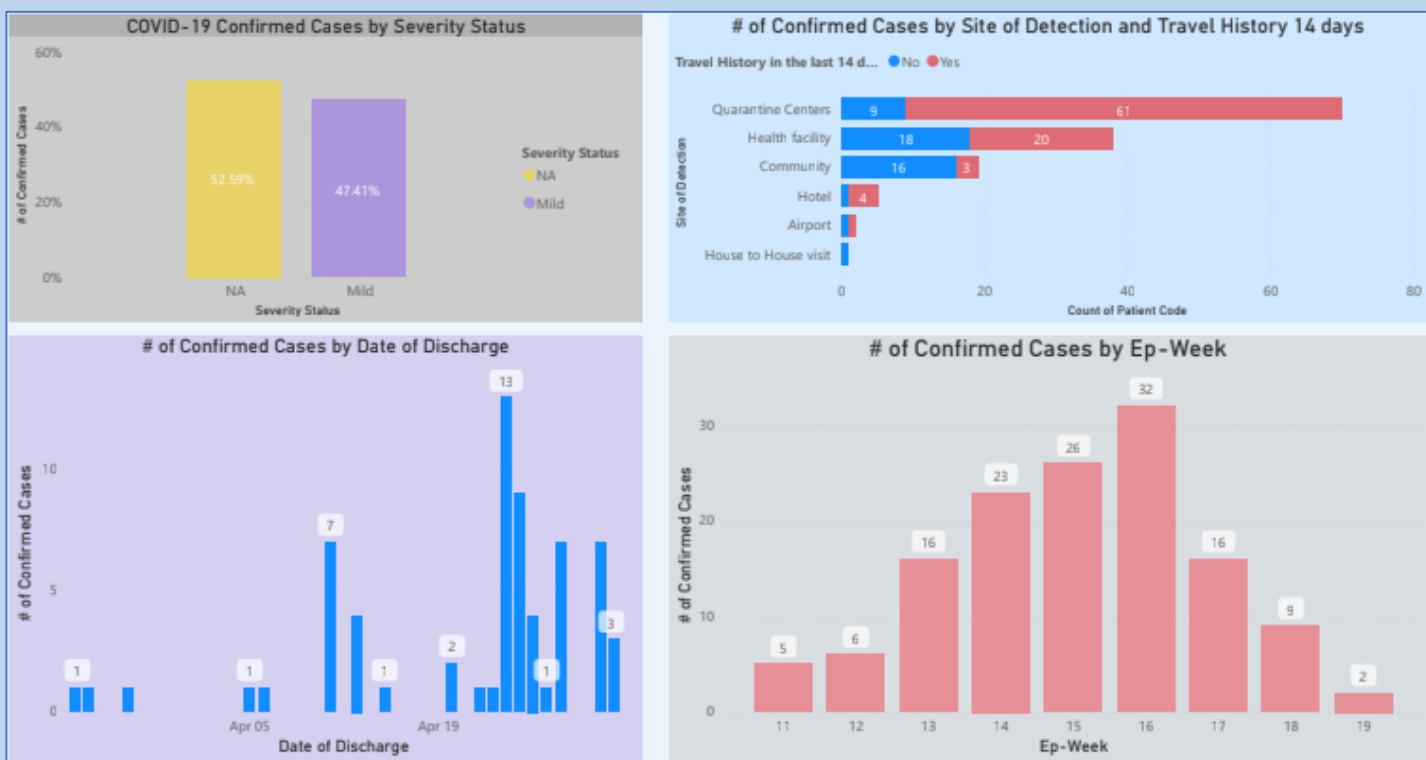


Figure 3: COVID-19 confirmed cases summary dashboard as of May 03, 2020, Ethiopia



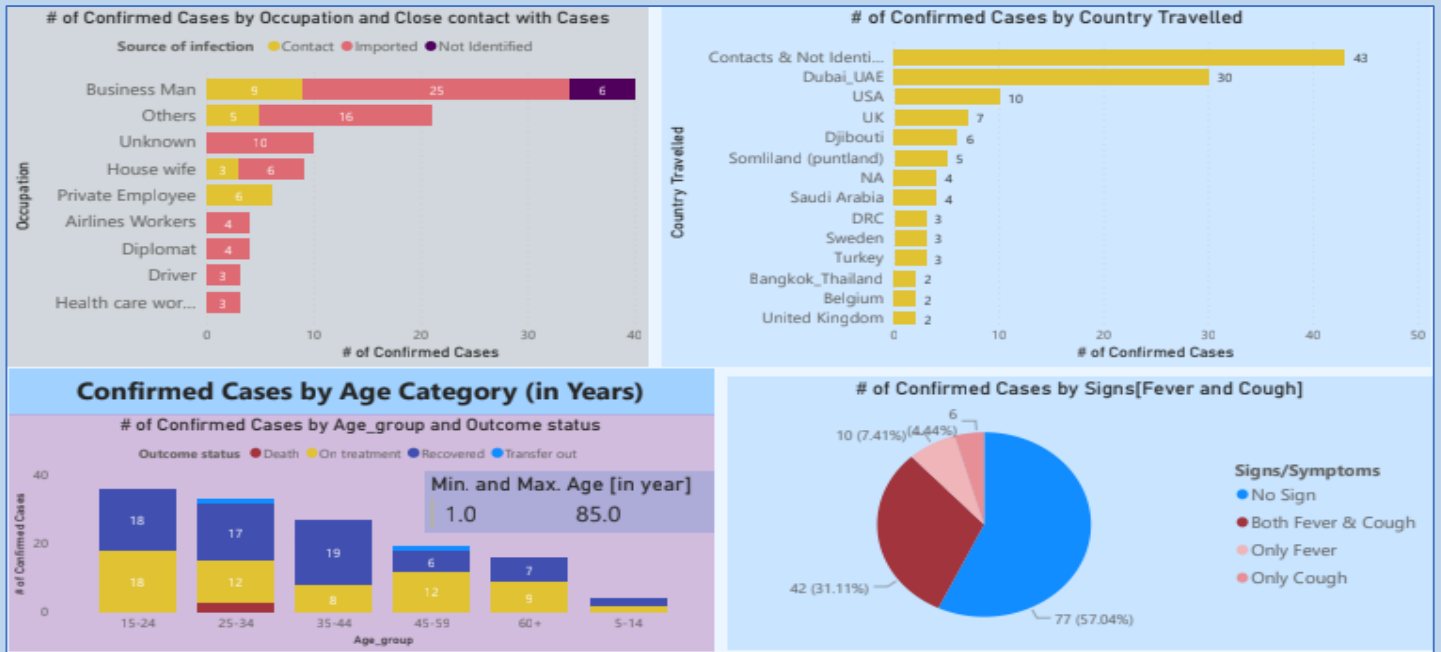


Figure 4: COVID-19 confirmed cases summary dashboard as of May 03, 2020, Ethiopia

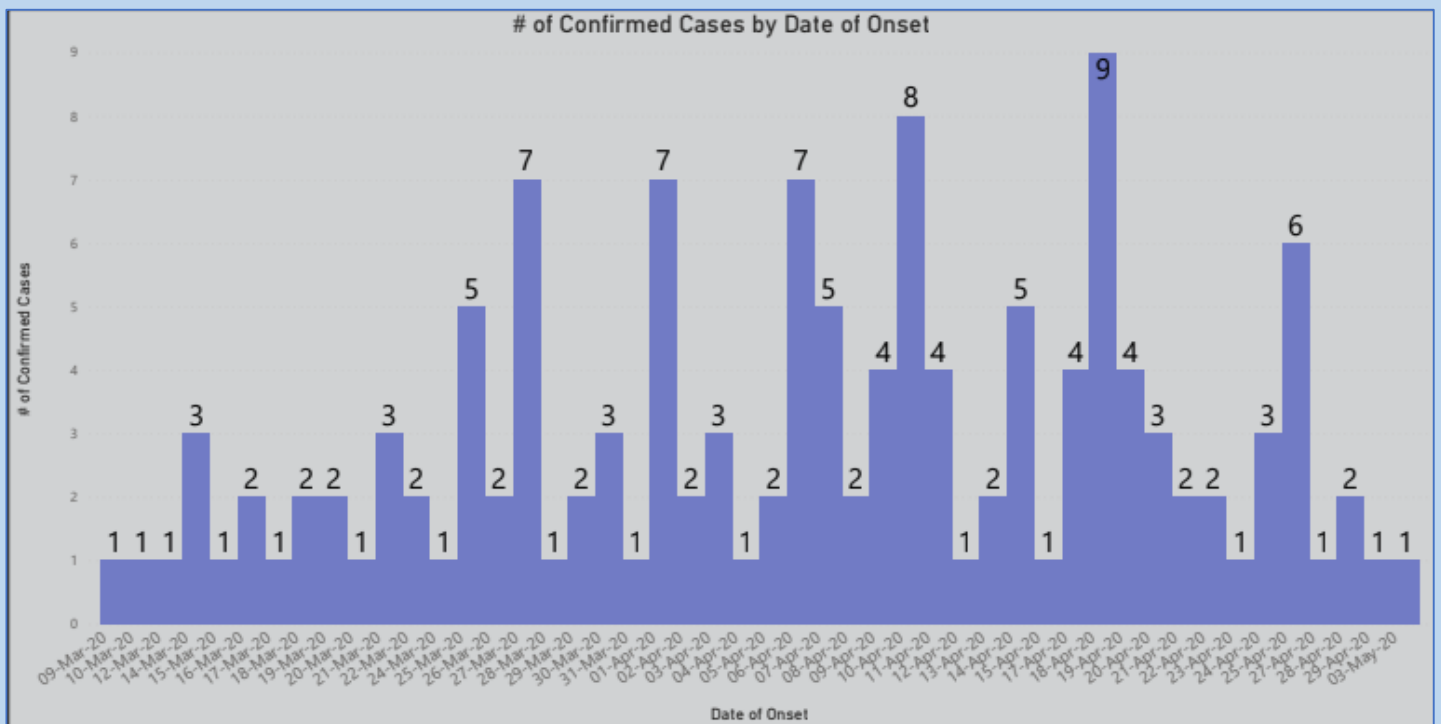


Fig. 5: Epi-Curve of Confirmed Cases by Date of Disease Onset

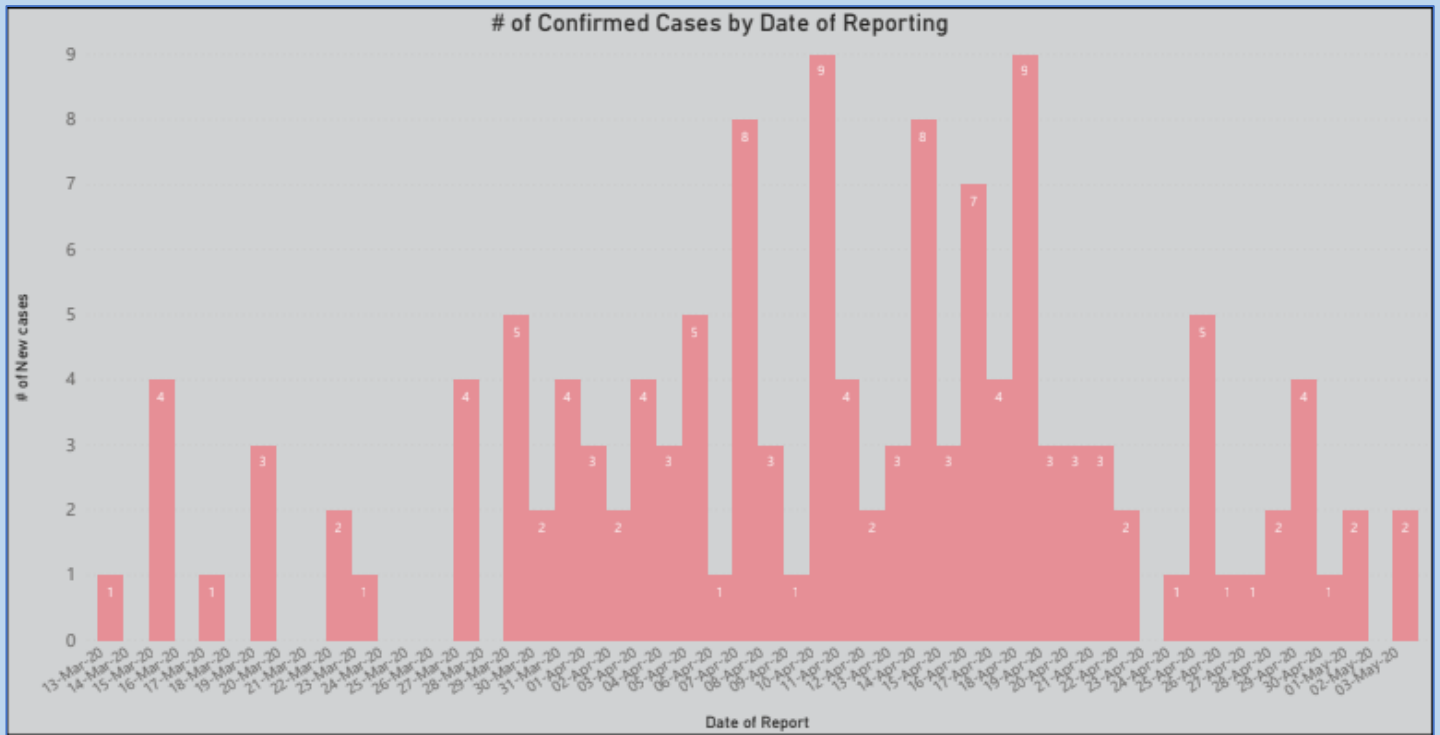
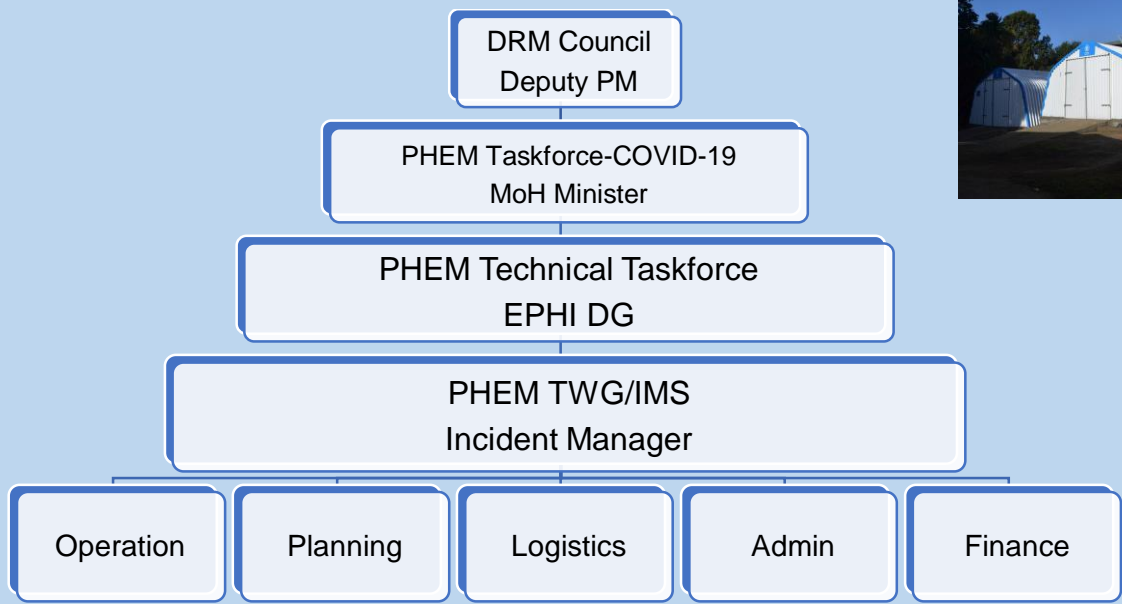


Fig. 6: Epi-curve of confirmed cases by date of confirmation

IV. COORDINATION AND LEADERSHIP

COVID-19 preparedness and response coordination platforms:

- Ministerial committee at national level established to oversee the overall COVID-19 response activities.
- Disaster and Risk Management (DRM) Council led by deputy prime minister.
- Multi-sectoral PHEM task force led by Minister, Ministry of Health established.
- PHEM technical task force led by EPHI Director General activated.
- Public Health Emergency Operation Center (PHEOC) activated



Partnership and collaboration:

- Since its activation, the national PHEOC is collaboratively working with stakeholders: government agencies, partner organizations, UN agencies, embassies, hospitality sector, Industrial parks and others.
- Jack Ma foundation donated medical equipment and supplies to African countries in two rounds. Ethiopia took the responsibility to distribute the donated materials to other countries.
- A Chinese medical expert team arrived in Addis Ababa on April 18, 2020, to share experience and support Ethiopia's effort to halt the spread of COVID-19.
- The Chinese medical team was briefed by the Ethiopian Public Health Institute on the situational of COVID-19 Response in Ethiopia.
- Supports (financial, logistic and technical) are being received from partners, private institutions, individuals and others.



V. SURVEILLANCE AND LABORATORY INVESTIGATION

Surveillance related activities that have been done during the current COVID-19 pandemic:

- Travelers health screening at point of entries (POEs) instituted
- Follow-up of international travelers is ongoing
- Mandatory quarantine of passengers coming to Ethiopia has been implemented since March 23, 2020
- Toll-free call centers are up running 24/7 at national and subnational levels for rumor collection and information provision
- A Rapid Response Team (RRT) has been established for rumor verification and investigation
- Community surveillance and house to house search is undergoing to find suspected COVID-19 cases
- Contact tracing and follow-up of persons who had contact with confirmed cases is ongoing
- Laboratory investigation of suspected cases, quarantined individuals, contacts of confirmed cases, random SARI/pneumonia cases and community members.

Health screening

- Health screening of passengers for COVID-19 at international airports and designated ground crossing is underway since 24th of January 2020 at POEs.
- Mass thermal-scanners and Infrared thermometers are used for body temperature screening at international airports and designated ground crossing in the country.
- There are temporary isolation units at those screening posts.
- Health declaration form and ODK based details of the traveler are being collected.

- A total of 127 health screeners are working 24/7 in three shifts.
- Three standby ambulances are on standby at BIA.

Mandatory Quarantine

- Hotels have been prepared for 14-days Mandatory quarantine for travelers from abroad.
- Health monitoring of the quarantined persons is in placed on daily basis by the assigned health professional, alerts and non-COVID-19 medical conditions notified
- Non-COVID-19 medical care at quarantine sites and referral linkage to the hospitals
- Laboratory testing of the quarantined individuals being implemented at the end of the 14 days mandatory quarantine period
- Quarantine centers disinfect regularly

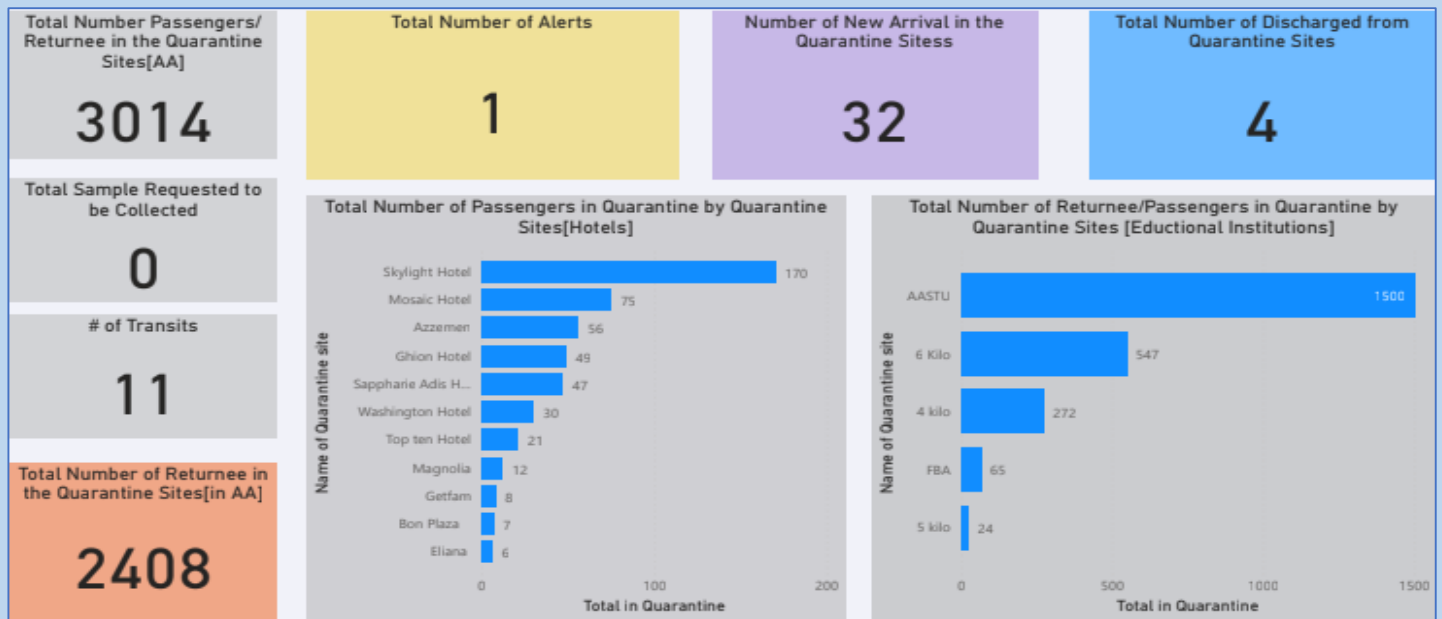


Fig. 7: Mandatory quarantine update as of May 03, 2020, Ethiopia

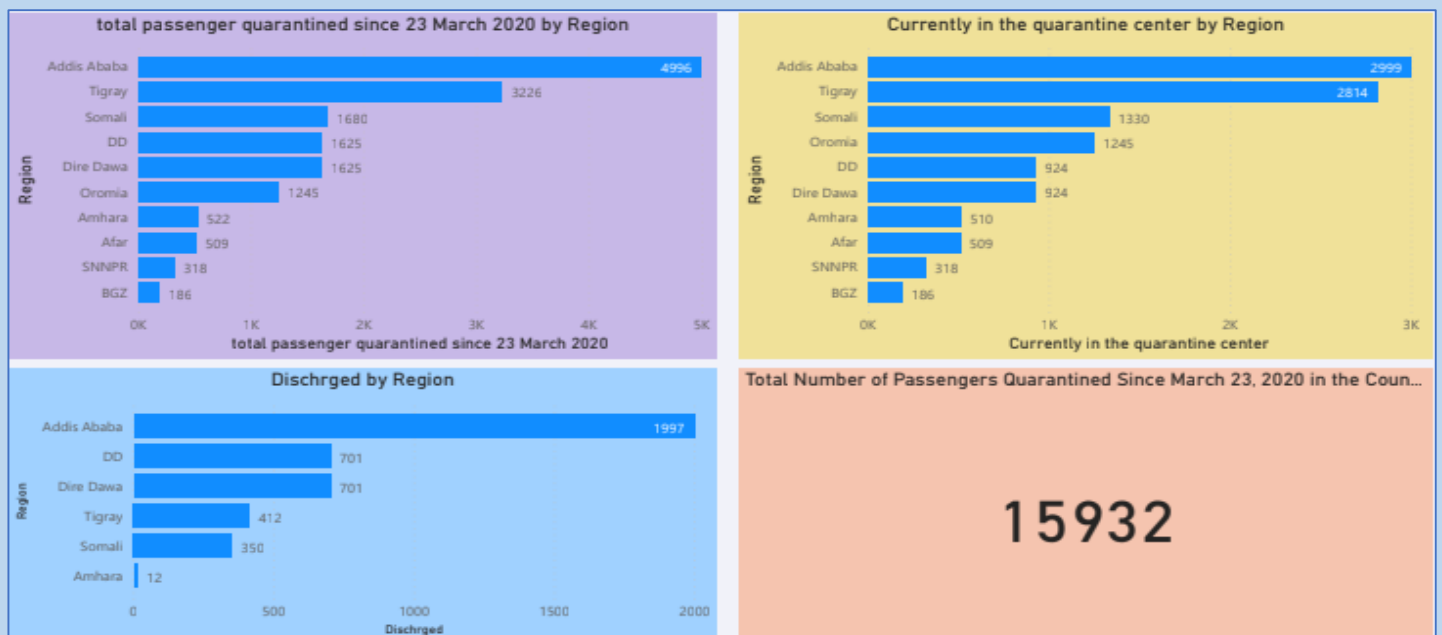


Fig. 8: Mandatory quarantine update as of May 02, 2020, Ethiopia

Rumor Verification and Investigation

- Stand by Rapid Response Team (RRT) established to investigate and respond to any rumor and alerts.
 - 30 RRT have established.
 - The RRT are operating 24/7 by different shifts
 - Each team has dedicated ambulance equipped with oxygen and other life basics
- Rumors are received from different sources: call centers, community, health facilities, embassies, medias and others.
- 24/7 Toll-free lines (8335) digitalized and began functioning as a call center. The line 952 was also added (in collaboration with the Wogen AIDS talk line) to enhance the call receiving capacity of the call center.
- As of May 03, 2020:
 - 2,569 rumors/alerts have been received and investigated. Of these, 97 rumors (4 via the call center) are reported today.
 - 1,721 rumors/alerts (46 new) have fulfilled the suspected case definition.
- About 6,000 – 10,000 calls (8,000 in average) calls are being responded every day.



Contact tracing

- Based on the case definition contacts of confirmed cases are being traced.
- A total of 2,827 contacts of confirmed cases have been identified. Of these, 76 developed COVID-19 suggestive of symptoms.
- Up to date, 42 of the contacts were tested positive.
- Home based quarantine is being implemented for contacts of confirmed case

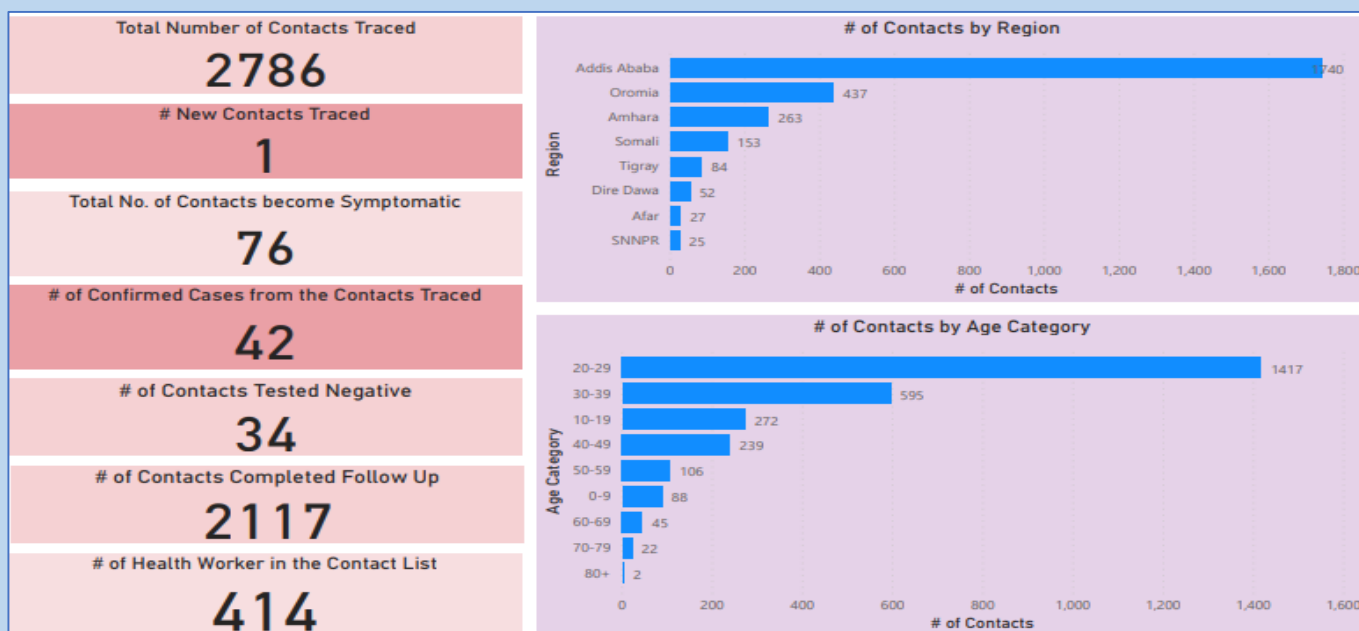


Fig. 8: contact tracing dashboard as of May 03, 2020, Ethiopia

Laboratory related activities

- National capacity of confirmatory testing for COVID-19 developed since February 8, 2020.
- Ongoing expansion of laboratory testing in different national and regional laboratories.
- Currently 19 laboratories located at Addis Ababa (8), Adama, Afar, Arsi, Bahirdar, Dessie, Jijiga, Jimma, Haramaya, Hawassa, Mekele and Sebeta have the capacity for testing COVID-19
- 12 additional laboratories located at Addis Ababa (4), Adama, Bishoftu, Debrebirhan, Nekemit and Wollega have passed verification steps and are ready to receive and process sample
- Three laboratories are under verification steps and 20 Laboratories are candidate for the expansion.
- Daily testing capacity as of May 03, 2020 is 6,500



VI. CASE MANAGEMENT AND IPC

- Treatment and isolation centers are established in different health facilities.
 - EKa Kotebe treatment center
 - St. Peter Specialized Hospital
 - Bole Chefa isolation center
 - St. Paul's Hospital Millennium Medical College (not yet started receiving patient)
 - Silk Road General Hospital
 - Hallelujah General Hospital
 - Millennium Hall treatment center (under preparation)
 - Regional treatment centers
- There is also regular and ongoing recommendation and support of the regions for site selection and establishment of COVID-19 treatment centers.
- Ongoing training on case management and IPC for health care workers
- More than 300 health professionals trained
- Case management, IPC protocols and guidance developed and disseminated for the isolation, treatment centers and regions



COVID-19 Treatment Center Eka Kotebe General Hospital

VII. RISK COMMUNICATION AND COMMUNITY ENGAGEMENT

- Risk Communication and Community engagement strategy developed
- Risk communication and community engagement works in dissemination of appropriate and timely COVID-19 related messages to the public and governmental stakeholders.



- Daily press statement, dashboard update and monitoring have been done routinely.
- Spot development
 - Video spot on how to make a mask at home
 - Audio and video spots for home care for covid-19.
 - Video spots for psychosocial support with save the children and UNICEF are being recorded
- Message developed for correct use of facemasks and delivered via varies channels

- Facebook challenges on #betenegn #IAmAtHome have been devised
- Media scanning and monitoring being conducted on daily basis
- Talk-walker social media monitoring platform deployed from UNICEF project which provide Coronavirus alert news
- Message guides and key message developed and communicated for Easter, Ramadan and other holidays on COVID -19 prevention and complying with government decision.

- Supportive supervision for HEW implementing door-to-door visit and active case search and assessment
- Different risk communication and awareness creation messages developed and distributed through different Medias.



VIII. CHALLENGES AND WAY FORWARD

Challenges

- Continued importation of cases
- Quarantine related challenges
 - Poor hygiene and sanitation
 - Failure of the quarantined individuals to adhere to IPC and quarantine protocol
- PPE supply shortage
- Irrational use of PPE (like face mask) by the public
- Shortage of mechanical ventilator
- Failure to adhere to physical distancing and other advises among the public

Way Forward

- Strengthening coordination and information sharing with regions
- Collaborate and coordinate with stakeholders and partners
- Intensify risk communication and community engagement activities
- Active case search for COVID-19 should be enhanced
- Capacity building trainings and orientation should be strengthened (virtual/online).
- Additional case treatment centers and quarantine sites, especially in regions, should be identified and established.

IX. PUBLIC HEALTH POLICY RECOMMENDATION

Advice for the Public:

- 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.

Research findings:

How accurate are COVID-19 tests?

- A meta-analysis was done on 16 registered tests, mostly rapid-tests, to describe accuracy to detect COVID-19 in Brazil (1).
- Pooled diagnostic accuracy measures [95%CI] were:
 - for IgM antibodies Se = 82% [76-87]; Sp = 97% [96-98]; DOR = 168 [92-305] and SROC = 0.98 [0.96-0.99];
 - for IgG antibodies Se = 97% [90-99]; Sp = 98% [97-99]; DOR = 1994 [385-10334] and SROC = 0.99 [0.98-1.00]; and
 - For detection of SARS-CoV-2 by antigen or molecular assays in naso/oropharyngeal swabs Se = 97% [85-99]; Sp = 99% [77-100]; DOR = 2649 [30-233056] and SROC = 0.99 [0.98-1.00].
- The study found that these tests can be helpful for emergency testing during the COVID-19 pandemic but, it is important to highlight the high rate of false negative results from tests which detect SARS-CoV-2 IgM antibodies in the initial course of the disease.
 - Again, it is important to note the scarce evidence-based validation results are published in Brazil.
- In a study conducted to increase the sensitivity of COVID-19 diagnoses, an IgM-IgG combined assay was developed and tested in patients with suspected SARS-CoV-2 infection (2).
- In total, 56 patients were enrolled in this study and SARS-CoV-2 was detected by using both IgM-IgG antibody and nucleic acid tests (the standard test).
- The findings of the study suggest that patients who develop severe illness might experience longer virus exposure times and develop a more severe inflammatory response.

- The study concluded that the IgM-IgG test is an accurate and sensitive diagnostic method and that a combination of nucleic acid and IgM-IgG testing is a more sensitive and accurate approach for diagnosis and early treatment of COVID-19.
- By retrospectively analyzing the data of viral RNAs and serum IgM-IgG antibodies against SARS-CoV-2 it was found that in the early phase of the illness, the viral RNA was most abundant in the sputum specimens, followed by throat swabs, while the antibody assays identified fewer positive cases at this stage (3).
 - Note that the sensitivity of the antibody assays overtook that of RNA test from eighth day of disease onset.
 - Simultaneous use of antibody assay and RT-qPCR improved the sensitivity of the diagnoses.
 - It was also found that most of the cases with no detectable viral RNA load during the early stages were able to be seropositive after 7 days.
- The antibody detection could be used as an effective supplementary indicator of SARS-CoV-2 infection in suspected cases with no detectable viral RNA, and in conjunction with nucleic acid detection in confirming the infection (3).
- A number of factors determine the accuracy of a COVID-19 test result (4).
 - The instrument and chemical reagents used to perform the test
 - The timing and quality of specimen collection
 - The biology of the individual patient.

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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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