1. BACKGROUND

Since its emergence in December 2019 the threat of coronavirus disease (SARS-Cov-2 or COVID-19) has inundated and threatened health systems worldwide. In Ethiopia, there are 5,000 cases and 75 deaths respectively over four months period (March-June 2020). Addis Ababa city has constituted more than two-thirds of the total cases. The Last Ten Kilometers Project (L10K), led by JSI Research & Training Institute, Inc. (JSI) and funded by the Bill and Melinda Gates Foundation (BMGF), has been supporting the Ministry of Health (MOH) and Addis Ababa City Health Bureau (AACHB) to address impacts of the pandemic on the health system and mitigate its effect on essential reproductive, maternal, newborn, and child health (RMNCH) services. L10K, in collaboration with the International Institute for Primary Health Care in Ethiopia (IfPHE), conducted a rapid assessment to understand the immediate effects of COVID-19 on the continuity of essential RMNCH services in Addis Ababa city. The assessment’s objectives were to 1) determine the immediate impacts of the pandemic on the use of routine RMNCH service; 2) explore practices of preventive measures and readiness and responsiveness of the health system and health facilities to COVID-19; and 3) explore the barriers to or facilitators of sustaining routine RMNCH services.

2. METHODS

The study was conducted in Addis Ababa, the seat of the African Union and Ethiopia’s capital city, with 10 sub-cities and 116 woredas, 97 health centers, and 13 public hospitals. L10K employed a descriptive explorative qualitative design. In May 2020, the project conducted 37 in-depth interviews with a purposive sample of 10 health care providers from public facilities, seven health care providers from private hospitals, three city health bureau officials, three sub-city health officers, six urban health extension professionals, five clients, and three community representatives using semi-structured guides. A trend analysis was also conducted to examine changes in essential RMNCH service use for the period July 2019-April 2020 using routine service statistics data from 96 health facilities (84 health centers, six public hospitals, and seven private hospitals).

3. KEY FINDINGS

Overall, health system actors have been making concerted efforts to respond to the pandemic through building the capacity of health workers, providing supplies, enhancing communications and community engagement, and enacting changes in service delivery modalities among others. On the other hand, while the atten-
tion of the health system, including the leadership, shifted to responding to the pandemic, other health services have been negatively impacted. The findings of this rapid assessment suggest that in Addis Ababa, access to RMNCH services has shown notable declines in March and April 2020. Details on the findings of this rapid assessment are presented in line with the three objectives stated above.

3.1 The response of the health system to the pandemic

In an effort to respond to COVID-19, health system actors have worked to build the capacity of the health workforce to prevent transmission of COVID-19, enhanced risk communication and community engagement (RCCE) for community surveillance, enacted changes in service delivery modalities, and strengthened coordination and support for health facilities and among implementing partners.

3.1.1 Orientation and training of staff on COVID-19 and its effect

Health system actors immediately responded to the pandemic by providing orientation and training to frontline health workers and health officials on COVID-19 preventive measures and infection prevention and control (IPC) using varied modalities including off-site training, on-site orientation, and virtual training through mobile applications. However, key informants indicated that health worker trainings lack depth, quality, and breadth of coverage to the most critical staff, particularly those working in isolation and quarantine centers. Health care providers in private health facilities did not get adequate training because of a lack of trainers and loose coordination with the AACHB. Health worker training has been significantly hampered by the state of emergency restrictions on in-person and group interactions.

3.1.2 Designating facilities as COVID-19 isolation and treatment centers

As part of the pandemic response, some health facilities have been designated as COVID-19 isolation and/or treatment centers, and, as a result, non-COVID-19 cases and regular clients must go instead to alternate health facilities. In addition to the burden of clients traveling farther for care, this has resulted in increased workload for providers and overcrowding, compromising the physical distancing efforts at those health facilities. In addition to the health facilities designated as COVID-19 centers, some facilities have isolation corners while also maintaining the provision of routine services.

3.1.3 Risk-communication and community engagement

In response to COVID-19, health centers have established community-based risk communication and community engagement (RCCE) teams composed of Urban Health Extension Professionals (UHE-ps), health center staff, and the police. The RCCE teams conduct awareness activities on preventive measures: hand washing or sanitizing, physical distancing, staying at home, mask-wearing, thermo-scanning, and screening community members for contact and travel history. This also included identifying and linking people who may have COVID-19 to the rapid response teams (RRT) or the national hotline and promoting continuity of essential services. At the beginning of the pandemic, the issues of essential RMNCH services were not well

“…you need a backup of professionals who are currently on duty, ... to alternate and task shift them when it is required. The quality and quantity of training ... are not adequate. So, it is important to explore alternative ways [of training] which don’t involve face-to-face or in-person training approaches - innovative ways with some incentive mechanism.”

– A respondent from the AACHB
integrated with the COVID-19 risk communication activities. Assessment findings show that such essential services, including the referral and linkage of pregnant women and newborns, have been compromised in part because the UHE-ps shifted their focus to COVID-19 related activities.

The major challenges of the RCCE teams include critical shortage of PPE, shortage of UHE-ps; limited or weak engagement of the Women Development Army (WDA); lack of adequate training to boost the confidence of the RCCE teams; misconceptions and reluctance to adopt preventive measures and quarantine; households not cooperative to the RCCE teams and UHE-ps during house-to-house visits; shortage and cost of transportation; and weak coordination with the police. Addressing domestic violence at the time of COVID-19 needs more attention than before and this may be an area of additional training for the RCCE teams.

### 3.1.4 Preventing the transmission of COVID-19

#### Ensuring availability of PPE:
To facilitate the accessibility and availability of PPE as part of the COVID-19 preventive measures, the financial procedures for procuring PPE materials (i.e., masks, gloves, sanitizer, face shields, goggles, and aprons) was eased for public health facilities, even if these needs were hampered by budget shortages. The shortage of PPE is the most critical bottleneck to not only infection prevention, but also to providers’ confidence in interacting with clients and client trust in providers. Health workers are reusing masks and gloves which compromises the safety and wellbeing of both providers and clients. Some UHE-ps are purchasing face masks on their own. The shortage of PPE is more pronounced in private health facilities as they are not able to receive or procure supplies from the government and because of shortages in the market.

**Facility level preventive practices:** Health service providers at all facilities surveyed have devoted resources and effort to best practices for preventing the transmission among clients and service providers, such as handwashing upon entrance; mandatory mask use; appropriate physical distancing; environmental cleaning and disinfecting; client screening based on body temperature, travel and contact history; triage and isolation, and targeted referral for suspected COVID-19 cases.

Challenges of the facility-level preventive measures include lack of PPE; budget shortage for renovations of some rooms and layouts for more physical space; workload; lack of physical structure to conduct the screening at entrances; improper use of face masks by clients and care providers; refusal of clients to comply with the screening and isolation practices; poor referral linkages between facilities and rapid response teams (RRT); and delays in verifying and linking suspected cases to testing and/or isolation centers.

**Community-level preventive practices:** Despite awareness campaigns at the community level, misconceptions around and negligence of individual preventive practices is very concerning. The level of care people took immediately after COVID-19 was reported in the country was high, but physical distancing and appropriate mask usage has lapsed, mainly in public transportation stations, banks, and market places. This has coincided with loose enforcement of MOH-mandated restrictions during the state of emergency.

“A client was screened at our emergency room and was found febrile. He was not willing to stay in the isolation room, rather he escaped out of the hospital and drove away. You can imagine how this person could transmit the virus if he has the virus.”

– A health worker from a private hospital
3.1.5 Change in service delivery modalities and prioritization of services
To minimize the risk of COVID-19 transmission in facilities due to compromised physical distancing or overcrowding, health facilities changed their service delivery modalities, including prioritization of services. Measures taken include multi-month drug refills for up to six months for people who may be at increased risk of the severe forms of COVID-19, such as PLHIV, diabetic, hypertensive, and asthmatic clients; fast-tracking chronically ill and immune-compromised clients and women with newborns presenting for vaccination services; adjusting facility operating hours to accommodate client and health staff transport needs; postponing elective surgeries, services and dental procedures; and prioritizing medical examination services for driver’s license requirements and hotel and other organization employees.

3.1.6 Coordination and technical support
Encouraging efforts have been made to provide a timely response to COVID-19 ranging from early planning of activities and establishment of the RRTs, RCCE, case management teams, logistics team, and Surveillance and Contact Tracing Committees and assigning trained focal people to spearhead COVID-19 specific activities at different system levels.

Task forces chaired by woreda or sub-city administrators were established to coordinate stakeholder activities in woredas and sub-cities.

However, the coordination efforts have been challenged by limited technical support from woreda and sub-city offices for health facilities and RCCE teams; inadequate or superficial supportive supervision; weak multi-sectoral collaboration in ensuring the timely availability of sanitation at facilities and supplies at quarantine centers; purchasing slowed by bureaucratic purchasing processes; and limited involvement of law enforcement bodies in RCCE. There is also poor integration of data sourced from the electronic Community Health Information System (eCHIS) used by RCCE and the national DHIS2 system used by RRTs. As these two systems are not integrated into a single platform, the RCCE teams could not trace suspected cases screened and referred to the RRT. This lack of data coordination has contributed to delayed linking of suspected and isolated cases to the test and quarantine or treatment centers. According to UHE-p key informants, the RMNCH related services they provide alongside the RCCE activities have not been recorded and reported on time. RCCEs have been challenged by shortage of vehicles and the inadequate compensation.

3.2 The immediate effect of COVID-19 on Essential RMNCH services:
The emergence of COVID-19 has affected essential RMNCH service delivery in various ways: a diversion of human and material resources; a shift in the focus of the leadership from essential health services to direct COVID-19 response activities; fear and stigma toward health workers; decreased availability and increased cost of transportation for frontline health workers; and the general decline in people going to health facilities for essential RMNCH services.

3.2.1 Diversion of resources
The health system has made strategic shifts to ensure maximum benefit for the population despite the increasingly limited resources available. As a result, human resource adjustments have shifted staff for COVID-19 response activities. Quarantine
“... it has been difficult to deal with the multi-sectoral collaboration .... It was difficult to ensure non-health services such as sanitation, security services and the likes at the quarantine centers. There have been also challenges in enforcing the wearing of face masks in the community, ... and there are a lot of challenges. There are also challenges in allocating budgets and the purchasing, it is too bureaucratic and very challenging.

– A Respondent from AACHB

centers have drained health care providers from health centers and hospitals, leaving vacancies and reducing capacity to maintain routine services. Staff have been assigned fulltime to RCCEs, rapid response activities, facility-level education, pre-triage, screening, isolation, and case referral, and to woreda and sub-city health offices COVID-19 response teams. The community-level activities conducted by the UHE-ps are reportedly limited by mostly COVID-19 related activities. In addition, some facilities have faced a shortage of budget and drugs and supplies-stock outs.

3.2.2 Health Workers experienced fear, stigma, workload, and difficulty of transportation

Fear and stigma: The rapid assessment findings show that health workers fear contracting the virus while providing services and transmitting it to their families or clients. The fear is accentuated by the critical shortage of PPE and the possibility of acquiring infections from asymptomatic cases. This risk and lack of assured prevention has led to anxiety in health workers who have also experienced stigma not only from their own families when they return home from work, but also from individuals in shared housing or on public transportation and taxis.

Workload and transportation: Additional COVID-19 response activities have resulted in various stressors for health workers: extended work hours and reduced options for and increased cost of transportation, as well as increased risk of their own viral exposure by using public transport. Additional COVID-19 responsibilities include: screening and triage of suspected cases; managing case flow within and referrals to designated COVID-19 treatment facilities; and increased the workload of service providers in non-COVID-19 facilities. The temporary restriction of health workers from taking any leave except sick time has exacerbated the effects of stress.

3.2.3 Decline in RMNCH service use

Study participants in qualitative interviews witnessed that the flow of clients seeking RMNCH services has shown a marked decline immediately after the pandemic. Service statistics from DHIS2 data also show that the number of clients seeking essential RMNCH services showed a decline in March and April concurrently with the first case of COVID-19 reported in Ethiopia in March, 2020. Data was analyzed from 97 health facilities (84 health centers, six public hospitals, and seven private hospitals) for the period between July 2019 and April 2020. Selected maternal and child health indicators including ANC, SBA, post-natal care (PNC), immunization, childhood pneumonia treatment, and under-5 outpatient department (OPD) visits. ANC-1, Early PNC, under-5 pneumonia treatment, and under-5 OPD attendance showed exceptionally low coverage with a drop of below -2 standard deviation in April 2020 from the previous ten months’ average performance. ANC-1 and under-5 OPD visits declined by about 30% and 40%, respectively, in April 2020 from the ten months average coverage. The number of under-5 children treated for pneumonia significantly declined in March and April 2020 at 2792 and only 991 cases respectively compared to the 10 months’ average of 3987 cases treated between July 2019 and April 2020. While strong implementation of preventive measures and increased public awareness about the status of
service provision at the health facilities were facilitators for the use of essential services, the lack and cost of transportation, shortage of budget to provide more space or expand service units, overcrowding and low practice of physical distancing, fear of infection, inappropriate mask-wearing, perception of clients that health facilities take care of only COVID-19 cases, and the perception that pregnant women are more affected by the diseases, and others were identified as factors that contributed to low use of facility level essential health services. In some instances, pregnant women preferred to go to private health facilities for skilled delivery attendance to avoid crowds and reduce the risk of infection in government health facilities. Rumors circulating within the community regarding isolation and quarantining also impacted clients’ decisions not to visit health facilities, including women choosing to deliver in their homes.

Despite the total shift in the attention of the leadership away from routine services at the beginning of the outbreak, recently sustaining routine essential services has become major agenda of the leadership at all levels with the understanding that the morbidity and mortality rates due to disruption of routine services could be by many folds more than the effect of COVID-19 itself. According to a respondent from AACHB, “if there are services to be compromised due to COVID-19, RMNCH will be the last one.” Subsequently, according to the key informants from health facilities, client flow has regained momentum following the implementation of the preventive measures taken by the health facilities which enhanced the confidence of clients and care providers for service delivery and use.

4. CONCLUSION AND RECOMMENDATIONS

Conclusion
The health system in Addis Ababa has made encouraging efforts in responding to the COVID-19 pandemic, ranging from training of health workers to the establishing response teams and committees. However, these measures have resulted in the diversion of human and other resources which have compromised the capacity of health facilities to sustain essential RMNCH services. Reduced RMNCH services use is also attributed to movement restrictions, the perception that facilities were closed, and
stigma and fear of acquiring infection from health workers or at transportation facilities due to overcrowding. The shortage of PPE combined with low level of psychological readiness of frontline health workers to handle the sudden stress of the COVID-19 response threaten maintaining RMNCH services while responding to the pandemic. The shifting of clients, especially for delivery services from the public into private health facilities in fear of being infected because of crowded facilities, is worth noting given the more pronounced limited availability of PPE and lack of training to the health workers in these facilities.

**Recommendation**

Evidence-informed, swift responses, including measures to boost the confidence of health workers and clients, are pivotal to alleviate the impact of the pandemic. Sustaining and further strengthening preventive practices at health facilities, including addressing PPE shortages, establishing effective patient flow to optimize physical distancing, strong infection-prevention practices, and triaging to quickly identify symptomatic clients, will increase the confidence of clients and protect health workers from the virus. Private health facilities should be engaged and supported in preventing the pandemic and in ensuring continuity of essential services through training of health workers, introducing alternative supply chain systems, and strengthening coordination and referral pathways. The overall coordination of facility and community level activities between the RCCE and RRT needs to be improved through strengthening referral and communication linkages and data sharing and using data for decision-making by creating a workable platform that ensures or improves the interoperability between the eCHIS and DHIS2 systems.

It is also crucial to sustain the commitment of health workers by addressing their daily realities of newly-stressful transportation and workload issues, coupled with their increased risk of viral exposure due to lack of consistent PPE. An additional consideration is implementing different motivation mechanisms in addition to addressing these needs. Health system actors may need to consider how to compensate workers for their extra efforts and recognize and honor their commitments. Frontline health workers should have proactive and timely psychosocial support including monitoring and management of burnout and stress, training on handling stigma and discrimination, and appropriate rest and recuperation options. Like any segment of the population, those health workers who are highly vulnerable if sickened may need to be reassigned to tasks with low risk of exposure to the virus. Also, devising a mechanism for continuous training or sharing of up-to-date information and any new developments regarding the diseases will help in filling capacity gaps including improving their psychological readiness among health workers and building their confidence. This may include initiating rapid training mechanisms and the provision of job aids for crucial competencies about diagnosis, triage, screening, clinical management, mitigation of stigma and discrimination, and essential infection prevention and control approaches. Use of digital technologies could play vital role in virtual consultation and counseling, and sending of text messages or updates to keep mothers abreast of the latest health facility access information using current and existing electronic tools and platforms.

At community level, UHE-ps need to be closely monitored and should receive the necessary support to maintain the referral linkage at PHCU levels and reduce the negative impacts on RMMNCH outcomes. Addressing domestic violence at the time of COVID-19 needs more attention than before. Communities need to receive current, life-saving, comprehensive information on transmission, prevention, and treatment in multiple and accessible formats. To ensure public health security and produce positive outcomes related to MNCH amid the pandemic, there might be a need to introduce context-specific interventions within communities and at the primary health care unit level including strengthening outreach services through deploying equipped health workers/midwives if women stop seeking in-clinic checkups and institutional deliveries for fear of infection.