

COVID 19 response in Ethiopia: Experiences of the National clinical advisory team

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Abstract

Background: After the first few cases of COVID 19, the Ministry formed a medical expertise group consisting of 12 multi-disciplinary teams on March 18th 2020, to advise on containing the disease, prevention, and to provide treatment for the affected individuals. The present study describes the experience, input, and challenges faced by the national clinical advisory team during the pandemic response (1).

Objective: The aim of this study was to review the experience and contribution of the clinical advisory team in response to COVID 19 in Ethiopia for future related actions.

Methods: A qualitative descriptive analysis of clinical advisory team contributions for pandemic control.

Finding: The multi-disciplinary team was formed by the Minister to provide a high-level advisory role, develop different protocols, guidelines, recommendations, and clinical formats, and for the involvement in the establishment of quarantine, isolation, and treatment centers.

The team provided mentorship in all regions and city administrations of the country on the site and virtually. Advisory team analysis and interpretation of timely evidence had a positive contribution to pandemic response, and it made the policymakers' decision evidence based. During the stay, the team had closely worked with multiple agencies, institutions, and associations.

Avoiding role confusion, having clear coordination and communication in an emergency can result in avoidance of duplication of effort and rapid early implementation of response measures.

Conclusions: The contribution of the team has created a great opportunity by providing scientific guides and recommendations for policymakers, clinicians, and health facility leaders. [*Ethiop. J. Health Dev.* 2021: 35(SI-4):00-00]

Keywords: COVID 19, Clinical advisory team, pandemic.

Introduction

On December 31, 2019, for the first time in Wuhan city, China, a new type of coronavirus was identified and named SARS COV 2. The virus spread rapidly around the world; Outbreak was declared as a public health emergency of international concern on January 30/2020. In March 2020, the World Health Organization declared a global pandemic.

Ethiopia has been taking different preparatory strategic response measures since late December. (1) On March 13, 2020, the Ministry of Health (MOH) had confirmed the first COVID-19 case in Addis Ababa, Ethiopia. As of January 17/2021, there were 131,195 COVID-19 cases reported in Ethiopia. (2) Experience from different parts of the world indicated that prioritizing in allocating the limited resources for the prevention of transmission of the disease and implementation of a uniform and evidence-based prevention and treatment protocol at all levels of the health care system throughout the country under central command, is believed to be crucial for optimal utilization of the resources (3). To deliver all preventive and treatment efforts based on scientific evidence, MOH gave due emphasis on expertise inputs and organized a clinical advisory team from different areas of expertise.

The Ministry of health and the Ethiopian Public Health Institute (EPHI) have organized various teams to respond to this pandemic. One of the teams is the

national clinical advisory team (NCAT) which was established under the ministry and has been providing periodic evidence-based guidance, which was focused on the clinical perspective to the Ministry and EPHI leveraging its effect to build their capacity in managing COVID 19 (1,2).

In this article, we describe the experience of the NCAT so that a lesson can be taken for any future activity.

Methodology

Study Design, Sampling and Methods: The present qualitative study is a secondary data review using a cross-sectional design performed by reviewing various documents (protocols, standard operation procedures, interim guides, and performance reports) developed since the establishment of the NCAT, that may indicate the productivity of the team in each month. In this study, in addition to the performance report review of the clinical advisory team, different output documents that were endorsed as well as published during the pandemic response were reviewed by experts. Following the review of relevant documents like publications, formal reports, meeting attendance, media outputs, we categorized the performance, experiences gains, and challenges faced by the team, and discussed four thematic areas (NCAT establishment and operation, Evidence generation, Health facility support, and public health support). The experts conducted a narrative review to extract concepts.

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Findings***NCAT establishment and operations***

The NCAT establishment: After the identification of the first few cases of COVID 19 in Ethiopia, medical expertise consisting of 12 teams were recruited and started the clinical advisory role on March 18th, 2020. A multidisciplinary team composed of internal medicine, Pulmonary & Critical Care, Infectious Disease, Emergency & Critical Care, Surgeons, Gynecology/Obstetrics, Pediatrics, Public health experts and other related professionals (based on need) was established.

The NCAT was established and governed by a Term of Reference which was signed between MOH, and the team. Action plans were prepared jointly with MOH and regularly revised as needed, following the dynamics of the disease.

NCAT operations

The team output was regularly monitored based on weekly formal reports and daily personal communication with NCAT represented by the team lead, which was live streamed with MOH and other stakeholders, forwarding recommendations, receiving feedbacks and directions. In their course of stay,

NCAT developed multiple protocols, and guidelines, which were flagged on the MOH website.

Review of literature, evaluation of quality of care, personal experiences on managing patients with COVID 19, site visits, news output, and local data on the progress of the diseases, team members' network inputs and feedback from stakeholders guided the formulation of recommendations and guidelines. Moreover, it helped in synthesizing research questions aimed to mainly capture the clinical manifestations and consequences of SARS COV 2 infections. Both Planned and emergency activities were carried out daily by the team, as the team was on board full time.

The team worked closely with regional and national agencies, institutions, and committees commonly working with EPHI, Regional task force, Scientific Advisory Council, National COVID 19 research task force, and MOH directorates.

Evidence generation

Developed Protocols and Guidelines: The protocols and guidelines developed are summarized in Table 1. Which mainly consisted of the management of patients with COVID 19 and data capturing tools.

Table 1. Developed protocols guidelines and clinical formats

Month	Activities
March, 2020	National comprehensive COVID 19 management handbook first edition
April, 2020	Comprehensive Essential Services Implementation guideline developed, and briefing made to ministry Clinical COVID 19 management Training manual Maintaining Essential Services Implementation guideline COVID 19 patient consent form Clinical data registry format Lockdown recommendation Targeted surveillance in community recommendation Dead body transportation /handling recommendation
May, 2020	Guideline for public face mask use COVID 19 Health facility Minimum standards COVID 19 Facility preparedness assessment tool Home base COVID 19 management protocol Interferon alpha 2B and Biomodulin T for COVID 19 use recommendation
June, 2020	COVID 19 Knowledge sharing program project proposal Private facility COVID involvement regulation review Private facility COVID 19 practice protocol National Tele-health protocol COVID 19 Pocket book for clinicians COVID 19 nutrition guide Health facility essential services M&E tool
July, 2020	COVID CPR guide Safe surgical, antithetic care guide for COVID 19 National comprehensive COVID 19 clinical guide second version COVID 19 patient dialysis protocols Facility readiness and management strategic plan TB and COVID 19 integration guide Tackling potential COVID 19 surges following the civilian unrest recommendation Dexamethasone use recommendation School reopening in era of COVID 19 recommendation Health resilient system development recommendation
August, 2020	Home isolation registry format Home isolation consent form

Engagement in research

Following the National Research Task Force research direction, the team published the first 33 COVID 19 patient cases series in Ethiopia and a descriptive analysis of COVID 19 deaths in Ethiopia from a reputable national journal, conducted death reviews, and implemented research questions addressing clinical findings and consequences of COVID 19 in Ethiopia. Researches on progress done by the team: Pediatric COVID 19 clinical features in Ethiopia, Prognostic factors and outcomes of COVID 19 multi-site Cohort study, retrospective COVID 19 death quality audit and factors influencing adherence to care standards in Ethiopia, radiological features of COVID 19 Patients in Ethiopia, risk factors, perceived transmission mechanisms and infection control practices among COVID 19 infected health care workers, clinical review of COVID 19 in Ethiopia, Experience of maintaining essential services in Ethiopia in the era of the pandemic and experience and opportunities of critical care advancement during pandemic in Ethiopia were areas of interest.

COVID 19 Facility support

Establishment of quarantine, isolation, and treatment centers: The team supported the establishment of quarantine, isolation, and treatment centers in two city administrations and ten regions including the establishment of the first COVID 19 treatment center. Eka kotobe general Hospital was the first dedicated facility with limited experience, NCAT, MOH and EPHI helped its establishment by mobilizing a disaster medical assistant team, which had Ebola and other disaster response experience.

Regional health care system support: Supportive supervision and mentorship had been provided for all regions in the country in the following areas: sensitization and alignment of the regional task force with the national COVID-19 response, assessment, and feedback for isolation, treatment, and quarantine centers, establishment of the regional clinical advisory team, and revitalization of the disaster medical assistance team. The team cascaded its experience and recommendations through different channels of which regional clinical advisory team establishment was the most rewarding.

Clinical care support: The team had been involved directly in patient care as well as providing consultation services including phone consultations 24/7.

Human resource Capacity building: The team participated in preparing training materials and trained health care professionals in collaboration with EPHI, Health Professional Associations, and MOH.

Public health support

COVID 19 Public education: Taking into consideration the importance of educating the community, NCAT used the different Media platforms for public education purposes, to deliver successful health education on topics related to COVID 19.

Difficulties encountered and measures taken: The unprecedented global rapid spread of coronavirus was a stress-inducing event for those involved in the COVID 19 response, as the impact in resource-limited countries like Ethiopia, was presumed to be dire. Similarly, our team faced the following challenges in the course of stay: Limited experiences all over the world, lack of communication guidelines with other stakeholders during an emergency situation as we did not have preexisting emergency and disaster response plans, duplication of developed documents, overlapping roles and responsibilities among different stakeholders, delay in development, endorsement and dissemination of protocols and guidelines, and incompleteness of data, poor understanding of the role of NCAT by some agencies and directors at the FMOH, conflict of interest from other committees and task forces, lack of a clear structure and standard operating procedures between the different committees, lack of a budget and incentive for the team, and overburdening team members as a result of emergency and unplanned activities requested by different structures of authorities of FMOH.

Despite multiple challenges, the team productivity was appreciable, and the team used formal and informal methods of conflict resolution such as accommodation, compromising and cooperation.

Discussion

The present article aimed to discuss the experience and contribution of the clinical advisory team in response to COVID 19 in Ethiopia. The composition of the team was an experienced multidisciplinary of professionals, with responsibilities being shared based on experience and expertise, and which contributed to the COVID 19 response.

Similar structures have been organized in many countries like the government of Western Australia Department of Health (4), which established a multidisciplinary COVID-19 Pandemic Infection Prevention and Control Clinical Advisory Group. Similarly, University of Kansas also established a Pandemic Medical Advisory Team (PAT) which comprised of medical doctors and public health officials, who assisted the state of campus operations to COVID-19 pandemic in the US (5). Such advisory teams have been engaged in reviewing and giving evidence-based recommendations for the general health system.

Many countries in the world have learnt from similar previous epidemics from their country or other countries and always have a team on standby, which regularly convenes and discusses surveys, analyzes, and reports potential epidemics to create resilient healthcare systems.

Our team focused in the beginning on organizing treatment centers and drafting protocols that can address basic preventive and treatment strategies. The teams' habit of regular desk review of international guidelines and literature and customization to local set ups, enabled the Ministry to be able to make evidence-based decisions.

In the beginning of the pandemic there was anxiety and uncertainty from facilities that were being prepared to handle the cases. Therefore, the team's recommendation on the organization of COVID 19 treatment centers has helped to have a common understanding and uniform organization throughout the country. Scaling up of similar centers at the lower level of the health care structure was not difficult.

Protocols on prevention, testing, treatment and follow up of patients was crucial, as it encourages for proper utilization of the limited resources the country has, at all levels. The team has tried to develop protocols taking the local situations into consideration. International recommendations that demand resources beyond the country's capacity was customized to the local capacity without compromising safety.

In addition, the fact that there has been an overall trend improvement of efficiency and timely publications of protocols and guidelines within the MOH during the period of the team stay, suggests a possible positive contribution of the clinical advisory team on the pandemic's response in general. The team also published two original articles in reputable journals and more than seven on the publication process. (6,7)

The team's role was not limited to developing specific protocols but also with monitoring the proper implementation of the different protocols. Virtual discussions with regional stakeholders and actual site visits were demanding for the team but were the most important pillars for the success of the team.

The team was involved in patient care consultation from fellow treating physicians, according to their expert areas that may have a direct impact on patient outcomes. The existence of such an organized team, especially in the first few months may result in development of confidence for frontline health care workers.

It is a fact that the involvement of professionals in the public COVID 19 education programs, through main Medias may have contributed to creating awareness and improving practice on non-pharmaceutical preventive mechanisms.

In the process, the team had communicated closely with multiple agencies, institutions, and associations. During the work process NCAT faced few challenges, such as role confusion among stakeholders, in some cases protocols and guidelines developed by two or more stakeholders at the same time for similar topics. Cognizant of this situation the advisory team developed guidelines on engagement of stakeholders. Such an interaction created a platform for developing concepts through discussion, as well as negotiation. It is a fact that conflicts of interests and challenges are inevitable but can be minimized through a different system. The team used different conflict resolution means, such as collaboration, negotiation, and accommodation.

Improvement has been made by the advisory team, through avoiding role confusion, having clear coordination and communication in emergency situations, which can result in avoidance of duplication of effort and rapid early implementation of response measures which result in effective response outcomes.

Limitation

The study was a cross sectional review of secondary data, utilizing a short study period, and being non-triangulated are considered limitations.

Ethical Considerations:

Permission has been granted from Ethiopian Ministry of Health (MOH).

Conclusions and recommendations

NCAT establishment is a wise measure that resulted in expert's involvement in planning, generating evidence, local protocol, guideline preparation for immediate use, and clinical capacity building during emergency situations. This can be extrapolated to the routine MOH activities by forming a permanent multidisciplinary team to support the Ministry. In such pandemics and other emergencies, MOH must have, a clear, standard operation procedure with a clear administrative structure, centralized command chain, and task force alignment for the different task forces.

References

1. Federal Ministry of Health report to the House of Representatives on COVID pandemics in Ethiopia. September 2020.
2. Ministry of health .*Ethiopia COVID 19 monitoring platform*. <http://www.moh.gov.et/ejcc>. : Ministry of health ; 2021.
3. Ministry of health. *National comprehensive COVID 19 clinical management handbook*, 2nd ed. <http://www.moh.gov.et/ejcc>. : Ministry of health ; 2020.
4. Government of Western Australia Department of Health: COVID-19 Pandemic Infection Prevention and Control Clinical Advisory Group-Terms of Reference, V1.0: ww2.health.wa.gov.au, 7 May 2020
5. The University of Kansas Pandemic Medical Advisory Team, Pandemic Advisory Team Decision-making framework for Changes to State of Campus Operations: ku.edu PROTECT KU, 2021
6. Membahu Saltan, Desalegn Kene, woldesenbet Waganew, Aschalew Worku, Aklilu Azazh, BazaGirma . Clinical Characteristics of COVID-19 Related Deaths in Ethiopia. *Ethiop J Health sci*. March 1, 2021; 31(2): 1-4
7. Sisay Teklu , Menbeu Sultan , Aklilu Azazh , Aschalew Worku , Berhane Redae , Miraf Walelegn. Clinical and Socio-demographic Profile of the First 33 COVID-19 Cases Treated at Dedicated Treatment Center in Ethiopia. *Ethiop J Health Sci*. September 1, 2020; 30(4): 1-6.