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BRIEF COMMUNICATIONS

BUILDING A COVID-19 REPOSITORY WEBSITE FOR HEALTHCARE PROFESSIONALS IN ETHIOPIA

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ABSTRACT

Health professionals dealing with the COVID-19, both in clinical care and in the public health domain, require up-to-date and relevant scientific information. The Diaspora and Ethiopian Advisory Councils on the COVID-19 pandemic in Ethiopia joined forces with the Ethiopian Medical Association to create a local repository of comprehensive peer-screened information on COVID-19. We describe the motivating factors for such a repository, the process of creating the website, and the utilization of this information resource for Ethiopian healthcare professionals.

INTRODUCTION

The international medical community has had minimal experience with the fast-evolving COVID-19 pandemic (1). For medical professionals in low-resource countries such as Ethiopia, the learning curve is even steeper due to the lack of an authoritative, comprehensive COVID-19 information resource specifically targeted for the country. In response to this deficit, the Children's Hospital of Philadelphia (CHOP) Department of Radiology's Global Radiology Outreach and Education team collaborated with the Ethiopian Diaspora High-Level Advisory Council on the COVID-19 Pandemic in Ethiopia, the Ethiopian Health Professionals Advisory Council on the COVID-19 Pandemic in Ethiopia, People to People (P2P), and the Ethiopian Medical Association (EMA) to establish a comprehensive COVID-19 medical information website (2).

Ethiopian healthcare professionals can access and navigate this repository to find up-to-date COVID-19 resources that will inform clinical and public health practices. Each publication, guideline, or webinar on the website is peer-screened to ensure its relevance for medical and public health practice in the country. The project was initiated in April 2020 and the webpage was launched on June 19, 2020. In this paper, we describe the background for initiating this project, the process of creating it, and the outcome of our effort.

Lack of a local comprehensive COVID-19 information resource for Ethiopian healthcare professionals : The volume of information on COVID-19 on the internet is staggering (3, 4, 5). In a Google search on April 19, 2020, the term "COVID-19" generated 2.3 billion entries (6).

In comparison, the word "Ebola" garnered only 59.9 million entries (6). On the same day, the central resource for scientific medical publications, PubMed, showed 5,279 publications on COVID-19 since January 2020, i.e., published within fewer than 4 months (7). In contrast, on PubMed there are only 9,045 publications on Ebola spanning the past 43 years. These numbers illustrate how daunting it can be for busy healthcare professionals to navigate through the myriad of scientific and non-scientific information on COVID-19.

In a matter of weeks, the COVID-19 pandemic became a worldwide crisis (8). The dearth of knowledge has spurred a flurry of research activities leading to publications in unprecedented numbers and at a breakneck pace (9). For the first time, publications are bypassing formal online or print processes and being circulated in early formats in order to accelerate the sharing of new scientific information (10). Furthermore, most journals have made COVID-19 publications available as free downloads. In addition to the scientific publications, epidemiological reports from a multitude of sources are appearing in real time (11). Healthcare institutions and government agencies are quickly generating COVID-19 guidelines and recommendations, which are frequently revised as our understanding of the virus develops.

In Ethiopia there was no authoritative local resource of comprehensive information on COVID-19 that had been designed specifically to support healthcare professionals. In the early months of the pandemic, as medical knowledge about the new virus rapidly evolved, it was imperative to provide a central, well-organized,

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easily accessible source of information with peer-selected clinical, research, and educational materials that would support Ethiopian healthcare professionals in combatting the spread of COVID-19. The Ethiopian Ministry of Health (MOH) was providing information primarily targeted to the public. On accessing its website on April 19, 2020, we found 19 posters, 2 brochures, 2 videos, 2 documents, and 3 online courses that required login access (12). Only the latter two resources were meant for healthcare professionals. Similarly, EMA had on the front page of its website some information about “Do’s and Don’ts regarding COVID-19” and a resource tab with a COVID-19 page.

On April 19, 2020, this page contained 19 COVID-19 protocols, which were mostly local resources (13). EMA and the Diaspora COVID-19 Advisory Councils collaborated to address the discrepancy between the abundance of COVID-19 information worldwide and what was easily accessible to Ethiopian healthcare professionals. In response, we developed an organized, comprehensive medical information resource targeting healthcare professionals.

The development of the COVID-19 repository website: The development of the website was a collaboration between CHOP’s Department of Radiology’s Global Radiology Outreach and Education team and EMA. The repository lives on the main website (www.ethiopianmedicalass.org) of EMA (Figure 1). This publicly accessible site serves as a local and centralized resource center with a repository for comprehensive and peer-screened information on COVID-19 which is available as full pdf files or videos. It also houses COVID-19 oriented diagnostic and treatment protocols selected for local healthcare professionals. Other professional societies and agencies, including those of all ancillary health services, are encouraged to establish links on their websites that would direct users to this central EMA COVID-19 repository.

The first task in developing the repository was to designate a coordinator. The person in this role communicated with peer screeners, facilitated selection of documents, and sent documents to the EMA webmaster. A webmaster was necessary to create and maintain the webpage, organize documents into pre-determined categories, and provide webpage access data. In order to ensure that the repository did not become an indiscriminate “dumping place” of COVID-19 information, 49 medical specialists and sub-specialists served as peer-screeners to share publications they deemed important for their specialty and to review the documents in their category for suitability.

Most relevant subspecialties related to COVID-19 were represented from both the clinical and public health aspects. Included in the clinical subspecialties were the following: Anesthesiology, Cardiology, Emergency Medicine, Hematology, Intensive Care Medicine, Internal Medicine, Neurology, Obstetrics, Palliative Medicine, Pulmonology, Pathology, Pediatrics, Radiology, Primary Health Care/Family Medicine, Surgery, and Treatment. The public health sector encompassed Epidemiology, Infection Prevention & Control, Mental Health, Modeling, Pharmaceuticals, Personal Protective Equipment, Testing, and Vaccination. Nursing was incorporated as well. The peer screeners were from Ethiopia (28) and the diaspora (21). Most of the peer screeners from Ethiopia and the diaspora were paired in their respective subspecialties to ensure a smooth transition when the website is eventually taken over by EMA.

The management of the COVID-19 repository website: Management of the website includes the following components: the coordinator contacts peer-screeners bi-weekly for any publications needed to be uploaded to the webpage, requests peer screeners to review entries in their designated category, searches for new scientific literature, and sends new publications to the webmaster to upload to the site. The coordinator ensures documents are saved using a uniform naming system and keeps track of submitted documents.

The website contains a wide range of clinical content under the most important subspecialties regarding COVID-19, encompassing important public health sub-categories, nursing, and a section for recorded webinars on various clinical and public health topics. It also provides clearly visible sections for guidelines and recommendations from the Ethiopian Diaspora and Local High-Level Advisory Council on the COVID-19 Pandemic in Ethiopia, the MOH, and the World Health Organization (WHO) COVID-19 websites.

The repository website was not meant to replace PubMed or other similar resources. Instead, the unique offerings of this website are the disease focus, the fact that the documents have been peer-screened and are relevant specifically for clinical care and public health practice in Ethiopia, that its PDFs are directly available for fast resource download, and its easy webpage navigation and search function. Finally, a key feature is that this is a locally maintained website easily accessible to Ethiopian healthcare professionals.

COVID-19 repository website traffic outcome and sustainability: A webinar launch was held on June 19, 2020 to inaugurate the COVID-19 repository webpage. The leadership of all the medical and public health professional societies in Ethiopia were invited to attend this virtual meeting. The webinar was also livestreamed on the EMA's Facebook page to reach a broader audience. By April 2021, 584 documents were uploaded on the website and over 31,000 people accessed it. On average, documents have been downloaded 2,856 times monthly by site visitors (Figure 2). Since the release of the website, site visitors from Ethiopia have downloaded documents 20,230 times.

In fact, the publications have also been downloaded from other countries, including the USA, India, and China (Figure 3).

The goal is for the repository website to be sustained by local stakeholders. The collaboration between CHOP and the EMA is meant to initiate the first phase of this repository. Soon, there will be a transition of the coordination from CHOP to EMA, and EMA will take on the responsibility of maintaining the site and curating up-to-date resources.

Figure 1: The front webpage of COVID-19 Central on the website of the Ethiopian Medical Association (EMA).

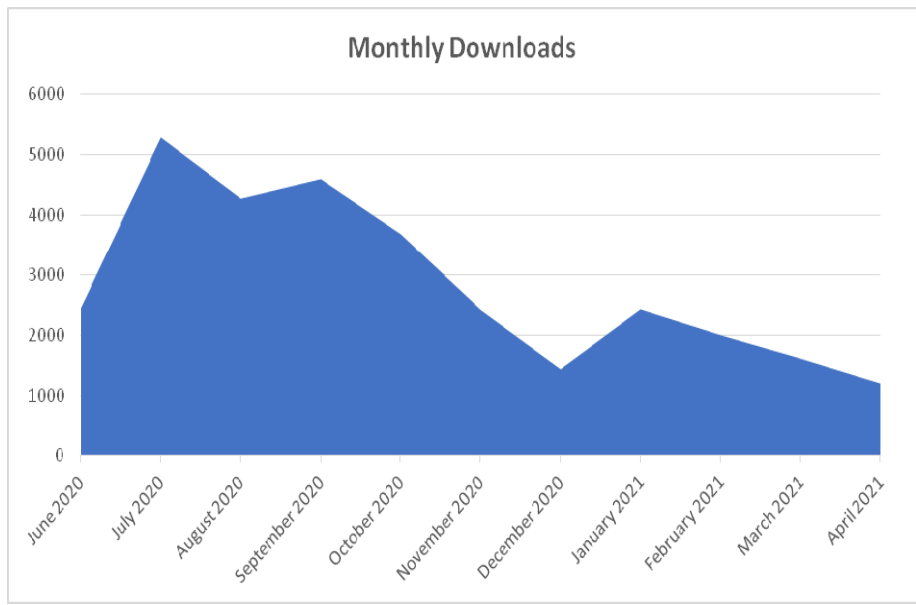
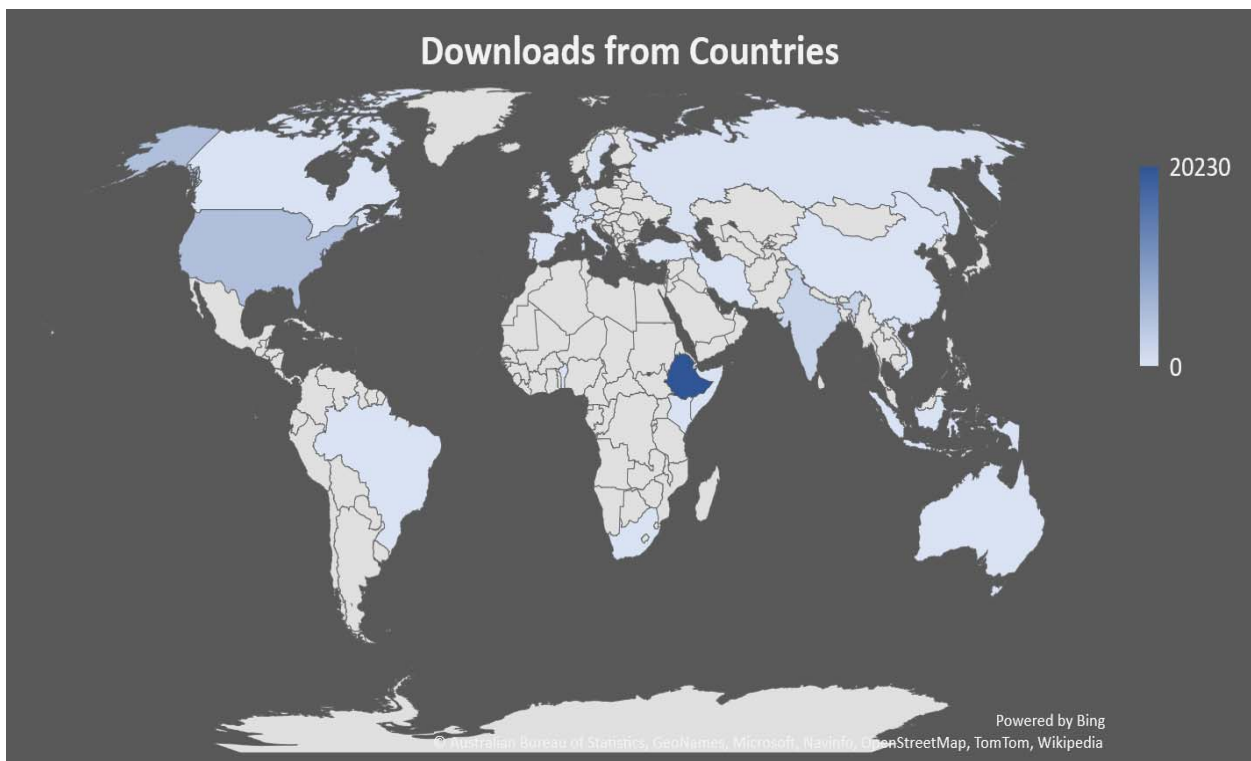


Figure 2: The number of monthly downloads from the COVID-19 Central webpage on the Website of the Ethiopian Medical Association (EMA).

Figure 3: Geographic distribution of downloads from the COVID-19 Central webpage on the website of the Ethiopian Medical Association (EMA).



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