

TeleCoronavírus Implementation Plan



Definition of the proposal

This project is a free telephone health service for screening of respiratory infection during COVID-19 epidemic in the State of Bahia- Brazil. The service is operated remotely by medical students. The initiative is coordinated by a team of researchers and professors from Oswaldo Cruz Foundation-Bahia (Fiocruz-Ba) and Federal University of Bahia (UFBA) and has a collaboration network formed by public and private universities (BAHIANA - School of Medicine and Public Health, Bahia State University, State University of Feira de Santana, State University of Santa Cruz, State University of Southwestern Bahia, Federal University of Recôncavo da Bahia, Federal University of Southern Bahia, University Center UniFTC, Universidade Salvador, Unime). Technological solution for remote assistance is provided by Government of Bahia State.

Objective

To reduce the unnecessary attendance to health care units, consequently decreasing viral transmission and contributing to flatten the curve of the epidemic. This strategy contributes to preventing the collapse of the health network.

Strategy

Based on the experience of telephone guidance programs (such as the Integrated Regional Network for the Attention to Acute Myocardial Infarction), provide and maintain a Virtual PABX service compatible with VoIP SIP technology with redirection and inform a toll-free number widely. Considering the period of installation of this proposal in Bahia and the phase of the epidemic in the State, we estimate that the initiative should last for four months. During this period, medical students will work remotely, screening, classifying cases, and indicating the necessary guidelines to the patients. The remote strategy of receiving calls on their cell phones aims to avoid the crowding of people in a closed call-center environment, as well as to reduce the displacement of volunteers, essential aspects for the protection of volunteers, and reinforcement of the social distance strategy. Using a message App, students are remotely supervised by residents and physician.

Phases:

1. Recruitment of volunteers:

- Profile of attendants: Recruit 1,200 medical students, with the following characteristics: a) belong to the last two years of the course; b) be recognized and authorized by their educational institution; c) have the availability to work as volunteers in four-hour shifts, and a minimum effort of 2 shifts from Monday to Friday, including holidays, and 1 shift during weekends.
- Recruit 150 medical residents or physicians, with the following characteristics: a) preferably retired or specialized in areas not directly involved in front-line assistance of COVID-19 cases; b) accept voluntary participation; c) agree to act as supervisors for groups of interns during the service period.
- Recruitment disclosure: Recruitment of interns will be carried out through the School Boards and Academic Directories. For doctors, the disclosure will take place with the support of the Bahian Medical Association, and by the press.

2. Service preparation:

- Flowchart: - A flowchart for screening patients was produced by a team formed by medical professors from UFBA and Fiocruz and updated based on official information from the Ministry of Health and SESAB. Each version of the flowchart receives the updated date. The most recent flowchart will be available on a website updated daily and students are advised to consult the most current version before each service shift.
- Video training class - a video lesson of about 20 minutes was created based on the service flowchart (see intervention design). The videos were produced by a multidisciplinary team of volunteers including technicians and professors from the universities. Additional short lessons (up to 5 minutes) on topics pertinent to clinical, ethical, and social conduct are released periodically.
- Training of volunteers - volunteers will be trained through a virtual teaching platform.
- Physicians and students have their identities confirmed through official lists provided by medical schools and regional medical board of Bahia (CREMEB)

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- Before and after the online training, the students take an online quiz to certify the comprehension.
- After training, they will have their cell phone registered in the call center so the center can direct users' calls.
- Formation of shift groups and definition of schedules - each shift group will be formed by a physician supervisor and about 20 students. The groups will be allocated to attend 1 shift of 4 hours of work from Monday to Friday, including holidays each week, and one shift during weekends every two weeks. In this way, the Tele Coronavírus will operate 12 hours a day, seven days a week (from 7:00 am to 7:00 pm).
- The supervisor of each group can review the data filled in the web application by the members under his tutelage to prevent any wrong orientation.
- Representatives of academic institutions were gathered via Message App groups to disseminate the strategy, operationalize in each institution, and referrals on the operation of the TeleCoronavirus.

3. Operationalization of call center:

- Infrastructure - operated by Bahia State Government
- The academic coordinators will create and manage all the groups formed by a medical supervisor and around 20 students
- A web application was developed by FesfTech, to register clinical and social-demographic informations. The application will be filled out by the students during tele orientation. The data will be stored and analyzed to provide information to the Health Department, optimizing the allocation of human resources and medical supplies to the public network.
- Data processing - the collected data will be analyzed for the construction of dynamic panels and decision-making guidance.

4. Intervention design

- I. While waiting on the line, the patient receives information on preventing the spread of the infection.



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- II. The volunteer will take a welcoming approach and apply rapid protocols for screening and evaluating patients over the phone that define the orientation of staying at home or going to the emergency unit
- III. Classified as mild case - receive guidance on measures to prevent the spread of the virus
- IV. Classified as moderate to severe case or patients with risk factors for complications – Inform which health unit should go and how they should behave during transportation (ways to minimize virus dissemination)
- V. The volunteer will advise the patient which is the nearest health facility. The guidance will be done based on the data of the city and neighborhood requested directly to the patient and consulted the list of Health Units will appear in the web application. The list of Health Units will be kept updated by government.

Cost

The call center is set up by telephone operators coordinated by the state government. The service to the population and coordination is carried out by a multidisciplinary team of volunteers.

Duration

The Tele-Coronavirus is expected to last for 3 to 4 months considering the evolution of the epidemic and the volume of incoming calls.

Expected impact

Telecoronavirus should work 7 days a week, from 7:00 am to 7:00 pm and possible changes will be made based on the assessment of the epidemic course. The volunteers will work in 4-hour shifts and with 80 simultaneous service channels. Considering an average of 4 calls per hour by volunteer, 60 simultaneously channels, and 12 hours of service, we will have an average potential of 2,880 calls per day. Adjustments to this potential capacity will be guided by the analysis of the plant's performance and dependent on the availability of volunteers.



Steps to implement:

1. Student recruitment

- a. Personal communication with medical school coordinators: These confirm interest, spread the opportunity among their students, and provide a list of enrolled students with a name and registration number to send the coordinating team to be a check of the records before confirming registration.
- b. Training strategy - before and after watching the video lesson, students must respond to a quick objective quiz about the video content. After approval, they can start attending.
- c. Distribution strategy of students/physician by team - students with confirmed registration are distributed in 4-hour shifts per day. This group will always work at the same service hours to facilitate the formation of groups with a supervising physician.

2. Call center

- a. Implementation of the registration of numbers - the list of students per shift is forwarded to the call center, any changes are updated daily.

3. Medical recruitment

- a. Physician: Pre-registration informing available working hours. Every pre-registration involves name, natural person register, medical license number, and specialty (if applicable). Every registration is checked through the regional medical counsel's website.
- b. Implementation of tutoring groups through a cross-platform messaging application: According to the availability of doctors, a group of students is formed and all doctors who will work with that team are included.



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Fesfttech

State Government of Bahia