empowered by clearly explaining and pasting their time allocation as a sticker on their clinic record book. Also, telemedicine was activated in order to connect the services over the phone consultation. Thus, facilitates unplanned visits, satisfaction to the patients with the new appointment system as well as prevent congestion.

The 2nd challenge was how to provide a first line protection for patients as well as staff from the suspected COVID 19 cases visiting to the center. A handwashing tap system was arranged by the patient welfare society at the entrance of the center in order to facilitates the hygienic practices. Also, a triage system was developed at the entrance of the building. Health attender was trained to carry out the triage as well as patient's involvement was encouraged. The checklist of triage included temperature, symptoms and contacts with cases and suspected cases. The reflection of the pilot plan was discussed with staff and patient welfare society members of FHC, Kondavil. Patients involved and developed a permanent triage system at the entrance of the center. That facilitates to prevent the community spread as well as routine works of the FHC, Kondavil.

The 3rd challenge was how to reduce the 'person to person' exposal time duration to avoid unwanted exposure for both staff and patients. This challenge empowered the staff to implement a plan for quick action not exceeded to 30 minutes with 1meter social distance. Therefore, the regular working station was separated for each tasks and time allocation was limited to maximum 10 minutes per station. The medications were already packed on the previous day of the clinic as individually and the outer cover was labeled with the particular patients' name, registration number and appointment time. That facilitates the quick move from the center and avoid unwanted long-term exposures. And it paved a way to run routine monthly follow-ups and drug delivery without fail.

Table 1: Separated work stations

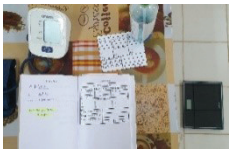
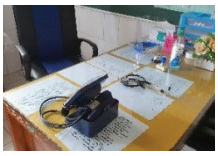
Stations	**Station 1** 	**Station 2** 	**Station 3** 	**Station 4** (**if necessary**)	**Station 5** 
Actions	Marking the entry for the appointment and giving dates for next appointment	Taking anthropometric measurements and blood pressure checking	Doctor/ consultation	Referrals for patient education about self-care and management at home level	Drug distribution
Maximum time allocation	5 minutes	5 minutes	10 minutes	10 minutes	5 minutes
Precautions	Using hand sanitizer after each exposure Wearing face mask, face shield and gloves (if necessary)				

Table 2: Main contents of the action plan

Challenge	**Discussed solution**	**Reflection after implementation**
1. Congestion 	Appointment system and telemedicine 	Reduces the congestion 
2. Firstline prevention from infection and spread	Hand washing set-up at the entrance  Triage system 	Hand washing facilitates to follow the hygienic practice Minimize the entry of the suspected cases in to the center
3. 'Person to person' exposal time duration	Separated working stations and limited time duration (Table1)	Reduce the contact time for each patient with staff
4. Chronic illness complications development due to sedentary life style	Patient education  Free seeds distribution for organic farming at home 	Facilitates self-care and management at home level Enhance the physical activity and boost the immune system by getting fresh fruits and vegetables from the home garden 
5. Inadequacy of resources	Human resources- Defined roles, monthly meetings and worked together Time- patient's waiting time utilize for education Space- Time tabled working days and working stations Finance- Get support from patient's welfare society	Facilitates to develop a new local guideline for staff

The 4th challenge was preventing the onset of chronic illness complication due to sedentary lifestyle. The patients were educated and facilitated to do self-care and management at home level. The patients were empowered to do organic home gardening by distributing free seeds as their leisure time activity. The training and inspection were facilitated by the agriculture inspector of the area. Also, the patients were encouraged towards the outcomes of the organic farming such as physical activity and boosting the immune system from fresh fruits and vegetables; in order to manage the chronic illness conditions as well as COVID 19 infection spread.

The 5th challenge was inadequacy of resources. The new health guidelines challenged human resource, time, space and finance to follow it. The available and limited human resources such as staff of FHC, Kondavil, staff from Department of community and family medicine, Faculty of medicine, University of Jaffna and the staff of Divisional Hospital, Kondavil are worked together with defined roles to manage the inadequacy of human resources. Monthly meeting was conducted to co-ordinate the human resources and manage the conflicts in work place. For time management, the patient waiting time for consultation was effectively used for group education about self-care and management. The available limited space was utilized by following the work stations and their time or day allocation (Antenatal clinic- Tuesday, Vaccination- Wednesday and Chronic illness management- Thursday, Friday and Saturday). Inadequacy of financial status was overcome with the support of patient's welfare society, especially for new set-ups like handwashing and triage system. This challenge facilitated FHC, Kondavil to prepare the local user-friendly guidelines for staff.

Conclusion and recommendation

The study can be concluded that, appointment system (avoid congestion), triage (minimize the entry of infected cases), separated working stations (reduce the risk in the work place), self-care management at home level (prevent the chronic illness complication development) and proper resource management (overcome the inadequacy) at primary care level are the recommendation for an effective chronic illness management plan in COVID 19 era.

Conflict of interest

There is no conflict of interest.

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