



Clinical Pharmacists: Practitioners Who Are Essential Members to Enhance Pharmaceutical Care During Covid-19 Pandemic

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The coronavirus disease 2019 (COVID-19) pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has challenged health systems to find innovative ways of delivering patient care.

Pharmaceutical care and team-based care which include the patient along with their other healthcare providers are designed to promote health, prevent disease, and ensure safe and effective use of medicine which is an essential component for fighting against COVID-19 pandemic (1).

Clinical pharmacy is defined as “a health science discipline in which pharmacists provide patient care that optimizes medication therapy and promotes health, wellness, and disease prevention” and “embraces the philosophy of pharmaceutical care”(2).

Clinical pharmacists (CPs) are practitioners with advanced education and training, providing direct patient care and comprehensive medication management for both patients and health-care providers, they also perform pharmaceutical care to ensure patients' safe and effective medication use (3). However, in case of public health emergencies, such as COVID-19 pandemic, the strategies of CPs need to be remodeled to face with rapid spread of the disease, and lack of evidence-based information.

CPs activities can promote the rational use of drugs (RUDs) to reduce the rate of side effects, drug costs and optimize patient outcome by selecting the most appropriate medication, dosage form, route of administration, and appropriate monitoring (4). Roles of pharmacist to enhance pharmaceutical care during COVID-19 pandemic can be characterized as follow:

1. Pharmacotherapy evaluation: By assessment of the patients in routine visits, the pharmacotherapy recommendations can be given based on medication review, data from medical documents, and interview with the physicians, and the patient.

2. Preparation of hospital treatment protocols: Providing updates on the latest evidence to guide health care team regarding COVID-19 management.

3. Establishment of evidence-based medicine and guidelines: By contribution to improve pharmaceutical policies and decision-making process.

4. Providing education on pharmacotherapy of COVID-19 for healthcare professionals: through pharmacotherapy classes, face to face education and utilization of virtual space.

5. Establishment of drug registration research and clinical trials: pharmaceutical scientists, clinicians and pharmacists are actively conducting registered studies to explore effective treatment options (Figure 1).

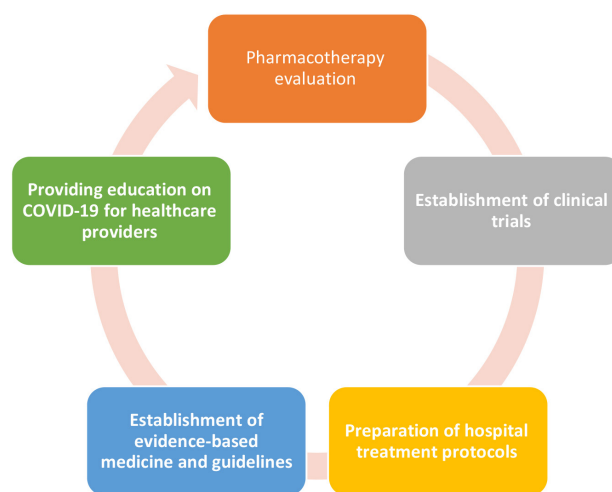


Figure 1. Clinical pharmacist's role to perform pharmaceutical care in COVID-19 pandemic.

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CPs can collaborate with other healthcare providers to apply their knowledge and pharmacological expertise to manage pharmacotherapy challenges in COVID-19 patients and actualize pharmacists' value and responsibility through the pandemic (4).

Clinical pharmacy services aimed improving the quality use of medicines which could lead to better patient outcomes and reducing health care costs (1). The implementation of RUD is a reasonable opportunity for CPs to make a significant impact on patient management, reducing healthcare costs, since they have the expertise to identify, resolve, and prevent medication errors and DRPs (5).

Notably, COVID-19 treatment protocols are rapidly changing, CPs should constantly keep their scientific information up to date so that they could play an active role in the pandemic. We need to implement creative methods to deal with this little known disease. Employment of CPs can affect the proper use of financial resources which is particularly important for developing countries.

Finally, the role of a CPs is not only being an academic leader to develop practice guidance and recommendations, but also a practitioner of pharmacy services who is at the frontline of fighting against COVID-19 to ensure the rational use of drugs during the pandemic. Involvement of CPs in the healthcare setting should not be overlooked in the pandemic, since it is a pragmatic step to improve safe and effective use of medication.

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