

# Providing pharmacy services during the coronavirus pandemic in Saudi Arabia

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**Abstract:** On March 2, 2020, the Kingdom of Saudi Arabia confirmed its first case of the emerging coronavirus strain that causes coronavirus disease 2019 (COVID-19). Shortly thereafter, the number of confirmed cases nationwide began to rise. Since the looming outbreak, all healthcare professionals, including pharmacists, began to work at maximum capacity and effort. The Saudi Society of Clinical Pharmacy (SSCP) recognizes the significant impact pharmacists can have during outbreaks. Based on the scientific evidence available during this outbreak, the SSCP set up an expert working group to conceptualize and draft proposed recommendations that highlight the roles and responsibilities of pharmacists during epidemics and pandemics. The SSCP working group made 28 recommendations. In addition to national and institutional guidelines, these recommendations could serve as guidance for affected entities.

**Keywords:** Pandemic, COVID-19, Pharmacist, Saudi Arabia.

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## I. INTRODUCTION

In December 2019, an alarming epidemic of unexplained etiology happened in Wuhan City, Hubei Province, China (Cucinotta and Vanelli, 2020). The World Health Organization (WHO) defined the extreme acute breathing syndrome coronavirus 2 (SARS-CoV-2) because the infective agent, inflicting the coronavirus sickness 2019 (COVID-19). The WHO categorized COVID-19 as a virulent disease at the eleventh of March 2020. (Cucinotta and Vanelli, 2020). Kingdom of Saudi Arabia (KSA) took numerous proactive preemptive measures to restriction the unfold of the outbreak (Yezli and Khan, 2020). For instance, at the twenty seventh of February 2020, KSA declared that it'd straight away droop access for people wishing to behavior spiritual activates (Barry et al., 2020). Moreover, at the eighth of March, the Saudi Ministry of Education introduced the suspension of the educational 12 months and closure of colleges and universities. On the 20 th of March, the Ministry of the Interior halted home and global transportation channels and a curfew turned into imposed from

7 pm, which turned into prolonged to be a 24-hour lockdown recently (Barry et al., 2020). Previous proof confirmed that the pharmacist's abilities and information each in network and medical institution settings would possibly permit them to play a substantial function for the duration of herbal screw ups and epidemics (Aruru et al., 2020).

The Saudi Society of Clinical Pharmacy (SSCP), set up in 2018, targets to offer medical guidance, recommendation, and insights for medical pharmacists operating in KSA. It works below the umbrella of the Saudi Health Commission for Health Specialties (SCFHS) that's a governmental medical frame based via way of means of distinctive feature of a royal decree. The SCFHS is chargeable for governing the healthcare practices, supervising expert health-associated programs, and licensing processes. The SSCP believes that the function of pharmacists is vital for the duration of situations inclusive of epidemics and pandemics.

## **II. CONSTRUCTING THE RECOMMENDATIONS**

The writing task force was hand-picked by the SSCP to create by mental act the primary draft of the recommendations. These recommendations were written supported the presently on the market proof that highlights the most effective practices concerning pharmacist's roles throughout emergency situations. Following that, these recommendations were shared with pharmacy profession stakeholders via the society social media platforms. The writing task force issued twenty-eight recommendations when receiving the feedback from the stakeholders.

### **2.1 The aim of the recommendations**

These recommendations aim to produce the pharmacy profession community with many insights regarding the pharmacist's roles and responsibilities in the community, provide chain, and health care settings supported existing knowledge base throughout this outbreak. It conjointly reinforces to the opposite healthcare suppliers and national organizations the importance of pharmacists' participation and role in deciding during these circumstances.

### **2.2 Recommendations**

- 1) We have a tendency to urge the Saudi Center for malady interference and management (CDC) and therefore the Ministry of Health (MoH) to still utilize pharmacists' experience in prevention and treatment throughout epidemic and pandemic situations. the globe Health Organization (WHO) recommends as well as pharmacists within the infection prevention and control of epidemics and pandemics (Sakeena et al., 2018). Pharmacists receive in depth education and coaching in evaluative rising evidence, and the Saudi agency and MOH may utilize their expertise in conceptualizing, appraising, and drafting prevention and treatment protocols. Their role is integral in analyzing national and international therapeutic choices for the management of any rising happening because of their quickly advancing clinical experience.
- 2) We have a tendency to urge all attention establishments to involve pharmacists in emergency state and disaster designing throughout epidemic and pandemic situations. Pharmacists will play an integral role in providing patient-focused services appreciate developing comprehensive care plans, therapeutic drug monitoring, and offer evidence-based recommendations (Song et al., 2020). because of the various nature of the pharmacy profession, pharmacists are operating in several healthcare sectors such as the MoH, Saudi Food and Drug Administration (SFDA), pharmaceutical industry, community pharmacies, primary attention centers associate degreed hospitals. Their involvement in the emergency designing throughout a rising epidemic or pandemic things is crucial and integral.
- 3) Pharmacists ought to take a proactive role within the development, implementation, and adherence to institutional and national tips concerning the emerging happening appreciate COVID-19. As explicit previously, pharmacists play an elementary role in the development and implementation of institutional and national guidelines, protocols, and clinical pathways (Thompkins et al., 2019). Previous proof showed that 50% of the printed clinical follow guidelines between Jan 1, 2010, and Dec 31, 2016, had a minimum of one health care provider as a member of on its writing panel (Thompkins et al., 2019). Pharmacist's interventions and involvement are related to higher rates of adherence to these clinical follow tips (Horning et al., 2007).
- 4) We urge pharmacy department administrators to make sure that pharmacy observe settings are capable of maintaining full practicality throughout epidemic and pandemic situations. it's the responsibility of pharmacy directors to ensure that each one patient is receiving adequate pharmaceutical care services during epidemics and pandemics. This includes setting cost-efficient plans to ensure the standard of care delivered to any or all patients, as well as infected

and antiseptic patients. one in every of the recommended modalities to ensure adequate functionality is to vary the working shifts to twelve h shifts rather than short staffing hours and have all staff solely enter through separate entrances to the facility, separate from the general public entrances. Reducing the frequency of shift changes or staff turnover will limit the spread of infection to a smaller number of people if exposure occurs. Pharmacy managers must ensure the continuity of the pharmaceutical business and consider the following:

- Review annual leave policies and vacancies in key areas and implement conservative policies to require all sick employees to stay home.
  - Reorganize the pharmacist's staff and resources for prep activities.
  - Prepare contingency plans to augment staff in the event of high levels of absenteeism, when staff become ill from anticipated respiratory infections, including COVID-19, or need to stay home to care for others, family.
  - Replacement of functions or redeployment of personnel with an increased risk of infection. For example, transferring immunocompromised staff to internal functions without direct patient contact. Work from home with remote access to the facility's computer system. Train all pharmacy staff on proposed emergency preparedness actions.
- 5) All pharmacy and supply chain managers must have a list of alternative suppliers of essential medicines, medical devices and contracted services and a strategy to address the associated shortages and ensure an adequate supply of all medicines used for critical illnesses and life-threatening conditions, implement epidemic and pandemic situations. Proper communication and transparency regarding bottlenecks from supply chain management and regulators related to out-of-stock or scarce medicines and the availability of alternatives are crucial. Create a continuously updated backup list of suppliers and pharmaceutical companies. Can be beneficial. In the event of national emergencies, the SFDA may be required to proactively identify and extend the shelf life of certain critical drugs to avoid unwanted shortages (Badreldin and Atallah, 2020).
  - 6) Pharmacists should avoid discarding expired medicines related to the direct treatment or treatment of symptoms of the pandemic or epidemic. Instead, they can seize drugs if the SFDA can extend the shelf life of drugs or authorize their use. in the absence of other current stocks. Community pharmacists should be trained to screen pharmacy customers for signs and symptoms of infections such as COVID-19 and provide the most appropriate plan of action based on Saudi CDC guidance in suspected cases.
  - 7) To reduce the risk of exposure and transmission of infections like COVID-19, community pharmacies need to develop a screening system to screen customers/patients before entering the pharmacy. We call on policymakers at the Department of Health to hire community pharmacists trained to administer vaccines to the public to reduce the burden on the healthcare system and improve immunization coverage when vaccines are needed for a specific epidemic or pandemic, such as COVID-19 become available.
  - 8) Recent evidence has shown that community pharmacists can reduce the time to achieve 80% vaccine coverage with a single dose during pandemics. Therefore, the use of trained community pharmacists to administer vaccines to the public should be integrated into the pandemic vaccine response plan (Schwerzmann et al., 2017). We urge all healthcare institutions to enlist the voluntary help of qualified unemployed or retired but licensed pharmacists and technicians in epidemic and pandemic situations. In these unprecedented times, the pharmaceutical workforce could be negatively impacted as some pharmacists and pharmacy technicians could be impacted by the infection, self-quarantine or the deployment of elsewhere.

This can disrupt workflow and therefore seeking help from qualified unemployed or retired pharmacists or pharmacy technicians can help minimize the impact of a pharmacy staff shortage. Maximize your volunteer efforts. We call on all pharmacy policy makers and directors to give more authority to licensed pharmacy technicians in epidemic and pandemic situations. The level of practice of the pharmacist could be maximized during epidemics and pandemics by giving more authority to licensed pharmacy technicians under the pharmacist's supervision.

Free pharmacists from technical duties and make them available to support healthcare teams caring for patients with the emerging infection like COVID-19. Technicians should receive the proper training consistent with their enhanced powers and privileges.

- 9) All pharmacists must proactively maximize the usage of digital and on-line structures which will train the general public concerning contamination prevention measures throughout epi- demic and pandemic conditions. Pharmacists are ready with abilities throughout their education to offer affected person training associated with public fitness matters. There are numerous approaches pharmacists can assist in instructing the general public throughout epidemics and pandemics. This will be performed via way of means of collaborating in digital focus campaigns, writing digital newsletters, or blogs. Developing virtual brochures, booklets concerning critical contamination prevention measures, and beneficial sources that may be shared via social media and different virtual structures. Launching on-line academic classes and recorded movies also are examples of proactive public fitness training modalities (Strand and Miller, 2014). Also, pharmacists can shape neighborhood or local message forums among every different to percentage revel in and ask questions of others to are seeking for answers to not unusual place and repetitive issues encountered throughout the remedy of the pandemic or deal with drug shortages problems and opportunity treatments.
- 10) Pharmacists must offer proof primarily totally based suggestions to sufferers and healthcare carriers in step with the MOH and Saudi CDC and institutional hints throughout epidemic and pandemic conditions. Implementation of proof-primarily based totally medicinal drug has been proven to offer the high-quality medical care at the bottom cost. Providing proof-primarily based totally suggestions to sufferers and healthcare carriers is one of the pharmacist's key responsibilities. These suggestions must be in alignment with the maximum present day MOH, Saudi CDC and institutional hints (Lewis and Orland, 2004).
- 11) All pharmacists must use their information and information throughout epidemic and pandemic conditions to proactively make clear misconceptions and rumors to the general public and direct them to dependable sources. Using social media structures, pharmacists must train the sufferers and the general public via way of means of going returned to the official, dependable sources which includes the Saudi CDC steerage and MoH hints and websites.
- 12) We suggest that everyone healthcare establishments put into effect an easy-to-replenish option to reduce capability and pointless publicity for the duration of epidemic and pandemic situations. Strategies have to be applied to take away or lessen the threat of publicity for the duration of the refilling process, such as drive- through and domestic shipping of medications, encouraging digital prescriptions, and lengthening the refilling length for sufferers with continual disorders. This has to know no longer effect the counseling service, that's necessary in stopping hospitalization because of affected person's loss of enough statistics concerning their medications. We urge all pharmacists to apply digital structures to behavior affected person counseling and medicine reconciliation.
- 13) Pharmacy administrators need to broaden steering for workforce tracking for any capability symptoms and symptoms of contamination at some stage in epidemics and pandemics. Pharmacy administrators need to make certain which includes regulations that contain complying with self- reporting and self-quarantine for all pharmacy workforces. They additionally need to enforce mechanisms for reporting each contamination and absenteeism at some stage in epidemic and pandemic situations.
- 14) Pharmacy administrators need to broaden regulations and approaches for personnel returning to paintings after improving from the rising contamination at some stage in epidemic and pandemic situations. These regulations and approaches need to contain steering for any returning worker to make certain the protection of his or her colleagues, which includes the range of allowed commercial enterprise days that might be neglected and modality of slow incorporation of returning workforce in everyday schedules.
- 15) We suggest limiting the presence of any useless workforce at some stage in epidemic and pandemic situations. Social distancing is a widespread determinant in proscribing the unfold of any rising contamination including COVID-19 and different viruses.
- 16) We urge all pharmacy policymakers and administrators to enforce regulations to display the provision of surgical mask, N95 respirators/powered air-purifying respirators (PAPRs), alcohol-primarily based totally hand disinfectants and gloves at some stage in epi- demic and pandemic situations. Policymakers and administrators ought to make certain the protection of the personnel via way of means of growing regulations and approaches that deal with the ordering, storage, utilization, and deliver tracking of surgical mask, N95 respirators/powered air- purifying respirators (PAPRs) and different materials which includes alcohol-primarily based totally hand disinfectants and gloves at some stage in epidemic and pandemic situations. The regulations need to additionally encompass the significance of masks suit checking out for individuals who are available direct touch with droplet/airborne precaution sufferers, i.e., pharmacists attending codes.

- 17) We urge all pharmacy policymakers and administrators to make certain that sufficient private defensive equipment (PPE) is furnished to all pharmacists and pharmacy workforce vulnerable to publicity at some stage in epidemic and pandemic situations. Due to the anticipated excessive call for PPE at some stage in epidemics and pandemics, we urge policymakers and healthcare executives to make certain that everyone workforce which includes pharmacy employees are geared up with suitable PPE, particularly if they may be operating in excessive extent settings, which can also additionally boom their hazard of publicity to doubtlessly inflamed individuals. There need to be a consistent assessment of the hazard associated with pharmacist-associated sports to make certain the dynamics of presenting them with PPE. Evaluations need to encompass a system for PPE conservation that could encompass re-use of PPE, which includes face mask after decontamination processes. Gloves, long-sleeved gowns, and face mask need to be granted for any pharmacy workforce operating with an inflamed individual.
- 18) Pharmacy administrators need to prioritize essential offerings primarily based totally on crucial institution-wide operations at some stage in epidemic and pandemic situations. A stepwise method needs to be applied in every pharmacy so as to prioritize pharmacy furnished essential offerings. This method needs to be applied to assist offer crucial offerings in a well-timed manner.
- 19) Pharmacy workforces need to be taught on critical pharmacy workflow approaches. Many pharmacies workforce can also additionally emerge as inflamed or quarantined at some stage in epidemics and pandemics. In the meantime, the workflow needs to know no longer be impacted. For this reason, an education plan with operation and reference manuals needs to be in vicinity for workforce taking on the jobs and obligations of different workforce members, which includes administrative, clinical, distribution, and stock control features at some stage in epidemic and pandemic situations.
- 20) We urge all quarantined pharmacy workforce to offer technical guide and supply telehealth offerings while- ever feasible to decrease burnout on-obligation workforce at some stage in epidemic and pandemic situations. It is crucial to make use of telehealth to pro- vide pharmaceutical offerings to boom affected person get admission to care. This consists of activating telehealth in pharmacist run clinics and counseling offerings.
- 21) Given the overpowering nature of everyday sufferers' rounds at some stage in the epidemic, we urge pharmacists to stay more vigilant via way of means of ensuring that their sufferers are receiving the maximum rational and suitable medicinal drug control which includes dosing adjustment, drug remedy tracking, unfavorable drug reactions, pills compatibilities, and drug interactions control. During pandemics including COVID-19, sure sufferers can be required to be remoted and dealt with as inpatients even as others can also additionally be admitted into the in-depth care unit (ICU) because of its complications. Pharmacists are entreated to follow-up at the sufferers' status, adjust the remedy plan, alter the medicines, and carry out right healing drug tracking while deemed necessary. In addition, and because of the improvement of numerous countrywide and global hints for the control of sure epidemics or pandemics, warning need to be suggested concerning drug-drug interactions at some stage in the initiation of recent medicines.
- 22) We urge pharmacy career leaders to create communicate channels that characteristic efficiently at some stage in epidemic and pandemic situations. It is crucial to create a channel of communicate thru pharmacy career leaders via way of means of setting up a machine of sharing facts with companions and stakeholders to keep away from medicinal drug shortages and to conquer the unavailability of drugs in any of the affected institutions. This communicate is essential at some stage in this time, and its miles specifically the duty of the drugstore leaders. It need to be completed mostly via way of means of developing a complete touch listing to perceive all of us withinside the chain of communicate (e.g., the Medication deliver chain in every institution), keeping an up to date number one and secondary listing for all of us withinside the chain of communicate, figuring out while and what sort of facts may be shared with the complete touch listing and figuring out the right communicate plat forms, including a hotline, automatic textual content messaging, email, social media, on line and organization messaging applications, and a website, to assist disseminate facts to inner and outside companions.
- 23) We advocate editing all pharmacy conferences modalities and make use of digital and digital modalities at some point of epidemic and pandemic situations. Regular and status conferences need to hold to transport ahead at some point of epidemics and pandemics to save you any put off in selection making. Virtual plat- paperwork are every other manner to continue with conferences as it's miles and clean and handy modality, and it enforces the idea of social distancing.

- 24) We urge all pharmacy departments to percentage their revel in and file it to the MOH and the Saudi CDC at some point of epidemic and pandemic situations. It is essential to create a portal wherein pharmacy departments can percentage their reports and concerns. Therefore, with the hobby of the general public fitness in mind, we inspire all healthcare establishments to file their experience to the MoH and Saudi CDC. The MoH and the Saudi CDC need to streamline and generate the essential policies and guidelines primarily based totally on those reports.
- 25) Pharmacists are endorsed to initiate/ take part in constructing registries and correctly make contributions to analyze and scientific trials in epidemic and pandemic situations. Pharmacists can play a huge position in constructing registries. Creating sickness registries may be a useful manner to recognize the character of the sickness throughout distinct geographic places as they are able to resource in spotting chance elements and diagnosis of illnesses and pick out the effect of healing control on various affected person populations (Akazawa et al., 2018).

### III. CONCLUSION

These 25 recommendations establish safety goals for pharmacists and protect the integrity of the healthcare system. They direct pharmacists to the best optimal use of resources, time, and shared information with the ultimate goal of ensuring the optimal access to and quality of care for everyone living in Saudi Arabia.

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