



The Shifting Landscape of Pharmaceutical Care—During and Beyond the COVID-19 Pandemic

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Pharmacists have been at the forefront of the battle against the Coronavirus Disease 2019 (COVID-19) Pandemic, offering their expertise and services in various settings, from community and hospital pharmacies to research institutions, insurance organizations, pharmaceutical industries and regulatory agencies. The unprecedented challenges faced by pharmacists in the wake of the Pandemic – which need to be addressed in order to ensure the appropriate, timely and comprehensive provision of pharmaceutical care services – are twofold: one is to continue providing uninterrupted, day-to-day services at usual practice sites while adhering to new guidelines set in place to minimize disease transmission (such as using appropriate Protective Personal Equipment (PPEs) in the workplace, managing drug shortages, keeping current with up-to-date treatment guidelines, etc.); the other is to meet new patient needs/ demands through devising innovative, yet feasible solutions, in order to fulfill their responsibilities as a member of multidisciplinary healthcare teams. Several such strategies which should be considered more seriously by pharmaceutical care practitioners in Iran have been presented and discussed in this editorial.

I. Extemporaneous compounding – Non-sterile and sterile compounding services have long been provided by pharmacists to address the immediate and individual therapeutic needs of a specific patient, which in turn necessitate understanding the risks inherent to compounding and adhering to standards which are essential for patient safety. Since the Pandemic, the United States Pharmacopoeia Compounding Expert Committee

has developed specific strategies for compounding sterile products, taking into consideration supply disruptions and drug shortages as well as the quality standards required for compounded sterile preparations (CSPs) (1).

These recommendations include:

1. Assigning Beyond-Use Dates (BUDs) conservatively, taking into account the chemical and physical stability of the medication, as well as microbiological considerations
2. Increased environmental monitoring and routinely disinfecting frequently touched surfaces and objects
3. Special considerations for disinfecting a facility when someone is sick
4. Prioritizing the use of commercially available sterile 70% isopropyl alcohol for sterile compounding

Complying with the above-mentioned recommendations is contingent upon the availability of medicinal supplies, which has been particularly challenging in Iran since the reinstatement of economic sanctions in 2018. The management of essential medicinal products at a time when the healthcare system is encountering additional pressure due to the Pandemic further underscores the role of pharmaceutical care providers in minimizing the impact of such compounded crises.

II. Telepharmacy – The use of digital information and communication technologies (ICT) by providers to remotely deliver quality, cost-effective health services to patients has been used in most all major healthcare disciplines. In light of COVID-19, telehealth has surged exponentially, not only to minimize the chances of disease contraction

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through avoiding unnecessary in-person encounters by patients and providers, but also to maximize clinic and hospital capacities for treating COVID-19 patients (2). Telepharmacy is the delivery of pharmaceutical care via ICT to patients when direct contact with a pharmacist is not possible. Providing medication therapy management (MTM) services online through virtual Pharmacies is now, more than ever, presenting itself as an appropriate and feasible alternative, especially in outpatient settings (3). Likewise, discussing patient cases and treatment plans online among interdisciplinary healthcare teams and holding virtual morning rounds with hospital staff have become more acceptable post-COVID-19. While increased access and convenience of care, improved productivity from clinician time savings and decreased costs are major advantages of telehealth, there are certain challenges that have yet to be adequately addressed before online pharmaceutical care becomes common practice in Iran. A robust platform which will support the necessary applications and features for Pharmacotherapy consultations while being affordable and user-friendly, and ensuring patient confidentiality are just to name a few.

III. Online prescriptions and mail-order pharmacies –

Should telepharmacy become more prevalent, electronic prescriptions and online ordering of pharmaceutical products will be the next step to ensure safe dispensing and distribution of medications to consumers. Perhaps there has never been a more appropriate time to consider the authorization of mail-order pharmacies, given the advantage of reduced exposure to the SARS-CoV-2 virus by both personnel and patients. While the debate continues among national regulatory bodies and professional pharmaceutical organizations in Iran regarding the necessary oversight for ensuring adequate patient education and safe delivery of prescription drugs to patients, the concept no longer seems to be as farfetched as once perceived. Mail-order pharmacy has even been encouraged by many health agencies and authorities in other countries since the outbreak of the Pandemic, such as the Centers for Disease Control and Prevention (CDC) of other countries (4,5).

IV. Immunization services – With influenza season fast approaching, healthcare experts fear complications of facing a “Twindemic”, which is “the simultaneous occurrence or overlapping of the COVID-19 pandemic and influenza epidemic.” (6) This multifaceted challenge could result in over taxing medical facilities, especially in the absence of a vaccine for the SARS-CoV-2 infection. What complicates matters is that the symptoms of flu and coronavirus are similar, making it difficult to distinguish the two. As a result, we run the risk of overwhelming the healthcare system, testing people who have flu for COVID and trying to care for both COVID-19 and flu patients at once.

In order to avoid / reduce the possibility of a severe flu season coinciding with a surge in COVID-19 cases, health

experts have recommended preemptive strategies, the most important of which include receiving the flu vaccine as early as possible this year, especially for vulnerable populations and predisposing conditions (e.g., elderly and immunocompromised patients, cardiovascular disorders, etc.).

Vaccine administration has traditionally been offered by general practitioners and nurses in many countries, including Iran. Despite many national and international health initiatives to improve immunization access globally, vaccination rates still fall short of targets. In response, several leading health organizations and professional pharmacy societies (e.g. American Pharmacist Associations) have promoted concepts such as the “immunization neighborhood”, denoting that all appropriate professions – including pharmacists– “should coordinate, communicate, and collaborate to increase immunization rates (7)”.

The potential for increased vaccination needs this fall and the desire to improve accessibility and convenience for the public will require pharmaceutical care practitioners in Iran to also become involved in administering flu vaccines. The expanded role of pharmacists will in turn require developing and offering appropriate certification programs for licensed pharmacists as well as revising the current Doctor of Pharmacy (Pharm D) curriculum to incorporate relevant courses / trainings for future graduates. Other issues entail devising appropriate compensation methods by health care authorities and insurance companies for pharmacists offering immunization services in the future.

V. Education – In addition to incorporating new educational contents in the curricula of pharmacy degree programs and continuing education courses to meet post-COVID-19 pharmacotherapy needs, the delivery modes and models for communicating course content and trainings also had to be adapted following the Pandemic. Online courses were offered as part of blended-learning models by many health science programs around the World, long before the Pandemic outbreak. The existing foundations and infrastructures of virtual education served as a major advantage point post-COVID-19, as it facilitated the transition to offering most educational content online in lieu of holding in-person classes – at least for the theoretical components. The remaining challenges for health care professional schools that prevented complete transition to an online curriculum were delivering practical course contents (e.g., pharmaceutical skills lab) and conducting Objective Structured Clinical Examinations (OSCEs) online. Many pharmacy schools have since been able to creatively tackle the aforementioned issues through staged implementation of novel education models and initiatives (8). These methods and approaches can also be referenced as a starting point by other pharmacy educators while they continue to observe the safety restrictions which have been set in place since the Pandemic.

Conclusion – Similar to other health care professionals, pharmaceutical care practitioners are grappling with the new realities of a post-COVID-19 World. Persevering through these trying times will require adopting policy changes and new approaches, many of which are only possible through forging partnerships with other health care specialties. More importantly, though, overcoming these unique challenges will require flexibility and adaptability as the dynamics of the pharmacy profession continually change.

References

1. United States Pharmacopeia (USP). Operational Considerations for Sterile Compounding During COVID-19 Pandemic. Available form: <https://go.usp.org/l/323321/2020-04-11/345w2b> (2020).
2. Bestsennyy O, Gilbert G, Harris A, Rost J. Telehealth: A quarter-trillion-dollar post-COVID-19 reality? McKinsey & Company - Healthcare Systems & Services. Available form: <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/telehealth-a-quarter-trillion-dollar-post-covid-19-reality> (2020).
3. Baldoni S, Amenta F, Ricci G. Telepharmacy Services: Present Status and Future Perspectives: A Review. *Medicina (Kaunas)* 2019;55(7):327.
4. Centers for Disease Control and Prevention (CDC). Guidance for Pharmacists and Pharmacy Technicians in Community Pharmacies during the COVID-19 Response. Guidance for Pharmacies. Available form: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/pharmacies.html> (2020).
5. Centers for Disease Control and Prevention (CDC). Using Telehealth to Expand Access to Essential Health Services during the COVID-19 Pandemic. Available form: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/telehealth.html> (2020).
6. Hoffman, J. Fearing a ‘Twindemic,’ Health Experts Push Urgently for Flu Shots. *The New York Times*. Available form: <https://www.nytimes.com/2020/08/16/health/coronavirus-flu-vaccine-twindemic.html> (2020).
7. Tanzi MG. It takes a village: NVAC standards emphasize importance of immunization neighborhood. *American Pharmacist Association (APhA)*. Available form: <https://www.pharmacist.com/article/it-takes-village-nvac-standards-emphasize-importance-immunization-neighborhood> (2014).
8. Lyons KM, Christopoulos A, Brock TP. Sustainable Pharmacy Education in the Time of COVID-19. *AJPE* 2020; 84:8088.