

## Mini-review

# Integrating pharmaceutical care into public health

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## Introduction

Nowadays, the pharmacy profession is moving toward a multidisciplinary approach. Besides the pharmacists' role beyond dispensing and checking the safety, quality and efficacy of the delivered medications, pharmacists are currently using their clinical knowledge to serve the community through different disciplines including drug counseling, vaccination, screening, and drug therapy management [1].

## Pharmacists' current role in public health

In addition to that, pharmacists can serve as healthcare educators and consult the patients about their conditions/health risks. Evidence has reported the pharmacists' potentiality in delivering interventions and educating patients about their conditions including diabetes [2, 3], hypertension, osteoporosis [4, 5], smoking cessation [6], weight management and substance abuse [7]. The first screening intervention for diabetes in the UAE was implemented by Hamzah and associates who found that community pharmacies are feasible sites for conducting the diabetes screening intervention [8].

Therefore, pharmacists have a high potential to improve access to health screening and promote public health awareness. Many people might relate public health to medicine, while there is a difference between both professions. Public Health interest relies mainly on disease prevention, life prolongation and health promotion. Its concern is directed toward promoting a healthy lifestyle, researching disease and injury

prevention also identifying, preventing and responding to infectious diseases at a population level.

## Pharmaceutical care and public health

Pharmacists' involvement in the health care team was always restricted to their role in medication-related care. The pharmacists' main focus was to improve the patients' quality of life by achieving the best therapeutic outcomes from the patient's medications. The American Society of Health System Pharmacists (ASHP) stated that to enhance the patient's quality of life, and the following therapeutic outcomes have to be met 1. Cure of a patient's disease 2. Eliminate/reduce a patient's symptoms 3. Arresting or slowing the disease progression and 4. Preventing diseases/symptoms [9]. Similarly, Public Health focuses on disease prevention and health enhancement at the population level. Pharmacy literature has discussed the importance, benefits, challenges and the need for policy changes in an integrated system between pharmacy and public health [7, 10 - 13]. Therefore, it is essential to create a partnership between pharmacy and public health to maximize the public health impact.

## Pharmacy accessibility and distribution all over the Emirates

There are around 2500 licensed community pharmacies in the UAE [8], that are open seven days per week with an average of 13 hours per day [8, 14]. This huge distribution all over the emirates makes the community pharmacists the only health care professionals that are available and accessible for the population all the time, especially when

it comes to the engagement with the groups of people who are less likely to access general practitioners, such as those from lower socio-economic backgrounds [15]. Consequently, this will cut-off any future unnecessary costs including hospitalization, prescriptions, doctor appointments, dependency and other unseen costs.

### Pharmacists' role in public health

Since pharmacy has become more patient-oriented, it is imperative to integrate public health into pharmaceutical care. The pharmacist possesses unique expertise which qualifies them to serve in many roles in public health, including disease prevention and medication safety, health education, public health policy, and research area. The COVID-19 pandemic has had a detrimental effect on the mental health of people, not only due to lockdowns, restrictions on travelling, and a decrease in job opportunities. This has resulted in many psychological problems that is started to appear during quarantine such as; stress, anxiety, depression and frustration [16]. As healthcare professionals, pharmacists can play a key role during the pandemic, acting directly with the community [17], continuing to care for patients with chronic diseases [18, 19], working in hospital pharmacies and providing pharmaceutical care to COVID-19 patients [20]. Moreover, they may provide reliable information for preventing, detecting, treating and managing coronavirus infections [21, 22]. As a result, several challenges have emerged and pharmacists are adopting innovative strategies to overcome them [23].

### References

- Lai E, Trac L, Lovett A (2013) Expanding the pharmacist's role in public health. *Universal Journal of Public Health*. 1(3): 79-85. doi: 10.13189/ujph.2013.010306.
- Chandra A, Malcolm N, Fetters M (2003) Practicing health promotion through pharmacy counseling activities. *Health Promotion Practice*. 4(1): 64-71. doi: 10.1177/1524839902238293.
- Letassy N, Dennis V, Lyons TJ, Harrison D, Burton M, Kirkpatrick A (2010) Know your diabetes risk project: Student pharmacists educating adults about diabetes risk in a community pharmacy setting. *Journal of American Pharmacy Association*. 50(2): 188-94. doi.org/10.1331/JAPhA.2010.09206.
- Elias MN, Burden AM, Cadarette SM (2011) The impact of pharmacist interventions on osteoporosis management: a systematic review. *Osteoporosis International*. 22(10): 2587-2596. doi: 10.1007/s00198-011-1661-7.
- Yuksel N, Majumdar SR, Biggs C, Tsuyuki RT (2010) Community pharmacist-initiated screening program for osteoporosis: Randomized controlled trial. *Osteoporosis International*. 21(3):391-398. doi: 10.1007/s00198-009-0977-z.
- Patwardhan PD, Chewing BA (2012) Effectiveness of intervention to implement tobacco cessation counseling in community chain pharmacies. *Journal of American Pharmacy Association* 52(4): 507-514. doi.org/10.1331/JAPhA.2012.10117.
- Agomo CO (2012) The role of community pharmacists in public health: A scoping review of the literature. *Journal of Pharmaceutical Health Services Research*. 3(1): 25-33. doi: 10.1111/j.1759-8893.2011.00074.x
- Alzubaidi HT, Chandir S, Hasan S, McNamara K, Cox R, Krass I (2019) Diabetes and cardiovascular disease risk screening model in community pharmacies in a developing primary healthcare system: A feasibility study. *British Medical Journal Open*. 9(11): 1-11. DOI:10.1136/bmjopen-2019-031246.
- Therapy M (1997) ASHP guidelines on pharmacist-conducted patient education and counseling. *American Journal of Health and Pharmacy*. 54(4):431-434.
- Dugan BDA (2006) Enhancing community pharmacy through advanced pharmacy practice experiences. *American Journal of Pharmacy Education*.70(1):21.
- Albert E (2012) The Case for Pharmacists As Legal Health Care Providers. *Indiana Health Law Review*. 9(1). doi: https://doi.org/10.18060/16605.
- Deas C, McCree DH (2010) Pharmacists and HIV/AIDS prevention: Review of the literature. *Journal of American Pharmacy Association*. 50(3):411-415. doi.org/10.1331/JAPhA.2010.09039
- Calis KA, Hutchison LC, Elliott ME, Ives TJ, Zillich AJ, Poirier T (2004) Healthy people 2010: Challenges, opportunities, and a call to action for America's pharmacists. *Pharmacotherapy*. 24(9): 1241-1294.
- Hasan S, Sulieman H, Chapman C, Stewart K, Kong DCM (2011) Community pharmacy in the United Arab Emirates: Characteristics and workforce issues. *International Journal of Pharmacy Practice*. 19(6):392-9.
- Willis A, Rivers P, Gray LJ, Davies M, Khunti K (2014) The effectiveness of screening for diabetes and cardiovascular disease risk factors in a community pharmacy setting. *PLoS One*. 9(4):1-9. doi: 10.1371/journal.pone.0091157.
- Zhang Y, Zhang H, Ma X, Di Q (2020) Mental health problems during the COVID-19 pandemics and the mitigation effects of exercise: a longitudinal study of college students in China. *International Journal of Environmental Research and Public Health*. 17(10): doi: 10.3390/ijerph17103722.
- Hedima EW, Adeyemi MS, Ikunaiye NY (2021) Community Pharmacists: on the frontline of health service against COVID-19 in LMICs. *Research Society Administrative Pharmacy*. 17(1): 1964-69. doi: 10.1016/j.sapharm.2020.04.013.
- Bhat S, Farraye FA, Moss A (2021) Roles of clinical pharmacists in caring for patients with inflammatory bowel disease during COVID-19. *Gastroenterology*. 160(5): 1880. doi: 10.1053/j.gastro.2020.05.044.
- Kretchy IA, Asiedu-Danso M, Kretchy JP (2021) Medication management and adherence during the COVID-19 pandemic: perspectives and experiences from low-and middle-income countries. *Research Society Administrative Pharmacy*. 17(1): 2023-2026. doi: 10.1016/j.sapharm.2020.04.007.
- Song Z, Hu Y, Zheng S (2021) Hospital pharmacists' pharmaceutical care for hospitalized patients with COVID-19: recommendations and guidance from clinical experience. *Research Society Administrative Pharmacy*. 17(10): 2027-2031. doi: 10.1016/j.sapharm.2020.03.027.
- International Pharmaceutical Federation COVID-19: guidelines for pharmacists and the pharmacy workforce. <https://www.fip.org/files/content/priority-areas/coronavirus/COVID-19-Guidelines-for-pharmacists-and-the-pharmacy-workforce.pdf>.
- Khan Z, Muhammad K, Ahmed A (2020) Coronavirus outbreaks:

- prevention and management recommendations. *Drugs Therapeutic Perspective*. 36:215-217. doi: [10.1007/s40267-020-00717-x](https://doi.org/10.1007/s40267-020-00717-x).
23. Li H, Zhenga S, Liua F (2021) Fighting against COVID-19: innovative strategies for clinical pharmacists. *Research Society Administrative Pharmacy*. 17(1): 1813-1818 doi: [10.1016/j.sapharm.2020.04.003](https://doi.org/10.1016/j.sapharm.2020.04.003).