

## Documents

Mubarak, N.<sup>a</sup>, Zahid, T.<sup>a</sup>, Rana, F.R.<sup>a</sup>, Ijaz, U.-E.-B.<sup>a</sup>, Shabbir, A.<sup>a</sup>, Manzoor, M.<sup>a</sup>, Khan, N.<sup>a</sup>, Arif, M.<sup>a</sup>, Naeem, M.M.<sup>a</sup>, Kanwal, S.<sup>a</sup>, Saif-Ur-Rehman, N.<sup>a</sup>, Zin, C.S.<sup>b</sup>, Mahmood, K.<sup>c</sup>, Asgher, J.<sup>a</sup>, Elnaem, M.H.<sup>d</sup>

**Are pharmacists on the front lines of the opioid epidemic? A cross-sectional study of the practices and competencies of community and hospital pharmacists in Punjab, Pakistan**

(2023) *BMJ Open*, 13 (11), art. no. e079507, .

DOI: 10.1136/bmjopen-2023-079507

<sup>a</sup> Lahore Medical and Dental College, Lahore University of Biological and Applied Sciences, Lahore, Pakistan

<sup>b</sup> Department of Pharmacy Practice, Kulliyah of Pharmacy, International Islamic University Malaysia, Kuantan, Malaysia

<sup>c</sup> University of the Punjab Quaid-i-Azam Campus, Lahore, Pakistan

<sup>d</sup> School of Pharmacy and Pharmaceutical Sciences, Ulster University, Coleraine, United Kingdom

### Abstract

**Introduction** Countries are grappling with a rapidly worsening upsurge in the opioid-related overdose deaths, misuse and abuse. There is a dearth of data in Pakistan regarding the practices and competencies of pharmacists in handling opioid-related issues. **Study design** A cross-sectional study, conducted across Punjab, Pakistan. **Method** The study deployed a validated survey to evaluate the competencies and practices of the community and hospital pharmacists. **Results** 504 community pharmacists and 279 hospital pharmacists participated in the survey with an overall response rate of 85.5%. Almost half of the respondents 'never' or 'sometimes' made clinical notes in a journal or dispensing software to monitor ongoing opioid use. Generally, pharmacists were reluctant to collaborate with physicians or notify police regarding the abuse/misuse of opioids. Hospital pharmacists achieved significantly higher mean competency scores than chain and independent community pharmacists ( $p < 0.05$ ). In competency evaluation, three priority areas emerged that require additional training, that is, 'opioid overdose management', 'opioid use monitoring' and 'therapeutic uses of opioids'. **Conclusion** Both community and hospital pharmacists hold significant positions and potential to contribute meaningfully to the mitigation of harms and risks associated with opioids. Nevertheless, this study underscores notable deficiencies in the competence of pharmacists, whether in hospital or community settings in Punjab, concerning various aspects related to the dispensing and utilisation of opioids. It also highlights the pressing need for the development of strategies aimed at improving several practice areas including the documentation, the quality of patient counselling, the effectiveness of reporting mechanisms for opioid abuse and the stringent enforcement of regulatory policies to curtail opioid misuse. Thus, to mitigate the opioid epidemic in Pakistan, it is imperative to institute opioid stewardship initiatives aimed at rectifying the competency and procedural deficiencies within the pharmacist workforce. © Author(s) (or their employer(s)) 2023. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

### Author Keywords

hospitals; pain management; primary care; public health

### Index Keywords

opiate, narcotic analgesic agent; adult, Article, clinical competence, community pharmacist, controlled study, cross-sectional study, female, hospital pharmacist, human, male, opiate addiction, Pakistan, pharmacy practice, prescription, private hospital, public hospital, drug overdose, opiate addiction, opiate overdose, pharmacist; Analgesics, Opioid, Cross-Sectional Studies, Drug Overdose, Humans, Opiate Overdose, Opioid Epidemic, Opioid-Related Disorders, Pakistan, Pharmacists

### Chemicals/CAS

opiate, 53663-61-9, 8002-76-4, 8008-60-4; Analgesics, Opioid

### References

- MacChia, L., Oswald, A.J.  
**Physical pain, gender, and the state of the economy in 146 nations**  
(2021) *Soc Sci Med*, 287, pp. S0277-S00664X.
- Amaechi, O., Human, M.M., Featherstone, K.  
(2022) *Pharmacologic Therapy for Acute Pain*,  
American Family Physician
- Anekar, A.A., Hendrix, J.M., Cascella, M.  
(2023) *WHO Analgesic Ladder*, pp. 1-7.  
Stat Pearls Publishing

- Rauf, U., Ali, M., Dehele, I.  
**Causes, nature and toxicology of fentanyl-analogues associated fatalities: A systematic review of case reports and case series**  
(2021) *J Pain Res*, 14, pp. 2601-2614.
- Alrashdi, S., Paudyal, V., Elnaem, M.H.  
**Causes, nature and toxicology of tramadol-associated deaths reported in the peer-reviewed literature: A systematic review of case studies and case series**  
(2021) *Drugs Ther Perspect*, 37, pp. 422-432.
- Gregory, T., Gregory, L.  
**The role of pharmacists in safe opioid dispensing**  
(2020) *J Pharm Pract*, 33, pp. 856-862.
- Jantarada, C., Silva, C., Guimarães-Pereira, L.  
**Prevalence of problematic use of opioids in patients with chronic Noncancer pain: A systematic review with meta-analysis**  
(2021) *Pain Pract*, 21, pp. 715-729.
- *World drug report 2022 (United Nations publications, 2022)*, UNODC n.d.
- Gardner, E.A., McGrath, S.A., Dowling, D.  
**The opioid crisis: prevalence and markets of opioids**  
(2022) *Forensic Sci Rev*, 34, pp. 43-70.
- Zimmer, Z., Fraser, K., Grol-Prokopczyk, H.  
**A global study of pain prevalence across 52 countries: examining the role of Country-level Contextual factors: PAIN**  
(2022) *Pain*, 163, pp. 1740-1750.
- Taylor, J., Pardo, B., Hulme, S.  
**Illicit synthetic opioid consumption in Asia and the Pacific: assessing the risks of a potential outbreak**  
(2021) *Drug Alcohol Depend*, 220, pp. S0376-S306657.
- Mubarak, N.  
**Corona and clergy-the missing link for effective social distancing in Pakistan: time for some unpopular decisions**  
(2020) *Int J Infect Dis*, 95, pp. 431-432.
- Siddiqui, A., Shrestha, S., Ahmed, A.  
**Addressing the opioid epidemic in Pakistan: urgent need for opioid stewardship and comprehensive solutions**  
(2023) *Drugs Ther Perspect*, 39, pp. 354-356.
- Islam, M.  
**State of the art treatment options for Pakistan's opioid, alcohol and methamphetamine crisis**  
(2020) *J Pak Med Assoc*, 70, pp. 1063-1068.
- Iqbal, A., Knaggs, R., Anderson, C.  
**Logic model for opioid safety in chronic non-malignant pain management, an in-depth qualitative study**  
(2023) *Int J Clin Pharm*, 45, pp. 220-232.
- Iqbal, M.J., Ali, M., Rizwan, G.  
(2021) *Study the different incidences of tramadol in different cities of Punjab*, 11.
- Alvin, M., Picco, L., Wood, P.  
**Community pharmacists ' preparedness to intervene with concerns around**

- prescription opioids: findings from a nationally representative survey**  
(2021) *Int J Clin Pharm*, 43, pp. 411-419.
- Webb, K., Cernasev, A., Li, M.S.  
**An exploratory study of pharmacist perceptions of opioid interventions for acute pain**  
(2021) *J Pharm Technol*, 37, pp. 36-44.
  - Underwood, N., Cremer, L., Cance, J.D.  
**The impact of community-level prevention strategies on high-dose opioid dispensing rates: 2014-2019**  
(2021) *Drug Alcohol Depend*, 227, pp. S0376-S00483X.
  - Maher, E., Nielsen, S., Summers, R.  
**Core Competencies for Australian pharmacists when supplying prescribed opioids: a modified Delphi study**  
(2021) *Int J Clin Pharm*, 43, pp. 430-438.
  - Sproule, B.  
(2018) *AFPC Commitment to the Joint Statement of Action to Address the Opioid Crisis in Canada.*,
  - (2023) *Punjab Pharmacy Council*,
  - Punjab, G.  
(2023) *Primary & Secondary Health Care Department (pp. 1-71),..*,
  - Brady, J.E., Wunsch, H., DiMaggio, C.  
**Prescription drug monitoring and dispensing of prescription opioids**  
(2014) *Public Health Rep*, 129, pp. 139-147.
  - Rosen, D.M., Alcock, M.M., Palmer, G.M.  
**Opioids for acute pain management in children**  
(2022) *Anaesth Intensive Care*, 50, pp. 81-94.
  - Pattullo, G.G.  
**Opioids in acute pain: towards getting the right balance**  
(2022) *Anaesth Intensive Care*, 50, pp. 68-80.
  - Hall, J.  
(2013) *Guyton and Hall: Textbook of Medical Physiology*, p. 1112.  
12th edn, Saunders
  - Brunton, L.L., Hilal-Dandan, R., Knollmann, B.C.  
(2022) *The Pharmacological Basis of Therapeutics*,  
13th edn. Mc Graw Hill Education
  - Yusoff, M.S.B.  
**ABC of content validation and content validity index calculation**  
(2019) *EIMJ*, 11, pp. 49-54.  
Department of Medical Education, School of Medical Sciences, Universiti Sains Malaysia,  
MALAYSIA
  - Bashir, I., Ahmad, M., Jamshaid, M.  
**Illicit sale of controlled drugs at community Pharmacy/medical stores of Punjab, Pakistan: A road to demolition of public health**  
(2021) *Heliyon*, 7, p. e07031.
  - Volkow, N.D., McLellan, A.T.  
**Opioid abuse in chronic pain-misconceptions and mitigation strategies**  
(2016) *N Engl J Med*, 374, pp. 1253-1263.

- Aziz, M.M., Ji, W., Masood, I.  
**Patient satisfaction with community pharmacies services: A cross-sectional survey from Punjab; Pakistan**  
(2018) *Int J Environ Res Public Health*, 15, p. 2914.
- Moecker, R., Weissenborn, M., Klingenberg, A.  
**Task sharing in an Interprofessional medication management program-a survey of general practitioners and community pharmacists**  
(2022) *BMC Health Serv Res*, 22, p. 1005.
- Mubarak, N., Hatah, E., Aris, M.A.M.  
**Consensus among Healthcare Stakeholders on a collaborative medication therapy management model for chronic diseases in Malaysia; A Delphi study**  
(2019) *PLoS One*, 14.
- Balough, M.M., Nwankpa, S., Unni, E.J.  
**Readiness of pharmacists based in Utah about pain management and opioid dispensing**  
(2019) *Pharmacy (Basel)*, 7, p. 11.
- Mubarak, N., Arif, S., Irshad, M.  
**How are we educating future physicians and pharmacists in Pakistan? A survey of the medical and Pharmacy student's perception on learning and preparedness to assume future roles in antibiotic use and resistance**  
(2021) *Antibiotics (Basel)*, 10, p. 1204.
- Renfro, M.L., Moczygemba, L.R., Baumgartner, J.  
**Opioid-related education provided by continuing education divisions at US Pharmacy schools**  
(2020) *Am J Pharm Educ*, 84, p. ajpe8001.
- Hohmeier, K.C., Cernasev, A., Sensmeier, M.  
**U.S. student pharmacist perceptions of the pharmacist's role in methadone for opioid use disorder: A qualitative study**  
(2021) *SAGE Open Med*, 9, p. 22994.

**Correspondence Address**

Elnaem M.H.; School of Pharmacy and Pharmaceutical Sciences, United Kingdom; email: m.elnaem@ulster.ac.uk

**Publisher:** BMJ Publishing Group

**ISSN:** 20446055

**PubMed ID:** 37989383

**Language of Original Document:** English

**Abbreviated Source Title:** BMJ Open

2-s2.0-85177981515

**Document Type:** Article

**Publication Stage:** Final

**Source:** Scopus

---

**ELSEVIER**

Copyright © 2024 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

 RELX Group™