

ASSESSMENT OF KNOWLEDGE, ATTITUDES, AND PRACTICES TOWARD CHOLERA AMONG HEALTH CARE PROFESSIONALS WORKING IN PRIVATE CLINICS OF DISTRICT WEST, KARACHI

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Abstract

Cholera continues to pose a significant public health risk in many urban regions of Pakistan, primarily due to unsafe drinking water, inadequate sanitation, and delayed case reporting. This study aimed to evaluate the knowledge, attitudes, and practices (KAP) related to cholera among registered healthcare professionals (HCPs) working in private clinics within District West, Karachi. A cross-sectional survey was conducted among 120 healthcare professionals. The findings revealed moderate levels of knowledge, generally positive attitudes, but inconsistent practices—particularly in areas concerning patient health education and timely case reporting to relevant authorities. These results underscore the need for continuous professional training and stronger integration between private healthcare providers and the public health system to improve cholera prevention and control efforts.

INTRODUCTION

Cholera is a highly communicable disease which caused by *Vibrio cholera* (CDC, 2024) transmitted primarily through contaminated water and food (Cholera, n.d.a). When people exposed to cholera usually they not become ill even they also not know about the attack of bacteria because most of the time its remain asymptomatic but the person play a major role in spreading of cholera, mild to moderate illness of cholera comprises on watery diarrhea while severe infection may lead to dehydration, imbalance electrolytes and sometime can also lead to shock (Cholera-Cholera - Symptoms & Causes, n.d.) .

Khan et al., (2022) Cholera continues to pose a public health burden in low-resource settings like Karachi. While public hospitals are integrated into

surveillance systems, private clinics often lack formal communication with district health authorities, despite serving a significant portion of the population (Gomes et al., 2022). This study explores the Knowledge attitude and practice related to cholera among these private health professionals, aiming to support early detection and outbreak control.

Objectives of this study were to assess knowledge regarding cholera symptoms, transmission, and treatment.

To evaluate attitudes of HCPs toward cholera prevention and public health.

To analyze clinical practices, include diagnosis, hygiene, and case reporting.

Literature Review

Cholera is a significant global health threat, especially in low- and middle-income countries (*Cholera – Global Situation*, n.d.) According to the World Health Organization cholera causes an estimated 1.3 to 4 million cases and 21,000 to 143,000 deaths worldwide each year. Its prevalence is closely tied to inadequate water supply, poor sanitation, and lack of awareness.

Several studies have highlighted the crucial role of healthcare professionals in cholera prevention and control (*Cholera*, n.d.-b).

Many studies emphasized the need for early case detection and community education, especially in urban slums. Rahman, (2020) noted that private healthcare providers in Bangladesh, while often the first point of contact for patients, are frequently excluded from national surveillance efforts, leading to underreporting and delayed outbreak responses.

In Pakistan, the burden of cholera is underreported due to weak health systems and the informal nature of private healthcare. A report by the Ministry of National Health Services *Pakistan Case Study*, n.d.(2021) indicated that many private clinics lack standardized protocols for infectious disease reporting. Studies by Riaz et al., (2019) confirm that knowledge among healthcare providers about cholera management is moderate, but practical implementation remains inconsistent.

Training and continuing medical education (CME) programs have shown promise in improving KAP scores. For instance, a controlled intervention study in India (Singh et al., 2018) demonstrated that CME

improved both awareness and compliance with reporting protocols among private practitioners.

Therefore, a gap exists between knowledge and practice in private clinical settings, particularly concerning hygiene practices, patient counseling, and disease reporting. This review underscores the importance of targeted KAP assessments to inform policy and public health strategy.

Methodology

This descriptive cross-sectional study was conducted among healthcare professionals working in private clinics of District West Karachi to evaluate their knowledge, attitude, and practice (KAP) regarding cholera. A purposive sampling technique was employed to select 120 registered healthcare providers, including general practitioners and homeopaths. Data were collected using a structured, self-administered questionnaire that contained both closed- and open-ended items, divided into sections on socio-demographic information and KAP indicators. The instrument was pre-tested for clarity and reliability, with necessary adjustments made prior to final administration. Ethical approval was obtained from the relevant institutional review board, and informed consent was secured from all participants. Data were analyzed using SPSS version 23.0, with results presented as frequencies, percentages, and mean scores. Cross-tabulations were also used to explore associations between demographic characteristics and KAP levels, with a significance level set at $p < 0.05$.

Results

Table 1. Demographic Profile of Respondents

Variable	Frequency (n=120)	Percentage (%)
Gender (Male)	75	62.5
Gender (Female)	45	37.5
Profession (MBBS)	70	58.3
Profession (Homeopath)	50	41.7
Experience >5 years	65	54.2
Experience ≤5 years	55	45.8



Table 2. KAP Scoring Summary

Component	Frequency (n=120)	Percentage (%)
Knowledge (Good)	50	41.7
Knowledge (Moderate)	45	37.5
Knowledge (Poor)	25	20.8
Attitude (Positive)	65	54.2
Attitude (Neutral)	35	29.2
Attitude (Negative)	20	16.6
Practice (Good)	40	33.3
Practice (Average)	50	41.7
Practice (Poor)	30	25.0

Key Indicators Visualized

A bar chart below summarizes the major indicators (see Figure 1):

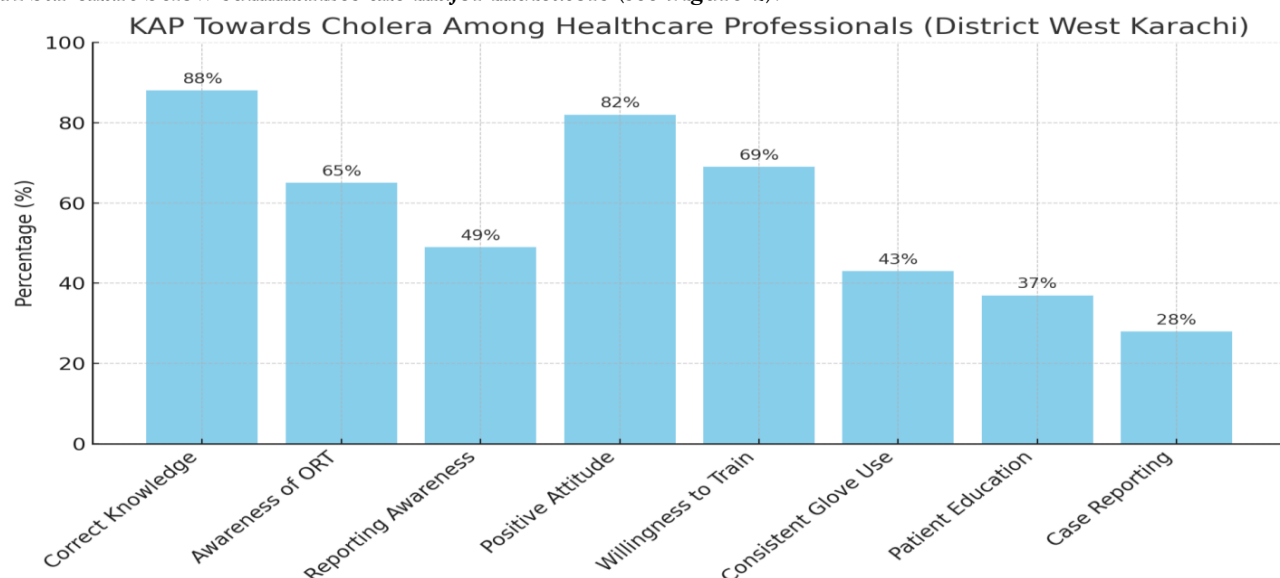


Figure 1: KAP Indicators among Private HCPs

- Correct knowledge: 88%
- Awareness of ORT: 65%
- Awareness of legal reporting: 49%
- Positive attitude: 82%
- Willingness to train: 69%
- Regular glove use: 43%
- Patient education: 37%
- Case reporting: 28%

Discussion

The findings shows moderate levels knowledge among private healthcare professionals regarding

cholera symptoms and management, consistent with studies (Elimian et al., 2023). However, the knowledge has not translated into unchanging practice. Less than one-third regularly report cases or provide hygiene awareness education, revealing a breakdown between awareness and application. Caution in reporting may be related to a lack of clear management, fear of clinic inspection, or simply no motivation. Further, while most professionals understand that cholera is preventable, preventive actions like safe water education and hand hygiene implementation are not routine. Integration of



private health care providers into the public disease surveillance network is vital.

Conclusion

This study discloses boosting knowledge and attitudes among private clinic-based health care professionals, but significant practice gaps remain in cholera control. Addressing these through structured, district-level training, guidelines for private setups, and real-time digital reporting tools could seriously enhance outbreak response capacity.

Recommendations

Implement mandatory, free CMEs modules on cholera.

Distribute visual IEC materials (in Urdu or local language) in private clinics.

Launch a mobile reporting app for private clinics.

Establish regular communication between district health offices and private practitioners, especially for communicable disease like cholera.

REFERENCES

- CDC. (2024, May 29). Cholera. Cholera. <https://www.cdc.gov/cholera/about/index.html>
- Cholera. (n.d.-a). Retrieved June 9, 2024, from <https://www.who.int/news-room/fact-sheets/detail/cholera>
- Cholera. (n.d.-b). Retrieved June 9, 2024, from <https://www.who.int/news-room/fact-sheets/detail/cholera>
- Cholera – Global situation. (n.d.). Retrieved June 9, 2024, from <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON426>
- Cholera-Cholera–Symptoms & causes. (n.d.). Mayo Clinic. Retrieved June 9, 2024, from <https://www.mayoclinic.org/diseases-conditions/cholera/symptoms-causes/syc-20355287>
- Elimian, K., King, C., Dewa, O., Pembi, E., Gandi, B., Yennan, S., Myles, P., Pritchard, C., Forsberg, B. C., & Alfvén, T. (2023). Healthcare workers knowledge of cholera multi-stranded interventions and its determining factors in North-East Nigeria: Planning and policy implications. *Human Resources for Health*, 21(1), 6. <https://doi.org/10.1186/s12960-023-00796-7>
- Gomes, B. M., Rebelo, C. B., & Alves De Sousa, L. (2022). Public health, surveillance systems and preventive medicine in an interconnected world. In *One Health* (pp. 33–71). Elsevier. <https://doi.org/10.1016/B978-0-12-822794-7.00006-X>
- Khan, H. A., Masood, W., Siddiqui, A., Ahmad, S., Salman, Y., & Essar, M. Y. (2022). The Cholera outbreak in Karachi, Pakistan: Challenges, efforts and recommendations. *Annals of Medicine and Surgery*, 78, 103873. <https://doi.org/10.1016/j.amsu.2022.103873>
- 3 Pakistan Case Study. (n.d.).
- Rahman, R. (2020). Shrinking the State: The Rise of Private Sector Healthcare in Bangladesh. *Journal of International Development*, 32(5), 717–726. <https://doi.org/10.1002/jid.3474>
- Riaz, M., Tiller, J., Ajmal, M., Azam, M., Qamar, R., & Lacaze, P. (2019). Implementation of public health genomics in Pakistan. *European Journal of Human Genetics: EJHG*, 27(10), 1485–1492. <https://doi.org/10.1038/s41431-019-0428-z>