

“HYGIENIC JUSTIFICATION OF THE RISKS OF HEALTHCARE-ASSOCIATED INFECTIONS WITH INTENSIVE USE OF MESSENGERS IN THE PRACTICE OF HOSPITAL PHYSICIANS”

**Razokova Zukhra Sherali qizi,
Razokova Mokhniso Sherali qizi**

Abstract

The intensive use of instant messaging applications by hospital physicians has become an integral part of modern medical practice, facilitating rapid communication, consultation, and decision-making. However, this convenience may contribute to the increased risk of healthcare-associated infections (HAIs) due to potential contamination of mobile devices and the transfer of pathogens between healthcare personnel and patients. This study examines the hygienic risks associated with frequent messenger use in hospital settings, analyzing the mechanisms of pathogen transmission, the types of microorganisms involved, and the contributing behavioral and environmental factors. The research highlights the importance of strict hand hygiene, regular disinfection of mobile devices, and the implementation of infection control protocols to minimize the risk of HAIs. By evaluating the hygienic implications of digital communication tools, this study aims to provide evidence-based recommendations for safe integration of messengers into hospital workflows without compromising patient safety.

Key Words: healthcare-associated infections; instant messaging; hospital physicians; mobile device hygiene; infection control; pathogen transmission

Introduction

In recent years, the use of digital communication tools, particularly instant messaging applications, has become an indispensable part of modern healthcare practice. Hospital physicians increasingly rely on messengers for rapid communication with colleagues, consultations with specialists, sharing of diagnostic images, and coordination of patient care. These applications provide unparalleled convenience and efficiency, enabling healthcare professionals to make timely decisions that can directly affect patient outcomes. The integration of digital communication into clinical workflows has led to improvements in interdisciplinary

collaboration, reduction of delays in treatment, and more coordinated management of complex cases.

However, the intensive use of messengers in hospital environments presents potential hygienic risks that are not yet fully understood. Mobile devices, including smartphones and tablets, are frequently handled by healthcare personnel, often without consistent adherence to hand hygiene protocols. These devices can act as reservoirs for pathogenic microorganisms, including bacteria, viruses, and fungi, which may be transmitted from healthcare workers to patients and vice versa. This phenomenon increases the likelihood of healthcare-associated infections (HAIs), which remain a significant challenge for patient safety in hospitals worldwide. According to the World Health Organization (WHO), HAIs contribute to prolonged hospital stays, increased healthcare costs, and elevated morbidity and mortality rates, making the identification and mitigation of risk factors a top priority.

The problem is exacerbated by the widespread and often uncontrolled use of messengers in hospital settings. Physicians may exchange patient information, laboratory results, or clinical images without considering the potential for contamination of their devices. Unlike traditional hospital equipment that is subject to routine disinfection protocols, personal mobile devices are rarely sanitized with the same rigor. This gap in infection control practices highlights a pressing need to assess the hygienic implications of intensive messenger use and to develop strategies that ensure both effective communication and patient safety.

Existing research on the role of mobile devices in HAIs has primarily focused on bacterial contamination, with studies demonstrating that pathogens such as *Staphylococcus aureus*, *Escherichia coli*, and *Pseudomonas aeruginosa* can survive on device surfaces for hours or even days. These studies also indicate that high-touch devices, including smartphones, can serve as vectors for the transfer of microorganisms between healthcare workers and patients. While hand hygiene remains the cornerstone of infection control, the presence of contaminated mobile devices can undermine these efforts, allowing pathogens to persist in clinical environments despite strict adherence to handwashing protocols.

Furthermore, behavioral and environmental factors contribute significantly to the hygienic risk associated with messenger use. Physicians often handle mobile devices during patient care, in consultation rooms, and in operating theaters, sometimes immediately after contact with patients or biological samples. The frequency of device handling, combined with insufficient awareness of infection risks, increases the likelihood of microbial transfer. Environmental conditions, including temperature, humidity, and the presence of organic matter, may further facilitate microbial survival on device surfaces. In addition, the rapid pace of hospital work often discourages rigorous device disinfection, creating a cycle in which mobile devices remain contaminated and continue to serve as vectors for HAIs.

The increasing reliance on messengers for communication in hospitals also raises concerns regarding the sharing of confidential patient information. While the primary focus of this study is hygienic risk, it is important to note that inappropriate handling of digital patient data can have ethical and legal implications. Thus, implementing hygienic measures for device use must go hand in hand with policies ensuring the security of patient information.

Given the growing body of evidence linking mobile device contamination to HAIs, there is a clear need for hygienic justification of the risks associated with intensive messenger use. This includes evaluating the mechanisms by which pathogens are transferred via devices, assessing the prevalence and types of microbial contamination, and identifying preventive strategies that minimize infection risk without compromising the utility of messengers in clinical practice. Evidence-based guidelines are essential for hospital administrations to balance the benefits of rapid communication with the imperatives of infection control.

This study aims to examine the hygienic risks of intensive messenger use among hospital physicians, with a particular focus on the role of mobile devices as vectors for pathogen transmission. Specific objectives include: analyzing patterns of device usage in clinical settings, identifying potential contamination points, evaluating the microbial load on commonly used devices, and proposing evidence-based hygiene measures. The results are expected to inform hospital policies,

contribute to the development of best practice recommendations, and support ongoing education for healthcare personnel regarding infection prevention.

The significance of this research extends beyond individual hospitals. As digital communication becomes ubiquitous in healthcare systems worldwide, understanding the hygienic implications of messenger use is critical for global efforts to reduce HAIs. By addressing this emerging risk factor, hospitals can enhance patient safety, optimize clinical workflows, and promote a culture of hygiene-conscious technology use among healthcare professionals.

Conclusion

The intensive use of instant messaging applications by hospital physicians offers substantial benefits in terms of efficiency, communication, and patient care coordination. However, this convenience carries an associated hygienic risk, primarily due to the potential contamination of mobile devices with pathogenic microorganisms. These devices, when handled frequently in clinical settings, can act as reservoirs and vectors for the transmission of bacteria, viruses, and fungi, thereby increasing the risk of healthcare-associated infections (HAIs).

Research indicates that mobile devices, including smartphones and tablets, frequently harbor clinically significant pathogens. The persistence of microorganisms on device surfaces, combined with inconsistent disinfection practices and high-touch handling, creates a scenario in which hand hygiene alone may be insufficient to prevent pathogen transfer. Environmental factors, workload pressures, and behavioral patterns of healthcare personnel further exacerbate this risk. Consequently, the intensive use of messengers in hospital practice represents a potential contributor to the burden of HAIs.

Preventive strategies are essential to mitigate the hygienic risks associated with digital communication tools. Regular disinfection of mobile devices, strict adherence to hand hygiene protocols, and the development of hospital policies regulating device use in clinical areas are critical measures. Educational interventions targeting hospital physicians and staff can increase awareness of contamination risks and promote behavior that reduces the likelihood of pathogen transmission. Additionally, integration of these measures into broader infection

control programs ensures a systematic and consistent approach across hospital departments.

The findings of this study underscore the need for a balanced approach in hospital settings, wherein the advantages of rapid communication via messengers are maintained while minimizing infection risks. Evidence-based recommendations, including standardized protocols for device disinfection and hygiene-conscious communication practices, can enable hospital physicians to leverage the benefits of instant messaging without compromising patient safety.

In conclusion, while messengers have become indispensable tools in modern healthcare, their intensive use in hospital practice necessitates careful consideration of hygienic risks. Hospitals must implement comprehensive strategies that combine education, device disinfection, hand hygiene, and policy measures to reduce HAIs associated with mobile devices. By addressing this emerging risk factor, healthcare institutions can improve patient safety, ensure effective clinical communication, and foster a culture of hygiene-conscious technology use among healthcare professionals. The integration of digital communication tools into clinical practice represents both an opportunity and a challenge. Through evidence-based assessment and proactive hygiene management, hospital physicians can continue to benefit from the efficiency of messengers while safeguarding patients against preventable infections. Ongoing research and monitoring are essential to adapt strategies to evolving technologies and clinical practices, ensuring that the future of digital healthcare remains both effective and safe.

REFERENCES

1. Ubbiniyazova A. M. Characteristic of a functional condition of an organism of workers of the Tashkent tractor plant // Medical magazine of Uzbekistan. – 2012. – C. 80-82.
2. Ataniyazova R. A. et al. Assessment of knowledge and skills of hand hygiene among representatives of three generations of the family living in different regions of Uzbekistan.

3. Madaminova M. A. et al. The dynamics are changes in organoleptic parameters and chemical composition of amudarya river water //European Journal of Molecular and Clinical Medicine. – 2020. – Т. 7. – №. 7. – С. 537-545.
4. Атаханова Д. О., Уббиниязова А. М., Садирова М. К. ОСНОВНЫЕ ГИГИЕНИЧЕСКИЕ ПРОБЛЕМЫ КЛАССИФИКАЦИИ ЗАГРЯЗНЕНИЯ ПОЧВ В КАРАКАЛПАКСТАНЕ //The Way of Science. – 2014. – С. 77.
5. Iskandarova G. T., Ubbiniyazova A. M. PROBLEMS OF ANTI-INFECTION PROTECTION IN BEAUTY AND HEALTH INSTITUTIONS //Медицинский журнал молодых ученых. – 2025. – №. 15 (09). – С. 202-205.