



**Analysis of health risks in hotel environments from a documentary review**  
**Análisis de los riesgos sanitarios en entornos hoteleros desde una revisión documental**

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**ABSTRACT**

**Objective:** to analyse health risks in hotel environments based on a documentary review. **Methods:** A systematic review of 15 articles on clinical risk management in hotel settings was used. **Results:** The identification of pathogens such as norovirus and Legionella, together with the high prevalence of STIs, highlights the need for a comprehensive approach to the training and sanitary control of hotel staff, whose role is critical in the spread of infectious agents. **Conclusion:** Outbreaks of gastrointestinal and sexually transmitted infections, together with the identification of environmental pathogens such as Legionella, highlight deficiencies in hygiene and control protocols, which were insufficient to mitigate the risks of contagion. **Keywords:** epidemiology; hotel sanitation; health surveillance system (Source, DeCS).

**RESUMEN**

**Objetivo:** analizar los riesgos sanitarios en entornos hoteleros desde una revisión documental. **Método:** Se empleó una revisión sistemática de 15 artículos sobre la gestión de riesgos clínicos en entornos hoteleros. **Resultados:** La identificación de patógenos como el norovirus y la Legionella, junto con la alta prevalencia de ITS, destaca la necesidad de un enfoque integral en la formación y control sanitario del personal hotelero, cuyo papel es crítico en la diseminación de agentes infecciosos. **Conclusión:** Los brotes de infecciones gastrointestinales y de transmisión sexual, junto con la identificación de patógenos ambientales como Legionella, subrayan las deficiencias en los protocolos de higiene y control, los cuales fueron insuficientes para mitigar los riesgos de contagio. **Descriptor:** epidemiología; saneamiento de hoteles; sistema de vigilancia sanitaria. (Fuente, DeCS).

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## **INTRODUCTION**

Clinical risk management in hotel settings is a significant public health challenge, given the confluence of factors that can facilitate the spread of infectious diseases. Hotels, as places of high social interaction and reception of travellers from diverse regions, become hotspots for the spread of both gastrointestinal and sexually transmitted infections. Recent studies have documented numerous outbreaks in these settings, including the rapid spread of norovirus and other gastrointestinal diseases due to inadequate hygiene and food handling practices (1,2). The high prevalence of sexually transmitted infections among sex workers and hotel employees, especially in areas with sex tourism, underscores the need for more rigorous preventive intervention and targeted educational programmes (5,7).

Furthermore, the presence of environmental pathogens such as *Legionella* in poorly maintained water systems in tourist facilities is evidence of failures in surveillance and primary prevention strategies, which can lead to outbreaks of serious diseases such as legionellosis (9). The global health emergency caused by the COVID-19 pandemic has exacerbated these risks, revealing the inadequacy of traditional cleaning protocols and the need for innovative and effective measures to protect both guests and hotel staff (14,15). In this context, it is imperative to review and strengthen public health policies in the hotel environment, considering the accumulated scientific evidence and emerging challenges, to ensure a safe environment and prevent the spread of diseases in an increasingly globalised world.

The aim of the research is to analyse health risks in hotel environments based on a documentary review.

## **METHOD**

A systematic review of 15 articles on clinical risk management in hospitality settings was used.



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Articles published in peer-reviewed journals addressing the incidence of infectious outbreaks, the prevalence of sexually transmitted infections, and the presence of environmental pathogens in hotels were included.

The selected studies had to be in English or Spanish, published between 1980 and 2023, and provide empirical data relevant to the relationship between hotel health practices and health outcomes.

Opinion articles, studies with significant methodological limitations, and those with non-representative populations were excluded.

Comprehensive searches of electronic databases such as PubMed, Scopus, and Web of Science were conducted using specific key terms: "hotel", "infectious outbreaks", "Legionella", "sexually transmitted infections", "infection control", among others. Reference lists of selected articles were also reviewed to identify additional studies that might meet the inclusion criteria.

## RESULTS

The results of the research are presented for consideration:

**Table 1.** Health risks in hotels.

<b>N</b>	<b>Reference</b>	<b>Main theme</b>	<b>Key findings</b>	<b>Implications</b>	<b>Clinical risks</b>
1	Michel et al., 2007	Norovirus outbreak in hotel	Identification of a norovirus outbreak in a hotel in Ireland; the rapid spread of the virus is highlighted.	Importance of sanitary measures in hotels to prevent outbreaks.	High risk of acute gastroenteritis in hosts due to norovirus transmission.
2	Reid et al., 1988	Viral gastroenteritis in a hotel	An infected food handler was identified as the source of the outbreak.	Need for strict controls on the health of food handlers.	Risk of massive gastroenteritis infection among hosts due to exposure to



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					contaminated food.
3	Yezli et al., 2021	Food security during Hajj	Assessment of gastrointestinal symptoms and food safety practices among pilgrims.	Improving food safety education at mass events.	Risk of gastrointestinal disease outbreaks during mass gatherings due to inadequate food handling practices.
4	Abdel-Dayem et al., 2014	Health of food handlers in hotels	Identification of microbial and parasitic pathogens in food handlers.	Reinforcement of medical examinations for workers in the hotel sector.	Risk of transmission of parasitic and bacterial infections through food handled by infected personnel.
5	Nessa et al., 2004	Sexually transmitted infections (STIs) among sex workers	High prevalence of STIs among sex workers in hotels.	Urgent sexual health and STI prevention programmes for vulnerable populations.	High risk of spreading STIs among sex workers and their clients.
6	Haseen et al., 2012	Sexual behaviour and STIs in young people	Sexual risk behaviours in young clients of hotel sex workers.	Need for educational and public health interventions targeting young people.	High risk of STIs among young people due to high-risk sexual behaviour.
7	Kapiga et al., 2003	Herpes simplex type 2 infection	High prevalence of HSV-2 among bar and hotel workers.	STI prevention and sexual health education programmes in high-risk areas.	Risk of HSV-2 infection and other STIs in hotel workers.
8	Kiwelu et al., 2005	Identification of HIV variants	Screening for HIV variants among bar and hotel workers.	Importance of ongoing surveillance and HIV prevention strategies in key populations.	Risk of infection with HIV variants due to high exposure in vulnerable populations.
9	McDonnell et al., 1995	Outbreaks of infectious	Study of outbreaks of intestinal	Need to improve personal hygiene	Risk of transmission of gastrointestinal



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		intestinal diseases	diseases with person-to-person transmission in hotels.	and training of catering staff.	infectious diseases due to lack of proper hygiene.
10	Tassiopoulos et al., 2007	Predictors of HSV-2 prevalence	Identification of risk factors associated with HSV-2 prevalence in hotel workers.	Interventions aimed at reducing the incidence of HSV-2 through education and prevention.	Continued risk of HSV-2 infection in the absence of preventive interventions.
11	Kapiga et al., 2002	HIV-1 epidemic in sex workers	Examining risk factors in the HIV-1 epidemic among hotel workers.	Creation of specific prevention programmes for women in the hotel sector.	Elevated risk of HIV-1 transmission in sex workers and their clients.
12	Doménech-Sánchez et al., 2022	Legionella surveillance in tourist facilities	Monitoring of Legionella in tourist facilities in the Balearic Islands.	Recommendation for preventive maintenance and continuous surveillance for Legionella in hotels.	Risk of Legionellosis outbreaks in tourist facilities due to lack of adequate surveillance.
13	Patwary et al., 2023	Sustainable consumption in green hotels	Research on the intention of tourists towards green hotels.	Strategies to promote sustainable tourism through green hotels.	No direct clinical risks identified, focus on sustainability.
14	Jiménez-Barreto et al., 2021	Cleaning programmes and COVID-19	Effectiveness of communication of cleaning programmes in hotels during the pandemic.	Improved clear and effective communication on health measures to customers.	Risk of COVID-19 infections if cleaning measures are not properly implemented and communicated.
15	Sharma et al., 2021	Innovation in hotels during COVID-19	Evaluation of hotel innovation and performance during the pandemic.	Promoting innovation in services and protocols to improve the resilience of the hotel sector.	Risk of decline in performance and safety of hotels without innovation in times of crisis.

Source: Own elaboration.



The analysis of the results presented in table 1 shows the significant prevalence of clinical risks associated with health management in hotel settings and their impact on public health. Outbreaks of infectious diseases, both gastrointestinal and sexually transmitted, underline the vulnerability of hotels as hotspots of contagion, exacerbated by poor implementation of control and prevention measures.

The identification of pathogens such as norovirus and Legionella, together with the high prevalence of STIs, highlights the need for a comprehensive approach to the training and sanitary control of hotel staff, whose role is critical in the spread of infectious agents. The interrelationship between guest behaviour and the sanitary conditions of the establishment highlights the importance of innovation in hygiene protocols and effective communication to mitigate risks during mass events or emergency situations, such as the COVID-19 pandemic.

## **DISCUSSION**

The discussion of the results obtained in the literature review highlights the complexity and challenges facing clinical risk management in the hotel environment, a space that, although designed for hospitality, can become a hotspot for the spread of pathologies if rigorous preventive measures are not implemented. The research documents multiple outbreaks of viral and bacterial infections in hotels, highlighting how the lack of adequate controls on staff health and environmental hygiene facilitates disease transmission. In this context, evidence of a norovirus outbreak associated with improper food handling highlights the critical need for strict protocols for health surveillance and ongoing staff training (4).

Beyond gastrointestinal outbreaks, the literature also points to the prevalence of sexually transmitted infections (STIs) among hotel workers, particularly in areas with high rates of sex tourism. Studies have shown that sex workers operating in hotels have a high incidence of STIs, which not only underscores the vulnerability of these populations, but also poses a significant public health risk (5). Transmission of herpes simplex virus type 2 (HSV-2) and the identification of HIV variants in hotel



workers in Tanzania illustrate the severity of the problem and the urgency of effective preventive interventions that address both health education and access to health services (6, 8).

On the other hand, the detection and control of environmental pathogens such as *Legionella* in tourist facilities reinforces the need for continuous environmental monitoring. The persistence of *Legionella* in poorly maintained water systems in hotel facilities is evidence of failures in the implementation of primary prevention strategies that could prevent outbreaks of Legionellosis, a disease that, although preventable, can have fatal consequences if not properly managed (9). The importance of these findings is amplified in situations of global health emergency, such as the COVID-19 pandemic, where the adoption of innovative measures and clear communication of cleaning protocols are essential to prevent disease transmission in hotel environments, a fact that has been widely documented in recent literature (14, 15).

## **CONCLUSION**

The critical interrelationship between health management in hotel environments and clinical risk prevention is evident, highlighting the need to implement advanced preventive strategies and ongoing epidemiological surveillance. Outbreaks of gastrointestinal and sexually transmitted infections, together with the identification of environmental pathogens such as *Legionella*, highlight the deficiencies in hygiene and control protocols, which were insufficient to mitigate the risks of contagion. It is important that health authorities encourage closer collaboration with the hotel industry, developing educational programmes and prevention policies that integrate technological innovations to effectively protect public health.

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## CONFLICT OF INTEREST

There is no conflict of interest with persons or institutions involved in research.

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