

## Editorial



# How to strengthen infection control practices in dental clinics and hospitals

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## OPEN ACCESS

**Received:** Sep 22, 2023

**Accepted:** Oct 20, 2023

**Published online:** Oct 26, 2023

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### Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Healthcare-related infections pose a significant threat to public safety, health, and life. In Korea, there has been a surge in public anxiety due to a series of mass infection incidents in medical institutions over the past decade. In response, the Korean government has developed and implemented a comprehensive plan to prevent and manage these infections. This plan, which has been updated every 5 years since 2018, aims to create a safer environment for medical and dental treatments. However, it primarily applies to surgical procedures in medical hospitals and focuses on inpatient-oriented measures and compensation. Unfortunately, it does not adequately address the unique circumstances of dental clinics, where treatments are typically performed on an outpatient basis.

Dental clinics and hospitals carry out numerous invasive procedures, to the point that each treatment space can be considered a small operating room where a significant amount of aerosols are produced. Furthermore, due to exposure to a broad spectrum of pathogenic microorganisms and the use of sharp, potentially hazardous instruments and equipment, there is a heightened risk of infection from blood-borne diseases such as human immunodeficiency virus and hepatitis B virus, or droplet-borne infectious diseases such as influenza and coronavirus disease 2019 (COVID-19). However, establishing a causal link between infections and dental treatment is challenging. The absence of an infection surveillance system further complicates the confirmation of dental-related infections, even when they do occur. The World Health Organization states that an effective infection control program can reduce healthcare-related infections by over 30%, and an infection surveillance system can decrease them by 25%–57%. However, these results may not be fully applicable to dental clinics and hospitals that lack an infection surveillance system [1].

Infection control in dentistry primarily revolves around reprocessing dental instruments. However, it should also emphasize the importance of basic hand hygiene, the use of personal protective equipment, and environmental management. This includes the disinfection of water lines and the surfaces of dental unit chairs, as well as specialized infection control measures for handpieces and laboratory equipment. Infection control should adhere to standardized, evidence-based guidelines. However, most guidelines currently used in Korean dental practices have certain limitations. Some are adapted from foreign guidelines, which do not adequately account for Korea's low healthcare insurance reimbursement system. Others are derived from surgery and hospitalization-focused medical guidelines, which do not accurately reflect the Korean dental treatment system.

How, then, can we ensure that dental institutions are safe from infection? First, it is crucial to establish an infection surveillance system. Dental clinics and hospitals should also implement the Korean National Healthcare-associated Infections Surveillance System (KONIS). Modules specifically designed for dental clinics and hospitals need to be developed and evaluated. These should focus on process indicators such as hand hygiene and management of water lines and surfaces, rather than outcome-based indicators typically used in medical hospitals, such as blood flow, urinary tract infections, pneumonia, and surgical infections.

Second, it is necessary to incentivize dental clinics and hospitals through a suitable compensation system. The implementation of infection control in these settings inevitably incurs costs. Therefore, without compensation, high-standard infection control activities may not be effective. In Korea, following the Middle East respiratory syndrome outbreak in 2015 and COVID-19 in 2020, the national health insurance service has been supporting the cost of infection control and patient safety. However, this support is only available for general medical treatment, not for dental clinics and hospitals. Therefore, the expenses associated with infection control must be covered, and policies such as participation in KONIS and the utilization of the healthcare accreditation system are necessary within the field of dentistry.

Third, infection control practitioners should be trained and recruited, and their capabilities should be strengthened. Dental hygienists' awareness of dental infection control was found to be higher when they had access to dental infection guidelines, had designated infection managers, and had undergone infection control education [2]. Infection control education should be conducted at schools, and infection control education for dental treatment teams should be strengthened. Training programs for infection control practitioners should be tailored to the unique characteristics of dentistry. Infection control practitioners in dental clinics and hospitals must have a clear understanding and delineation of their roles to effectively carry out their infection control responsibilities. In Korea, legal regulations concerning infection control practitioners are applicable to hospitals with more than 100 beds. However, for dental clinics and hospitals, separate standards such as the number of unit chairs, rather than the number of beds, should be established in legislation pertaining to the duties of infection control practitioners.

Thus, the government, related organizations, and dental workers must all collaborate and develop organically to strengthen infection control activities in dental clinics and hospitals.

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