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Sholekhah, N.K.[a] , Lestari, W.[b] , Sumarwanto, E.[a] , Faradiza, A.M.[c]

Relationship Between Compliance Level of Dentist Infection Control and Microorganism Number on Dental Unit at Universitas Muhammadiyah Semarang Dental and Oral Hospital

(2025) *Journal of International Dental and Medical Research*, 18 (1), pp. 95-101.

[a] Department of Dental Public Health, Faculty of Dentistry, Universitas Muhammadiyah Semarang, Indonesia
[b] Department of Oral Biology, Kuliyyah of Dentistry, International Islamic University Malaysia, Malaysia
[c] Dental Profession Students, Faculty of Dentistry, Universitas Muhammadiyah Semarang, Indonesia

Abstract
Infection control efforts in dentistry are critical for preventing contamination and the spread of microorganisms. The purpose of this study is to examine how the quantity of microorganisms on the surfaces of dental units and the dentist's level of infection control compliance relate to one another. Observational Analytic Research was conducted at specialist and general dental clinics at Universitas Muhammadiyah Semarang (Unimus) Dental and Oral Hospital. Observations were made regarding infection control in September 2024. Data was collected by swabbing the dental unit's surface. Bacterial counting was performed using a Colony Counter instrument, and the findings were reported as colony forming units (CFU). Identified by their bacterial species using the Vitek 2 Compact tool. The number of microorganisms in the dental unit at the Unimus Dental and Oral Hospital was 31,743 CFU/mL with details of 590 CFU/mL (Oral Surgery); 100 CFU/mL (Dental Conservation); 0 CFU/mL (Oral Disease); 145 CFU/mL (Pedodontic); 27,775 CFU/mL (Prosthodontic); 0 CFU/mL (Periodontic); 100 CFU/mL (Orthodontic); 3033 CFU/mL (General). Dentists' compliance with infection control measures was found to be moderate (65%). The most prevalent microbe detected at Unimus Dental and Oral Hospital was Sphingomonas paucimobilis (56%). Statistical research revealed a strong correlation between compliance level and microbe count (p-value 0.014 <0.05). There was a significant relationship between the level of compliance and the number of microorganisms. The higher the level of infection control compliance of dentists, the fewer the number of microorganisms and vice versa © (2025), Journal of International Dental and Medical Research

Author Keywords
Infection control; infection transmission; microorganism contamination; oral health facilities

Funding details
PT/2024
Funding details
The authors would like to thank the Faculty of Dentistry, Universitas Muhammadiyah Semarang, Unimus Dental and Oral Hospital, and all subjects who have participated in this study. The authors would also like to thank Universitas Muhammadiyah Semarang for funding this research. This research was funded by Universitas Muhammadiyah Semarang based on the letter of Rector Decree Number: 023/UNIMUS/SK.PT/2024. We would also like to thank the Institute for Research and Community Service of Universitas Muhammadiyah Semarang for the internal grant funding in 2024.

Correspondence Address
Sholekhah N.K.; Universitas Muhammadiyah Semarang, Jalan Kedungmundu Raya Nomor 22, Indonesia; email: drg.tusy@unimus.ac.id

Publisher: University of Dicle

ISSN: 1309100X
Language of Original Document: English
Abbreviated Source Title: J. Int. Dent. Med. Res.
2-s2.0-105001860419
Document Type: Article
Publication Stage: Final
Source: Scopus