

KNOWLEDGE, ATTITUDE AND PRACTICE OF INFECTION CONTROL AMONG DENTAL LABORATORY TECHNICIANS, MEDINA, KSA

Abdulrahman Abdali, Ali Altoori, Mohammad Abu Alghayth, Khalid Alsharif, Khalid Alblwshi & Nahlah Alharbi Research Scholar, Specialized Dental Centre, KFH, Medina, KSA

ABSTRACT

In dental working environments, disease control is essential. The danger of infection transmission in the dental lab has for some time been perceived. Dental professionals ought to intently follow the recommended conventions to stay away from cross defilement, bringing about a protected working environment for patients and laborers.

Materials and Strategies

In this cross sectional review, Dental lab specialists working in both private and government labs in Medina, Saudi Arabia will be given a self-managed poll.

KEYWORDS: Dental Professionals

Article History

Received: 06 Dec 2021 | Revised: 13 Dec 2021 | Accepted: 14 Dec 2021

INTRODUCTION

Result

By far most (81.0 percent) have crisis gauges set up for treating needle sticks and different sharps wounds. In open clinics, 28.6% utilized high volume departure, contrasted with 19.4% in scholastic establishments (P 0.01). Furthermore, 70.2 percent of private dental centers, 50% of public emergency clinics, and 36.1 percent of scholarly organizations applied surface boundaries for dental unit surfaces (P 0.001). At last, when contrasted with dental specialists, dental help laborers clung to contamination control gauges rarely.

Conclusion

There was an absence of consistence with disease control conventions, dental procedures are more powerless to cross defilement and contamination, and they have a restricted comprehension of disease control rules and approaches.

Background

In the field of dentistry, forestalling the spread of irresistible ailments is a basic concern. Notwithstanding the way that most countries have word related guidelines for work insurance and contamination control, just as continuous oversight by administrative specialists to uphold the necessities, we all things considered see helpless disease control in certain well off countries.1 Medical history, actual assessment, and research facility tests are not typically adequate to distinguish patients with irresistible problems. Any norm of care intended to shield medical services experts and patients from sicknesses that

can be spread by blood or some other organic liquid, discharge, or emission," as indicated by the Centers for Disease Control. 2 Hand washing, respiratory cleanliness, and hack behavior are on the whole standard safety measures. Sharps wellbeing, safe infusion strategies, sterile instruments and gadgets, clean and sanitized work surfaces, and the utilization of individual defensive hardware are terrifically significant. Mycobacterium tuberculosis, hepatitis infections, staphylococci, streptococci, herpes simplex infection types, human immunodeficiency infection, mumps, flu, rubella, and different microbes address a worry to patients and dental consideration laborers in dentistry. Microbes can be spread in the dental climate either straightforwardly through tainted blood, spit, or other body liquids, or in a roundabout way through polluted hardware, materials, and surfaces. Inward breath of airborne contaminations as splattered drops or vapor sprayers from salivation and respiratory emissions can likewise spread pathogens.3-5

Cross-disease is a huge danger for dental medical services laborers (DHCWs) because of word related openings, for example, needle stick and sharp instrument wounds (NSIs), mucocutaneous pollution, chomps, conjunctivitis, and mechanical injury. Drifting particles, which are viewed as genuine dangers for DHCW, can send an assortment of microorganisms, including cytomegalovirus, Mycobacterium tuberculosis, hepatitis B and hepatitis C infections (HBV and HCV), Herpes simplex infection type 1, human immunodeficiency infection (HIV), streptococci, contagious spongiform encephalopathies (counting variation CJD)6-7

Cross tainting among dental colleagues is a genuine worry, as indicated by a practically identical cross-sectional review led in Saudi Arabia's Jeddah, and severe adherence to contamination control guidelines is needed at dental centers and laboratories.8

The reason for this review was to evaluate dental lab professionals' mindfulness, information, and demeanor in regards to contamination anticipation techniques at Medina's dental research facilities.

METHODS

In this cross-sectional review, information were gathered by the deliberately developed poll. A survey made out of the segment things. Specialists of this board will made out of a subject trained professional, scientist, language master. Cranach alpha of the survey was determined. The review was led in the Medina locale of Saudi Arabia. After assortment of information, information were coded and entered in the SPSS ver.20 programming for examinations illustrative insights (mean standard deviation, frequencies, and %s were processed), to gauge the importance contrasts t-test and chi-square test was utilized at 5% degree of importance

In light of a poll conceived by the creators, information were gathered from dental research center work force. In the city of Medina, Saudi Arabia, a sum of 125 dental experts partook in the survey, which was dispersed as a printed version among the objective segment at a specific dental community just as business dental research facilities. There were eight segments to the poll: The primary part of the survey got some information about segment data, the subsequent area got some information about research facility data, and the leftover areas got some information about information appraisal, disposition, and practice about disease control methods

Result

Around 66% individuals in the example were over the age of 30. As per the discoveries, 82.1 percent of the people had hepatitis B immunization. The non-inoculated division included 34.4 percent of dental help laborers and 9.9 percent of dental specialists (chi = 19.15; P0.0001). Moreover, when contrasted with those with different degrees,

89

confirmation/secondary school degree holders were bound to be unvaccinated (31.7 percent versus 39.6 percent, separately, chi = 25.83; P0.001). There were no measurably critical contrasts in hepatitis B immunization when contrasted with other segment attributes.

Besides in select spots, there was no measurably critical variety close by cleanliness practice dependent on segment and work factors, as demonstrated by bi-variate investigation. In contrast with male (9.9%) people, females (26.1%) once in a while purged their hands prior to wearing gloves (chi =7.3; P=0.026). Just 4.9 percent of dental specialists (chi = 10.36; P=0.006) said they once in a while clean up prior to starting patient consideration, contrasted with 19.4 percent of dental help laborers. When contrasted with the rest, members with a certificate detailed cleaning up after tolerant consideration in a lower extent (chi esteem = 13.37; P=0.038). In forte facilities, 41.0 percent of members said they generally use hand sanitizer as opposed to cleaning up, contrasted with 24.0 percent overall practice centers

Most of members said they utilized individual insurance hardware at a proper level (Table 2). Continually wearing gloves while doing dental medicines (87.9%), changing gloves between patients (89.5%), wearing clean careful gloves (63.7%), and covers are generally instances of this (78.9 percent)

Most of the review members regularly sanitized utilized devices, hand pieces, brambles, and endodontic records by drenching them in purification arrangement (68.9 percent, 74.2 percent, 83.2 percent and 84.2 percent, individually). Wrapping sacks are utilized by 78.0 percent of members for instrument sanitization, while routine cleaning is utilized by a marginally more modest extent (74.7 percent) for surface sterilization in dental consideration offices. Surface boundaries are utilized by around 56.0 percent of respondents for dental unit surfaces. In their dental facilities, most of respondents (90.5 percent) use an autoclave to sanitize instruments.

DISCUSSION

An irresistible illness can be moved in dental workplaces through an assortment of means, incorporating direct contact with blood, mouth liquids, and other body emissions. Backhanded contact with defiled instruments, working hardware, and encompassing surfaces is additionally an unmistakable possibility.9-10

To stay away from cross-disease among oral medical services suppliers and patients, just as between patients themselves, it is basic to follow the all around proposed suggestions. This complete review means to examine the degree of disease control strategies utilized by dental medical services professionals in Jordan, including inoculation, hand cleanliness, the utilization of individual defensive hardware (PPE), sanitization, and sterilization. Also, the current review checked out the connections between the members' socio-segment and expert attributes and their utilization of disease control methods.11-12

As a general rule, the discoveries of the review uncovered that most of the members cling to widespread necessities for hepatitis B infection immunization, individual defensive gear (PPE), cleaning and cleansing, and managing sharp tools.13-14

The Hepatitis B Virus is a notable word related risk for dental specialists, as it very well may be moved through contact with a contaminated individual's blood and organic liquids. Most of people in this review (82.1 percent) were immunized against hepatitis B, which is more prominent than prior examinations from Jordan (36 percent)11 and Pakistan15 (71.6 percent), however lower than those from New Zealand16 (94.2 percent), Italy (85.7 percent), and Saudi Arabia17 (90.6 percent). The majority of the non-immunized hepatitis B patients were dental collaborators. The Hepatitis

B Virus is a notable word related risk for dental specialists, as it very well may be moved through contact with a contaminated individual's blood and organic liquids. Most of members in this review (82.1%) were immunized against hepatitis B, which is more prominent than earlier investigations' findings.15-16

Hand cleanliness rehearsed by dental experts is believed to be a powerful method for forestalling and control disease transmission in the dental office. Most of members in this review was found to clean up more after quiet treatment than prior to beginning treatment.17-19

In the dental climate, sickness transmission by voyaging beads and vapor sprayers that stay noticeable all around for quite a while is a major concern. Dental consideration suppliers ought to use PPE like gloves, defensive outfits, and facial coverings to diminish their weakness to airborne and blood borne sicknesses. 1,4,18 most of respondents said they every now and again use gloves (87.9%) and veils (78.9%) while doing dental operations.20

Contingent upon the danger of contamination related with their utilization, patient-care gear ought to be characterized and cleaned or sanitized. Most of members in the review sanitized and disinfected their gear consistently, as indicated by the data.21

CONCLUSION

Contamination control insurances are for the most part very much rehearsed among dental consideration experts. When contrasted with earlier investigations, dental consideration specialists are bound to follow all inclusive disease control standards. Notwithstanding, as various examination in different countries have illustrated, this edge isn't outright. Disease control prerequisites were followed less rigorously by dental colleagues. Subsequently, instructive projects and preparing drives ought to be embraced to further develop dental specialist consistence just as dental care staff consistence with disease control prerequisites.

REFERENCES

- Yadav BK, Rai AK, Agarwal S, Yadav B. Assessment of infection control practice in private dental hospital. Int J Res Med Sci. 2017;5(11):4737–4742. doi:10.18203/2320-6012.ijrms20174687
- 2. Taiwo J, Aderinokun G. Assessing cross infection prevention measures at the Dental Clinic, University College Hospital, Ibadan. Afr J Med Med Sci. 2002;31(3):213–217.
- 3. Aurangjeb AM, Zaman T, Badruddoza M. Practice of dental surgeons about dental splatter and aerosol. City Dent Coll J. 2013;10(2):10–16. doi:10.3329/cdcj.v10i2.16314
- 4. Kazi MM, Saxena R. Infection control practices in dental settings-a review. J Dent Allied Sci. 2012;1(2):67–71. doi:10.4103/2277-4696.159148
- 5. Gordon B, Burke F, Bagg J, Marlborough H, McHugh E. Systematic review of adherence to infection control guidelines in dentistry. J Dent. 2001;29(8):509–516. doi:10.1016/S0300-5712(01)00043-4
- 6. Di Giuseppe G, Nobile CG, Marinelli P, Angelillo IF. A survey of knowledge, attitudes, and behavior of Italian dentists toward immunization. Vaccine. 2007;25(9):1669–1675. doi:10.1016/j.vaccine.2006.10.056
- 7. Savabi O, Nejatidanesh F, Bagheri KP, Karimi L, Savabi G. Prevention of cross-contamination risk by disinfection of irreversible hydrocolloid impression materials with ozonated water. Int J Prev Med 2018;9:37.

- Diaconu D, Tatarciuc M, Vitalariu A. Quantitative analysis of bacterial contamination in dental laboratory air. Rom J Oral Rehabil 2012;4:27-9.
- 9. Kohn WG, Collins AS, Cleveland JL, Harte JA, Eklund KJ, Malvitz DM; Centers for Disease Control and Prevention (CDC). Guidelines for infection control in dental health-care settings—2003. MMWR Recomm Rep 2003;52:1-61.
- 10. Salvia AC, Matilde FS, Rosa FC, Kimpara ET, Jorge AO, Balducci I, et al. Disinfection protocols to prevent cross-contamination between dental offices and prosthetic laboratories. J Infect Public Health 2013;6:377-82.
- 11. Merchant V. An update on infection control in the dental laboratory. Quintessence Dent Technol 1997;20:157-69.
- 12. Gupta, Sakshi, Rani, Sapna, Garg, Sandeep. Infection control knowledge and practice: A cross -sectional survey on dental laboratories in dental institutes of North India. J Indian Prosthodont Soc 2017;17:348-54.
- 13. Balcos C, Barlean M, Bobu L, Popescu E. Evaluation of infection control knowledge and attitude among dental technicians in IASI. Rom J Oral Rehabil 2018;10:120-7.
- 14. Sammy K, Benjamin S. Infection control mechanisms employed by dental laboratories to prevent infection of their dental technicians/technologists. J Oral Health Craniofac Sci 2016;1:1-11.
- 15. Agostinho AM, Miyoshi PR, Gnoatto N, Paranhos HF, Figueiredo LC, Salvador SL. Cross -contamination in the dental laboratory through the polishing procedure of complete dentures. Braz Dent J 2004;15:138-43.
- 16. Boyce R, Mull J. Complying with the occupational safety and health administration: Guidelines for the dental office. Dent Clin North Am 2008;52:653-68.
- 17. Ajantha H, Kumar B. Infection control in the dental office -A review. Indian Journal of Dental Advancements 2011;3(03):577-82.
- 18. Diaconu D, Vitalariu A, Tatarciuc M, Murariu A. The economic crisis effects on the cross -contamination control in dental laboratories. Rev Cercet Interv 2014;47:105-16.
- 19. Ezzat A. Practice of cross -contamination prevention among dental laboratory technicians in the city of Jeddah in Saudi Arabia. EC Dent Sci 2018;17:2227-38.
- 20. Moh.gov.sa. 2018. Manual of Infection Prevention & Control in Dental Settings.
- 21. Nimonkar SV, Belkhode VM, Godbole SR, Nimonkar PV, Dahane T, Sathe S. Comparative evaluation of the effect of chemical disinfectants and ultraviolet disinfection on dimensional stability of the polyvinyl siloxane impressions. J Int Soc Prev Community Dent 2019;9:152-8.

FIGURES







