Infection Control and Safety (Advanced)

Year 4 — Bachelor of Dental Surgery

Reference and Resource List — Chapters 15.1 to 15.11

Supporting the MCQ, SBA, SAQ and flashcard question bank

BM Education FZE

Disclaimer
Questions in this bank were generated with the assistance of artificial intelligence and reviewed against the references listed. They are provided for educational revision only, are not a substitute for prescribed textbooks, clinical guidelines or supervised clinical training, and no warranty is given as to their accuracy or completeness.

References are presented in Vancouver style. Part 1 lists the core sources that apply across the whole subject; Part 2 lists, for each chapter, the relevant sections of those core texts together with sources specific to that chapter. Numbers in square brackets in Part 2 refer to the core list in Part 1.

PART 1 — CORE REFERENCES (ALL CHAPTERS)

1.1 Principal infection prevention and control textbooks

1. Miller CH. Infection Control and Management of Hazardous Materials for the Dental Team. 7th ed. St Louis: Elsevier; 2022.
2. Pankhurst CL, Coulter WA. Basic Guide to Infection Prevention and Control in Dentistry. 2nd ed. Chichester: Wiley Blackwell; 2017.
3. Samaranayake L. Essential Microbiology for Dentistry. 5th ed. Edinburgh: Elsevier; 2018.
4. McDonnell GE. Antisepsis, Disinfection, and Sterilization: Types, Action, and Resistance. 2nd ed. Washington (DC): ASM Press; 2017.
5. Mallya SM, Lam EWN, editors. White and Pharoah's Oral Radiology: Principles and Interpretation. 8th ed. St Louis: Elsevier; 2019.
6. Whaites E, Drage N. Essentials of Dental Radiography and Radiology. 6th ed. Edinburgh: Elsevier; 2021.

1.2 International infection prevention and control guidelines

7. Kohn WG, Collins AS, Cleveland JL, Harte JA, Eklund KJ, Malvitz DM; Centers for Disease Control and Prevention. Guidelines for infection control in dental health-care settings—2003. MMWR Recomm Rep. 2003;52(RR-17):1–61.
8. Centers for Disease Control and Prevention. Summary of infection prevention practices in dental settings: basic expectations for safe care. Atlanta (GA): CDC; 2016. Available from: https://www.cdc.gov/dental-infection-control
9. Siegel JD, Rhinehart E, Jackson M, Chiarello L; Healthcare Infection Control Practices Advisory Committee. 2007 guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings. Atlanta (GA): CDC; 2007.
10. Rutala WA, Weber DJ; Healthcare Infection Control Practices Advisory Committee. Guideline for disinfection and sterilization in healthcare facilities, 2008 (updated 2019). Atlanta (GA): CDC; 2008.
11. Sehulster L, Chinn RYW; Centers for Disease Control and Prevention, Healthcare Infection Control Practices Advisory Committee. Guidelines for environmental infection control in health-care facilities. MMWR Recomm Rep. 2003;52(RR-10):1–42.
12. World Health Organization. WHO guidelines on hand hygiene in health care. Geneva: WHO; 2009. Available from: https://www.who.int/publications/i/item/9789241597906
13. World Health Organization. Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level. Geneva: WHO; 2016.
14. World Health Organization, Pan American Health Organization. Decontamination and reprocessing of medical devices for health-care facilities. Geneva: WHO; 2016.

1.3 UK and regional dental guidance

15. Department of Health. Health Technical Memorandum 01-05: Decontamination in primary care dental practices. 2013 ed. London: Department of Health; 2013. Available from: https://www.gov.uk
16. Scottish Dental Clinical Effectiveness Programme. Decontamination into practice. Dundee: SDCEP; 2014. Available from: https://www.sdcep.org.uk
17. Loveday HP, Wilson JA, Pratt RJ, Golsorkhi M, Tingle A, Bak A, et al. epic3: national evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England. J Hosp Infect. 2014;86 Suppl 1:S1–70.
18. NHS England. Health Technical Memorandum 07-01: Safe and sustainable management of healthcare waste. London: NHS England; 2023. Available from: https://www.england.nhs.uk

1.4 Occupational health, regulatory and professional sources

19. Occupational Safety and Health Administration. Bloodborne pathogens standard. 29 CFR 1910.1030. Washington (DC): OSHA; 1991 (as amended 2001).

20. Centers for Disease Control and Prevention. Updated U.S. Public Health Service guidelines for the management of occupational exposures to HBV, HCV, and HIV and recommendations for postexposure prophylaxis. MMWR Recomm Rep. 2001;50(RR-11):1–52.
21. Centers for Disease Control and Prevention. Immunization of health-care personnel: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep. 2011;60(RR-7):1–45.
22. Health and Safety Executive. Control of Substances Hazardous to Health (COSHH). Approved Code of Practice and guidance L5. 6th ed. Norwich: HSE Books; 2013. Available from: https://www.hse.gov.uk
23. General Dental Council. Standards for the dental team. London: GDC; 2013. Available from: https://www.gdc-uk.org
24. Dental Council of India. Bachelor of Dental Surgery (BDS) Course Regulations, 2007 (as amended). New Delhi: DCI.

1.5 International standards

25. International Organization for Standardization. ISO 17665:2024. Sterilization of health care products — Moist heat — Requirements for the development, validation and routine control of a sterilization process for medical devices. Geneva: ISO; 2024.
26. International Organization for Standardization. ISO 15883-1:2006/Amd 1:2014. Washer-disinfectors — Part 1: General requirements, terms and definitions and tests. Geneva: ISO; 2014.
27. International Organization for Standardization. ISO 11140-1:2014. Sterilization of health care products — Chemical indicators — Part 1: General requirements. Geneva: ISO; 2014.

1.6 Key journals for currency

Journal of Hospital Infection · American Journal of Infection Control · Infection Control & Hospital Epidemiology · Antimicrobial Resistance & Infection Control · MMWR Recommendations and Reports · Journal of the American Dental Association · British Dental Journal · Journal of Dentistry · International Dental Journal · Dentomaxillofacial Radiology

PART 2 — CHAPTER-SPECIFIC REFERENCES

Chapter 15.1 — Foundations of Infection Prevention and Control (IPC) in Dentistry

15.1.1 Scope and objectives · 15.1.2 Chain of infection (applied) · 15.1.3 Risk assessment in dental settings

Core texts: [1] Sections on microbiology, the chain of infection and principles of infection control · [2] Chapters on principles of IPC and risk assessment · [3] Sections on infection and host defence · [7] · [8] · [9] · [13] · [23]

Additional

- Laheij AMGA, Kistler JO, Belibasakis GN, Välimaa H, de Soet JJ. Healthcare-associated viral and bacterial infections in dentistry. J Oral Microbiol. 2012;4:17659.
- Yamalik N, Van Dijk W. Analysis of the attitudes and needs/demands of dental practitioners in the field of patient safety and risk management. Int Dent J. 2013;63(6):291–7.

Chapter 15.2 — Standard Precautions (Core: Always Apply)

15.2.1 Hand hygiene (advanced practical) · 15.2.2 Personal protective equipment (PPE) · 15.2.3 Respiratory hygiene and cough etiquette · 15.2.4 Safe injection practices

Core texts: [1] Sections on hand hygiene, PPE and safe injection practices · [2] Chapters on standard precautions and PPE · [7] · [8] · [9] · [12] · [17] · [19]

Additional

- Boyce JM, Pittet D; Healthcare Infection Control Practices Advisory Committee; HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. Guideline for hand hygiene in health-care settings. MMWR Recomm Rep. 2002;51(RR-16):1–45.
- Garner JS; Hospital Infection Control Practices Advisory Committee. Guideline for isolation precautions in hospitals. Infect Control Hosp Epidemiol. 1996;17(1):53–80.

Chapter 15.3 — Decontamination Workflow and Zoning (Dirty → Clean → Sterile)

15.3.1 Clinic layout and zoning principles · 15.3.2 Receiving instruments

Core texts: [1] Sections on instrument processing and the processing area · [2] Chapter on decontamination of instruments · [7] · [8] · [10] · [14] · [15] · [16] · [25]

Additional

- International Organization for Standardization. ISO 17664-1:2021. Processing of health care products — Information to be provided by the medical device manufacturer for the processing of medical devices — Part 1: Critical, semi-critical and non-critical medical devices. Geneva: ISO; 2021.
- McDonnell G, Burke P. Disinfection: is it time to reconsider Spaulding? J Hosp Infect. 2011;78(3):163–70.

Chapter 15.4 — Cleaning, Disinfection, and Sterilization (Critical Differentiation)

15.4.1 Definitions · 15.4.2 Cleaning methods · 15.4.3 Inspection and packaging · 15.4.4 Sterilization (autoclave) · 15.4.5 Sterilization monitoring and validation · 15.4.6 Storage and shelf-life

Core texts: [1] Sections on instrument processing, sterilization and monitoring · [2] Chapter on decontamination of instruments · [4] · [7] · [10] · [15] · [16] · [25] · [26] · [27]

Additional

- Spaulding EH. Chemical disinfection of medical and surgical materials. In: Lawrence CA, Block SS, editors. Disinfection, Sterilization, and Preservation. Philadelphia: Lea & Febiger; 1968. p. 517–31.
- McDonnell G, Burke P. Disinfection: is it time to reconsider Spaulding? J Hosp Infect. 2011;78(3):163–70.

Chapter 15.5 — Clinical Environmental Cleaning and Disinfection

15.5.1 Clinical contact surfaces · 15.5.2 Spills management · 15.5.3 Laundry and textiles

Core texts: [1] Sections on surface asepsis and environmental infection control · [2] Chapter on the clinical environment · [7] · [8] · [10] · [11] · [14] · [22]

Additional

- Donskey CJ. Does improving surface cleaning and disinfection reduce health care-associated infections? Am J Infect Control. 2013;41(5 Suppl):S12–9.
- Weber DJ, Rutala WA, Miller MB, Huslage K, Sickbert-Bennett E. Role of hospital surfaces in the transmission of emerging health care-associated pathogens: norovirus, Clostridium difficile, and Acinetobacter species. Am J Infect Control. 2010;38(5 Suppl 1):S25–33.
- Otter JA, Yezli S, Salkeld JAG, French GL. Evidence that contaminated surfaces contribute to the transmission of hospital pathogens and an overview of strategies to address contaminated surfaces in hospital settings. Am J Infect Control. 2013;41(5 Suppl):S6–11.

Chapter 15.6 — Aerosol-Generating Procedures (AGPs) and Air Quality

15.6.1 AGP risk assessment · 15.6.2 Aerosol mitigation strategies · 15.6.3 Ventilation and air cleaning (overview)

Core texts: [1] Sections on aerosols, spatter and respiratory protection · [2] Chapters on aerosols and airborne infection · [8] · [9] · [11]

Additional

- Harrel SK, Molinari J. Aerosols and splatter in dentistry: a brief review of the literature and infection control implications. J Am Dent Assoc. 2004;135(4):429–37.
- Peng X, Xu X, Li Y, Cheng L, Zhou X, Ren B. Transmission routes of 2019-nCoV and controls in dental practice. Int J Oral Sci. 2020;12(1):9.
- Innes N, Johnson IG, Al-Yaseen W, Harris R, Jones R, Kc S, et al. A systematic review of droplet and aerosol generation in dentistry. J Dent. 2021;105:103556.
- Nulty A, Lefkaditis C, Zachrisson P, Van Tonder Q, Yar R. A clinical study measuring dental aerosols with and without a high-volume extraction device. Br Dent J. 2020 Nov 12. doi:10.1038/s41415-020-2274-3.
- Veena HR, Mahantesha S, Joseph PA, Patil SR, Patil SH. Dissemination of aerosol and splatter during ultrasonic scaling: a pilot study. J Infect Public Health. 2015;8(3):260–5.
- Cochran MA, Miller CH, Sheldrake MA. The efficacy of the rubber dam as a barrier to the spread of microorganisms during dental treatment. J Am Dent Assoc. 1989;119(1):141–4.
- World Health Organization. Infection prevention and control in the context of coronavirus disease (COVID-19): a living guideline. Geneva: WHO; 2023. Available from: https://www.who.int

Chapter 15.7 — Dental Unit Waterlines (DUWL) and Water Safety

15.7.1 Why waterlines matter · 15.7.2 Control measures · 15.7.3 Surgical water

Core texts: [1] Section on dental unit water asepsis · [2] Chapter on dental unit waterlines · [7] · [8]

Additional

- Pankhurst CL, Coulter WA. Do contaminated dental unit waterlines pose a risk of infection? J Dent. 2007;35(9):712–20.
- O'Donnell MJ, Boyle MA, Russell RJ, Coleman DC. Management of dental unit waterline biofilms in the 21st century. Future Microbiol. 2011;6(10):1209–26.
- Coleman DC, O'Donnell MJ, Shore AC, Russell RJ. Biofilm problems in dental unit water systems and its practical control. J Appl Microbiol. 2009;106(5):1424–37.
- Walker JT, Bradshaw DJ, Bennett AM, Fulford MR, Martin MV, Marsh PD. Microbial biofilm formation and contamination of dental-unit water systems in general dental practice. Appl Environ Microbiol. 2000;66(8):3363–7.
- Barbeau J, Tanguay R, Faucher E, Avezard C, Trudel L, Côté L, et al. Multiparametric analysis of waterline contamination in dental units. Appl Environ Microbiol. 1996;62(11):3954–9.

- International Organization for Standardization. ISO 7494-2:2022. Dentistry — Stationary dental units and dental patient chairs — Part 2: Air, water, suction and wastewater systems. Geneva: ISO; 2022.
- Health and Safety Executive. Legionnaires' disease: the control of legionella bacteria in water systems. Approved Code of Practice and guidance L8. 4th ed. Norwich: HSE Books; 2013.
- American Dental Association. Statement on dental unit waterlines. Chicago (IL): ADA. Available from: https://www.ada.org

Chapter 15.8 — Sharps Safety and Injury Prevention

15.8.1 Sharps risks in dentistry · 15.8.2 Safe sharps handling · 15.8.3 Sharps injury management protocol

Core texts: [1] Sections on sharps management and exposure incidents · [2] Chapter on sharps injuries · [7] · [8] · [19] · [20]

Additional

- Centers for Disease Control and Prevention. Workbook for designing, implementing, and evaluating a sharps injury prevention program. Atlanta (GA): CDC; 2008.
- National Institute for Occupational Safety and Health. NIOSH alert: preventing needlestick injuries in health care settings. DHHS (NIOSH) Publication No. 2000-108. Cincinnati (OH): NIOSH; 1999.
- Cleveland JL, Barker LK, Cuny EJ, Panlilio AL; National Surveillance System for Health Care Workers Group. Preventing percutaneous injuries among dental health care personnel. J Am Dent Assoc. 2007;138(2):169–78.
- Sohn S, Eagan J, Sepkowitz KA. Safety-engineered device implementation: does it introduce bias in percutaneous injury reporting? Infect Control Hosp Epidemiol. 2004;25(7):543–7.
- Trim JC, Elliott TSJ. A review of sharps injuries and preventative strategies. J Hosp Infect. 2003;53(4):237–42.
- The Health and Safety (Sharp Instruments in Healthcare) Regulations 2013. SI 2013/645. London: The Stationery Office; 2013.

Chapter 15.9 — Blood-Borne Pathogens and Occupational Health

15.9.1 Core pathogens and transmission · 15.9.2 Immunization and staff health · 15.9.3 Managing known infected patients

Core texts: [1] Sections on bloodborne diseases, immunization and exposure management · [2] Chapters on bloodborne viruses and occupational health · [3] Sections on hepatitis viruses and HIV · [8] · [19] · [20] · [21] · [23]

Additional

- Cleveland JL, Gray SK, Harte JA, Robison VA, Moorman AC, Gooch BF. Transmission of blood-borne pathogens in US dental health care settings: 2016 update. J Am Dent Assoc. 2016;147(9):729–38.
- Beltrami EM, Williams IT, Shapiro CN, Chamberland ME. Risk and management of blood-borne infections in health care workers. Clin Microbiol Rev. 2000;13(3):385–407.
- Kuhar DT, Henderson DK, Struble KA, Heneine W, Thomas V, Cheever LW, et al. Updated US Public Health Service guidelines for the management of occupational exposures to human immunodeficiency virus and recommendations for postexposure prophylaxis. Infect Control Hosp Epidemiol. 2013;34(9):875–92.
- Schillie S, Vellozzi C, Reingold A, Harris A, Haber P, Ward JW, et al. Prevention of hepatitis B virus infection in the United States: recommendations of the Advisory Committee on Immunization Practices. MMWR Recomm Rep. 2018;67(1):1–31.
- Moorman AC, de Perio MA, Goldschmidt R, Chu C, Kuhar D, Henderson DK, et al. Testing and clinical management of health care personnel potentially exposed to hepatitis C virus — CDC guidance, United States, 2020. MMWR Recomm Rep. 2020;69(6):1–8.
- Public Health England. Integrated guidance on health clearance of healthcare workers and the management of healthcare workers living with bloodborne viruses (hepatitis B, hepatitis C and HIV). London: PHE; 2017. Available from: https://www.gov.uk

- World Health Organization. Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022–2030. Geneva: WHO; 2022.

Chapter 15.10 — Clinical Waste Management (Advanced)

15.10.1 Waste segregation · 15.10.2 Storage and collection

Core texts: [1] Sections on waste management and hazardous materials · [2] Chapter on clinical waste · [18] · [22]

Additional

- Chartier Y, Emmanuel J, Pieper U, Prüss A, Rushbrook P, Stringer R, et al., editors. Safe management of wastes from health-care activities. 2nd ed. Geneva: World Health Organization; 2014.
- United Nations Environment Programme. Minamata Convention on Mercury. Nairobi: UNEP; 2013. Available from: https://www.mercuryconvention.org
- World Health Organization. Future use of materials for dental restoration: report of the meeting convened at WHO HQ, Geneva, Switzerland, 16th to 17th November 2009. Geneva: WHO; 2010.
- American Dental Association. Best management practices for amalgam waste. Chicago (IL): ADA; 2007.
- Environmental Protection Agency. Effluent limitations guidelines and standards for the dental category. 40 CFR Part 441. Fed Regist. 2017;82(113):27154–78.
- Department for Environment, Food and Rural Affairs. Guidance on applying the waste hierarchy. London: DEFRA; 2011.

Chapter 15.11 — Radiation Safety (Integrated Safety Block)

15.11.1 Operator and patient protection

Core texts: [5] Chapters on radiation biology and radiation protection · [6] Chapters on radiation dose, risk and protection

Additional

- International Commission on Radiological Protection. The 2007 recommendations of the International Commission on Radiological Protection. ICRP Publication 103. Ann ICRP. 2007;37(2–4):1–332.
- International Commission on Radiological Protection. Radiological protection in medicine. ICRP Publication 105. Ann ICRP. 2007;37(6):1–63.
- International Atomic Energy Agency. Radiation protection and safety in medical uses of ionizing radiation. IAEA Safety Standards Series No. SSG-46. Vienna: IAEA; 2018.
- European Commission. Radiation Protection No. 136: European guidelines on radiation protection in dental radiology. Luxembourg: Office for Official Publications of the European Communities; 2004.
- Public Health England. Guidance notes for dental practitioners on the safe use of X-ray equipment. 2nd ed. London: PHE; 2020. Available from: https://www.gov.uk
- American Dental Association, US Food and Drug Administration. Dental radiographic examinations: recommendations for patient selection and limiting radiation exposure. Revised 2012. Chicago (IL): ADA; 2012.
- National Council on Radiation Protection and Measurements. Radiation protection in dentistry and oral and maxillofacial imaging. NCRP Report No. 177. Bethesda (MD): NCRP; 2019.
- Horner K, Eaton KA, editors. Selection criteria for dental radiography. 3rd ed. London: Faculty of General Dental Practice (UK); 2013 (revised 2018).
- The Ionising Radiations Regulations 2017. SI 2017/1075. London: The Stationery Office; 2017.
- The Ionising Radiation (Medical Exposure) Regulations 2017. SI 2017/1322. London: The Stationery Office; 2017.

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