

**Infection control protocol**

“An ounce of prevention is worth a pound of cure” (Ben Franklin)

Consciousness and constant vigilance results in hygienic practices in the clinical environment.

Please read the following carefully.

1. Universal Precautions:

- 1.1. **Hand Hygiene.** Hand hygiene is the most important measure to prevent the spread of infections among patients and DHCP.
 - 1.1.1 Use approved protective attire and barrier techniques when contact with body fluids or mucous membranes (oral cavity) is anticipated.
 - 1.1.2 Remove all jewelry, except for a thin, smooth wedding band, and maintain Nail hygiene.
 - 1.1.3 Wash hands (antimicrobial hand-wash) before and after each patient contact.
 - 1.1.4 Wear gloves (exam, surgical, vinyl)

1.2 Personal Hygiene:

A. Hair: hair should not be long and should be kept away from the face to prevent contamination from spray or spatter produced during dental procedures.

B. Facial hair: Male students are to wash and clean facial hair with suitable disinfectant and cover it with a face mask during patient treatment to prevent contamination from spray or spatter produced during dental procedures.

C. Jewelry: Remove all jewelry except a thin, smooth wedding band and a wristwatch. Any jewelry that interferes with patient care should not be worn in the clinic.

D. Nails: Nails must be maintained in a short, clean, and healthy fashion as it harbors most microorganisms on the hand.

- 1.3 Wear uniforms, laboratory coats, or gowns within the working cubicle.

2 Respiratory Hygiene/Cough Etiquette.

2.1 Dental patients and dental health care providers are exposed to getting infected with many pathogenic microorganisms which might be blood-borne or originate from oral or respiratory tract infections, including cytomegalovirus (CMV), HIV, HBV, HCV, Mycobacterium tuberculosis, staphylococci, streptococci.

2.2 The mode of transmission of these infections includes:

- Direct contact with patient blood, oral fluids, or other contaminated secretions like saliva or serum exudates.



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- Indirect contact with contaminated instruments, objects, or surfaces.
- Droplet infection from spattered material of the patients e.g., coughing or sneezing that might come into contact with the conjunctiva or a non-intact nasal or oral mucosa.
- Inhalation of airborne microorganisms from the aerosol in the surroundings of the dental theatre

2.3 Conditions for getting an infection include:

- Sufficient dose of a virulent pathogenic organism.
- A medium or reservoir for the organism to survive and multiply like blood.
- A transmission mode allowing a portal of entry from the source to the host.
- A susceptible host who is not immune or resistant to the invading pathogen.

2.4 Effective infection-control procedures prevent infection by cutting one or more links in this chain.**2.5 Standard precautions should be considered during contact with:**

- All body fluids & secretions e.g. blood, mucous secretions & saliva.
- Non-intact skin & mucus membranes.

3 The Procedure**3.1 Orientation:**

- 3.1.1** All dental staff and students must read this document and receive a copy of infection control and safety protocols before any clinical responsibility is delegated.
- 3.1.2** Upon completion of orientation and review of protocols, individuals should sign the consent in the respective course clinic manual, stating that they have received the infection control protocol of the college and are responsible for following it.
- 3.1.3** Dental Infections Control should be checked randomly every day before, during, and after patient treatments in college clinics by an infection controller using the Infection Control inspection checklist.

3.2 Immunizations:



3.2.1 All dental clinic staff and students are urged to have appropriate immunizations before engaging in the treatment of patients.

3.2.2 All dental staff and students are afforded the opportunity to be immunized against Hepatitis-B.

3.3 Importance of Current Medical Histories:

3.3.1 Patient medical histories should be updated whenever the patient comes for treatment.

3.3.2 Chair-side Assistants should review pertinent information with a doctor before patient treatment.

3.3.3 Patient charts should reflect that a history review has occurred before any administration of medication or invasive procedure.

3.3.4 Infectious diseases can often be present without overt symptoms. Further, some patients are reluctant to divulge facts about certain medical conditions; therefore, all patients are to be treated as potentially infectious by observing and employing "Universal Precautions."

3.4 Clinic setup:

3.4.1 Before entering clinic, please ensure that the clinic was cleaned and disinfected, no used barriers/disposables present, clinic floor and surfaces are clean and no waste or sharps, spittoons and drains clean (chair is in raised position)

3.4.2 Before inviting patient to the clinic complete the preparation phase: Barriers: place plastic chair cover, put blue plastic film on light handles and switch, tray handles, button panels, put plastic tube cover: suction pipes/3-way, handpiece, scaler pipes, and for required devices and equipment (rotary/light cure/impression gun etc.) Also make sure that disposable items like suction tips, polytowel, plastic cups, and tissue paper are available.

3.4.3 After finishing the procedure carry out the post-procedure disinfection phase: Remove all the barriers, dispose of waste materials, secure sharps in sharps container. Disinfect surfaces - spray and wipe down, raise chair - flush spittoons and drains, keep chair in raised position. Return all instruments/equipment and unused materials to nursing station.

3.5 Opening of the instrument package:

3.5.1 Before opening instrument packages, the packages must be examined to ensure the seal is intact, and the integrity of the package is not broken in any way (e.g. through tears, perforations, or wetness).

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3.5.2 The instrument packages should be opened without touching the instruments.

3.5.3 The packages should be opened with clean hands after the patient is seated and then put on gloves just before first contact with the patient’s mouth.

3.6 Patient Treatment:

3.6.1 During patient treatment, all procedures should be performed to minimize the formation of droplets, spatter, and aerosols; this can be accomplished by using high-volume evacuation and proper patient positioning.

3.6.2 Dental personnel should limit the field of contamination by avoiding contact with objects such as charts, telephones, and cabinets during treatment.

○ Tray Setup:

- When possible, use tray setups to minimize entering drawers and cabinets.
- Think ahead when preparing for procedures.
- When cabinet drawers must be entered during a procedure to secure an instrument or supplies, it must be accomplished with sterile forceps or barriers to prevent contamination of the drawer’s contents.

3.7 Sterilization and Disinfection of Patient-Care Items and Devices.

3.7.1 Polyether impressions should be sprayed with a 1:10 dilution of 5.25% sodium hypochlorite (bleach) solution, kept wet for 2-3 minutes, and then rinsed with water before sending it to the laboratory.

3.7.2 Vinyl Polysiloxane impressions should be immersed in a 1:10 dilution of 5.25% sodium hypochlorite (bleach) solution, soaked for 10 minutes, rinsed, and sent to the laboratory.

3.7.3 Alginate impressions should be rinsed with water immediately after removal from the mouth to remove blood and saliva. They should then be sprayed with a 1:10 dilution of sodium hypochlorite (bleach) solution, sealed in a plastic bag for 10 minutes, and poured immediately.

3.8 Shipping of Contaminated Articles:

3.8.1 Any laboratory cases (impressions, models, prosthetic devices, etc.) and any contaminated equipment being shipped for processing or repair must be decontaminated before packaging, rinse with water, spray/immerse with a 1:10 dilution of sodium hypochlorite disinfectant solution or 50% diluted



chlorhexidine solution for 10 minutes, appropriate for the item being shipped.
All laboratory items should be send along with laboratory disinfection checklist.

3.9 Contaminated Waste:

- 3.9.1** Refuse considered "infectious" shall be separated from all others and placed into covered steal containers with plastic liners or liners clearly labeled as bio-hazard to alert personnel of possible danger.
- 3.9.2** Infectious materials bagged includes gauze and cotton balls soaked with blood, saliva, blood-stained paper goods, teeth, or excised soft tissue. Sharp items are to be tightly sealed in puncture-resistant yellow containers to preclude loss of contents.
- 3.9.3** All contaminated waste is collected from each container at the end of each day.
- 3.9.4** The dental personnel must wear gloves when performing this job.
- 3.9.5** All bags are placed in a large blue bag and taken to the designated holding areas within the clinic, where it is deposited for removal by a special waste hauler.
- 3.9.6** Full sharps containers taped shut are to be taken to the aforementioned holding area and similarly deposited in infectious waste containers.

4. Injuries and Sharp Items:

- 4.1.1 Safety precautions are to be taken to protect hands from injuries and disease-causing pathogens.
- 4.1.2 Wash hands (antimicrobial hand wash) before gloving and after de-gloving.
- 4.1.3 Change gloves between each patient.
- 4.1.4 Discard gloves that are torn, cut, or punctured.
- 4.1.5 Avoid injury with sharp instruments and needles.
- 4.1.6 Report all injuries, no matter how small, to your supervisor.
- 4.1.7 Handle sharp items carefully. Hemostats or pliers may be used to handle sharp items.
- 4.1.8 When it is necessary to recap needles, recap with a needle shield using a one-handed recapping technique to avoid accidental needle sticks.
- 4.1.9 Place sharp items in appropriate containers labeled and designated for that purpose.
- 4.1.10 A container for disposal of sharp items is located either in each operatory or in the sterilization room designated for disassembling trays after patient treatment.



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- 4.2.1 Stop patient treatment.
- 4.2.2 Excuse yourself from the patient.
- 4.2.3 Wash the wound area with antiseptic soap and water.
- 4.2.4 Do not scrub (wash around).
- 4.2.5 Bleed the wound.
- 4.2.6 Cover the injured area.
- 4.2.7 Report the injury to your clinical/practical supervisor
- 4.2.8 Document injuries.
- 4.2.9 Bring the patient's chart with you.
- 4.2.10 Go to the emergency room for further injury management and fill the incidence report.
- 4.2.11 This incident report will be referred to the clinic director, who in turn gives the student a referral letter to KKU medical city hospital with a copy of the incident letter for making the necessary investigations and precautionary measures needed for such incidents and asking for feedback report.
- 4.2.12 A referral letter to KKU medical city hospital will also be given to the patient for the same purpose
- 4.2.13 A copy of the incident report, referral letters, and feedback reports should be kept in a confidential file in the file storage room.
- 4.2.14 Faculty and staff will follow the same procedure.

5. Other Procedures:**5.1 General diagnostic imaging:**

- 5.1.1 The wheelchairs and gurneys should be wiped down with sanitizing wipes or a solution containing 70% alcohol
- 5.1.2 The exam table must be wiped down frequently with sanitizing wipes or a solution containing 70% alcohol.
- 5.1.3 The x-ray tube, chest board, control panel, and countertops should be wiped down frequently with sanitizing wipes or a solution containing 70% alcohol.
- 5.1.4 The cassettes must be cleaned at least once a month with sanitizing wipes or a solution containing 70% alcohol.
- 5.1.5 For OPG and CBCT infection control should be concerned for Bite blocks (Disposable, Reusable, and Sterilized between each patient or barrier protected.)
- 5.1.6 Chin rest, Head-positioning guides, and handgrips should be barrier protected or cleaned after each exposure.
- 5.1.7 Digital radiography sensors/plates are considered semi-critical devices and should be cleaned with alcohol/glutaraldehyde disinfectant. They should be barrier protected with plastic and rubber sleeves together.



5.2 Personal hygiene of the technologist:

- 5.2.1 Wash hands before and after every contact with a patient.
- 5.2.2 BSI (Body Substance Isolation) precautions are to be used on every patient concerning saliva.
- 5.2.3 Technologists with communicable diseases should stay home and not work with patients.
- 5.2.4 Technologists should be well-kept and neat in their appearance.
- 5.2.5 Technologists should be free from offensive odor.
- 5.2.6 Technologists should avoid direct coughs from patients.
- 5.2.7 New employees are required to have a TB test.
- 5.2.8 Lab coats are to be laundered frequently.
- 5.2.9 Restrooms are to be cleaned daily.
- 5.2.10 Hands are to be washed before and after every patient.

6. Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease (COVID-19) Pandemic (Updated Sept. 27, 2022)

6.1 Isolation and work restriction guidance

- 6.1.1 Asymptomatic HCP with higher-risk exposures **do not** require work restriction.
- 6.1.2 HCP with even mild symptoms of COVID-19 should be prioritized for viral testing with nucleic acid or antigen detection assays.
- 6.1.3 If using NAAT (molecular), a single negative test is sufficient in most circumstances. If a higher level of clinical suspicion for SARS-CoV-2 infection exists, consider maintaining work restrictions and confirming with a second negative NAAT (nucleic acid amplification test).
- 6.1.4 After returning to work, HCP should self-monitor for symptoms and seek re-evaluation from occupational health if symptoms recur or worsen.

6.2 HCP(Health care professional) with mild to moderate illness who is not moderately immunocompromised could return to work after the following criteria have been met:

- 6.2.1 At least 10 days and up to 20 days have passed since symptoms first appeared.
- 6.2.2 At least 24 hours have passed *since last fever* without the use of fever-reducing medications, and
- 6.2.3 Symptoms (e.g., cough, shortness of breath) have improved.

7. HCP who had prolonged close contact with someone with SARS-CoV-2 in the community (e.g., household contacts) should be managed as described for higher-risk occupational exposures

- 7.1 An exposure of 15 minutes or more is considered prolonged. This could refer to a single 15-minute exposure to one infected individual or several briefer exposures

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to one or more infected individuals adding up to at least 15 minutes during a 24-hour period.

- 7.2 The presence of extenuating factors (e.g., exposure in a confined space and performance of aerosol-generating procedure) could warrant more aggressive actions even if the cumulative duration is less than 15 minutes.
- 7.3 Any duration should be considered prolonged if the exposure occurred during a performance of an aerosol-generating procedure.
- 7.4 The HCP should be within 6 feet of a person with a confirmed SARS-CoV-2 infection.
- 7.5 Having unprotected direct contact with infectious secretions or excretions of the person with confirmed SARS-CoV-2 infection.
- 7.6 Distances of more than 6 feet might also be of concern, particularly when exposures occur over long periods of time in indoor areas with poor ventilation.
- 7.7 While respirators confer a higher level of protection than facemasks and are recommended when caring for patients with SARS-CoV-2 infection, facemasks still confer some level of protection to HCP, which was factored into this risk assessment if the patient was also wearing a cloth mask or facemask

Students MUST familiarize themselves with the Infection Control Policy of the KKU Dental Hospital.

“Wise and humane management of the patient is best safeguard against infection” (Florence nightingale)

Reference & Recommendation:

Manual of Infection Prevention & Control in Dental Settings, Second Edition, 2018
(By Ministry of Health, Kingdom of Saudi Arabia)



<https://www.moh.gov.sa/Ministry/MediaCenter/Publications/Documents/2018-11-22-005.pdf>