



**CASE WESTERN RESERVE
UNIVERSITY**
School of Dental Medicine

MANUAL OF APPLIED INFECTION PREVENTION AND CONTROL



2023-2024

Table of Contents

I.	<u>INTRODUCTION/RATIONALE</u>	3
II.	<u>WHO IS AT RISK / PREVENTION HIERARCHY</u>	6
III.	<u>HOW DOES INFECTION OCCUR</u>	7
IV.	<u>SODM APPLIED INFECTION PREVENTION/CONTROL STANDARDS</u>	9
	a. <u>REGULATORY FOUNDATION</u>	9
	b. <u>DRESS</u>	12
	c. <u>PPE</u>	13
	d. <u>HAND HYGIENE</u>	17
	e. <u>ENVIRONMENTAL CONTROLS</u>	19
	f. <u>CLEANING/DISINFECTING/STERILIZATION</u>	19
	g. <u>ENGINEERING CONTROLS</u>	21
	h. <u>CUBICLE MANAGEMENT</u>	23
	i. <u>DENTAL UNIT WATERLINES</u>	30
	j. <u>INSTRUMENT MANAGEMENT – PRE AND POST TREATMENT</u>	32
	k. <u>RADIOLOGY UNITS</u>	33
	l. <u>WASTE MANAGEMENT</u>	35
	m. <u>DOCUMENTATION</u>	37
V.	<u>CUBICLE AUDITING AND COMPLIANCE</u>	39
	a. <u>INFECTION CONTROL OFFICER</u>	39
	b. <u>AUDITING FORM AND COMPLIANCE</u>	39
VI.	<u>IMMUNIZATION PROTOCOLS</u>	42
VII.	<u>EXPOSURE RESPONSE PLAN FOR BLOODBORNE INCIDENTS</u>	46
	a. <u>NEEDLE STICK PROTOCOLS</u>	46
	b. <u>INCIDENT REPORTING</u>	46
	c. <u>FOLLOW-UP</u>	52
VIII.	<u>NORTHEAST OHIO REGIONAL SEWER DISTRICT (NEORS) CODE OF REGULATIONS</u> <u>AMALGAM AND AMALGAM WASTE</u>	53
IX.	<u>REFERENCES/RESOURCES</u>	53
X.	<u>APPENDICES:</u>	
	A. <u>MANDATORY COMPLIANCE AGREEMENT</u>	58
	B. <u>HEPATITIS B VACCINE DECLINATION (MANDATORY)</u>	59
	C. <u>HEPATITIS B PROPHYLAXIS</u>	60
	D. <u>INFECTION CONTROL DEPARTMENTAL RATING</u>	61
	E. <u>ORAL SURGERY HANDPIECE MAINTENANCE</u>	65
	F. <u>NEEDLESTICK DOCUMENTATION</u>	68



APPLIED INFECTION PREVENTION AND CONTROL

I. INTRODUCTION

THE PURPOSE OF THE BLOOD BORNE AND AEROSOL PATHOGENS STANDARD

THE PRIMARY GOALS OF AN INFECTION PREVENTION PROGRAM ARE TO PREVENT HEALTH CARE-ASSOCIATED INFECTIONS IN PATIENTS AND HEALTH CARE PROVIDERS PREVENT EXPOSURE IN PERSONNEL, THUS ENSURING SAFE PRACTICE.¹

COMMISSION ON DENTAL ACCREDITATION STANDARD 5-8

“The dental school must establish and enforce a mechanism to ensure adequate preclinical/clinical/laboratory asepsis, infection and biohazard control, and disposal of hazardous waste, consistent with accepted dental practice.”

When brought to its attention, The Occupational Safety and Health Administration (OSHA) and the Center for Disease Control (CDC) recognized that workers who came into contact with blood, aerosols, and other potentially infectious materials (such as saliva in the case of dental health care providers) were at risk of contracting a variety of infectious diseases. OSHA’s purpose in writing the Blood borne and Aerosol Pathogens Standards, was to minimize or eliminate exposure of health care employees to these diseases by a variety of means as enumerated in an Exposure Control Plan which was to be developed by every employer. The exposure control plan is, in essence, an infection control plan. The means by which exposure for these workers is to be minimized or eliminated include the following:

- Identifying those workers who, in fact, are at risk (***Exposure Determination***)
- Identifying work practices or engineering controls that minimize or eliminate exposure (***Methods of Compliance***)
- Providing a schedule of training for health care workers to educate and train them (***Awareness***)
- Providing Hepatitis B vaccination for employees (***Prevention***)
- Providing post-exposure evaluation and any post-exposure follow-up as required by the Standard (***Post-Exposure follow-up***)
- Communicating hazards to employees by labels, signs, and training (***Warning***)
- Keeping medical records and training records for the employees (***Documentation***)

The provisions of the CWRU School of Dental Medicine’s Applied Infection Prevention and Control Manual apply equally to students, residents, faculty, and staff. For that reason, throughout the Infection Control Manual the term “HCW” (Health Care Worker) shall be used to designate anyone in the School of Dental Medicine, be it student, faculty or staff, who may have potential for exposure to infectious or contaminated materials.

This infection control manual applies to all personnel in the dental school except where otherwise noted.

The Occupational Safety and Health Administration (OSHA) of the Department of Labor have put into law the Occupational Exposure to Blood borne Pathogens Standard. The Exposure Control Plan and Infection Control Manual will be modified or updated during the year to reflect changes in procedures, materials, techniques, whenever new or modified procedures affect occupational exposure or if new job titles that have occupational exposure.

The role of the Infection Control Officer is to:

1. Ensure that clinical and auxiliary personnel in all departments are acquainted with the Infection Prevention and Control Manual, its contents as they pertain to their clinical/administrative responsibilities;
2. Educate Students, Residents, Faculty, Administrative and Clinical support staff on the Principles of Infection Prevention and Control as they affect their roles and responsibilities;
3. Audit, monitor, enforce, and maintain records for clinical compliance with standards in all departments (see Inspection Form below);
4. Maintain records pertaining to Vaccination protocols, compliance, and/or declination;
5. Establish and administer protocol for clinical injury reporting, i.e. needlestick or other sharps incidents;
6. Ensure SODM compliance with Regional, State, Federal regulation;
7. Assist in completion of CODA applications for Accreditation renewal;
8. Other tasks/issues as they arise.

The Infection Control Officer at the School of Dental Medicine, at present, is Dr. Lawrence P. Rossoff. All questions relating to infection control should be referred to Dr. Rossoff - Room #389, 216-368-2162. However, since one person cannot oversee the day-to-day adherence to the provisions of this manual, **the faculty – especially the Preceptors in the pre-doctoral clinics, the faculty in the pre-clinical areas, and the attending faculty in the postdoctoral clinics – will have to be responsible for seeing that infection control is carried out in those areas for which they are responsible.**

EXPOSURE DETERMINATION

According to the Bloodborne Pathogens Standard, an exposure determination must be made if any health care worker has occupational exposure; that is, reasonably anticipated skin, eye, mucous membrane, or parental contact with blood, body fluids, or other potentially infectious materials. For the purposes of the School of Dental Medicine, all clinical faculty, staff and students come under the purview of OSHA and CDC Standards. In addition, research efforts may necessitate the handling of body tissues, body fluids and cultures. Therefore, the majority of our HCW's will have occupational exposure.

- A. Tasks and procedures which could result in possible occupational exposure at our School include the following:
- Patient treatment procedures

- Radiographic procedures
- Cleaning, disinfection and sterilization of instruments
- Environmental surface and equipment disinfection
- Dental laboratory procedures
- Handling contaminated laundry
- Handling infectious waste
- Repairing dental equipment
- Handling infectious tissues and body fluids in the research laboratory

Reflecting the tasks listed above, the job classifications that have occupational exposures include the following:

- Clinical Faculty
- DMD Students
- AEGD Residents / Post Grad Specialty Residents
- Dispensary Workers
- Research laboratory technicians
- Maintenance technicians
- Dental Assistants
- Dental Hygienists
- Expanded Function Dental Assistants

Refer to Section VII, page 59, EXPOSURE RESPONSE PLAN FOR BLOODBORNE INCIDENTS, for further information.

RATIONALE AND RESOURCES

This manual on Infection Prevention and Control is based upon current guidelines and recommendations published by: Centers for Disease Control (CDC); Occupational Safety and Health Administration (OSHA); Ohio State Dental Board; American Dental Association, Case Western Reserve University guidelines.



Content from CDC, OSHA and the State Dental Board do represent the accepted and expected Standard of Care, while most represent enhanced guidelines that should form the basis of Dental Clinic procedures and protocols related to Infection Control/Prevention and Safety before, during, and after dental treatment.

II. WHO IS AT RISK / PREVENTION HIERARCHY

OSHA places Dentistry in the **VERY HIGH RISK category – we must act accordingly.**

DENTISTRY RISK LEVELS

LOWER	MEDIUM	HIGH	VERY HIGH
<p>Performing administrative duties in non-public areas of dentistry facilities, away from other staff members. No direct patient contact.</p> <p>*Administrators, Bookkeepers, Call Center</p>	<p>Providing administrative/support services, not involving aerosol-generating procedures, to well patients (i.e., to members of the general public who are not known or suspected COVID-19 patients). Working at busy staff work areas within a dentistry facility.</p> <p>*Check-in/Check out personnel; Treatment Plan coordinators; Office Managers Lab Technicians</p>	<p>Entering a known or suspected COVID-19 patient's room or care area. Providing emergency dental care, not involving aerosol-generating procedures, to a known or suspected COVID-19 patient. Performing aerosol-generating procedures on well patients.</p> <p>*Dentists, Dental Assistants, Dental Hygienists</p>	<p>Performing aerosol-generating procedures on known or suspected COVID-19 patients. Collecting or handling specimens from known or suspected COVID-19 patients.</p> <p>*Dentists, Dental Assistants</p>

*Examples of team positions within each risk level

These mandates and guidelines are adopted by and applied to the School of Dental Medicine Policy and Procedures Guidelines because dental patients, Healthcare Workers, Faculty, and Clinical Staff can be exposed to pathogenic organisms.

Tasks and procedures performed in which occupational exposure occurs.

The following tasks and procedures are performed in this clinic and may cause occupational exposure: patient treatment and other procedures; radiographic procedures; cleaning, disinfection and sterilization of instruments; environmental surface and equipment disinfection; handling contaminated laundry; handling infectious waste; repairing dental equipment; handling infectious tissues and body fluids in the research clinic; and handling prosthetic cases for shipment to outside dental laboratories.

III. HOW DOES INFECTION OCCUR

These pathogens can be transmitted in dental settings through:

Contact transmission: Where pathogens enter a person's body through contact with a mucous membrane or breaks (i.e. cuts, abrasions) in the skin.

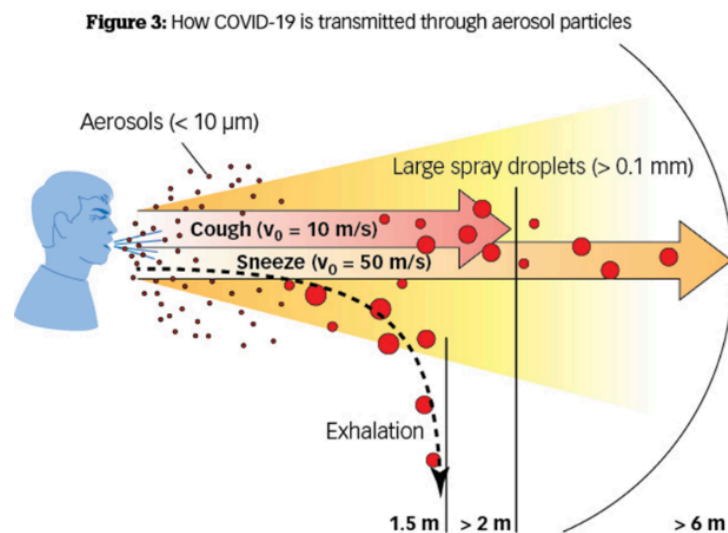
- A. **Direct** – Direct contact: contact with blood, oral fluids or other patient body fluids (except sweat);
- B. **Indirect** – Indirect contact: contact with contaminated objects (e.g. instruments, equipment or environmental surfaces).

DIRECT CONTACT

Droplets/Aerosols

Contact of mucosa (conjunctival, nasal or oral) with **droplets** (e.g. spray or splatter) containing pathogens generated from an infected person and propelled a short distance (e.g by sneezing or coughing); and

Exhalation of airborne pathogens. What the illustration below shows us is that aerosol droplets can travel up to 8 feet from a cough, 20 feet from a sneeze, 5 feet from just breathing. **Think about the potential exposure of yourself and any personal items in your cubicle from an un-masked patient. The Covid-19 pandemic has caused a renewed emphasis on aerosol contamination and the spread of disease. Healthcare in general, and dentistry specifically, has responded successfully to newly mandated safeguards represented in this manual.**



Bloodborne Pathogens

“Compared with HCV (Hepatitis C Virus) or HIV (Human Immunodeficiency Virus), transmission of HBV (Hepatitis B Virus) is the greatest hazard in healthcare settings to those who are not immune. The presence of HBeAg indicates a high risk of infectivity. Among HCPs (Healthcare Personnel) who sustain injuries from needles contaminated with blood containing HBV, the risk of developing clinical hepatitis if the blood was both HBsAg-positive (HB surface antigen) and HbeAg-positive (HB core antigen) was 22%-31%. By comparison, the risk of developing clinical hepatitis from a needle contaminated with HBsAg-positive, HBeAg-negative blood was 1%-6%. Estimates of the risk of disease transmission after needlestick injuries contaminated with HCV or HIV are approximately 2% and 0.3% respectively. Healthcare workers, including students who are infected with HCV, HIV, or HBV –

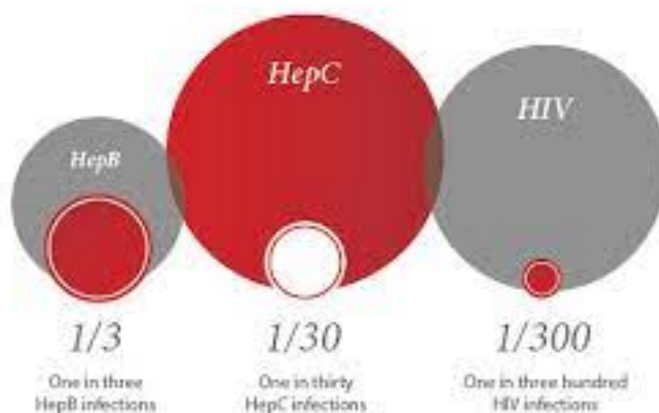
with no evidence of HBe antigen or a high viral load (>103 genome equivalents/mL) are considered low risk for transmission.

Awareness of needlestick injuries started to develop soon after the identification of HIV in the early 1980s. However, today the major concern after a needlestick injury is not HIV but hepatitis B or hepatitis C. However, after a needlestick injury, developing HIV is not common at all. In fact, from 1981 to 2010, there have only been 143 possible cases of HIV that were reported among healthcare professionals.

Of the viruses, the most common organism acquired via a needlestick injury is Hepatitis B. About 30% to 50% of individuals who do contract hepatitis B may develop jaundice, fever, nausea, and vague abdominal pain. In most individuals, these symptoms will spontaneously subside in 4 to 8 weeks. About 2% to 5% of the individuals will go on to develop chronic infection with hepatitis B. Today it is estimated that healthcare workers who suffer a needlestick injury and develop hepatitis C make up about 2% to 4% of the total number of Hepatitis C cases.”¹

Blood-borne pathogen	Remarks
HIV	Infectious agents of major importance (high rates of seroconversion on exposure to infected blood)
Hepatitis B	
Hepatitis C	
HTLV-I and II	Infectious agents having potential for transmission through needle stick injuries
Hepatitis D virus, hepatitis G virus	
Cytomegalovirus	Agents linked to unsafe injection practices
Epstein-Barr virus	
Parvovirus B19	
Transfusion-transmitted virus	
West Nile virus	
Prion agents	
Ebola	
Lassa	
Plasmodium falciparum	

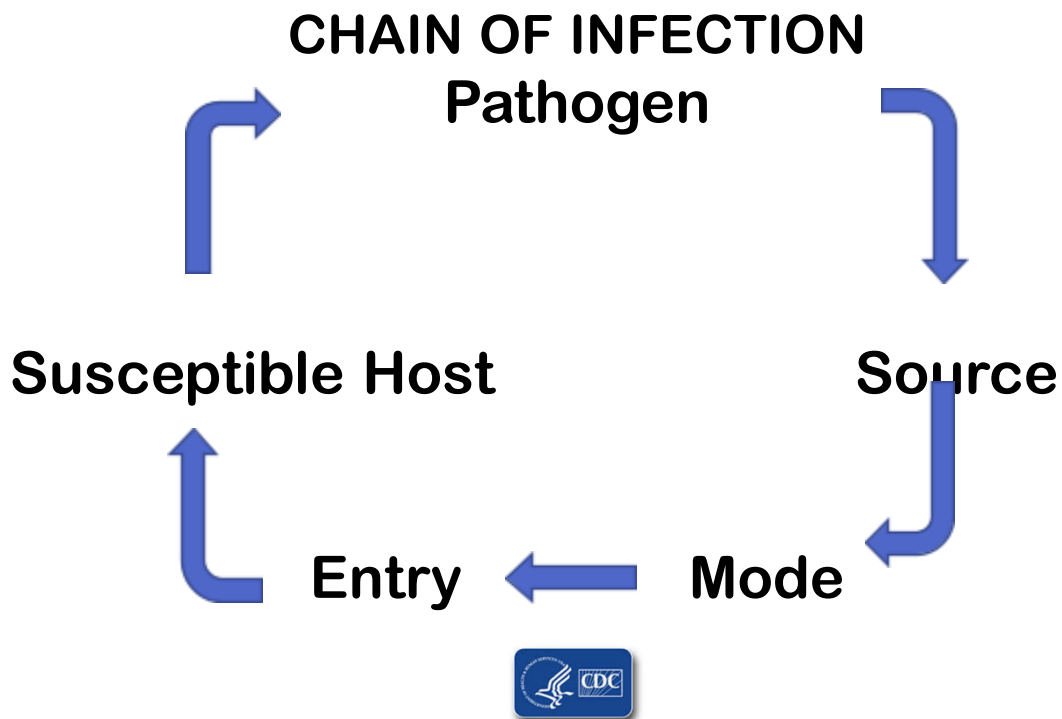
HTLV: Human T-lymphotropic retroviruses



For the risk of infection to be present, whether real or theoretical, through any of the transmission routes, the “*chain of infection*” needs to be closed – requires that all of the following conditions, or “*links*” be present:

- **Pathogenic organisms of sufficient virulence and in adequate numbers to cause disease;**
- **Reservoir or source (e.g. blood, aerosols) that allows the pathogen to survive and multiply;**
- **Mode of transmission from the source to the host;**
- **Susceptible host (i.e. one who is not immune).**

National Library of Medicine; King, KC, Strony,R.; Stat Pearls; "Needlestick"; May 6, 2022



Exposure may be insufficient to cause replication in the host and not lead to transmission or be sufficient for replication (transmission) in the new host; and may or may not lead to symptoms, which may/may not lead to a diagnosis.

Effective infection control strategies prevent disease transmission by interrupting one or more of the above “links” in the chain, i.e. breaking the chain of infection.

IV. REGULATORY AND UNIVERSITY / SODM APPLIED INFECTION PREVENTION/CONTROL STANDARDS

It should be noted that as of the date of this publication, there have been updates to the Case Western Reserve University protocols and those of the SODM given the reductions in Covid-19 cases seen and reported. The standards found below are in place pending any further HCW guidelines or recommendations.

A. REGULATORY FOUNDATION

CDC first introduced the term “standard precautions” in 1996 to refer to a standard of care designed to protect health care professionals and patients from pathogens that can be spread by blood or any other body fluids. That was reinforced again in 2007. Standard precautions apply to contact with blood, body fluids (except sweat), non-intact skin, and mucous membranes. In the dental setting, saliva is considered potentially infectious.

A thorough medical history is mandatory to help identify individuals who pose a risk of infection to the DHCP. Some infections have a latent or prodromal stage of infection (where the disease is not yet clinically manifested). Therefore, standard precautions need to be applied to everyone, i.e. **treat all patients as a potential source of infection.**

Basic elements of Standard Precautions include:

- ✓ **Hand Hygiene**
- ✓ **Use of Personal Protective Equipment (PPE)**
- ✓ **Proper management of patient care equipment**
 - ✓ **Environmental surfaces**
 - ✓ **Environmental controls**
- ✓ **Injury prevention** – actions to stay healthy including immunization as well as safe injection practices.

In some cases (e.g. TB, Influenza, Varicella, COVID-19), expanded or transmission-based precautions (e.g. isolation, respiratory protection, postponement of non-emergency treatment) might be necessary.



The current Ohio State Dental Board mandates for the safe practice of Dentistry reflect the reduced incidences and severity of Covid-19 infection across the State, and the general consensus of OSHA and the CDC regarding relaxation of Pandemic related protocols and procedures.. The principle mandates still in place consist of:

1. Standard Precautions / PPE usage – a reported infraction can result in Board action;
2. Cleaning, Disinfection, and Sterilization protocols remain;
3. Barrier technique for dental equipment;
4. Sharps disposal
5. Good judgment by the practitioner in safeguarding patients, staff, and providers.
- 6.



**CASE WESTERN RESERVE
UNIVERSITY**
School of Dental Medicine

CASE WESTERN RESERVE UNIVERSITY PROTOCOL UPDATE

- **EFFECTIVE MONDAY, FEB. 20, 2023, THE UNIVERSITY IS LIFTING THE EMERGENCY RESPONSE DESIGNATION ENACTED AT THE START OF THE PANDEMIC.**
- **MASKS: MASKING IS NO LONGER REQUIRED ON CAMPUS. THAT SAID, THOSE WHO WANT TO WEAR MASKS CAN DO SO. SODM POLICY: MASK WEARING IN THE CLINICAL SETTINGS IS STILL REQUIRED, UNTIL FURTHER NOTICE.**
- **COVID-19 VACCINATIONS: AS OF MAY 31, “THE UNIVERSITY HAS LIFTED ITS COVID-19 VACCINE REQUIREMENTS FOR MOST FACULTY, STAFF, AND STUDENTS – BUT STRONGLY ENCOURAGES EVERYONE TO STAY CURRENT WITH THEIR COVID-19 IMMUNIZATIONS.”**

THE CURRENT CLINICAL PROTOCOL OF THE SCHOOL OF DENTAL MEDICINE (JULY, 2023) IS THAT MASK WEARING IN THE CLINIC ENVIRONMENT IS STILL REQUIRED “UNTIL FURTHER NOTICE.” ALL OTHER STANDARD PRECAUTIONS AND PPE REQUIREMENTS REMAIN IN PLACE.



“Dentistry workers must use proper PPE when exposed to patients.”

OSHA RECOMMENDATIONS

PROCEDURAL PPE

Well Patients

Non-aerosol generating

Work clothing, such as scrubs, lab coat, and/or smock or a gown;
Gloves
Eye protection (e.g. goggles, face shield)
Face shield (e.g. surgical masks)

Well Patients

Potential Aerosol generating

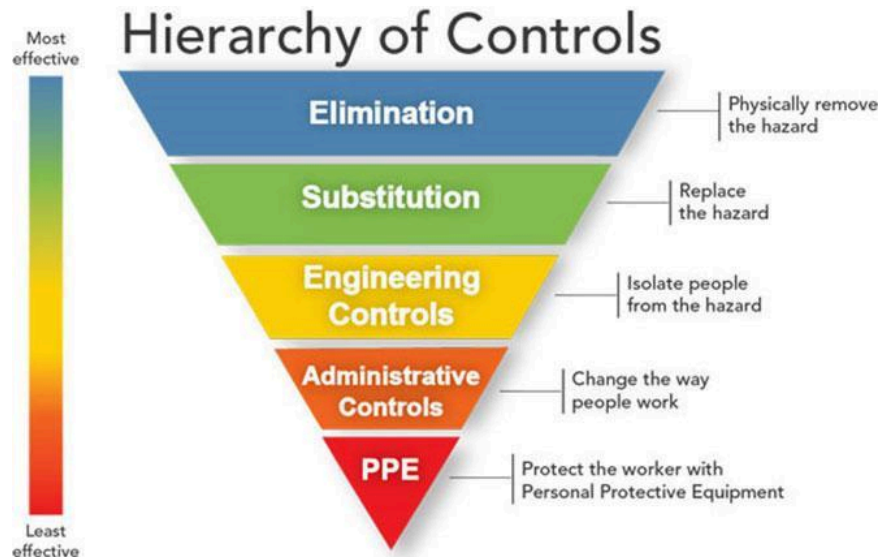
Gloves
Gown
Eye protection (e.g. goggles, face shield)
NIOSH – certified, disposable N95 filtering face piece respirator or better*

There is limited information and guidance from OSHA pertaining to post-Covid protocols or mandates.

Fundamental preventive measures, such as: Standard Precautions / PPE; use of barrier techniques; proper cleaning/dis-infecting (according to manufacturer directions), are still in effect. OSHA is committed to the Occupational safety of workers and staff members.



APPLIED INFECTION PREVENTION AND CONTROL IN THE CWRU SODM CLINICS



This pyramid illustrates that the best way to prevent the spread of disease is to physically remove the hazard – in other words, do the right thing to prepare yourself and your workspace to eliminate the offending microorganisms and prevent their spread. The LEAST effective way to prevent disease spread is the use of PPE. Therefore, doing it right matters!

B. BASIC DRESS CODE (CLINICAL AND PRE-CLINICAL)

Appearance:

Hygiene and grooming:

- Face should be clean and well groomed;
- Males: clean shaven, unless growing a permanent beard or mustache. To be well groomed
- Makeup to be worn in moderation;
- Good principles of personal hygiene, including control of body odors. Strongly scented colognes/perfumes should NOT be used.
- Fingernails clean and trimmed to **surgical working length**. Artificial nails prohibited. Nail polish preferably clear – *Always remember that once nail polish starts to breakdown, it will act as a harbor for microorganisms to breed and thrive!*



CDC guidelines say that health care personnel should not wear artificial nails and should keep natural **nails less than one quarter inch long** if they care for patients at high risk of acquiring infections (e.g. patients in

intensive care units or in transplant units). The WHO guidelines prohibit artificial nails and extenders for all healthcare workers.

Hair

- Hair should be clean, well groomed and worn in such a manner that it will not interfere with patient care or laboratory activity. It should **present a professional image.**
- If hair is long, it must be worn in a surgical cap or tied back behind the neck and securely pulled back for the full length of the clinical session. Bangs should be held back as to not touch the protective eyewear. (To minimize its contamination by droplets or aerosols.)

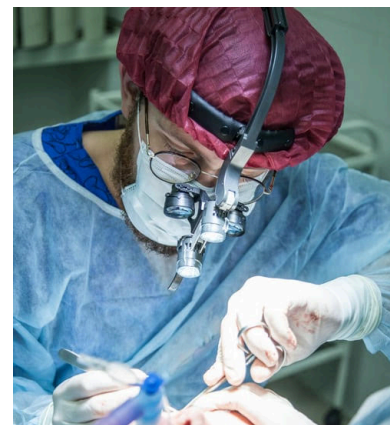
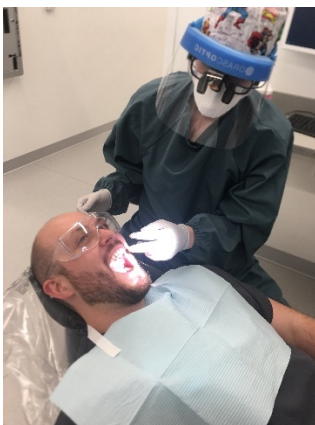
Skin/Mucosal Alterations

- No visible tattoos. Any visible tattoo must be covered with a bandage or clothing.
- All facial jewelry/piercings, such as those in the nose, lips, and eyebrows need to be removed. If they do not come out, the area needs to be covered by a bandage.

C. PERSONAL PROTECTIVE EQUIPMENT AND ATTIRE

PPE are to be worn at all times during patient care procedures. PPE is designed to protect the skin and mucous membranes of the eyes, nose, and mouth of the HCW from exposure to blood and other potentially infectious material (notable saliva and aerosols). Primary PPE in Dentistry includes:

- Gloves
 - Surgical Masks
 - Protective Eyewear/Loupes and Face Shields
 - Protective clothing/scrubs
 - Surgical Gowns, Caps/Bouffant
 - Shoe covers
- Protective eyewear (e.g. safety glasses) with gaps between glasses and the face likely do not protect the eyes from all splashes and sprays.
- Long sleeved disposable gowns must be worn in all patient care, and all clinics where splatter and spray are anticipated, as is the case with handpiece and/or power instrumentation unit use (including ultrasonic instruments). Also during acrylic denture, custom tray adjustments and prophylaxis use. Likewise, when invasive oral surgery procedures are undertaken.



GLOVES



“The use of disposable gloves as an essential part of infection control in dentistry followed the discovery of HIV and AIDS in the 1980's and the introduction of universal cross-infection control measures [7]. Today the use of gloves in dental surgery is mandatory, with their ability to substantially decrease the amount of blood transferred by a needle stick injury [8], a key factor in this. In addition, gloves can be protective against

chemicals and materials used in the treatment of patients from coming into direct contact with the skin.”
Nitrile gloves are the commonest used gloves in general practice, likely due to their superior properties compared to alternative, non-latex containing gloves.”

2020 May; 6(5): e03889.

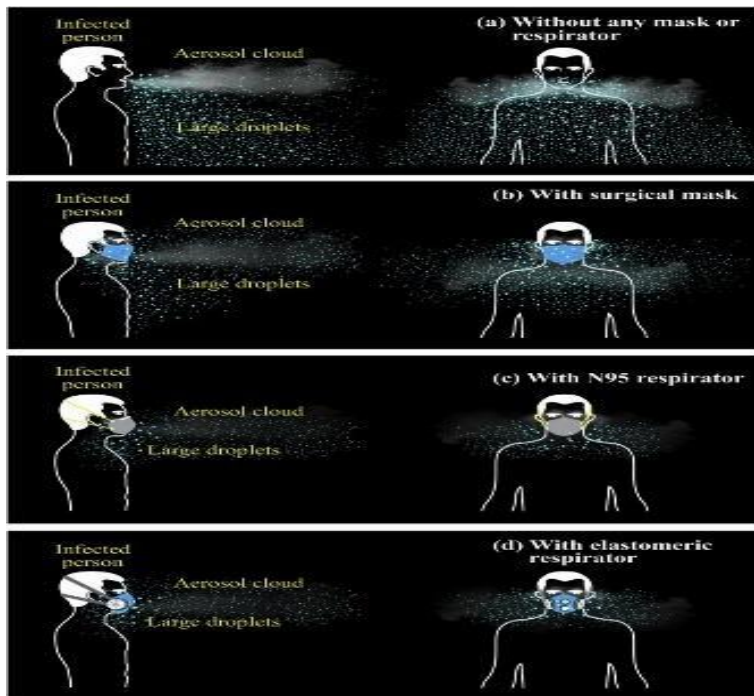
Published online 2020 May 5. doi: [10.1016/j.heliyon.2020.e03889](https://doi.org/10.1016/j.heliyon.2020.e03889) Latex and synthetic rubber glove usage in UK general dental practice: changing trends

[Emma Critchley*](#) and [Michael.N. Pemberton](#)

SURGICAL MASK

- Wearing a surgical mask is strongly recommended when arriving in the clinic and performing most clinical procedures.
- A surgical mask should be replaced by a fitted mask (e.g. N95) when performing oral surgical or other soft/hard tissue invasive procedures.
- Remember, a mask that does not fit does NOT protect you!***

MASK EFFECTIVENESS AGAINST AIRBORNE DROPLET SPREAD



CLINICAL SCRUBS

- Scrubs should be cleaned and changed daily. *Always remember that if you are not using a long sleeves protective gown, most of the droplets and aerosols generated during the clinical session, land on your scrubs even though it may seem clean.*
- If pant legs are too long, do not roll them up as they can harbor soil and debris. You need to get them properly hemmed and fitted, or you can use rubber bands to tighten them if too loose.



- Wearing scrubs in undesignated areas is considered a breach of infection control protocol and subject to Unsatisfactory Professionalism assessment and/or suspension of clinical privileges. Back and forth between the SODM clinic facility and Samson Pavilion SIM lab is acceptable. It is recommended that clinical scrubs be covered with a button-up, clean lab coat.
- It is important to note, many individuals get offended by the sight of operating scrubs being worn outside of clinical areas, period! In addition to the obvious infection control purpose, wearing disposable operating room gowns in the presence of splatter and spray will reduce the potential for unsightly staining and soiling of scrubs.

- **The wearing of sweatshirts, sweaters, and other garments during clinical time with patients is unprofessional and NOT acceptable.** The texture of these garments is highly prone to carry a high bacterial load while projecting a casual image to patients. Again, it is recommended that clinical scrubs be covered with a button-up, clean lab coat as an alternative.

ATTIRE

- No jewelry: that includes rings, wristwatches, neck pendants, multiple chains, drop earrings, and all facial jewelry.
The exception is religious bracelets, which must be covered during clinical procedures.
- No sweaters, sweatshirts, or jackets over the scrubs, a white t-shirt or tank may be worn under the scrubs if needed, however, such clothes need to be handled and changed the exact same manner as the scrubs (not to be worn back and forth from home, needs to be changed daily).
- Shoes: Clean, athletic runners (in good condition) with, preferably, white socks. To avoid injury in the incidence of a dropped sharp instrument: runners should be solid leather or firm cloth (**no loose fabric, sandals, no holes and no large logos**) without mesh parts. Shoe coverings may be appropriate in a surgical setting.



SEQUENCE OF DONNING AND DOFFING PPE



PPE MANAGEMENT

BEFORE TREATMENT – SEAT PATIENT, THEN...

1. Hand Hygiene
2. Gown Donning
3. Secure Surgical Mask
4. Eye Protection (NOT eyeglasses)
5. Hand Hygiene
6. Gloves
7. **Enter the Op**

DR. LPR

AFTER TREATMENT

1. Remove Gloves
2. Remove Gown
3. **Exit the Op**
4. Hand Hygiene
5. Remove Eyewear
6. Remove Mask/Respirator
7. Hand Hygiene

8/11/2020

28

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D. HAND HYGIENE

Hand hygiene is a term that encompasses hand washing and hand sanitizing. *It is the single most critical measure for reducing the risk of pathogen transmission by removing soil and transient microorganisms. Hand and wrist jewelry must be removed before hand hygiene.*

In the clinical setting, hand hygiene is indicated:

When in the patient care environment;

- Before and after direct contact with a patient;
- Before procedures;
- Before donning gloves and immediately after removing Before and after mask use;
- After risk of body fluid exposure;
- After touching inanimate objects likely to have been contaminated by blood or saliva;
- After contact with environmental surfaces, instruments, or other equipment in the dental operator;
- After contact with dental laboratory materials and equipment;
- When hands are visibly soiled;
- Before leaving the dental operator or the dental laboratory.

Good hand hygiene, whether hand-washing with soap and water or hand sanitizing using an alcohol-based hand rub, is critical to reduce the risk of spreading infections in patient care settings.

Hand Washing



When hands are visibly soiled, hand washing with soap and water should be performed. Hand washing using plain soap for a minimum of 20 seconds

(lathering), followed by thoroughly rinsing with cool or tepid water and careful drying with disposable paper towels.

A thorough hand washing is essential:

- At the beginning of the day
- Upon entering the operatory for a clinical session
- After washroom use
- At the end of the clinical session.

A routine hand washing using plain soap and water should be performed as follows:

- Wet hands
- Dispense soap
- Rub hands together to generate lather
- Scrub all surfaces of your hands (between fingers) for a minimum of 20 seconds
- Rinse with cool or tepid water
- Thoroughly dry with a disposable paper towel.

Alcohol-based preparations (hand sanitizers)

Alcohol-based hand rubs may also be used if hands are not visibly soiled. The antimicrobial activity of alcohols can be attributed to their ability to denature proteins. Alcohol solutions containing 60% - 95% alcohol are most effective, reducing bacterial counts on the hands, however, do not eliminate soil, only soap and water does.



ADVANTAGES	LIMITATIONS
o Rapid: less time consuming than hand washing and drying	o Cannot be used when hands are visibly soiled
o Effective against a wide range of microorganisms	o Need to store away from high temperatures or flames
o Less irritating to skin than soap and water	o Builds-up after a number of uses requiring hand washing.

SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- ✓ Keep hands away from your face
- ✓ Limit surfaces touched
- ✓ Change gloves when torn or heavily contaminated
- ✓ Perform hand hygiene before donning and after removing gloves
- ✓ Have mouth rinse, an antimicrobial Chlorohexidine OR 1.5% Hydrogen Peroxide, available for the patient to use immediately after he/she is seated.

E. ENVIRONMENTAL SURFACES AND INFECTION CONTROL

Environmental surfaces are inanimate surfaces that do not directly come into contact with a patient. These surfaces may become contaminated with pathogens during patient care although they have not been associated directly with transmission of infection. These surface can be divided into two categories: *housekeeping surfaces* and *clinical contact surfaces*.

- Housekeeping surfaces* (e.g. floors, walls, and doors) have limited risk of disease transmission and can be decontaminated by less stringent means. Transfer of pathogens is primarily via hand contact.
- Clinical contact surfaces* can be directly contaminated from direct contact, splatter or spray and pose a theoretical risk of cross contamination. Clinical contact surfaces include: bracket tables, countertops, overhead lights, and reusable containers of dental materials.

F. CLEANING, DISINFECTING, STERILIZING

WHAT'S THE
DIFFERENCE
BETWEEN...

CLEANING

DISINFECTING

STERILIZING

CLEANING

The mechanical removal of visible surface contaminants, soils etc. Usually with soap water and enzymatic detergents, suing hand scrubbing or more sophisticated cleaning such as ultrasonics. Dawn Detergent Soap or other detergent cleansers are



Will NOT kill bacteria or viruses

DISINFECTING

Applied to inanimate objects or surfaces to kill many or all microorganisms except resistant bacterial spores.

Only effective when they are applied per instructions for the correct time period.



CaviCide is a “surface disinfectant cleaner that is Bactericidal, Virucidal, Fungicidal, Tuberculocidal. As a cleaner, it is sprayed on hard surfaces, left for 30 seconds and wiped clean with a towel. As a disinfectant, it requires a visibly wet *3 minute kill time to be used on operatory hard, non-porous surfaces, and then wiped dry.

STERILIZING

Extreme physical or chemical process that eliminates all forms of microbial life, including: transmissible agents such as fungi, bacteria, viruses, and all bacterial spore forms.

Achieved by applying heat, chemicals, or irradiation.



Cleaning is the first step in decontaminating clinical contact surfaces. Following the cleaning process, clinical contact surfaces should be disinfected with a hospital grade tuberculocidal intermediate-level disinfectant.

Ohio State Dental Board Rules state: “(C) Surface disinfection:

(1) Environmental surfaces that are contaminated by blood or saliva must be properly cleaned prior to disinfection. Disinfection must be accomplished with an appropriate disinfectant that is registered with the environmental protection agency and used in

accordance with the manufacturer's instructions. The disinfection process must be followed between each patient.”

Decontamination will be performed:

- Immediately after any spill of biohazardous materials in the work area
- At the completion of any procedures involving biohazardous materials
- At the end of each work shift if any procedures involving biohazardous materials have been performed.
 - **At the end of treatment of each patient and at the end of each workday.**

G. ENGINEERING CONTROLS

Engineering controls are those devices and/or tools that increase employee safety by isolating or removing bloodborne and aerosol pathogens hazards or limiting the potential for exposure at or as near as possible to the point of origin. Engineering controls remove or reduce a hazard, or they place a barrier between the worker and the hazard.

All Personnel are expected to utilize these devices and procedures appropriately whenever working with or at risk of being exposed to blood borne or aerosol pathogens. Training in the proper use of engineering controls is the responsibility of the Exposure Control Officer, Lawrence P. Rossoff, DDS, FICD, FACD. ***Please refer to CWRU School of Dental Medicine Infection Prevention / Control Manual, section VI, Auditing and Compliance, for more information.***

Should it be necessary to perform a procedure without the engineering controls normally used (because the engineering controls will increase the risk of exposure or otherwise endanger personnel), the Exposure Control Officer **MUST** be notified. He will investigate and document why it was necessary to dispense with the engineering controls. Only after his written approval can those engineering controls be waved or other ones installed that are more appropriate to the task being performed. This must be done each time and should only be considered in unusual circumstances.

The following Engineering Controls are in place in the CWRU School of Dental Medicine as they apply to the dental operatory, to isolate or remove the hazard from employees.

Containers

- Primary containers are properly labeled and sealed, leak proof
- Secondary containers are properly labeled and leak proof. These are to be used in case the primary containers fail and when transporting containers from lab to lab.
 - Waste containers:
 - o **SHARPS** containers wall-mounted labelled containers puncture-resistant, leak-proof, with lids in place)
 - o **BIOHAZARDOUS WASTE RECEPTICLES** (red, leak-proof and universally marked)



Both are located in direct proximity to clinical areas throughout the Facility.

Other Engineering Controls

Self-sheathing needles, Needle Distancing Devices (Hemostats and Clamps),

Rubber Dams, High speed Evacuators, Clamps/tongs, Operatory Adhesive Barriers (refer to the following section)

In addition to the general engineering controls described above, this clinic will institute the following controls when performing certain procedures unique to this clinic, designed to enhance worker safety.

There are controls that can be implemented in order to protect the HCW's from being exposed to Aerosol droplets and spray in the dental office/clinic environment: Intra-oral, Extra-oral, and Engineering. These are illustrated below. **These controls should be employed based upon the disease risk determined by the CDC/OSHA, and State regulators.**

H. CUBICLE MANAGEMENT

During Patient Treatment

During patient treatment, the following procedures should be observed:

- a) Seat the patient. Even if the patient has eyeglasses, give the patient a pair of protective eyewear to wear during dental treatment.
- b) Put on protective equipment (protective clinical gown, mask and eye protection, gloves).
- c) Have the patient use a mouthrinse (e.g. chlorhexidine)
- d) Just before gloving, wash and dry your hands according to the technique described above.
- e) Place rubber dam whenever possible.
- f) Do not make entries in patient's record during treatment unless it is absolutely necessary; in that case, before touching the keyboard. When done, wash your hands and re-glove.

- g) Once gloved, do not touch anything but the patient, barrier and covered areas or areas that were already decontaminated at the end of the last patient visit.
- h) If you leave your cubicle for any reason, deglove; no one is to walk around the clinics outside their cubicles or immediate treatment areas with gloves on.
- i) When taking radiographs, set up the x-ray room before re-gloving.
- j) Cover tube head, chair, controls with protective covers and barrier film. After patient is seated, place lead apron on patient. Glove. Expose radiograph(s) and confirm digital capture.
- k) When using digital sensors, cover sensor with disposable sensor sleeve. Replace between each patient and disinfect sensor with Caviwipe.
- l) Use high-speed evacuator, rubber dam, Isovac,(as appropriate) to prevent spread of contamination when using high-speed handpieces, water spray, ultrasonic cleaners, or any other piece of equipment likely to produce aerosols, splatter or droplets.
- m) If an instrument is dropped, do not pick it up and reuse it. Unless it is a hazard leave it where it has fallen until you are finished with your treatment, then pick it up with your utility gloves. If you must remove it immediately, pick it up with your gloves and then place it in the sink or any other appropriate place out of your immediate operating area. Deglove, wash your hands and re-glove before proceeding.
- n) Disposable items are what the name implies. Use them once and only once, and then discard. This includes gloves, masks, prophy angles, air/water tips, high volume evacuator tips, etc. For dental prophylaxis, always use the disposable prophy angles.
- o) If, during treatment, prosthetic-related items need to be transported somewhere else in the clinic such as the laboratory, these items must be cleaned and disinfected before leaving the treatment area. These items include impressions, models, die, prostheses, bite registrations, wax-ups, etc. Clean, disinfect, remove gloves; then you can safely package items exposed to intra-oral environment, place in transporting box, take the items to the shipping window to be shipped outside the School.
- p) Do not visit offices, cashier, or dispensary wearing gloves or masks.
- q) Do not allow patients to visit offices, cashier or restrooms wearing bibs.

Upon Completion of Treatment

After the patient's treatment is completed, the operatory or cubicle must be prepared for the next patient. Remove patient napkin and place in the appropriate waste container. Dismiss the patient, take off your gloves, wash your hands, and make your appropriate entries on the dental record. Then:

- a) Put on your utility gloves.
- b) Take sharps to sharps container and regulated waste to regulated waste container (red containers at the end of each aisle).
- c) Gather your instruments:
 - Flush your handpiece(s) with water for 25 seconds to purge the line of any contaminants that may have been sucked back into the handpiece.
 - Direct the spray into your high volume evacuator.
 - Wash, rinse and dry your handpiece.
 - Lubricate the handpiece according to the manufacturer's directions.

- Place the dry handpiece into a sterilization pouch for sterilization. Place aside on a non-contaminated surface (bracket table cover or countertop).
 - The rest of your instruments should be placed back into a cassette. The cassette, too, is to be placed aside on a non-contaminated surface (clean bracket tables cover on the countertop which you have placed just prior to start of clean up).
- d) Return to your dental unit and dispose of all barriers (plastic wrap, chair covers, dental light cover, bracket table cover, etc.) Dispose of high volume evacuator tip, saliva ejector tip, paper cups, rubber dam and any other non-regulated waste. Remember that the patient napkin has already been placed into regulated waste container. Disinfect non-covered areas of your cubicle that may have become contaminated during your last treatment with hospital level disinfectant supplied by the SODM. Use the spray-wipe-spray technique. Be sure to use this disinfectant according to manufacturer's recommendations
 - e) Remove barriers from and disinfect any equipment that needs to be returned to sterilization. All equipment and materials retrieved from the dispensary **must** be returned to sterilization or disinfection prior to restocking in the dispensary
 - f) Remove your utility gloves, wash your hands and return any equipment to the dispensary that needs to be returned. If you have another patient, start over again with step 2 by gathering your materials (instruments, etc.), make ready your unit with the appropriate barriers, etc.
 - g) Remove your eye protection touching only the earpiece, and your facemask touching only the ties – not the mask itself.

At the End of the Clinic Treatment Day

While still wearing protective equipment, disinfect the high volume evacuator using an appropriate cleaner (caviwipes). Disinfect the countertop, dental unit, chair and light using the spray-wipe-spray technique. Be sure the base of the dental chair, dental stool and the sink are clean. Elevate the chair to enable floor access during floor cleaning. A neat appearance promotes a feeling of confidence and good will in the patient the moment he or she walks into your cubicle.

Look at the drawers in your unit. There should be no loose instruments. All instruments should be in pouches or cassettes that have been sealed, returned, and sterilized.

Flush waterlines – Refer to Section H.

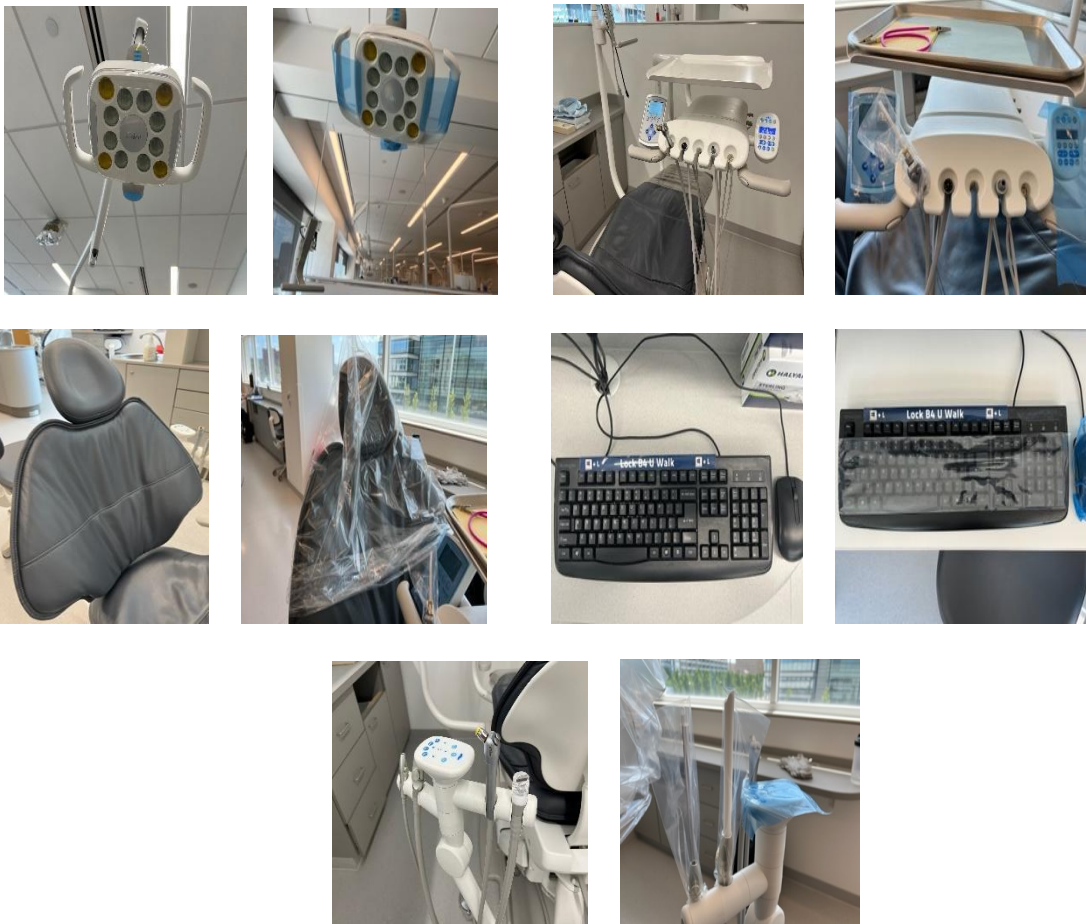
Barriers

- When used appropriately, are an effective tool to reduce the spread of infection, through creating an interruption in the chain of infection;
- Reduce bio-burden, i.e. reduces the number of microorganisms contaminating the underlying clinical surface;
- Are effective on surfaces that are difficult to clean and disinfect thoroughly and are likely to become contaminated with oral fluids during treatment procedures. Typically, permanently attached components to the dental unit, e.g. handles / dental unit attachments of saliva ejector, high volume suction, air/water syringe;

- Should be impervious to moisture;
- Are single use;
- Must be changed after each use;
- Are not substitutes for disinfection, therefore, the area to be protected should be appropriately cleaned and disinfected before placing the barrier:



BARRIERS USED IN THE CLINIC



Used barrier material should be disposed in the WHITE containers located within the clinical areas throughout the school..

Hierarchy of Management Need

Critical: contact bone or soft tissue Ex. instruments, burs, etc.

Semicritical: contact w/ non-intact skin or oral cavity Ex. xray sensor, Rinn kit, impressions

Noncritical: contact w/ skin Ex. X-ray head, lead apron

Single-use only: needles, carpules of anesthetic, scalpel blades, plastic impression trays, impression, composite, and etch tips.

Sequence of cubicle management

1. Setup

- a. Disinfect (Cavicide) -- Spray hard surfaces allow 3 minutes to sit. Wipe or air dry
- b. Tape -- Handles, light, buttons, keyboard, mouse
- c. Barriers / sleeves -- Equipment, chair, surfaces for materials and instruments (desktop)
- d. Syringe sleeves -- Suction, air water syringes
- e. Wash hands or use hand sanitizer
- f. PPE: donning gown, mask, gloves
- g. If possible, wait to open the sterilization bag your cassette is in in front of the patient

2. During procedure - operators proceed to:

- a. Dispensary to get handpieces, other equipment, supplies **Remove gloves when getting materials**
- b. Updating odontogram and perio charting
 - i. Place clear or blue tape over mouse and plastic cover over keyboard if directly adding patient's dental findings into Axium.
- c. Opening drawers get materials -- Remove gloves
- d. Sharps
 - i. Cap needles after use-use holder in cassette or scoop technique
 - ii. Use cotton rolls if no cap
- e. Cover handpiece with cup or sleeve when leaving cubicle and during preceptor checks to avoid inadvertent skin injury.
- f. Patient: Eyeglasses; Bib
- g. X-ray rooms/Operatory equipment
 - i. Disinfect prior to setting up
 - ii. Barriers on sensor, x-ray tube head, chair, button panel, tray, and mouse
 - iii. Place apron on patient when taking radiograph
 - iv. Immediately after taking patient and bringing patient to op chair: cavicide tray, keyboard, mouse, sensor and cord, button, lead apron, place x-ray cassette in cart so room is clean for next patient and student doctor
 - v. **EXIT AXIUM – TO PREVENT: HIPAA VIOLATION AND EQUIPMENT OVERLOAD CAUSING TECHNICAL MALFUNCTION. See Section K.**

3. Clean up

- a. Dispose of sharps in red sharps container. Includes local anesthetic carpules, blades, needles, etc.
- b. Sterilize critical instruments-burs, instruments, place in sterilization bags and drop off at dirty dispensary. **No gloves at dispensary or dirty dispensary window!**
- c. Instruments in cassettes and in cart, no dirty gloves

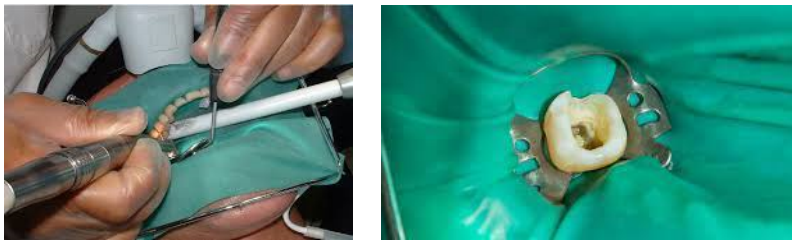
- d. Clean burs using solutions and/or brushes provided
- e. Cavicide hard surfaces and semi critical and noncritical items including left-over composite, etch, impression material, etc.
- f. Dispose single-use items including impression tips
- g. Bloody waste in biohazards waste
- h. Doffing PPE

4. Miscellaneous

- a. Patient waiting area -- No PPE other than masks
- b. Impressions
 - i. Cavicide impressions before showing Preceptor.
 - ii. Rinse with water after 3 min.
 - iii. Impression gun in sterilization bag and give to dirty dispensary
 - iv. Wipe down extra material with Cavicide
 - v. Dispense impression gun tips in regular waste.
- c. Dental materials, canisters, impression guns etc.
 - i. Wipe down before placing back in box and return to dirty dispensary window.
- d. Photos
 - i. Mirrors in cassette and placed on cart, cheek retractors placed in sterilization bag and give to dirty dispensary
- e. Prosthetics Lab
 - i. Remove dirty gloves
 - ii. Have impression trays sprayed with Cavicide
 - iii. Lab burs and materials:
 - 1. no patient contact,
 - 2. WEAR GLOVES
 - 3. WEAR EYE PROTECTION
 - 4. **CLEAN YOUR WORK AREA AFTER USE!**



- f. Isolation
 - i. Rubber Dams
 - 1. The purposes of the Rubber Dam are:
 - a. Protect the airway from potential swallowing/aspiration
 - b. Maintain a dry, isolated environment for restorative, Endo procedures.
 - c. When removing deep caries that may cause pulpal exposure
 - d. **To reduce possible exposure of HCW's to infectious aerosols.**



- ii. Isovac.-- Provides indirect isolation with enhanced vacuum/suction and direct illumination. Isovac does not fully protect the airway or protect from patient generated aerosols.



Prosthodontic Protocol

Impressions – Rinse the impression with water to remove all saliva and blood. Then, disinfect it using CaviCide. While performing these tasks, be sure you are wearing protective clothing, mask, eye protection and gloves.

When impressions or interim prostheses are sent to the lab, they must be appropriately labeled to indicate whether they have been disinfected. Impressions, bite registrations must be packaged prior to placement into a transporting box. If they have been disinfected, the label should also clearly state that fact; otherwise, the lab will disinfect the impressions again. This is important and is required by law.

BIOHAZARD



Cover the work area with disposable barriers as much as possible and change these barriers between cases.

Disinfect these areas at the end of the day. That are not covered should be disinfected between cases.

- Do minor adjustments of interim and completed prostheses in your cubicle using sterilized burs, polishing wheels and disks, and autoclaved rag wheels.
- In the case of completed prostheses or prostheses that need adjustment in the laboratory, used sterilized burrs and rag wheels obtained from the dispensary.
- Be sure to obtain a new polishing kit form the dispensary for each case.

All health care workers who work in a dental laboratory or handle laboratory cases on a regular basis should be vaccinated against Hepatitis B.


At the End of the Clinic Treatment Day

While still wearing protective equipment, disinfect the high volume evacuator using an appropriate cleaner (Caviwipes). Disinfect the countertop, dental unit, chair and light using the spray-wipe-spray technique. Be sure the base of the dental chair dental stool and the sink are clean. A neat appearance promotes a felling of confidence and good will in the patient the moment he or she walks into your cubicle.


Look at the drawers in your unit and roll around. There should be no loose instruments. All instruments should be in pouches or cassettes that have been sealed and sterilized.

Pouches and cassettes on which the expiration date has expired should be sterilized again. Put sterilized pouches in one drawer, non-sterile items in another. Be sure items such as torches and rubber bowls are cleaned and disinfected.

Never combine sterilized and non-sterilized instruments in the same drawer.




DO NOT...



- ✓ LEAVE YOUR CUBICLE WITH TREATMENT GLOVES ON;
- ✓ LEAVE LAB CASE BOXES IN THE CUBICLE AREA;
- ✓ LEAVE USED GOWNS/LAB COATS IN THE CUBICLE AREA;
- ✓ WEAR SWEATERS/SWEATSHIRTS OR OTHER STREET CLOTHING OVER SCRUBS;

- ✓ PICK UP DROPPED INSTRUMENTS...
- ✓ PASS INSTRUMENTS OR CHEMICALS OVER THE PATIENT'S FACIAL AREA



DR. LPR
56

IN ADDITION, DO NOT FORGET TO:

- put the indicator into the peel pack
- clean and disinfect instruments and handpieces prior to returning for sterilization
- disinfect all impressions prior to QA approval and packaged for isolation in transporting boxes
- clean used burs of debris using designated bur cleaning solutions and/or metal cleaning brushes prior to returning for sterilization. OR utilize single use burs whenever possible.

I. DENTAL UNIT WATERLINES

OSHA resources state:

What is the Issue?

“Biofilms are slime-producing microbial communities that adhere to solid surfaces in the presence of moisture, and are found virtually everywhere in nature. These microorganisms, which can include a wide variety of bacteria, fungi, and protozoa, colonize and replicate in water sources forming a biofilm. The slime layer protects the microorganisms due to its high resistance to removal.

Biofilm contamination of dental unit waterlines (DUWLs) occurs when the biofilm forms on the walls of the small-bore plastic waterline tubing that delivers water to the dental hand pieces, scalers, and air-water syringes used in patient care. According to the CDC, research has shown that microbial counts in untreated dental unit water can exceed 200,000 colony-forming units of heterotrophic water

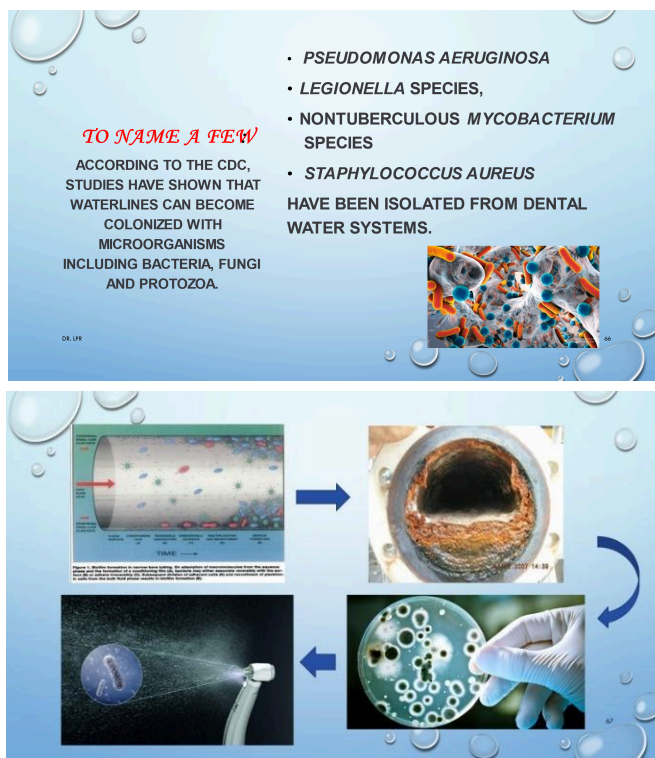
bacteria per milliliter of water (CFU/ml) within just five days after waterline installation.” According to the CDC, “clean water is < 500 CFU/ml.”

TO NAME A FEW

ACCORDING TO THE CDC, STUDIES HAVE SHOWN THAT WATERLINES CAN BECOME COLONIZED WITH MICROORGANISMS INCLUDING BACTERIA, FUNGI AND PROTOZOA.

- PSEUDOMONAS AERUGINOSA
- LEGIONELLA SPECIES,
- NONTUBERCULOUS MYCOBACTERIUM SPECIES
- STAPHYLOCOCCUS AUREUS

HAVE BEEN ISOLATED FROM DENTAL WATER SYSTEMS.



Dental unit water quality standards fall under the individual state dental boards’ purview, according to states’ dental infection control requirements, which vary widely state by state.



It is required that “Water lines must be flushed for 30-45 seconds at the end of each day.” This can be done two ways – (1) attach water lines to the ADEC flushing device located on cabinetry located to the side of the patient chair and follow instructions, or (2) manually activate water flow from handpieces, air/water syringe, or other water-reliant equipment, into both high volume suction and saliva ejector attachment, or into adjacent sinks. Connect the HVE and saliva ejector to the ICV and in 45 seconds, the vacuum lines are purged with the cleaner.

ACCORDING TO A-DEC: **MONITOR the Water Quality**

“It’s important to regularly monitor the water in your dental equipment. The frequency depends on your test results and water quality goals. Initially, test once per month. If monthly results pass your clinic’s water quality goal for all treatment rooms for three successive months, reduce the testing frequency to once every three months. Water quality should be monitored by performing a test that provides a quantitative measurement of heterotrophic bacteria. Call your A-dec dealer for information about in-office water monitoring test kits or water quality testing services. Follow these procedures:

1. Replace air/water syringe tips and remove handpieces, detachable motors and couplers, and ultrasonic instruments. Wipe waterline outlets (syringe tips, handpiece tubing terminals, etc.) with a disinfectant wipe to avoid external contaminants.

2. Unless otherwise directed, a composite sample for an individual dental unit may be collected by combining approximately equal amounts of water from each tubing (e.g., if there are two handpiece tubing and two air/water syringes, collect approximately one-fourth of the water sample from each tubing).
3. Follow the water monitoring test kit instructions for handling, storing, and processing the sample. The results obtained from this monitoring procedure will provide an indication of the dental unit water quality in each treatment room and what action to take next—continue maintaining with ICX or implement a shock treatment. Guidelines or requirements for dental unit water quality vary by region and are usually specified in colony forming units per milliliter (CFU/mL). **The U.S. Centers for Disease Control and Prevention (CDC) guideline is ≤ 500 CFU/mL.”**

J. INSTRUMENT MANAGEMENT



Pre-Treatment

Instrument cassettes and handpieces/clinical equipment are picked up at the departmental dispensary. They are placed in the cubicle/operatory remaining unwrapped until ready for use just prior to patient seating. They are unwrapped and organized in full view of the patient to validate they are, in fact, sterilized for their benefit.

Post-Treatment

The post-treatment management of dental instruments and equipment is a key part of effective infection prevention and control.



Student/Resident requirements: Following dental treatment, maintaining eye, mask, and glove protection, and prior to repackaging, physically inspect instruments/burs; using disinfecting wipes, wipe instruments/burs clean of particulate matter (using metal brushes on burs as needed); re-place into respective holders/wrapping/cassettes; apply labels accordingly; and return to the sterilization carts or “dirty windows” located throughout or within the clinical area. **Students/Residents must ensure that no sharps are extruding outside of returned cassettes to ensure the safety of the staff handling these items. Carts doors should be kept closed when not in use.** These carts are then transported to the Sterilization Facility

Sterilization

Sterilization is carried out most effectively and easily with the use of the steam autoclave. The sterilization of instruments for all clinical departments is done in the SODM basement in the designated sterilization facility. This facility contains industrial sized technology to accommodate: pre-autoclave ultrasonic cleaning (A); 4 multiple cart holding ovens (B); and automated cart-washing areas to prepare for re-use (C).



A



B



C

Clinical materials/supplies such as: Handpieces, Bur Blocks, Impression Guns, Endo Ice, Shade Guides, Rinn Kits, Denture Teeth books and folders, are returned to the “Dirty Window” in the respective clinical area.

Dispensary and other authorized personnel operating autoclaves will ensure the autoclaves are working properly by using process indicators such as sterilization tape and by performing biological monitoring using the appropriate spore tests. They will keep a log of the sterilization cycles. This log will contain the results of biological monitoring, and are to be turned into the Infection Control Officer or his/her assistant once a month. The spore tests will be performed at least weekly, or more often if circumstances dictate. To properly perform biological monitoring, place the biological monitors within the instrument pack according to direction and then run normal cycle of the autoclave. After processing the monitors, the results will be satisfactory if the test monitor is negative. If the biological monitor is positive, then these additional steps must be taken:

- Stop using the autoclave immediately.
- Inform the Infection Control Officer.
- Re-sterilize all packs that have been processed through the sterilizer since the last negative results.
- Notify repair personnel as soon as possible.
- After repairs are complete, retest the autoclave immediately. If test results are still positive, continue to seek the cause for the positive results.
- Do not begin routine use of the autoclave until negative results from the spore tests are obtained.
- Autoclave must not be put back in use until approved by Infection Control Officer or his designee.

K. RADIOLOGY UNITS

PRINCIPLES TO FOLLOW:

Oral Radiology Protocol

THIS!



RADIOLOGY PRINCIPLES TO FOLLOW:

- ✓ **Make sure you sign off the computer COMPLETELY.** If multiple people are signed in it overloads the system. **This is a major reason we have technical issues in taking images.**
- ✓ Always clean the rooms completely after using them. **DO NOT LEAVE DIRTY CASSETTES, GLOVES, GAUZE OR ANY OTHER HAZARDOUS WASTE IN THE ROOMS.**
- ✓ Make sure the x-ray machine arm and head are placed up against the wall.
- ✓ Hold the button down when taking x-rays until it beeps so you don't get an error message.
- ✓ To avoid cross contamination the disposable sticky tabs should not be kept in the rooms in a big bin.
- ✓ Make sure gloves are stocked in the rooms.

ALWAYS COMPLY WITH INFECTION CONTROL STANDARDS!

VIOLATION OF THESE PRINCIPLES CAN RESULT IN REFERRAL TO THE STUDENT STANDING AND PROMOTIONS COMMITTEE FOR APPROPRIATE ACTION.

THIS



NOT THIS!



The following should be observed prior to exposing images:

- ✓ Disinfect prior to setting up
- ✓ Barriers on sensor, x-ray tube head, chair, button panel, tray, and mouse
- ✓ Place lead apron with protective collar on patient when taking radiograph

a) Exposing sensors

- i. Place barriers over the tube head and chair.
- ii. Cover the exterior controls with plastic wrap.

- iii. Cover the computer keyboard with protective tape if using gloves.
- iv. Place lead apron and thyroid collar over patient. Wash your hands, then glove and mask.
- v. Use film sensor that has a barrier around it.
- vi. Use autoclaved or disposable position indicating devices.
- vii. Use autoclaved or disposable panoramic bite block or cover it with a disposable cover.

Cleaning the suite or the operatory area

- i. With gloves on, remove all barriers;
- ii. Disinfect x-ray head and keyboard with CaviWipes or spray;
- iii. Close Axium to protect PHI.
- iv. Remove all personal items from the suite.

Immediately after taking patient and bringing patient to op chair: Remove all barriers, relocate x-ray head to designated location, CaviWipe tray, keyboard, mouse, sensor and cord, button, lead apron, place x-ray cassette in cart so room is clean for next patient and student doctor.



L. WASTE MANAGEMENT

1. Biomedical Waste

Regulated Biohazardous Waste

Biohazardous wastes in the CWRU School of Dental Medicine Clinics are classified either as Sharps or Infectious Wastes:

Sharps are any item capable of causing puncture wounds or cuts.

Examples include: discarded hypodermic needles, syringes, and scalpel blades.

Cannulas, cover slips, microscope slides, all pipettes (glass or plastic) and pipette tips, test tubes, or glass Petri dishes. Also, broken glass or any other item capable of causing puncture wounds or cuts.

All Sharps, whether contaminated or not, must be contained in puncture-proof containers mounted on the front wall of each group isle in Comprehensive Care and strategically located within Specialty and AEGD areas:



- All contaminated Sharps; needles, syringes and scalpel blades; and all materials designed for use in biological, etiological, bacteriological or tissue culture work must be placed in designated Sharps containers.

Infectious Waste is defined as any non-sharp materials contaminated with blood borne pathogens or other pathogens.

Examples include: infectious gauze, cotton rolls, bibs, cotton swabs. In research areas, examples include: all infectious plastic Petri plates and plastic tissue culture vessels containing media, cultures and stocks of infectious agents, devices used to transfer, inoculate or mix such agents, and paper or cloth material contaminated with these agents.

Infectious wastes are to be placed in approved biohazardous waste containers: red, sealed, leak-proof. The biohazard symbol may also be on the container or bag liner.

Infectious waste discarded in **RED** containers located throughout the clinical area.



If other containers are designated as containing biohazardous materials, provisions must be made to notify non-clinic personnel of this prior to their entering the clinic. This must also be noted in the Exposure Control Plan.

Infectious wastes must be treated prior to disposal. Steam sterilization is the simplest, most effective method and should be conducted as close to the point and time of waste generation as possible. All waste must be sterilized in red or orange biohazardous bags. All bags must be autoclavable and conspicuously labeled with the international biohazard symbol.

After sterilization and cooling, these bags are to be denoted "sterilized" and tagged with the Primary Investigator's name and date of sterilization. All biohazardous bags must remain in the room/clinic for evening pick up. Biohazardous waste must be disposed of expeditiously.

Note that under State law, autoclaved infectious waste is still regulated. Do not throw it away in the regular trash as uncontaminated or general clinic waste.

Contaminated Laundry

- Contaminated laundry will be handled as little as possible.
- It will not be sorted or rinsed in the clinic.
- It will be placed in properly labeled, sealed and leakproof containers.
- It will be collected in the clinic and washed. If the clinic does not have the means to clean the laundry, a private laundry service must be used.
- Employees are prohibited from taking contaminated laundry home to be cleaned.

Laundry containers are located throughout the clinical area.



M. DOCUMENTATION

A. General

OSHA has mandated that certain records be kept. These include medical records and training records. But the School of Dental Medicine will keep sterilization logs and cubicle inspection check list and any other record which it feels are necessary to ensure it is minimizing or eliminating the exposure to infectious diseases.

B. Sterilization Logs

Each area operating autoclaves will keep an operating and spore testing log as found in the Appendix for each autoclave they operate. The log should also reflect any repairs and retesting before resumption of normal use. The sterilization log is created by the Sterilization staff assigned and must be turned into the Infection Control Officer or his/her designee once a month.

C. Medical Records

1. The School of Dental Medicine shall establish and maintain an accurate record for each health care worker with occupational exposure, in accordance with 29 CFR 1910.20.
2. This record shall include the following:
 - a) The name and social security number of the health care worker;
 - b) A copy of the health care worker's Hepatitis B vaccinations and any medical records relative to the health care worker's ability to receive vaccination as required by the section on Hepatitis B vaccination;
 - c) A copy of all results of examinations, medical testing and follow-up procedures are required by the section on Post-Exposure Evaluation and Follow-up;
 - d) The School of Dental Medicine's copy of the health care professional's written opinion as required;
 - e) A copy of the following information provided to the health care professional
 - i. A copy of the Standard;
 - ii. A description of the exposed health care worker's duties as they relate to the exposure incident;
 - iii. Documentation of the route(s) of exposure and circumstances under which the exposure occurred;
 - iv. Results of the source individual's blood testing, if available;
 - v. All medical records relevant to the appropriate treatment of the health care worker including vaccination status which are the School of Dental Medicine's responsibility to maintain.
3. Confidentiality

The School of Dental Medicine shall ensure that the following health care worker medical records required by the Standard are:

- a) Kept confidential
- b) Not disclosed or reported without the health care worker's express written consent to any person within or outside the workplace except as required by the Standard or as may be required by law.

The School of Dental Medicine shall maintain the records as specified by the section on Recordkeeping for as least

the duration of employment plus 30 years in accordance with 29 CFR 1910.20.

D. Training Records

- 1) Training records shall include the following information:
 - a) The dates of the training sessions;
 - b) The contents or a summary of the training sessions;
 - c) The names and qualifications of persons conducting the training;
 - d) The names and job titles of all persons attending the training sessions.
- 2) Training records shall be maintained for three years from the date on which the training occurred.

E. Availability

- 1) The School of Dental Medicine shall ensure that all records required by the Standard shall be made available on request to the Assistant Secretary of Labor for Occupational Safety and Health or designated representative (hereafter referred to as “Assistant Secretary”), and the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative (hereafter referred to as (“Director”)), for examination and copying.
- 2) Health care workers’ training records shall be provided upon request for examination and copying to health care workers, to health care workers’ representatives, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.
- 3) Health care workers’ medical records shall be provided upon request for examination and copying to the subject health care worker, to anyone having written consent of the subject health care worker, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

F. Transfer of Records

1. The School of Dental Medicine shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.20.
2. If the School of Dental Medicine ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the School of Dental Medicine shall notify the Director at least three months prior to their disposal, and transmit them to the Director, if required by the Director to do so, within that three month period.

Residents / Students must wear the appropriate personal protective equipment, in addition to mask, protective eyewear and gloves, a long sleeved gown, disposable cap and a disposable face shield (which covers the mask) should be used.

Surgical hand asepsis:

The purpose of surgical hand asepsis is to reduce, with persistent effect, transient and resident hand microflora thus preventing contamination of the surgical site in case surgical gloves get punctured or torn.

We are presently using *Manorapid*, an alcohol based surgical antimicrobial alcohol rub. When performing surgical hand asepsis the protocol is to

- First handwash with soap and water
- Use *Manorapid* according to the manufacturer's instructions (90 seconds) for a surgical hand disinfection.
- Don sterile surgical gloves.

Barriers and surgical drapes:

The certified dental assistant (CDA) assigned to oral surgery will open the surgical tray which contains the sterilized drape, patient bib, the foil which is to be placed on the light and bracket table handles. The CDA will also attach the sterilized surgical handpiece to its connection and place it on top of the sterilized drape on the bracket arm.

V. CUBICLE/OPERATORY AUDITING AND COMPLIANCE

The role of the Infection Control Officer is to:

1. Ensure that clinical and auxiliary personnel in all departments are acquainted with the Infection Prevention and Control Manual, its contents as they pertain to their clinical/administrative responsibilities;
 2. Educate Students, Residents, Faculty, Administrative and Clinical support staff on the Principles of Infection Prevention and Control as they affect their roles and responsibilities;
 3. Audit, monitor, enforce, and maintain records for clinical compliance with standards in all Departments (see Inspection Form below);
 4. Assist Departmental staff in maintaining records pertaining to Vaccination protocols, compliance, and/or declination for those required by statute to comply;
 5. Establish and administer protocol for clinical injury reporting, i.e. needlestick or other sharps incidents;
 6. Ensure SODM compliance with Regional, State, Federal regulation;
 7. Assist in completion of CODA applications for Accreditation renewal;
 8. Respond to other issues / tasks as they arise.
- Appropriate personnel under his/her supervision are offered the vaccine within the required time period.
 - Employees who do not begin the vaccination series or sign a declination form within 10 days, do not work with bloodborne pathogens until either the vaccination series is begun or a declination form is signed.

Inspection Procedures

1. Daily monitoring by the faculty.
2. Random inspections by the Infection Control Officer.

A. Clinical

- i The Infection Control Officer will conduct cubicle/operator inspections throughout the SODM on a scheduled rotating basis, thus including the DMD Clinic, all Specialty Clinics, and the AEGD.**
- ii Violators of protocols, whether engineering, environmental, or clinical PPE/attire, will be given the documented inspection form, to be kept on file, and monitored for repeat violations.**
- iii**
- iv Serious or repeat violations will be reported to the Associate Dean for Clinical Affairs and subject to notifying the Student Standing and Promotions Committee.**

B. Pre-Clinical

- i Random inspections will be performed in the pre-clinical area within Samson Pavilion.
- ii Violations will be documented and disciplinary action will be taken in accordance with the policy described in the Infection Control Inspection Form above.
- iii All Infection Control Policies apply in the laboratory settings with the exception of use of OSHA compliant gowns.

*Compliance with this Infection Prevention / Control Manual is mandatory by all personnel in the School of Dental Medicine. Violation will result in:

1st offense - verbal warning

2nd offense - written warning and no credit for procedure in process

Subsequent offenses - immediate suspension from the clinic and students on emergency duty will see your patients and receive credit for the work they perform on your patients. The offender must take an infection control course and show proof of attendance at said course, or other remedial work at the discretion of the Infection Control Officer.

If a suspension is imposed, student will be referred to the Committee on Faculty Student Relations and time must be made up during down time as directed by the Infection Control Officer or the Committee on Faculty Student Relations.

Appeals regarding the decision of the Infection Control Office can be made to the Office of the Associate Dean of Clinical Affairs.

In addition to individual student/resident auditing and rating, each department will be rated using the auditing form found at Appendix D, page 87.

NOTE: THIS AUDITING PROCESS CAN BE UPDATED, MODIFIED, OR AMENDED AT ANY TIME AT THE DISCRETION OF THE INFECTION CONTROL OFFICER. ANY CHANGES WILL BE EFFECTIVE IMMEDIATELY UNLESS OTHERWISE INDICATED.



**CASE WESTERN RESERVE
UNIVERSITY
School of Dental Medicine**

INFECTION CONTROL COMPLIANCE REPORT

STUDENT / RESIDENT#: _____ NAME: _____

GROUP #: ____ CUBE #: ____

DATE: _____ A day or B day

Enforcement: 1st Offense – Verbal/written warning + “0” grade in Dental Management

2nd Offense - “0” grade in Dental Management; report to Associate Dean of Clinics

3rd Offense OR any serious breach of compliance safety, report to Student Standing Promotions Committee

 Countertops not cleared of personal items

Lab Case(s) not stored away from countertops

Cubical cleaning / CaviCide disinfection not performed

Drawers contain dispensary materials/supplies not returned including local anesthetic carpules

- Operatory barriers not in place during treatment
- Needle caps not covering needle during treatment
- Student not using assigned cubicle
- HIPAA Violation (axiUm patient chart not closed; PHI exposed)
- PPE NOT worn in clinical treatment setting
 - Patient
 - Student

OTHER _____



REPORTED BY: _____ TO: _____

ACTION TAKEN: _____

RETURN THIS FORM TO DR. ROSSOFF WHEN COMPLETED

Initial : _____ Dr. Rossoff, Infection Control Officer

VI. IMMUNIZATION PROTOCOLS, STANDARDS, REGULATION

Disease	Recommendation
Hepatitis B	REQUIRED
Influenza	RECOMMENDED
Measles	RECOMMENDED
Mumps	RECOMMENDED
Polio	RECOMMENDED
Rubella	RECOMMENDED
Tetanus	RECOMMENDED
Pertussis	RECOMMENDED
Diphtheria	RECOMMENDED

HEPATITIS B

Immunization of adults is a series of three vaccines. A Hepatitis B screen for previous disease is mandatory (HB surface antigen and Ab (Antibody))



OHIO STATE DENTAL BOARD IMMUNIZATION REQUIREMENT

“RULE: 4715-20-01 Patient and personnel protection. (A) Immunization - All dentists and dental health care workers must show evidence of immunity to or immunization against the hepatitis B virus as specified by board guidelines. Such immunization must begin prior to patient contact.”

A. General

Hepatitis B is a highly infectious disease with serious potential consequences including death, and is the main impetus of the passage of the Blood borne Pathogen Standard. The following paragraphs, which govern our policies here at the School of Dental Medicine, reflect OSHA mandates as well as the School’s concern for its employees’ safety. Ohio State Law also is specific in this arena with its applicable statutes.

B. Hepatitis B Vaccination

1. Students and Residents

Students and residents who are enrolled in the School of Dental Medicine must have proof of immunity, either through previous exposure of previous vaccination (by demonstrating a titer level greater than ten international units of Anti-HBs), or by beginning the series of Hepatitis B vaccinations at the Student Health Service before they may start patient treatment. Students must have a Hepatitis B vaccination series unless such a vaccination will pose a threat to his/her health or well being as determined by their physician and approved by the Ohio State Dental Board. This provision applies to all students.

2. Faculty and Staff

- a) The School of Dental Medicine will make available the Hepatitis B vaccination series to all faculty and staff who have occupational exposure, and post-exposure evaluation and follow-up to all faculty and staff who have had an exposure incident.
- b) The School of Dental Medicine will ensure that all medical evaluations and procedures, including the Hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up including prophylaxis are:
 - i. Made available to faculty and staff at no cost to them
 - ii. Made available to faculty and staff at a reasonable time and place

- iii. Performed by or under the supervision of a physician or by or under the supervision of another licensed health care professional
- iv. Provided according to recommendations of the U. S. Public Health Service current at the time these evaluations and procedures take place except as specified by the Standard.

The School of Dental Medicine shall ensure an accredited laboratory at no cost to a faculty or staff member conducts all laboratory tests.

- c) Those faculty or staff members who refuse to have the vaccination must sign the Declination as found in the Appendix B. If a faculty or staff member who may have occupational exposure to blood borne pathogens refuses vaccination, his or her employment will have to be terminated because Ohio State Law does not permit health care workers to work without the benefit of the vaccine unless his/her health and well-being would be compromised, or unless he/she can demonstrate immunity and must be approved by the Ohio State Dental Board. In any case, the OSDB rules supersede, and no dental healthcare provider would be allowed patient contact until after the first dose of the vaccine has been administered.
- d) Hepatitis B vaccination shall be made available after the health care worker has received the training required and within ten working days of initial assignment to all health care workers who have occupational exposure unless the health care worker has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the health care worker is immune, or the vaccine is contraindicated for medical reasons.
- e) The employer shall not make participation in a prescreening program a prerequisite for receiving Hepatitis B vaccination.
- f) If the health care worker initially declines Hepatitis B vaccination but at a later date while still covered under the Standard decides to accept the vaccination, the School of Dental Medicine shall make available the Hepatitis B vaccination at that time.
- g) The School of Dental Medicine shall assure that health care workers who decline to accept Hepatitis B vaccination offered by the School sign the Declination Statement located in the Appendix.
- h) If the U. S. Public Health Service recommends a routine booster dose(s) of Hepatitis B vaccine at a future date, such booster dose(s) shall be made available in accordance with the Standard.
- i) TB Testing is required annually of all Students, Faculty and staff who have patient contact. CWRU Health Services conduct this testing at CWRU School of Dental Medicine annually. Documentation of Faculty and Staff of this annual test and/or

documentation, which exclude you from this testing must also, be submitted to CWRU School of Dental Medicine Facilities Office.

C. COVID-19 VACCINE AND BOOSTER REQUIREMENTS (per the CWRU website)

“The health and safety of the campus community has been and will continue to be the university’s highest priority.

Part of meeting that responsibility involves ensuring that as many members of the campus community as possible have received the COVID-19 vaccine and booster dose.

As of August 1, 2022 – new updates to CWRU policy:

*From: Sara Lee, MD. Executive Director, University Health & Counseling Services
Shirley Mosley, Associate Vice President for Student Affairs and Dean of Students*

“We are fortunate that our community’s high vaccination rates—nearly 96% when the spring semester ended—significantly reduce the risk of severe illness and hospitalization for those who become infected. Given this context, we are continuing our vaccination requirements, but providing more room for individual choice for other preventive measures.

This approach reflects the information we have at this time; should new circumstances require changes, we will notify you as promptly as possible.

Vaccinations

Case Western Reserve requires that all members of the university community be fully vaccinated (meaning that they have received the full initial dosage of their specific vaccine, along with at least one booster when eligible).”

Students who fail to comply with Case Western Reserve’s vaccination policy will be referred to the Office of Student Conduct and Community, which will begin the university’s [Conduct Process](#).

Other Immunizations

Although the Blood borne Pathogens Standard focuses on HBV and HIV infection, there many other blood borne pathogens that can cause the health care worker devastating or fatal illness. Childhood diseases, sexually transmitted diseases, and tuberculosis are but a few of these infectious diseases. Therefore, any health care worker who has patient contact or contact with infectious materials should be sure they have had these diseases or have been vaccinated against them.

The Disease Immunization Checklist Table, located at the beginning of this section, was adapted from the Center for Disease Control’s publication, “Practical Infection Control in the Dental Office,” 1989, and should serve as a reminder for you. Some of these diseases can have far-reaching consequences, especially for female health care workers.

VII. EXPOSURE INCIDENT RESPONSE PLAN FOR BLOODBORNE PATHOGENS

A. General – Needle stick or other incident exposure Protocols

Before one can discuss what to do about an exposure incident, one must know what an exposure incident is. An exposure incident refers to specific eye, mouth or mucous membrane, non-intact skin or **parenteral** contact with blood or OPIM that results from the performance of one's duties or tasks – for example, in the case of the CWRU School of Dental Medicine, a student performing clinical duties as part of their education. Although contact with mucous membrane can happen, an exposure incident usually takes the form of a puncture wound of the health care worker's skin. This penetration is usually the result of a needle, scalpel blade or other sharp object such as a burr or scaler. There are separate protocols for students and for faculty or staff members. Below is the updated protocol for students who experience a bloodborne exposure.

From the CWRU Health and Counselling Center.

Bloodborne Pathogen Exposure Protocol for CWRU School of Dental Medicine

Updated- 7/18/22

1. DMD Student and Resident Reporting Protocol

1. Wash and rinse area of exposure

When an exposure happens, rinse/wash site of injury or flush eye for 15 minutes. There is no need to express bleeding from a puncture site.

2. Notify Dental School via your **Preceptor**.
3. Report the incident as soon as possible to the Infection Control Officer (Dr. Larry Rossoff) or his designee.

Student/employee should notify Dental School personnel who will arrange for source patient to be tested for Hepatitis B surface antigen, Hepatitis C antibody and HIV Antigen/antibody. If the source patient has a history of HIV, Hepatitis B or Hepatitis C infection, they should also have a viral load drawn. If there are questions, call UH&CS 216-368-2450, and speak with the on-call service.

Student/Resident will complete documentation on:

REFER TO APPENDIX F FOR DOCUMENTATION

- a. Injury Report Form
- b. Incident Response Management Form
- c. Tracking Report

Provided by Infection Control Officer

4. Have the Infection Control Officer or their designee talk to the source patient. They will ask the patient to have their blood drawn for testing for HBV, HCV, HIV. Blood should be drawn on all source patients, unless the same blood

tests have been drawn in the last 2 weeks. In that case, it will not be necessary to obtain a sample of the patient's blood. Information concerning the patient's serostatus will be provided to the student and to University Health Services.

- a. If the source patient is known positive for Hepatitis B, blood should be drawn for Hepatitis B DNA viral load, HCV and HIV Ag/Ab.
 - b. If source patient is known positive for Hepatitis C and HAS been treated, blood should be drawn for Hepatitis C RNA viral load, HepBsAg, and HIV Ag/Ab. (Even if successfully treated, patient will still test positive for HCV Ab and could have been re-infected with Hepatitis C.)
 - c. If source patient is known positive for Hepatitis C and HAS NOT been treated, blood should be drawn for Hepatitis C RNA viral load, HepBsAg, and HIV AgAb.
 - d. If source patient is known positive for HIV, blood should be drawn for HIV RNA viral load, HepBsAg, and HCV Ab.
5. The student will have counseling, evaluation, and recommendation for treatment at Student Health Service at no charge or physician of choice at the individual's personal expense.
 6. Complete Accidental Injury form
A yellow Report of Accidental Injury form is completed upon evaluation and sent to the appropriate University office. If it has not been done at the Dental School, it will be completed at Health Services.
 7. Notify Health Services
If between 9:00am-4:30pm, student/employee should call University Health and Counseling Services 216-368-2450 ASAP. If after hours and patient is high risk, go to emergency department but if the source patient is low risk, can wait until next day to speak with UH&CS. Phone consultation will be with a nurse who will ask for the following information:
 - a. Student or employee name, date of birth and program details
 - b. Date of Incident
 - c. Where did exposure happen?
 - d. How did the exposure happen?
 - e. Hepatitis B surface antibody status
 - f. Tetanus (Td or Tdap) status
 - g. Source patient information (patient name, DOB)
 - h. Will source patient be tested?
 - i. If yes, where?
 8. Baseline testing of student/employee

Baseline lab testing of the student/employee will be done if not already completed in the last 2 weeks- Hepatitis B surface Ab, Hepatitis C Ab, HIV Ag/Ab- if Hepatitis B vaccination status is uncertain, also add Hepatitis B surface antigen if not already in the subject's record.

Baseline testing needs to be done even if it is already known that source patient testing is all negative.

Student/employee can come to UH&CS for blood testing or a lab request can be sent to them for blood to be drawn at outside lab. They will receive their lab results via secure message through myhealthconnect.case.edu.

9. The Source Patient (SP) will provide:

- Their name
- Contact information
- Consent for drawing blood for testing – HBV, HBC, HIV

10. Follow-up

a. SP tests neg- If source patient is low risk and tests negative for Hepatitis B, Hepatitis C and HIV and student/employee has negative baseline labs, no further follow up is needed.

b. SP not tested- If source patient is low risk and no source patient tests are done, student/employee needs follow up testing in 4 months. If all tests negative at that time, no further follow up is needed.

c. SP high risk for HIV

If source patient is high risk for HIV, student/employee needs to be evaluated asap at UH&CS or in an emergency department. If UH&CS is not open, they should go to the emergency department immediately and not wait until the next day. They may want to start Post Exposure Prophylaxis (PEP) which is more effective the earlier it is started. Student will need more frequent follow up testing. **If there has been a definite HIV exposure or a high risk exposure, we start Truvada 200/300 qid and Isentress 400 mg bid immediately- the earlier the better.** Starting it 1 hour after exposure is better than 6 hours after exposure which is better than starting it 12 hours after exposure. Patients are treated even 7 days out from the exposure but it is much better to start sooner.

d. SP high risk for Hepatitis B

If the student/employee is not adequately vaccinated for Hepatitis B and the source patient has Hepatitis B infection or is high risk for Hepatitis B and will not be tested in the 7 days following the exposure, the student/employee may need to go to the emergency department to receive Hepatitis B immune globulin. If source patient has Hepatitis B but the student/employee has good

- Hepatitis B surface antibodies, no follow up for Hepatitis B infection is needed.
- e. SP high risk for Hepatitis C
If source patient has Hepatitis C infection, closer follow up with more frequent labs for student/employee may be necessary.

Role of Dental School Liaison

The Dental School BBP Exposure Liaison:

1. Serves as the contact person for any dental students and staff who have an exposure (Recommend primary contact and a back-up contact person).
2. Encourages student/employee to call UH&CS asap for follow up.
3. Gives student CWRU Accidental Injury Form either in person or via email. Forms should be completed and attached to a message to UH&CS.
4. Arranges for source patient to be tested. Dental faculty name is used on lab test requests.
5. When results are available, faxes results of source patient labs to UH&CS with name of exposed student written. Patient's name is usually visible- or if preferred, can be redacted.
6. Testing for students will go through their insurance but any out-of-pocket expenses are reimbursed by the Dental School. The Dental School will reimburse or pay outright for medications for PEP when needed. The medications can be expensive if student does not have insurance. Currently, GoodRx price for Truvada qd about \$45 and Isentress 400 mg bid about \$1800 for 28 day course of both pills.

Thankfully, for at least the last 25 years, we have not had a dental student or staff member become infected with any bloodborne pathogens related to occupational exposures. However, follow up is very important to the University.

Dental Faculty- Lawrence Rossoff, DDS, FICD, FACD Infection Control Officer

lpr42@case.edu

Off: 216-368-2162

Dental Clinic, Room #389

UH&CS Supervising Physician- Jennifer Kidd, MD

jxk70@case.edu

216-368-2450

UH&CS Nurse Coordinator- Sharon Wittke, BSN, RN

216-368-2450

Dental School Liaison- Debra Tomsick

JRK 7/18/2022

2. Faculty or Staff Member Protocol

- a) Immediately after the occurrence of the exposure, flush the area of contact or penetration with copious amounts of water.
- b) Report the incident as soon as possible to the Infection Control Officer, or his designee, plus University Health Services.
- c) Employee and supervisor must file an Occupational Injury/Illness Report with the office of Risk Management. All injuries severe enough to require first aid or medical treatment shall be reported by telephone within one working day following the knowledge of accident. (216) 368-4394.
- d) The Infection Control Officer, or their designee will ask the source patient to have his/her blood collected and tested for HIV, HBV, HCV, and other blood borne pathogens.
- e) Following the report of the exposure incident, the School of Dental Medicine shall make immediately available to the exposed faculty or staff member a confidential medical evaluation and follow-up including at least the following elements:
 - i. Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;
 - ii. Identification and documentation of the source individual, unless the School of Dental Medicine can establish that identification is infeasible or prohibited by state or local law;
 - 1) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV, HCV, and HIV infectivity. If consent is not obtained, the School of Dental Medicine shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.
 - 2) When the source individual is already known to be infected with HBV, HCV, or HIV, testing need not be repeated.
 - 3) Result of the source individual's testing shall be made available to the exposed faculty or staff member, and the faculty or staff member shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.
 - iii. Collection and testing of blood for HBV, HCV, and HIV serological status;
 - 1) The exposed faculty or staff member's blood shall be collected as soon as feasible and tested after consent is obtained.
 - 2) If the faculty or staff member consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the faculty or staff member elects to have the baseline sample tested, such testing shall be done as soon as feasible.

- iv. Post-exposure prophylaxis, when medically indicated, as recommended by the U. S. Public Health Service;
- v. Counseling;
- vi. Evaluation of reported illnesses.

C. Medical Records

The School of Dental Medicine shall establish and maintain an accurate record for each health care worker with occupational exposure, in accordance with 29 CFR 1910.20.

D. This record shall include the following:

- a. The name and social security number of the health care worker;
- b. A copy of the health care worker's Hepatitis B vaccinations and any medical records relative to the health care worker's ability to receive vaccination as required by the section on Hepatitis B vaccination;
- c. A copy of all results of examinations, medical testing and follow-up procedures are required by the section on Post-Exposure Evaluation and Follow-up;
- d. The School of Dental Medicine's copy of the health care professional's written opinion as required;
- e. A copy of the following information provided to the health care professional
 - i. A copy of the Standard;
 - ii. A description of the exposed health care worker's duties as they relate to the exposure incident;
 - iii. Documentation of the route(s) of exposure and circumstances under which the exposure occurred;
 - iv. Results of the source individual's blood testing, if available;
 - v. All medical records relevant to the appropriate treatment of the health care worker including vaccination status which are the School of Dental Medicine's responsibility to maintain.

E. Confidentiality

The School of Dental Medicine shall ensure that the following health care worker medical records required by the Standard are:

- a) Kept confidential
- b) Not disclosed or reported without the health care worker's express written consent to any person within or outside the workplace except as required by the Standard or as may be required by law.
- c) The School of Dental Medicine shall maintain the records as specified by the section on Recordkeeping for as least the duration of employment plus 30 years in accordance with 29 CFR 1910.20.

F. Information provided to the Health Care Professional

- i. The School of Dental Medicine shall ensure that the health care professional responsible for the faculty or staff member's Hepatitis B vaccination is provided a copy of this regulation.
- ii. The School of Dental Medicine shall ensure that the health care professional evaluating a faculty or staff member after an exposure incident is provided the following information:
 - 1) A copy of this regulation;
 - 2) A description of the exposed faculty or staff member's duties as they relate to the exposure incident;
 - 3) Documentation of the route(s) of exposure and circumstances under which exposure occurred;
 - 4) Results of the source individual's blood testing, if available;
 - 5) All medical record relevant to the appropriate treatment of the faculty or staff member including vaccination status, are the School of Dental Medicine's responsibility to maintain.

iii. Health Care Professional's Written Opinion

The School of Dental Medicine shall obtain and provide the faculty or staff member with a copy of the evaluating health care professional's written opinion within 15 days of the completion of the evaluation.

The health care professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for a faculty or staff member, and if the faculty or staff member has received such a vaccination.

- i. The health care professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:
 - 1) That the faculty or staff member has been informed of the results of the evaluation;
 - 2) That the faculty or staff member has been told about any medical conditions resulting from exposure to blood or OPIM, which require further evaluation or treatment.
- ii. All other finding or diagnoses shall remain confidential and shall not be included in the written report.

G. Medical Recordkeeping

Medical records required by the Standard shall be maintained in accordance with the Standard.

FOLLOW-UP

THE UNIFORM NEEDLESTICK AND INJURY/EXPOSURE INCIDENT REPORT AND INJURY RESPONSE MANAGEMENT FORMS LOCATED IN APPENDIX F, WILL BE COMPLETED AND UPDATED AS EVENTS OCCUR. THESE FORMS WILL BE KEPT AND MANAGED BY: DR. LAWRENCE ROSSOFF, INFECTION CONTROL OFFICER, AND ADAM MAJETTE, THE DISPENSARY MANAGER, WITH COPIES TO THE ASSOCIATE DEAN CLINICAL AFFAIRS.

Consent form for the drawing of blood by the source individual is found at Appendix F.

Exposure Control Plan for Bloodborne Pathogens

Dental Clinic Responsibilities

1) Appointment of an Exposure Control Officer and Exposure Determination

This Exposure Control Plan is in effect for CWRU School of Dental Medicine.

This school is located at 9601 Chester Ave., Cleveland, Ohio, 44106. The Exposure Control Officer is Lawrence P. Rossoff, D.D.S., FICD, FACD,. Office #389, who can be reached at telephone number (216) 368-2162.

It is the Exposure Control Officer's responsibility to ensure that:

- Appropriate personnel under his/her supervision are offered the vaccine within the required time period.
- Employees who do not begin the vaccination series or sign a declination form within 10 days do not work with bloodborne pathogens until either the vaccination series is begun or a declination form is signed.

This Exposure Control Plan was implemented on November 23, 1998. The Plan has been reviewed and the Infection Prevention and Control Manual updated July, 2022, and further updated July 2023.

Listed below are important items that must be adhered to at the School of Dental Medicine. This will enable us to have a successful Exposure Control Plan.

- Hand washing Facilities:** are available and located in each treatment area.
- Soap & alcohol based hand rubs** are provided in each treatment area. X Yes
- SHARPS containers** are available. X Yes
- Secondary containers** are available and properly labeled. X Yes
- Universal Precautions** are used at the School of Dental Medicine. X Yes

In case of exposure to bloodborne pathogens, the following protocol **MUST** be followed:

The Exposure Control Officer Lawrence P. Rossoff, D.D.S., FICD, FACD, who can be reached at (216) 368-2162 and will be notified as soon as possible.

Exposed individuals will go to University Health Services (x2450) as soon as possible (after hours, to University Hospitals Emergency Room).

If the exposed individual is not a student or an employee of the School of Dental Medicine, the Exposure Control Officer or his designate will direct that individual to the appropriate testing facility and any other action to be taken in connection with the incident.

NOTE: If the above protocol is not adhered to, the School of Dental Medicine will not be responsible for any charges incurred at a private physician or other facilities unless approved by the Exposure Control Officer.

Contaminated Laundry must be properly handled and contained. Cleaning is performed by

Merchants Linen Inc
 10629 Berea Rd, Cleveland, OH
 44102
 216-961-3310

Companies outside the University handling potentially contaminated clothing are notified in writing that laundry may be contaminated with bloodborne pathogens.

VIII. NORTHEAST OHIO REGIONAL SEWER DISTRICT (NEORS) CODE OF REGULATIONS – AMALGAM AND AMALGAM WASTE

Dental Practice Discharge Permit No. 8021-4237-19

In accordance with Section 2.0603 of the Northeast Ohio Regional Sewer District (NEORS) Code of Regulations the Dental Practice operated by and located at:

**CWRU School of Dental Medicine
9601 Chester Avenue
Cleveland, Ohio 44106**

is hereby granted the authority to discharge dental wastewater from the above identified facility and through the discharge source(s) identified herein into the Northeast Ohio Regional Sewer District's (hereinafter referred to as **District**) sewerage collection/treatment system. This authority is granted in accordance with the conditions set forth in this Dental Practice Discharge **Permit** (hereinafter referred to as **Permit**). All discharges from the above-mentioned practice, requirements, and reports relating thereto shall be in accordance with the terms and the conditions of this **Permit**. Compliance with this Permit does not relieve **CWRU School of Dental Medicine** of the obligation to comply with any and all applicable regulations, standards, requirements, or laws that may become effective during the term of this **Permit**.

Noncompliance with any term or condition of this **Permit** shall constitute a violation of the **District's** Code of Regulations.

This **Permit** shall become effective October 29th, 2019 and shall expire on October 31st, 2022. Upon expiration, the provisions of this **Permit** shall remain in effect and any requirements shall be performed until the time a new **Permit** is issued.

The NEORS may reevaluate your practice prior to the expiration date of this **Permit**. An updated **Permit** may be issued prior to the expiration date.

All NEORS Sewer Use Code citations that appear herein are taken from the Title I (2016 version) and Title II (2014 version) of the Code of Regulations.

By: Manager of Water Quality and Industrial Surveillance

Issued this 29th Day of October, 2019.

Part 1 – Process/Operational Description

As defined in the Code of Federal Regulations, 40 CFR 441.10(a) and 40 CFR 441.20(i), **CWRU School of Dental Medicine**

A. is a new source dental discharger. The discharge of wastewater from this dental office is regulated by the NEORS Code of Regulations and by the Code of Federal Regulations 40 CFR 441 – Dental Office Point Source Category.

Part 2 – Wastewater Discharge Requirements

A. During the period of October 29, 2019 to October 31, 2022, **CWRU School of Dental Medicine** shall operate and maintain a mercury amalgam separator. All amalgam process wastewater shall pass through this separator.

1. The mercury amalgam separator shall meet the following standards:

a. The amalgam separator must be compliant with either the American National Standards Institute (ANSI) American National Standard/American Dental Association (ADA) Specification 108 for Amalgam Separators (2009) with Technical Addendum (2011) or the International Organization for Standardization (ISO) 11143 Standard (2008) or subsequent versions. Separator manufacturer compliance must be assessed by an accredited testing laboratory under ANSI's accreditation program for product certification or a testing laboratory that is a signatory to the International Laboratory Accreditation Cooperation's Mutual Recognition Arrangement. The testing laboratory's scope of accreditation must include ANSI/ADA 108-2009 or ISO 11143.

b. The amalgam separator must be sized to accommodate the maximum discharge rate of amalgam process wastewater.

2. The amalgam separator(s) must be inspected in accordance with the manufacturer's operating manual to ensure proper operation and maintenance of the separator(s) and to confirm that all amalgam process wastewater is flowing through the amalgam retaining portion of the amalgam separator(s).

3. If an amalgam separator is not functioning properly, the **District** must be notified in accordance with Part 3(C) of this permit. The malfunctioning amalgam separator must be repaired consistent with manufacturer instructions or replaced with a unit that meets the requirements of Part 2(A)(1) of this permit as soon as possible, but no later than 10 business days after the malfunction is discovered by the dental discharger, or an agent or representative of the dental discharger.

4. The amalgam retaining units must be replaced in accordance with the manufacturer's schedule as specified in the manufacturer's operating manual or when the amalgam retaining unit has reached the maximum level, as specified by the manufacturer in the operating manual, at which the amalgam separator can perform to the specified efficiency, whichever comes first.

B. No later than January 29, 2020, **CWRU School of Dental Medicine** shall achieve the following BMPs to control the discharge of mercury. **CWRU School of Dental Medicine** must certify that the following BMP's have been achieved as per Part 3(A) of this **Order**.

1. Waste amalgam shall not be discharged to the sewer.

2. Waste amalgam from chair-side traps, screens, vacuum pump filters, dental tools, cuspidors, or other amalgam collection devices, shall not be discharged to the sewer.

3. Dental unit water lines, chair side traps, vacuum lines, or other sources that discharge to an amalgam separator **must not be cleaned with oxidizing or acidic cleaners**, including but not limited to bleach, chlorine, iodine, peroxide, or any cleaning agent that has a pH lower than 6 or greater than 8.

4. Vacuum pump filters and screens shall be changed at a frequency recommended by the manufacturer.

5. Amalgam traps, filters, and/or screens shall never be washed or rinsed over drains or sinks.

6. All staff that handles or may handle mercury-containing material must be trained in its proper use and disposal.

C. **CWRU School of Dental Medicine** is encouraged to implement the following recommended, non-mandatory BMPs.

1. Use mercury-free alternatives to amalgam when appropriate.

2. Use of pre-capsulated dental amalgam.

3. Store amalgam waste in a container as recommended by your recycler so as to prevent the accidental discharge of amalgam waste to the sewer.

4. Install clear plastic, easily removeable under-sink P-traps.

5. Clean or replace under-sink traps and sumps. Remove sludge and have it recycled or hauled away as hazardous waste.

6. Use disposable chairside amalgam traps instead of reusable traps in your cuspidor and vacuum system. Have disposable traps recycled or hauled away as hazardous waste.

7. Maximize use of a high-speed suction (vacuum) system for capturing amalgam waste in lieu of the coarse screen of a cuspidor.

8. Obtain mercury spill kits, place them in appropriate easy-to-access locations, and immediately use them as directed by the manufacturer for any spill of mercury-containing material. All spilled mercury-containing material must be recycled or hauled away as hazardous waste.

9. Never dispose of amalgam waste with regular trash, with infectious waste, or with sharps in a sharps container.

D. CWRU School of Dental Medicine may be subject to periodic, unannounced inspections and other monitoring activities by **District**.

Part 3 – Reporting Requirements

A. CWRU School of Dental Medicine shall certify on a One-Time Compliance Report Form by January 29, 2020 that all mandatory BMPs have been implemented.

B. During the period of October 29, 2019 to October 31, 2022, **CWRU School of Dental Medicine** shall submit a Dental Annual Report Form by June 1st of each year.

C. CWRU School of Dental Medicine shall notify the **District** immediately upon occurrence of an accidental discharge of mercury-containing material. Notifications are to initially be made to the **District** by telephone at (216) 641-6000, Monday through Friday from 8:00 a.m. until 4:30 p.m., or at any other time by telephone at (216) 641-3200.

D. CWRU School of Dental Medicine shall report any outage or malfunction of any pretreatment system for mercury removal (e.g., amalgam traps, filters, screens, and/or separators) within twelve (12) hours of discovery of such outages or malfunction.

E. CWRU School of Dental Medicine shall maintain a log of amalgam waste generation and recycling/disposal. Documentation of all amalgam waste recycling/disposal will be obtained from the recycler or hazardous waste hauler, kept on file, and made available to the **District** upon request

F. All reports and communications required by this **Permit** shall be mailed to:

Supervisor of Pollution Prevention
Northeast Ohio Regional Sewer District
4747 East 49th Street
Cuyahoga Heights, OH 44125

Part Four – Violation Charges

As per Chapter 7, Title II of the District's Code of Regulations:

A. Any failure to comply with this **Permit** and/or the provisions set forth in the NEORS Code of Regulations may result in charges and/or damages as stipulated necessary by the **District**.

Part Five – Special Conditions

A. Reopener Clause

1. This **Permit** may be reopened and modified to incorporate any new and/or revised requirements contained in the NEORS Code of Regulations.

2. This **Permit** may be reopened and modified to incorporate any new or revised requirements resulting from the **District's** reevaluation of local limits or to ensure POTW compliance with applicable sludge management requirements promulgated by EPA (40 CFR 503).

3. This **Permit** may be reopened and modified due to any failure to comply with this **Permit**.

B. Compliance Schedule

1. **CWRU School of Dental Medicine** is not subject to a compliance schedule.

C. Records

For as long as it remains in operation, or until ownership is transferred, **CWRU School of Dental Medicine** shall maintain the One-Time Compliance Report as required in Part 2(B) and Part 3(A) of this **Order**, and make it available for inspection in either physical or electronic form.

As per Section 2.0801 of the District's Code of Regulations, **CWRU School of Dental Medicine** shall retain and preserve for no less than three (3) years any records, books, documents, memoranda, reports, correspondence, RCRA Sludge Hauling Manifests, and any and all summaries thereof, relating to monitoring, sampling and chemical analyses made by or on the behalf of a discharger in connection with its discharge. All records which pertain to matters which are the subject of Administrative Adjustment or any other enforcement or litigation activities brought by the **District**, or by request of the Ohio EPA, pursuant hereto shall be retained and preserved by **CWRU School of Dental Medicine** until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

IX. REFERENCES AND RESOURCES

1. **CWRU SODM Infection Control Manual, 2017**
2. **OSHA**
3. **CDC**
4. **Ohio State Dental Board Rules**
5. **American Dental Association**
6. **University of British Columbia Infection Control Manual**
7. **CWRU HEALTH AND COUNSELLING SERVIC**

APPENDIX

A. MANDATORY COMPLIANCE AGREEMENT

The provisions contained in this infection control manual shall be adhered to by all faculty, staff and students. Failure to adhere to any of the provisions contained in this manual will be grounds for discipline up to and including termination from employment and dismissal from the University.

Acknowledgment

I acknowledge that I have read the Case Western Reserve University Basic Clinic and Infection Control Manual. I further acknowledge that I understand the contents of the manual and agree to abide by its contents. I also acknowledge that I was given ample opportunity to ask questions and seek clarifications for the contents of this manual.

Name (please print clearly)

DMD Student / Resident #

Signature _____

Please sign and return this form to the Infection Control Officer.

B. HEPATITIS B VACCINE DECLINATION (MANDATORY)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Name _____

Employee Signature _____

Employee Department _____

Date _____

NOTE: Per OHIO STATE DENTAL BOARD, no Ohio Dental Healthcare Worker can decline Hep B Vaccination Series without Board Approval.

C. HEPATITIS B PROPHYLAXIS

OSHA regulations require that:

- There be an HBV vaccination and post-exposure follow-up program.
- Pre-exposure vaccines be offered free of charge to all employees in Exposure Categories I and II (see above). Personnel in the CWRU School of Dental Medicine must be vaccinated as per state law.
- Complete and detailed documentation of exposure incidents be maintained. The University Health Service will maintain these records.
- Pre-exposure vaccine be offered within 10 days of initial work assignment.
- Employees refusing vaccination sign a declination statement.

It is the Exposure Control Officer's responsibility to ensure that:

- Appropriate personnel under his/her supervision are offered the vaccine within the required time period.
- Employees who do not begin the vaccination series or sign a declination form within 10 days, do not work with bloodborne pathogens until either the vaccination series is begun or a declination form is signed.

D. INFECTION CONTROL DEPARTMENTAL RATING FORM



CASE WESTERN RESERVE UNIVERSITY
School of Dental Medicine

INFECTION CONTROL RATING

Prepared for: _____
Department: _____
Date: _____
Assessed by: _____

AREA ASSESSED	RATING	FOLLOW UP
1. Dental Infection Control Program Administration		
Are "standard precautions" followed for all patients?	___	___
Is there a written infection control program?	___	___
Does the office have an IC and OSHA coordinator assigned?	___	___
Have all personnel received training regarding infectious agents?	___	___
When? () upon hire; () annually; () according to state statute; () as needed		
Are the supplies necessary for adherence readily available?	___	___
Does the office routinely evaluate the office infection control program?	___	___
COMMENT:	Average ___	___
2. Preventing Transmission of Bloodborne Pathogens		
Is the HBV vaccination offered and records kept?	___	___
Are sharps containers and needle recapping devices available?	___	___
Is there a "needle stick" protocol and post-exposure program?	___	___
COMMENT:	Average ___	___
3. Hand Hygiene		
Do clinic personnel perform hand hygiene before and after treating patients?	___	___
Are alcohol hand rubs available?	___	___
Are products available for hand hygiene manufactured for health care providers?	___	___
Are appropriate hand lotions available to prevent skin disorders?	___	___
COMMENT:	Average ___	___
4. Contact Dermatitis and Latex Sensitivity		
Are latex-free items available for patients and clinic personnel?	___	___
Are clinic personnel made aware of latex sensitivity and consequences?	___	___
COMMENT:	Average ___	___
5. Personal Protective Equipment		
Do DHCP understand the sequence for donning PPE?	___	___
Do clinic personnel wear appropriate eye protection?	___	___
Is protective eyewear provided to patients being treated?	___	___
Do clinic personnel change masks between patients?	___	___
Do clinic personnel wear protective clothing and change when necessary?	___	___
Is protective clothing removed before leaving office?	___	___
Are there provisions for gown laundry on site?	___	___
Are gloves appropriate to treatment available in sizes required?	___	___

Are gloves changed between patients? _____

COMMENT: **Average** _____

6. Sterilization and Disinfection of Patient-Care Items

Is there a central instrument processing area available for the office? _____

Are the manufacturer's guidelines followed for sterilizer maintenance? _____

Have clinical personnel received training on how to use the equipment? _____

Are visible blood and debris removed from instruments prior to sterilization? _____

If hand scrubbing is performed, is a long-handled brush utilized and utility gloves worn? _____

If instrument cleaning via ultrasonic or direct brushing is performed, are proper enzymatic cleaners used? _____

Are heavy-duty utility gloves provided for instrument cleaning? _____

Are instruments wrapped appropriately before sterilization? _____

Is sterilization equipment properly monitored and records maintained? _____

Are all wrapped instrument packages inspected to ensure they are intact? _____

Are all implantable devices sterilized before use? _____

COMMENT: **Average** _____

7. Environmental Infection Control

Are clinical contact surfaces disinfected or barrier protected for each patient? _____

Are surface barriers changed between patients? _____

Are appropriate products utilized for cleaning and disinfecting clinical contact areas? _____

Do clinic personnel use PPE when cleaning environmental surfaces? _____

Are housekeeping surfaces cleaned on a routine basis? _____

COMMENT: **Average** _____

8. Respiratory Hygiene / Cough Etiquette

Are patients with obvious respiratory/coughing tendencies identified early at check-in? _____

Are there policies/procedures to contain respiratory secretions to include: _____

✓ Posted signs in reception areas with instructions to patients with symptoms about cough hygiene or consider rescheduling? _____

✓ Provision of tissues and non-touch receptacles for disposal? _____

✓ Resources for patient hand hygiene near the reception area? _____

✓ Provision of face masks while waiting? _____

COMMENT: **Average** _____

9. Dental Unit Waterlines

Does the dental unit water meet EPA regulatory standards for drinking water? _____

Have the manufacturers' recommended guidelines been followed? _____

Is the water flushed (handpieces, ultrasonic scalers, and air/water syringes) for 20-30 seconds after each patient? _____

COMMENT: **Average** _____

10. Dental Handpieces

Are handpieces cleaned, disinfected, lubricated, and sterilized between patients? _____

COMMENT: **Average** _____

11. Parenteral Medications

Are single-dose medications and devices used for one patient only and disposed of appropriately? _____

COMMENT: **Average** _____

12. Oral Surgical Procedures

Do clinical personnel wear sterile surgeon's gloves and use sterile irrigation?	___	___
Is sterile water (or saline) used for invasive procedures?	___	___
Are biopsy specimens placed in a sturdy, leakproof container with proper labels?	___	___
Are extracted teeth disposed of as a regulated medical waste or returned to the patient?	___	___

COMMENT: **Average** ___ ___

13. Dental Laboratory

Are clinical personnel using PPE when handling items received in the laboratory?	___	___
Are impressions disinfected prior to being transported to the lab and communicated as such?	___	___

COMMENT: **Average** ___ ___

14. Needlestick and Occupational Hazard Protocols

Is the Dental Team trained on what to do in the event of a possible exposure incident?	___	___
Is a log kept of needle stick, sharps, bur, prosthesis exposure according to statute?	___	___
Are referral arrangements in place to qualified health facilities for both patient and DHCP?	___	___
Do the DHCP and patient receive timely reports on the outcomes of lab tests?	___	___
Are prompt and appropriate treatment or prevention remedies made available at no cost to the DHCP?	___	___

Average ___ ___

OVERALL RATING ___ ___

Comment:

Recommendations:

CENTER FOR DISEASE CONTROL AND PREVENTION

***Infection Prevention Checklist for Dental Settings: Basic Expectations for Safe Care**

The checklist above is used –

1. To ensure the dental health care setting has appropriate infection prevention policies and practices in place, including appropriate training and education of dental health care personnel (DHCP) on infection prevention practices, and adequate supplies to allow DHCP to provide safe care and a safe working environment.
2. To systematically assess personnel compliance with the expected infection prevention practices and to provide feedback to DHCP regarding performance. Assessment of compliance will be conducted by direct observation of DHCP during the performance of their duties.

Case Western Reserve University School of Dental Medicine is using this checklist to identify all procedures performed in the clinical, pre-clinical teaching setting. Certain sections may not apply (e.g. the use of medications in vials such as for conscious sedation, or where oral surgery is not performed).

Where any area has been rated at “1 or 2” – efforts **must** be made to determine why the correct practice is **not** being performed, correct this with Team education and coaching, employ corrective measures of protocol and compliance, and reassess to ensure excellence in compliance. The CDC goes so far as to suggest that “consideration be given to determine the risk posed to patients by the deficient practice”.

Where any area has been rated at “3 – 7”, this represents varying degrees of compliance (from poor to good), where deficiencies will be noted and with Team education and coaching, **should** elevate this performance to excellence in compliance.

Where any area has been rated at “8 – 9”, this represents evidence of very good compliance that **could** be elevated further with coaching to the highest standard of compliance.

Where any area has been rated at “10”, CONGRATULATIONS on achieving excellence in compliance

*Centers for Disease Control and Prevention. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Prevention, National center for Chronic Disease Prevention and Health Promotion. Division of Oral Health; March 2016

E. ORAL SURGERY HANDPIECE MAINTENANCE



Reprocessing of the BeinAir Dental handpiece device.

Caviwipes should "not be used as a terminal sterilant/high-level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to preclean or decontaminate critical or semi-critical medical devices prior to sterilization /high-level disinfection." However, the Caviwipes may be used to decontaminate the handpiece and motor prior to steam sterilization.



AIR TURBINE

PREPARATION

A. REMOVING THE INSTRUMENT: Remove the rotary instrument from the chuck mechanism

B. PRE-DISINFECTION: External disinfection

Do not immerse the instrument in a disinfectant bath.

CLEANING

A. CLEAN UNDER RUNNING WATER AT <38°C

B. REMOVING DIRT/DEPOSITS

- Carefully remove all traces of dirt or deposits from the spray nozzles using the Bien-Air cleaning wire
- Dry the nozzles with compressed air then dry the rest of the instrument with a cloth

Do not immerse in an ultrasonic cleaner

C. INTERNAL AND EXTERNAL CLEANING WITH SPRAYNET

- Shake the Spraynet before use
- Use the Spraynet attachment [1](#) (for 2-/3-way and 4-way turbines, see inset below)

- Keep the tip of the instrument pointing down and protect with an absorbent cloth; press the Spraynet button down for 1 second
- Clean the exterior of the turbine with a cloth soaked in Spraynet

FOR 2-/3-WAY AND 4-WAY TURBINES ONLY **C'**.

CLEANING THE INSIDE WITH SPRAYNET FOR 2-/3-WAY AND 4-WAY TURBINES ONLY

- Use the Spraynet attachment **2**
- Keep the tip of the instrument pointing down and protect with an absorbent cloth; press the Spraynet button down for 1 second

Spray into the opening as shown in the illustrations for “2-/3-way” and “4-way”

DISINFECTION

A. DISINFECTION USING SURFACE DISINFECTANT (follow the manufacturer's instructions for use)

Do not immerse the instrument in a disinfectant bath

OR

B. THERMAL DISINFECTION (follow the manufacturer's instructions for use)

LUBRICATION

A. LUBRICATION WITH LUBRIMED OR LUBRICATION WITH LUBRIFLUID

- Shake the Lubrifluid before use
- Use the Lubrifluid attachment **2**, **3** ou **4** depending on the type of instrument * (For 2-/3-way and 4-way turbines, see inset below)
- Keep the tip of the instrument pointing down and protect with an absorbent cloth; press the Lubrifluid button down for 1 second
- Then, run an operating test for 30 seconds at low speed to remove any surplus lubricant
- Store immediately: store the instruments with the tip pointing downwards so that any oil residues can flow out

FOR 2-/3-WAY AND 4-WAY TURBINES ONLY **B'**.

INTERNAL LUBRICATION WITH LUBRIFLUID FOR 2-/3-WAY AND 4-WAY TURBINES ONLY

- Use the Lubrifluid attachment **2**
- Keep the tip of the instrument pointing down and protect with an absorbent cloth; press the Lubrifluid button down for 1 second

Spray into the opening as shown in the illustrations for “2-/3-way” and “4-way”

STERILIZATION

A. PLACE THE TURBINE IN A STERILIZATION BAG

B. STERILIZE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS

- Instruments bearing the "135°C" symbol can be sterilized in an autoclave

Only sterilize instruments which have been cleaned and lubricated.



CONTRA ANGLE

PREPARATION

A.REMOVING THE INSTRUMENT

- Remove the rotary instrument from the chuck mechanism
- Disconnect the contra-angle from the motor

B.PRE-DISINFECTION

- External disinfection

Do not immerse the instrument in a disinfectant bath.

CLEANING

A.CLEAN UNDER RUNNING WATER AT <38°C

B.REMOVING DIRT/DEPOSITS

- Carefully remove all traces of dirt or deposits from the nozzles using the Bien-Air cleaning wire
- Dry the nozzles with compressed air then dry the rest of the instrument with a cloth

Do not immerse in an ultrasonic cleaner

C.INTERNAL AND EXTERNAL CLEANING WITH SPRAYNET

- Shake the Spraynet before use
- Use the Spraynet attachment [1](#)
- Keep the tip of the instrument pointing down and protect with an absorbent cloth; press the Spraynet button down for 1 second
- Clean the exterior of the contra-angle with a cloth soaked in Spraynet.

DISINFECTION

A.DISINFECTION USING SURFACE DISINFECTANT (follow the manufacturer's instructions for use)

Do not immerse the instrument in a disinfectant bath

OR

B.THERMAL DISINFECTION (follow the manufacturer's instructions for use)

LUBRICATION

A.LUBRICATION WITH LUBRIFLUID

- Shake the Lubrifluid before use
- Use the Lubrifluid attachment [1](#)
- Keep the tip of the instrument pointing down and protect with an absorbent cloth; press the Lubrifluid button down for 1 second
- Store immediately: store the instruments with the tip pointing downwards so that any oil residues can flow out.

STERILIZATION

A.PLACE THE CONTRA-ANGLE IN A STERILISATION BAG

B.STERILISE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS

- Instruments bearing the "135°C" can be sterilized in an autoclave

Only sterilize instruments, which have been cleaned and lubricated

F. NEEDLESTICK DOCUMENTATION

**Lab Order for the Collection of Blood
Student/Resident/Source Individual**

LAB ORDER:

The Source Individual/Student Resident/Staff named on page 2 have consented to have bloodwork done at a clinic of their choosing. The lab tests requested are described below.

**Please send Lab test results directly to University Health Services by
Fax # 833-645-0872.**

UHS will then provide the Dental Student/Resident/Staff the test results who, in turn, will submit the results to the SODM Infection Control Officer, Dr. Lawrence Rossoff for its records.

The SODM Fax # to use is 216-368-0617.

Thank you.

_____ **Source patient: Dx code: W46.0XXA- Exposure to hypodermic needle, initial encounter**
Hepatitis B Surface antigen (HBSAG),
Hepatitis C Antibody (HCVAB),
HIV Antigen/Antibody (HIV)
consider Hepatitis C RNA, By PCR (HCVPR)
consider HIV RNA by PCR (HIVPR)

_____ **Student/Employee: Dx code: Z77.21 Contact with and suspected exposure to potentially hazardous body fluids**
Hepatitis B Surface Antibody (HBSAG)
Hepatitis C Antibody (HCVAB)
HIV Antigen/Antibody (HIV)

Exposure Department/Location: _____ Date: _____

Infection Control Officer _____ **Date:** _____
Lawrence P. Rossoff, DDS, FICD, FACD



**CASE WESTERN RESERVE
UNIVERSITY
School of Dental Medicine**

**Consent Form for the Collection of Blood
Student/Resident/Source Individual**

I have been advised of the need to collect a sample of my blood as the result of an exposure incident that has occurred in the School of Dental Medicine.

Consent to have my blood drawn

_____ Is hereby given

_____ Is hereby declined.

I understand that this testing will be done in a confidential manner, and will be made available only to: University Health Services, the person who was exposed and the Infection Control Officer of the School of Dental Medicine. I also understand that this person has been informed of applicable laws and regulations concerning disclosure of my identity and my infectious status.

***Signature:**

Print:

Witnessed by:

Source Individual

Print: _____

***Signature:**

Print:

Witnessed by:

Student/Resident/Staff

Print: _____

Exposure Department/Location: _____ **Date:** _____

Infection Control Officer _____ **Date:** _____

A copy of this form will be kept in confidence by the Infection Control Officer.

IF A NEEDLESTICK OR SHARPS INJURY OCCURS,

DOCUMENTATION STEPS TO TAKE:

Student/Faculty/Staff Name:				
Department:				
Source Patient Name:				
Chart Number:				
Source Patient DOB:				
	Done	Date	Not Done	Comments
Immediate water flushing of contact or penetrated area				
Report to IC Officer				
Complete initial Report				
Report to Student or University Health Services				
Injured Student/Faculty/Staff blood drawn and tested				
Source Patient consulted and directed for blood testing – HBV/HIV/Other				
Student/Faculty/Staff counseling, evaluation, recommendations for tx				
Confidential Medical eval provided to injured by Health Services or MD of choice				
Written opinion received within 15 days of testing				
PHI confidentiality maintained				
Student/Faculty/Staff return to normal duties				

**To be completed by Infection Control Officer, copy to: Dispensary Manager
Associate Dean Clinical Affairs**

**Referrals for Bloodwork made to:
University Health and Counseling Services
Case Western Reserve University
10900 Euclid Avenue
Cleveland, Ohio 44106
216-368-2450**

UNIFORM NEEDLESTICK AND SHARP OBJECT INJURY REPORT

Name: _____

Incident Report #: _____

Job Category:

- DDS/DMD (attending/staff)
- DDS/DMD (intern/resident)
- DS I
- DS II
- DS III
- DS IV
- RDH (attending/staff)
- DH I
- DH II
- DA
- Dental technician
- Sterilization personnel
- Housekeeping/ laundry worker
- Other _____

Where did injury occur?

- Treatment room
- Outside treatment room (hallway, etc)
- Emergency clinic
- Operating room
- Procedure room (x-ray, sterilization, etc)
- Dental laboratory
- Pathology
- Other _____

Was the source patient identified?

- Yes
- No

Was the injured person the original user of the sharp item?

- Yes
- No

Was the sharp item:

- Contaminated (known exposure to patient or contaminated equipment)
- Uncontaminated (no known exposure to patient or contaminated equipment)
- Unknown

For what purpose was the sharp item originally used?

- Unknown
- Injection (syringe)
- To connect IV line (intermittent IV/piggyback/IV infusion)
- To start IV (IV catheter or butterfly-type needle)
- To draw a venous blood sample
- To obtain a body fluid or tissue sample
- Fingerstick
- Suturing
- Cutting (surgery)
- Electrocautery
- To contain a specimen or pharmaceutical (glass items, local anesthetic cartridge)
- Other _____

What device or item caused the injury?

When and how did the injury occur?

- Before use of item (item broke or slipped, assembling device, etc)
- During use of item (item slipped, patient jarred item, etc)
- Between steps of a multistep procedure (between incremental injections, passing instrument, etc)
- Disassembling device or equipment
- In preparation for reuse or reusable instrument (sorting, disinfection, sterilization, etc)
- While recapping a used needle
- Withdrawing a needle from rubber or other resistant material (rubber stopper, IV port, etc)
- Other after use, before disposal (in transit to disposal, cleaning up, left on table, floor, other inappropriate place)
- From item left on or near disposal container
- While putting the item into the disposal container
- After disposal, stuck by item protruding from opening of disposal container
- Item pierced side of disposal container
- After disposal, item protruded from trash bag or inappropriate waste container
- Other _____

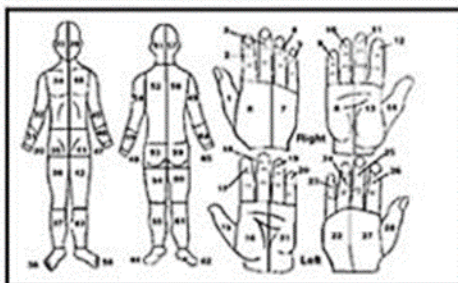
If the item caused the injury was a needle, was it a "safety design" with a shield, recessed, or retractable needle?

- Yes
- No

Was the injury:

- Superficial (little or no bleeding)
- Moderate (skin punctured, some bleeding)
- Severe (deep stick/cut, or profuse bleeding)

Mark the location of the injury:



Describe the circumstances leading to this injury:



**CASE WESTERN RESERVE
UNIVERSITY
School of Dental Medicine**

INJURY / INCIDENT RESPONSE MANAGEMENT

DATE OF INCIDENT: _____ TIME: _____

ORIGINATOR OF REPORT: _____

(NAME / POSITION)

DEPARTMENT: _____

Please indicate who was injured: Patient (chart number) _____

Student (Name, student number) _____

Faculty (Name) _____

Staff (Name) _____

Other _____

1) INCIDENT (State what happened)

2) COMMENT: _____

3) REFERRED TO: _____

SIGNATURE: _____ DATE: _____

ACTION/RESPONSE/FOLLOW-UP REQUIRED BY: _____ DATE: _____

4) *COMMENT:

5) REFERRED PARTY: _____ DATE: _____

PLEASE RESPOND BELOW AS APPROPRIATE: (check all that apply)

Respond to incident without referral

Concern addressed, follow-up required; Concern addressed, NO follow up required

Original sent to the Clinical Administration Office, at conclusion of incident management

6) DECISION:

Signature: _____ Date: _____

*Use other side of this document if additional space is required. Identify by the designated number response and initial.

Copy to: Clinic Dispensary Manager

Infection Control Officer

Associate Dean Clinical Affairs

SODM Finance & Operations Office

