1

Greetings and Introductions:

Marie Fluent, DDS, CDIPC
- Infection Control Consultant
- Author
- Speaker

And YOU:

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Course Description

- Maintaining OSHA dental office compliance is the responsibility of the entire dental team. Dental offices are required to implement and maintain all the necessary infection control and safety systems as required by OSHA. This class provides valuable information on the regulatory requirements and offers practical suggestions on how the dental team can work together to ensure a mutually safe work environment for employees and patients.
- 3-hours for DDS, Hygienists, Assistants, Staff

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Objectives:

- Understand the differences between CDC guidelines and OSHA Standards
- Understand the OSHA Bloodborne Pathogen Standard
- Understand OSHA recommendations for COVID-19
- Discuss the importance of a written office-specific infection control program and OSHA regulatory documents

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Disclaimers:

- This presentation is intended to lend clarity and simplification to government regulations
- It is the responsibility of each DDS/employer to understand, implement OSHA relating to their own practice
- This presentation may not be substituted for advice of legal counsel

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Compliance

Advisory Agencies	Regulatory (MUST FOLLOW)
ADA American Dental Association®	OSHA VOSHA
adha American Dental Hygienists' Association	State Dental Boards
State Dental Associations	Manufacturer's Instructions for Use
ADS Association for Dental Safety	
CDC	

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In Other Words:

- If your state has adopted CDC Guidelines, then these Guidelines become STANDARDS and NOT optional.
- If your state has NOT adopted CDC Guidelines, please remember that these Guidelines are viewed as "best practices" based on scientific evidence and may be upheld in a court of law.
- Vermont has mandated compliance with CDC (in context of COVID-19 and beyond)

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Manufacturer's Instructions for Use

MUST:

-Read

-Understand

-Follow

To be in compliance with EPA, FDA

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CDC Centers for Disease Control and Prevention

Vs.

OSHA®

- Advisory Agency
- Nation's health protection agency
- CDC Guideline for Infection Control in Dental Healthcare Settings—2003
- Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care (2016)

- Regulatory Agency
- Ensures a SAFE work environment
- OSHA Bloodborne Pathogens Standard
- Hazards Communication Standard

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Caution: CDC ≠ OSHA

If CDC Guidance ≠ OSHA Standards,
Follow the most stringent policy and protocol

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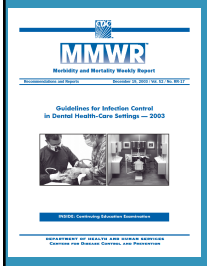
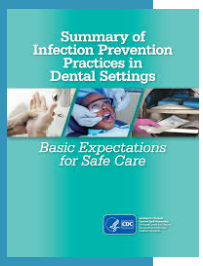
CDC Guidelines:





- 2003 CDC Guidelines for Infection Control in Dental Health Settings, https://www.cdc.gov/mmwr/pdf/rr/rr5217.pdf
- 2016 Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care, https://www.cdc.gov/dental-infection-control/hcp/summary/index.html

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Automotive Plants: Pre-OSHA

Workers and visitors exposed to:

Dangerous machinery: belts, pulleys, gears

Hazardous materials: chemicals, dusts,

Poor ventilation

Catastrophic injuries, often by machinery accidents

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Occupational Safety and Health Act of 1970: (OSHAct)

- To prevent workers from being killed or seriously harmed at work
- Requires employers to provide safe working conditions
- The Act created Occupational Safety and Health Administration (OSHA)
  - Sets and enforces protective workplace safety and health standards
  - Provides information, training and assistance to workers and employers

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OSHA provides workers with Rights to:

Receive	Receive information and training about hazards, methods to prevent harm, and OSHA Standards to their workplace, • Training must be in a language you can understand
Observe	Observe testing that is done to find hazards in workplace and get test results
Review	Review records of work-related injuries and illnesses
Get	Get copies of their medical records
Request	Request OSHA to inspect their workplace
Use	Use their rights under the law free from retaliation and discrimination

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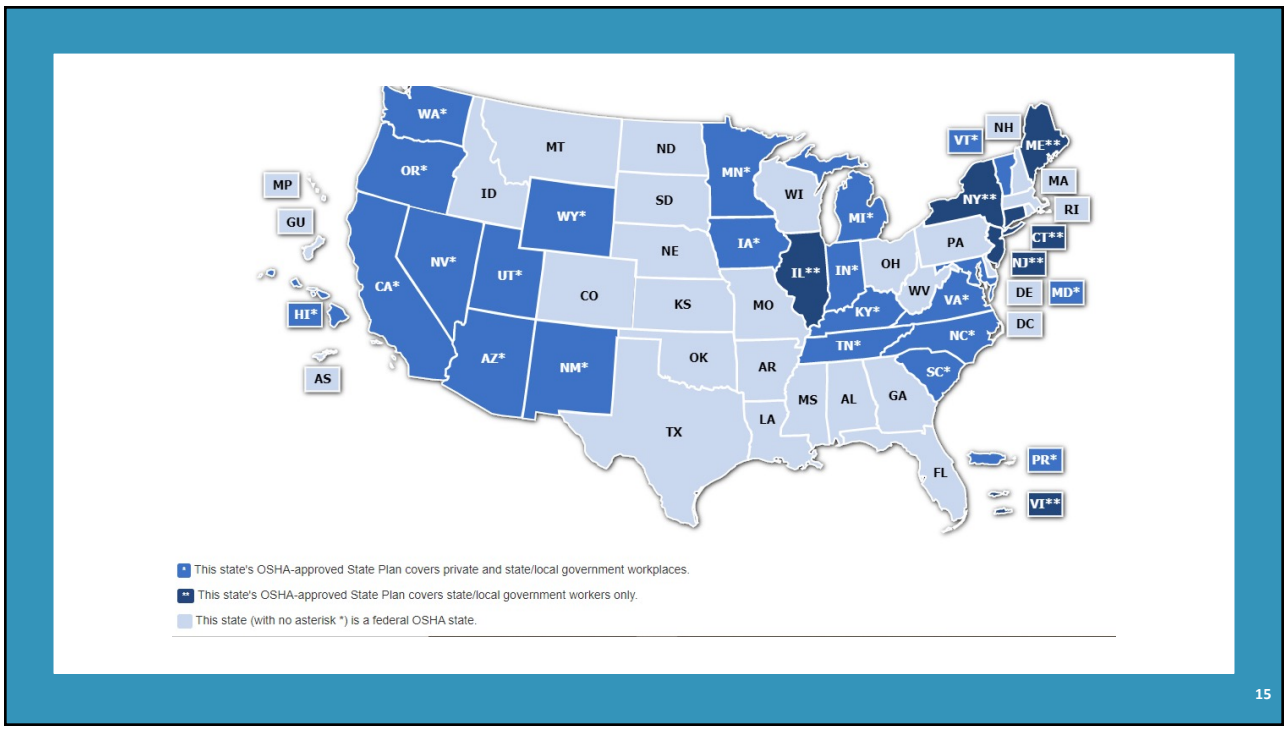

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Vermont Occupational Safety and Health Administration (VOSHA)

- Established 1974
- Vermont Dept of Labor: Montipelier, VT
- 802-828-4000

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OSHA General Duty Clause:

- Each employer shall furnish to each of his employees' employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees
- Section 5(a)(1) addresses hazards for which there is no standard.

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General Duty Clause Example:

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OSHA®

2025 Updates:

Increased Penalties:

- Other-than-serious violations increased from $16,131 to $16,550 per violation
- Willful /repeated violations: $165,514 (from $161,323)
- Employers should prioritize safety audits, training, and hazard mitigation to avoid fines

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OSHA®

2025 Updates:

Enhanced Recordkeeping:

- Digital tools and reporting more prevalent
- Keep OSHA 300 logs, 301 forms, and Annual Summaries for 5 years

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OSHA 2025 Updates:

Miscellaneous:

- Hazard Communication: Stricter requirements for Safety Data Sheets and labeling of hazardous chemicals
- Respiratory Protection: Regular fit tests and medical evaluation
- Emerging Technologies and Ergonomics: Assess challenges posed. Prioritize ergonomics to reduce injuries
- Remain aware of State-specific updates

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How to Avoid VOSHA Penalties:

- Proactively address workplace hazards BEFORE a VOSHA inspector arrives at worksite
- Contact Consultation Services Division, Project WorkSAFE
  - Free on-site consultation service
  - Helps identify and correct potential safety and health hazards
  - 1-888-723-3937

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Worker Safety for Healthcare Settings:

- Focus on prevention
- Training
- Exposure determination
- Hepatitis B vaccination
- Post-exposure plan

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Hazards In Dentistry

- Bloodborne pathogens
- Infectious diseases
- Pharmaceuticals
- Chemicals
- Ergonomics
- Noise
- Workplace violence

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3-8-24

https://www.usatoday.com/story/news/nation/2024/03/08/benjamin-harouni-san-diego-dentist-killed-man-charged/72895561007/

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Workplace Violence in Dentistry:

- Physical violence, verbal abuse
- Patients are primary source, but can also come from patient's relatives, companions, other team members
- Higher risks: female personnel, working alone, working night shifts, working in close proximity
- Prevention:
  - Staff training
    - Recognize warning signs, deescalate situations, respond effectively
  - Clear policies
  - Reporting mechanisms
  - Access to mental health service

Fonseca, et al. Vulnerability of female dentists to workplace violence, https://www.nature.com/articles/s41598-025-10953-8

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Additional Hazard:

Mental Health as a Safety Issue for Dental Team members

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Hazard Assessment:

- Evaluation
- Job classifications
- List of all tasks and/or procedures

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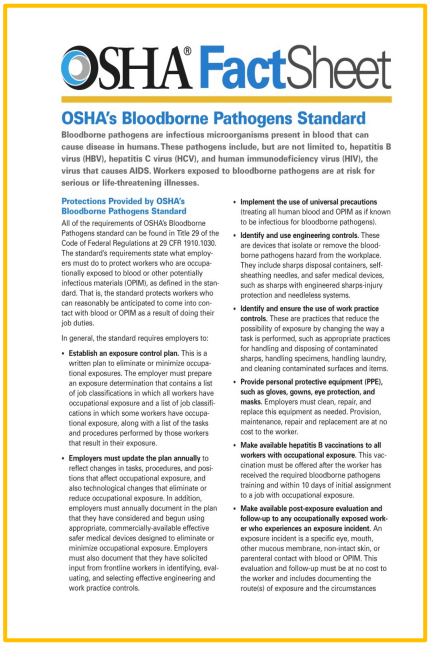
Required OSHA Document:

Bloodborne Pathogen Standard



OSHA® FactSheet

OSHA's Bloodborne Pathogens Standard

Bloodborne pathogens are infectious microorganisms present in blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV), the virus that causes AIDS. Workers exposed to bloodborne pathogens are at risk for serious or life-threatening illnesses.

Protections Provided by OSHA's Bloodborne Pathogens Standard

All of the requirements of OSHA's Bloodborne Pathogens standard can be found in Title 29 of the Code of Federal Regulations at 29 CFR 1910.1030. The standard's requirements state what employers must do to protect workers who are occupationally exposed to blood or other potentially infectious materials (OPIM), as defined in the standard. That is, the standard protects workers who can reasonably be anticipated to come into contact with blood or OPIM as a result of doing their job duties.

In general, the standard requires employers to:

- **Establish an exposure control plan.** This is a written plan to eliminate or minimize occupational exposures. The employer must prepare an exposure determination that contains a list of job classifications in which all workers have occupational exposure and a list of job classifications in which some workers have occupational exposure, along with a list of the tasks and procedures performed by those workers that result in their exposure.
- **Employers must update the plan annually** to reflect changes in tasks, procedures, and positions that affect occupational exposure, and also technological changes that eliminate or reduce occupational exposure. In addition, employers must annually document in the plan that they have considered and begun using appropriate, commercially-available effective safer medical devices designed to eliminate or minimize occupational exposure. Employers must also document that they have solicited input from frontline workers in identifying, evaluating, and selecting effective engineering and work practice controls.
- **Implement the use of universal precautions** (treating all human blood and OPIM as if known to be infectious for bloodborne pathogens).
- **Identify and use engineering controls.** These are devices that isolate or remove the bloodborne pathogens hazard from the workplace. They include sharps disposal containers, self-sheathing needles, and safer medical devices, such as sharps with engineered sharps-injury protection and needleless systems.
- **Identify and ensure the use of work practice controls.** These are practices that reduce the possibility of exposure by changing the way a task is performed, such as appropriate practices for handling and disposing of contaminated sharps, handling specimens, handling laundry, and cleaning contaminated surfaces and items.
- **Provide personal protective equipment (PPE), such as gloves, gowns, eye protection, and masks.** Employers must clean, repair, and replace this equipment as needed. Provision, maintenance, repair and replacement are at no cost to the worker.
- **Make available hepatitis B vaccinations to all workers with occupational exposure.** This vaccination must be offered after the worker has received the required bloodborne pathogens training and within 10 days of initial assignment to a job with occupational exposure.
- **Make available post-exposure evaluation and follow-up to any occupationally exposed worker who experiences an exposure incident.** An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM. This evaluation and follow-up must be at no cost to the worker and includes documenting the route(s) of exposure and the circumstances

- 29 CFR 1910.1030
- Prescribes safeguards to protect workers against health hazards caused by blood borne pathogens.

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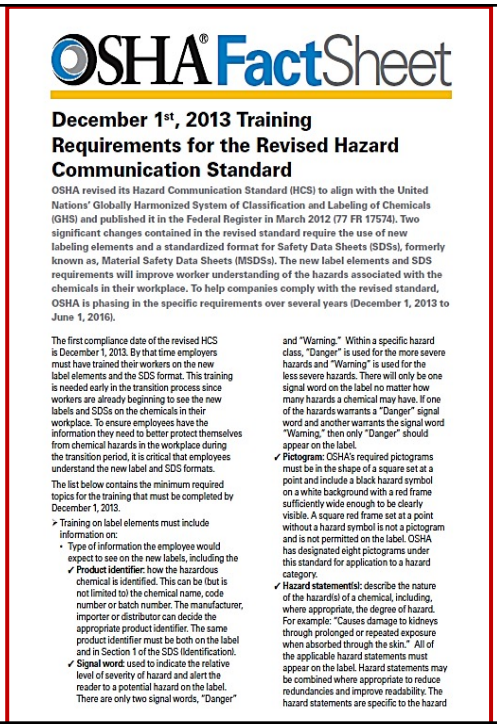
Required OSHA Document:

Hazard Communication Standard:



OSHA® FactSheet

December 1st, 2013 Training Requirements for the Revised Hazard Communication Standard

OSHA revised its Hazard Communication Standard (HCS) to align with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and published it in the Federal Register in March 2012 (77 FR 17574). Two significant changes contained in the revised standard require the use of new labeling elements and a standardized format for Safety Data Sheets (SDSs), formerly known as, Material Safety Data Sheets (MSDSs). The new label elements and SDS requirements will improve worker understanding of the hazards associated with the chemicals in their workplace. To help companies comply with the revised standard, OSHA is phasing in the specific requirements over several years (December 1, 2013 to June 1, 2016).

The first compliance date of the revised HCS is December 1, 2013. By that time employers must have trained their workers on the new label elements and the SDS format. This training is needed early in the transition process since workers are already beginning to see the new labels and SDSs on the chemicals in their workplace. To ensure employees have the information they need to better protect themselves from chemical hazards in the workplace during the transition period, it is critical that employees understand the new label and SDS formats.

The list below contains the minimum required topics for the training that must be completed by December 1, 2013.

➢ Training on label elements must include information on:

- Type of information the employee would expect to see on the new labels, including the
  - ✓ **Product identifier:** how the hazardous chemical is identified. This can be (but is not limited to) the chemical name, code number or batch number. The manufacturer, importer or distributor can decide the appropriate product identifier. The same product identifier must be both on the label and in Section 1 of the SDS (Identification).
  - ✓ **Signal word:** used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. There are only two signal words, "Danger" and "Warning." Within a specific hazard class, "Danger" is used for the more severe hazards and "Warning" is used for the less severe hazards. There will only be one signal word on the label no matter how many hazards a chemical may have. If one of the hazards warrants a "Danger" signal word and another warrants the signal word "Warning," then only "Danger" should appear on the label.
  - ✓ **Pictogram:** OSHA's required pictograms must be in the shape of a square set at a point and include a black hazard symbol on a white background with a red frame sufficiently wide enough to be clearly visible. A square red frame set at a point without a hazard symbol is not a pictogram and is not permitted on the label. OSHA has designated eight pictograms under this standard for application to a hazard category.
  - ✓ **Hazard statement(s):** describe the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard. For example: "Causes damage to kidneys through prolonged or repeated exposure when absorbed through the skin." All of the applicable hazard statements must appear on the label. Hazard statements may be combined where appropriate to reduce redundancies and improve readability. The hazard statements are specific to the hazard

- 1910.1200:
- Ensures that hazards of all chemicals produced or imported are classified
- Information is transmitted to employers and employees

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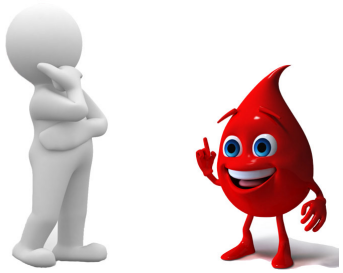
Education and Training:

- Training must include:
  - Dates of training sessions
  - Contents or a summary of the sessions
  - Names and job titles of attendees
  - Names and qualifications of person(s) conducting the training
  - Retain for three years



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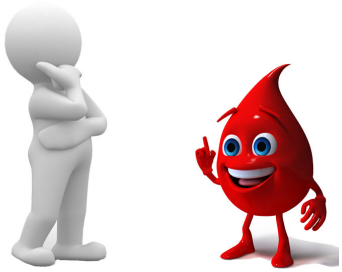
OSHA:
Keep training records for 3 years

Vermont Board of Dental Examiners:
Keep Records of Continuing education for 7 years

So, Which is it?

Follow MOST STRINGENT Policy:

Keep training records for 7 years!



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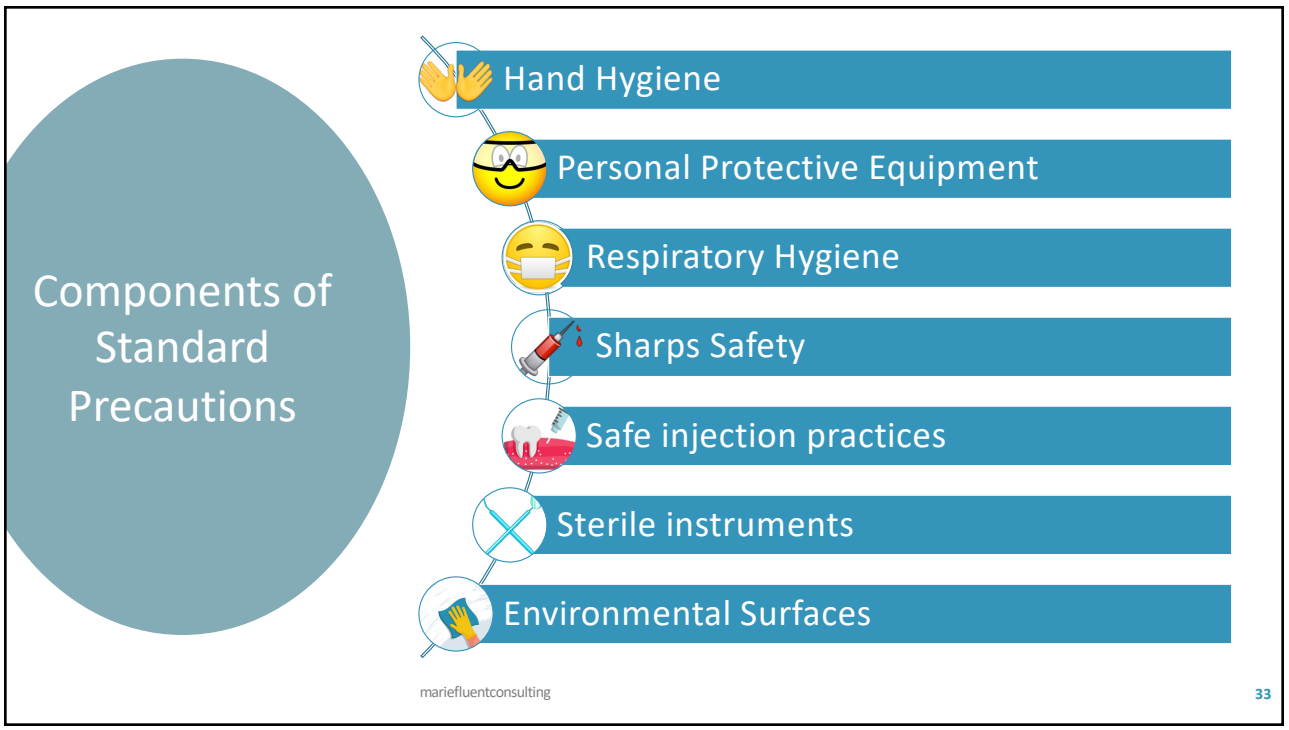
Components of Standard Precautions
Hand Hygiene
Personal Protective Equipment
Respiratory Hygiene
Sharps Safety
Safe injection practices
Sterile instruments
Environmental Surfaces
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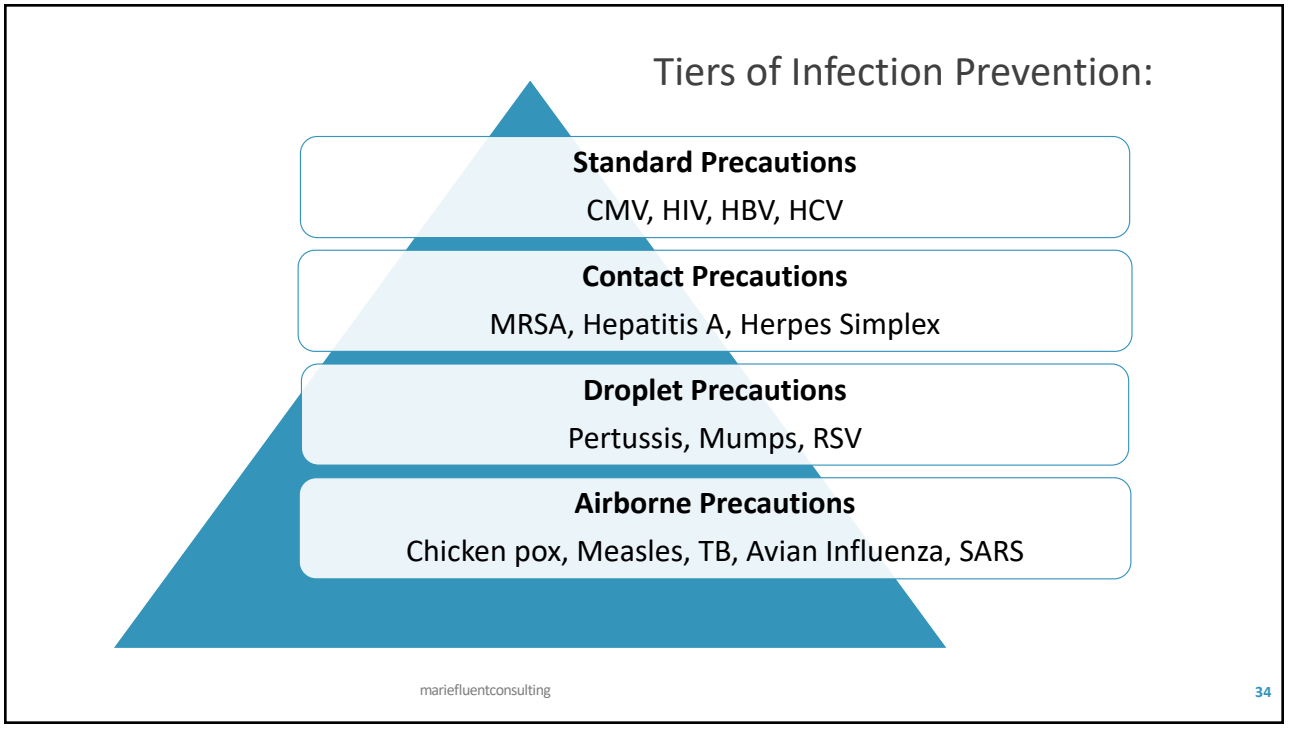
Tiers of Infection Prevention:
Standard Precautions
CMV, HIV, HBV, HCV
Contact Precautions
MRSA, Hepatitis A, Herpes Simplex
Droplet Precautions
Pertussis, Mumps, RSV
Airborne Precautions
Chicken pox, Measles, TB, Avian Influenza, SARS
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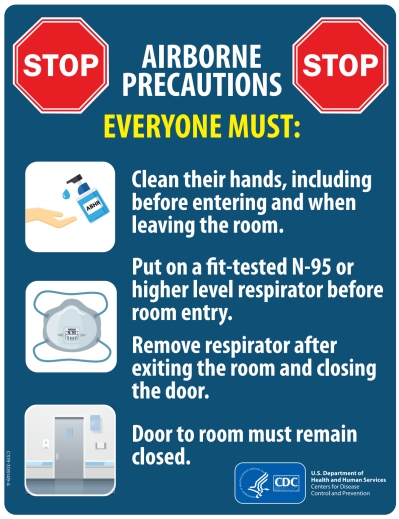
Standard Precautions vs. Transmission-Based Precautions



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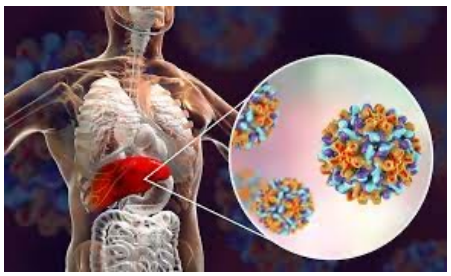
Hepatitis B

Acute infection:
- Mild: Few or no symptoms
- Severe: May require hospitalization, lead to liver failure, death
  - Fever, fatigue, nausea, vomiting, abdominal pain
  - Grey stools, dark urine, joint pain, jaundice

Chronic infection:
- May take up to 30 years to develop
- Liver damage, symptoms similar to acute phase

Transmission:
- Blood, semen other body fluids
- Sexual, contaminated needles, mother-to-baby



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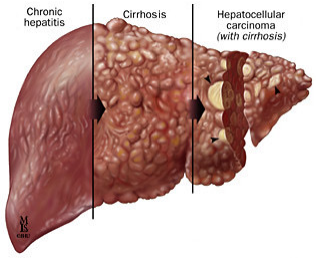
Hepatitis C

Treatment:
Drugs available
No PEP available

CDC recommends baby boomers to be tested

- Acute:
  - Similar symptoms to HBV
- Chronic:
  - Long-term
  - Can last lifetime and lead to cirrhosis, liver failure, liver cancer, death
- Transmission:
  - Contaminated needles
  - Mother-to-baby
  - Sexual contact less common



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Transmission of HIV:

- Use of contaminated needles (IV drug usage)
- Unprotected sex with infected individuals
- Multiple sex partners

Less common:

- Birth from an HIV infected mother
- Injury with contaminated needle
- Health-care workers

- HIV cannot reproduce outside the human body.

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Occupational Exposures to Bloodborne Pathogens

Injuries may be:

- •Percutaneous injury
- •Mucous membrane exposure
- •Non-intact (broken) skin exposure
- •Bites

CDC estimates:

- ~385,000 sharps injuries annually (>1,000 injuries/day)
- Increased risk for bloodborne virus transmission
- Costly to personnel and healthcare system

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HBV	HCV	HIV
Aware: 25% **Unaware: 75%**	Aware: 40% **Unaware: 60%**	Aware: 87% **Unaware: 13%** 40% of new infections involve someone who doesn't know their disease status.

Percent of People Aware of their Disease Status: (USA, 2023)

Ref: Hepatitis B Foundation, Gilead HIV, Self-Awareness of HBC, Gnanapandithhan et al. ,

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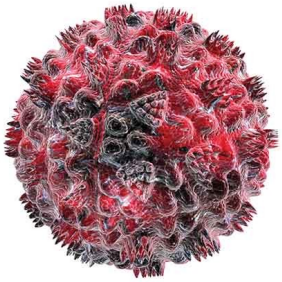
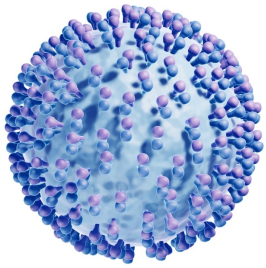
Risk of Acquiring Infection after Needlestick (From a Known Positive Source):

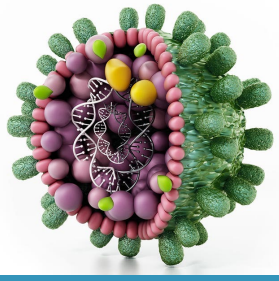
HIV:
1 in 300
(0.33%)



HCV:
1 in 30
(3.3%)



HBV:
1 in 3
(33.3%)



If **NOT** Vaccinated!

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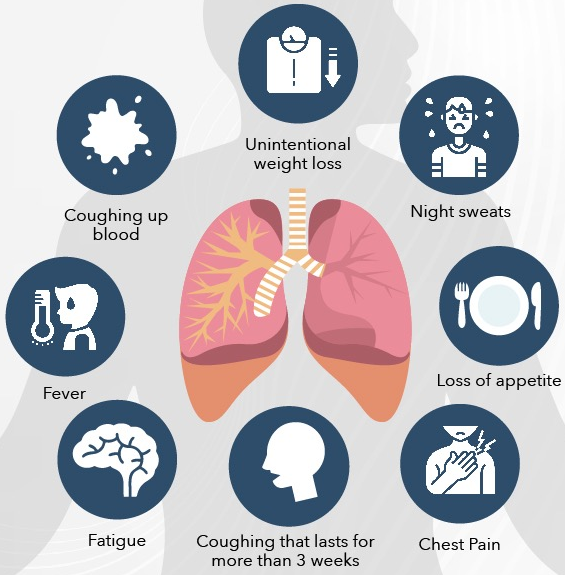
Watch out for signs of ACTIVE TB



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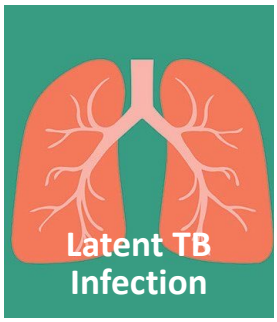
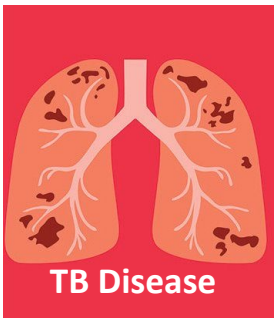
Latent TB Infection vs. TB Disease:



- Have TB infection
- Asymptomatic
- Non-contagious
- May progress to active disease state
- Will have +TB skin test
- OK to treat pts. with Latent TB??



- Have TB infection
- Symptomatic
- Contagious
- Will have + TB skin test
- Do not treat pts. with active disease in outpatient setting.

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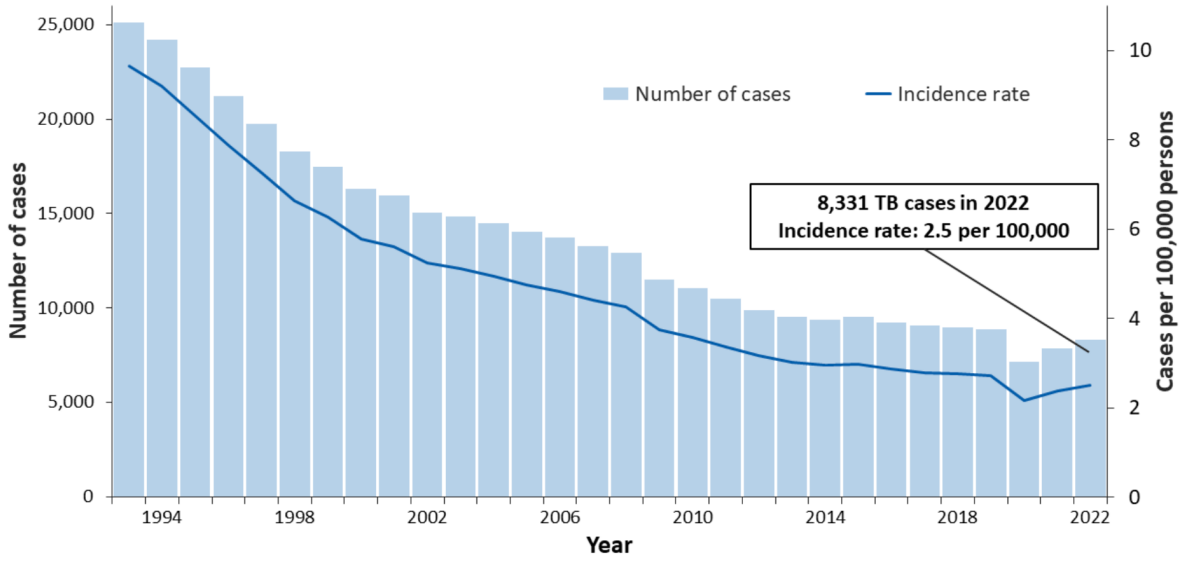
TB Cases and Incidence Rates, United States, 1993–2022



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Prevention of TB in Dentistry

- At risk workers should have baseline TB test upon hire
- Assess all patients for history of active TB
- Defer elective dental treatment
- If patient must be treated:
  - Refer to facility with proper TB infection control precautions – N95Respirator, negative air-flow
  - DHCP should wear face mask
  - Separate patient from others/mask/tissue

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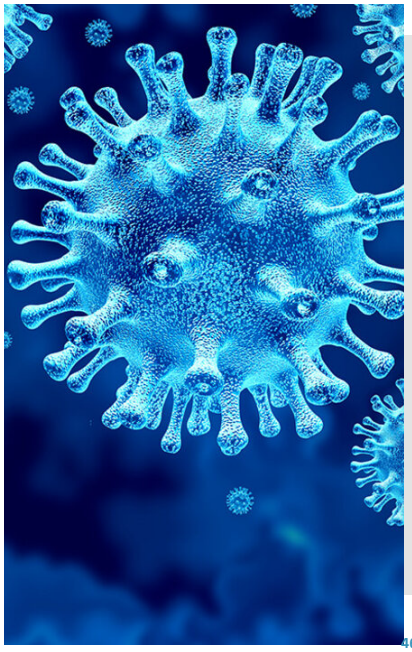
COVID-19:

- SARS-CoV-2 Virus
- Enveloped Virus .125µm
- Transmission:
  - Droplet
  - Aerosols
- Infectivity: High

https://covid.cdc.gov/covid-data-tracker/#variant-proportions



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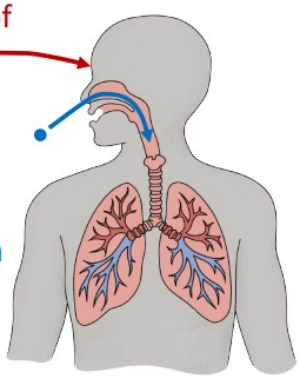
Defining Transmission by Exposure Path

LARGE DROPLETS are sprayed onto the body, a form of contact transmission

AEROSOLS are inhaled into the respiratory system



This distinction drives
- Control strategies
- Infectious dose
- Severity of disease

(The physics-based cutoff is 60-100 μm)

Credit: Lindsey C. Marr, The Role of Aerosols in the Transmission of COVID-19, https://medicine.vtc.vt.edu/content/dam/medicine_vtc_vt_edu/news/2021/vtcsom-deltadental-presentation-linsey-marr.pdf

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Just wondering:

As a healthcare worker,
If I test positive COVID-19,
How long do I need to isolate?

Considerations:

- Severity of illness
- Whether you are immunocompromised
- Whether symptoms have improved
- Whether At least 24 hours passed since last fever without use of meds

For more information, visit:

https://www.cdc.gov/covid/hcp/infection-control/guidance-risk-assesment-hcp.html#:~:text=At%20least%207%20days%20have,of%20fever%2Dreducing%20medications%2C%20and

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As a healthcare worker,
If I have been EXPOSED
to COVID-19,
Do I need to isolate?

In general, asymptomatic healthcare personnel who have been exposed to COVID, do NOT require work restrictions regardless of vaccination status

For more information, visit:

https://www.cdc.gov/covid/hcp/infection-control/guidance-risk-assesment-hcp.html#:~:text=At%20least%207%20days%20have,of%20fever%2Dreducing%20medications%2C%20and

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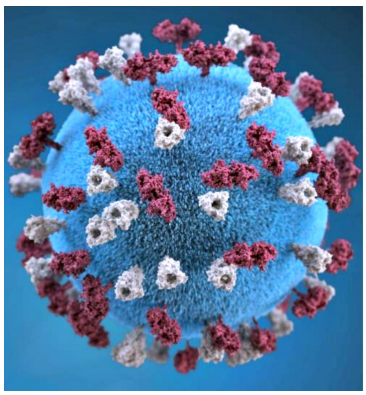

Measles

- Highly contagious virus
- Lives in nose and throat
- Spread through coughing and sneezing
- Infected people can spread to others up to 4 days before rash appears
- Virus can live up to 2 hours in air

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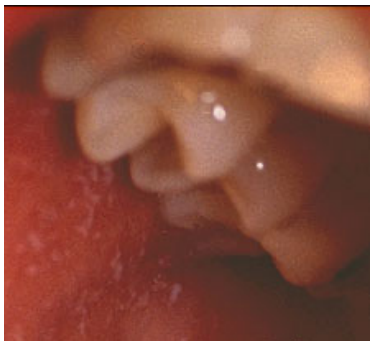
Measles signs and symptoms

- High fever (may spike up to more than 104)
- Cough
- Runny nose
- Red, watery eyes
- 2-3 days after symptoms: Koplik spots appear
- 3-5 days after symptoms: Rash appears
  - Rash begins at hairline, spreads downward



51

Measles Complications:

Hospitalization. About 1 in 5 unvaccinated people in the U.S. who get measles is **hospitalized**.

Pneumonia. As many as 1 out of every 20 children with measles gets pneumonia, the most common cause of **death from measles in young children**.

Encephalitis. About 1 child out of every 1,000 who get measles will develop encephalitis (swelling of the brain) that can lead to convulsions and can **leave the child deaf or with intellectual disability**.

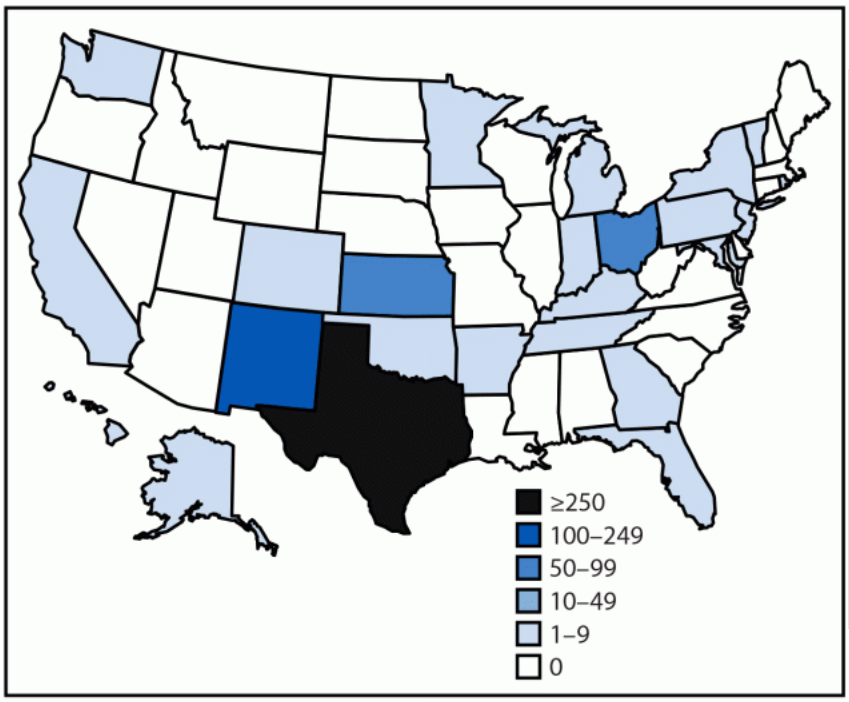
Death. Nearly 1 to 3 of every 1,000 children who become infected with measles will **die from respiratory and neurologic complications**.

Complications during pregnancy. Measles may cause pregnant women who have not had the MMR vaccine to **give birth prematurely, or have a low-birth-weight baby**.

52

Reported number of confirmed* measles cases, by state (N = 800) — United States, January 1–April 17, 2025

https://www.cdc.gov/mmwr/volumes/74/wr/mm7414a1.htm



53

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Exposure Prevention Strategies:

Work Practice Controls

Administrative Controls

Engineering Controls

54

54

Work Practice Controls

Changing the way a task is performed to reduce risk
Examples:

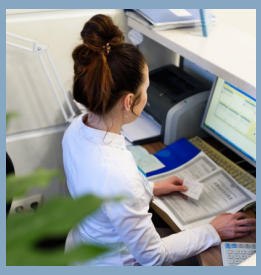
- Single handed scoop technique
- Not bending needle
- Using instruments instead of fingers for tissue retraction

Administrative Controls

Engineering Controls

55

Administrative Controls



Policies that reduce the risk of
Examples:

- Education and training
- Documentation
- Infection Control Coordinator
- Written manual
- Exposure prevention program

Work Practice Controls

Engineering Controls

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Engineering Controls

Products or devices that have been manufactured to reduce risk

Examples:

- Needle capping device
- Self-sheathing needle
- Sharps container

Work Practice Controls

Administrative Controls

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OSHA® Engineering Device Ruling:

1. Identify, evaluate, and select devices with safety features.
2. Employees must have input
3. Employees must evaluate the product to agree on the level of safety
4. If a safer product becomes available, the employees must be made aware of the product and given the opportunity to use it

https://www.cdc.gov/dental-infection-control/media/pdfs/device-evaluation-form.pdf

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The Infection Control Coordinator (Safety Officer):

- May have responsibilities within a larger job position
  - Safety director, employing dentist, dental assistant, office manager, etc.
- Should have a basic understanding of:
  - Modes of cross-contamination in dentistry
  - Infection prevention
  - General safety procedures
  - Products and equipment available to maintain employee and patient safety
- Job duties:
  - Overall responsibility of coordinating the written Infection Control Program
  - Has Leadership role
  - Maintain relevant documents, records and logs
  - Provides or coordinates education and training

Remember:
The ENTIRE dental team must be committed and accountable!

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Infection Control and Safety is a TEAM SPORT!
Let ADS Help You!

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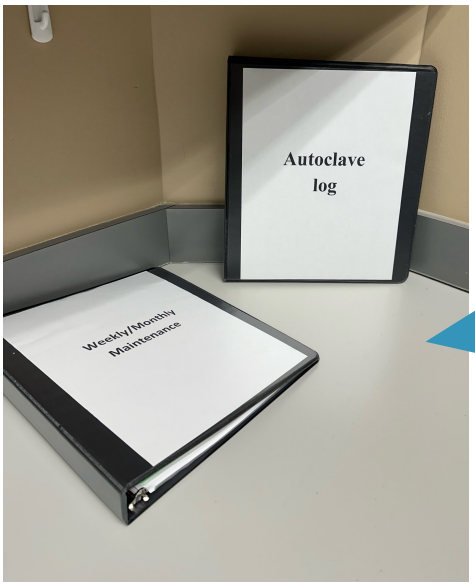

OSHA Regarding Documentation:

If it's not written,
It never happened!

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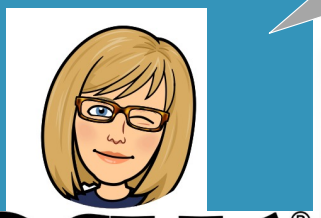
Written Compliance Manuals

Written step-by-step instructions:
- Improve consistency, quality, and efficiency
- May enhance longevity of devices
- Enhances compliance



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- Written SOP (Standard Operating Procedures)
- Policy Statements
- Exposure Control Plan
- HBV Vaccination Statements
- Hazard Communication Plan
- Waste Management Plan
- Emergency Action Plan
- References
- Recordkeeping

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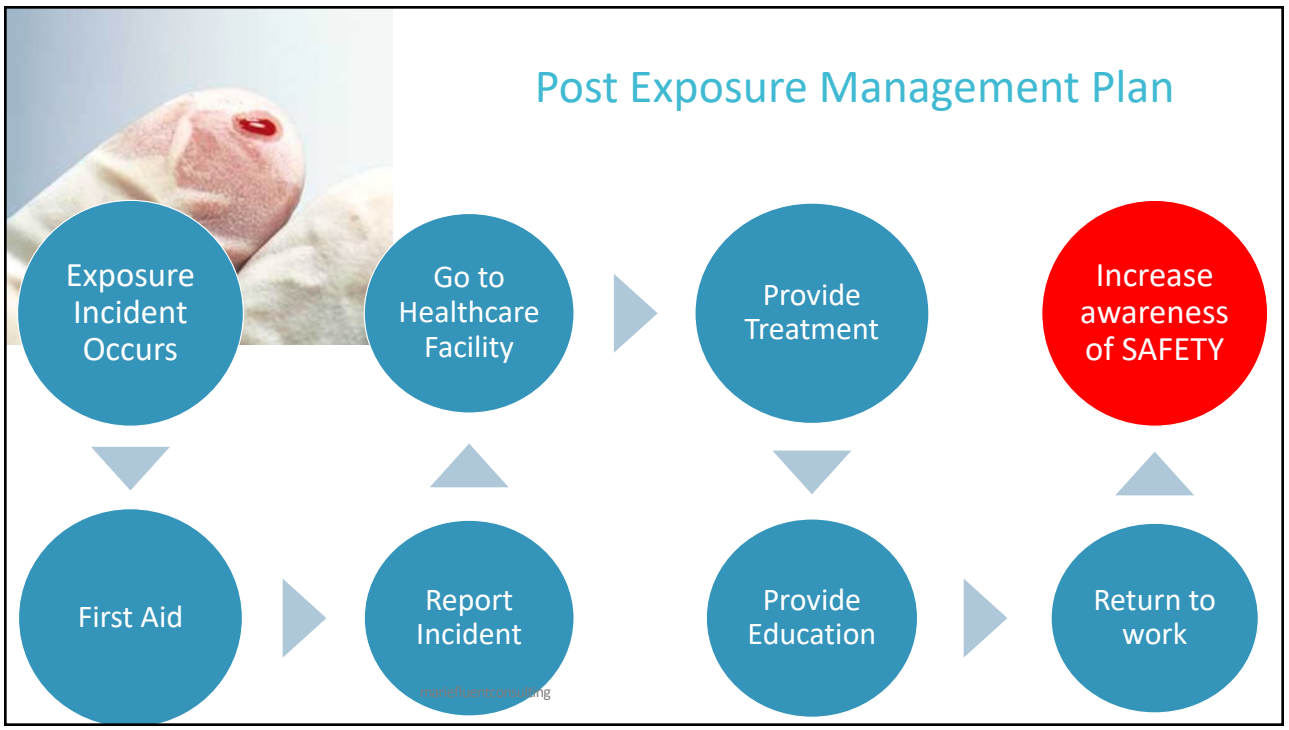

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Incident Report Details:

- Date and time
- Details of the procedure being performed
- Details of the exposure
- Details on known health issues
  - Source
  - Worker
- Counseling, post exposure management

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Where should employees go to manage post exposure incidents?

Establish in advance
Rapid HIV testing
Post-exposure medications
Payment
Hours of operation
Wait times
Current with recent guidance

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Source Patient

- Obtain consent based on State Law
- HIV Antibody
- Rapid HIV test
- Hepatitis B Surface Antigen (HBsAG)
- Source patient testing is not indicated if exposed worker has documented immunity

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Worker Declination:

Post-exposure Evaluation Declination:

"I have been trained on OSHA Policies and procedures and understand that I could have contracted an infectious disease such as HIV, Hepatitis B or Hepatitis C during the exposure incident referenced above. I also understand the consequences of contracting these diseases. I have been offered, without charge, testing to determine whether or not I have contracted an infectious disease and medical evaluation by a healthcare professional for counseling and treatment."

I decline this post exposure evaluation and follow-up and the blood tests.

Signature_____
Date:_____

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Vaccinations:

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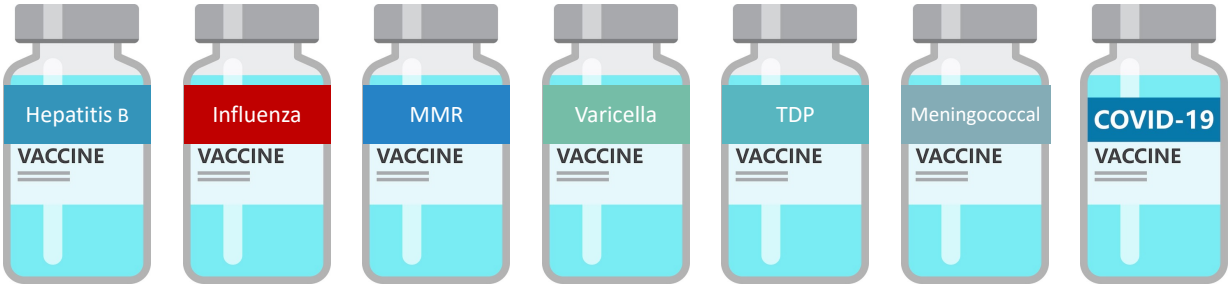
Vaccine Recommendations for Dental Healthcare Personnel:

APIC
Association for Professionals in Infection Control and Epidemiology

CDC



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Recommended Vaccinations for Dental Workers:

Vaccine	Recommendation
Hepatitis B	If no evidence of immunity then: 3-dose series of Recombivax HB or Engerix-B (dose#1 now, #2 in 1 month, #3 in 5 months after dose #2) OR 2-dose series of Heplisav-B with doses separated by 4 weeks. Get anti-HBs serologic test 1-2 months after final dose
Influenza	One dose annually
MMR (measles, mumps, rubella)	If born before 1957 and no immunity, only 1 does of MMR is recommended. (may receive 2) If born in 1957 or later and have no immunity then 2 doses of MMR
Varicella (Chickenpox)	If no immunity, get 2 doses, 4 weeks apart
Tdap (Tetanus, Diptheria, Pertussis)	One-time dose of Tdap Get either Td or Tdap booster every 10 years Pregnant healthcare workers get dose of Tdap during pregnancy
Meningococcal	For microbiologists who are exposed to Neisseria meningtidis
COVID-19	For all healthcare personnel

https://apic.org/policy-priorities/mandatory-healthcare-personnel-vaccination/

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OSHA® FactSheet

Hepatitis B Vaccination Protection

- Must be offered free of charge to employees involved with potential occupational exposure:
  - Clinical care or contaminated instruments.
- Must be offered within 10 working days of assignment.
- Employers must ensure workers are trained about vaccine (safety, efficacy, safety, method of administration, benefits of vaccination)
- Employees who decline must sign declination form.
- Exceptions:
  - Employee has been vaccinated
  - Antibody testing reveals immunity

https://www.osha.gov/sites/default/files/publications/bbfact05.pdf

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Common OSHA Citation:

No Signed HBV Declination Statement

- Waiver must state:
- Understanding of risk
- Acknowledgment of opportunity of vaccination at not cost
- Declining vaccination
- Future availability of vaccination at no cost if desired, if still in risk status

72

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Hand Hygiene

- The single most critical measure for reducing the risk of transmitting organisms to patients and healthcare workers
- Failure to perform appropriate hand hygiene is leading cause of healthcare associated infections
- Approximately 2 million patients get a hospital-related infection each year in US

- Molinari J, Harte J, Practical Infection Control In Dentistry, 2010: 125

CDC, MMWR 2003; 52 (No. RR-17): [14]

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When to Soap vs. Sanitize:

When to Use Soap

- Use soap and water when **hands are visibly soiled or contaminated** with blood or other bodily fluids.

  Visibly Soiled = Hands on which soil or bodily fluids are readily visible.

- After caring for patients with *Clostridioides difficile* (C. diff) infection
- Before eating
- After using the restroom
- Per your facility's policy

When to Sanitize

- Use alcohol-based hand rub (ABHR) **in all other clinical situations** if hands are not visibly soiled.

  Well-formulated products often contain conditioners and emollients that can benefit the skin.

ABHR is the gold standard in all situations when hands are not visibly soiled

Purell

74

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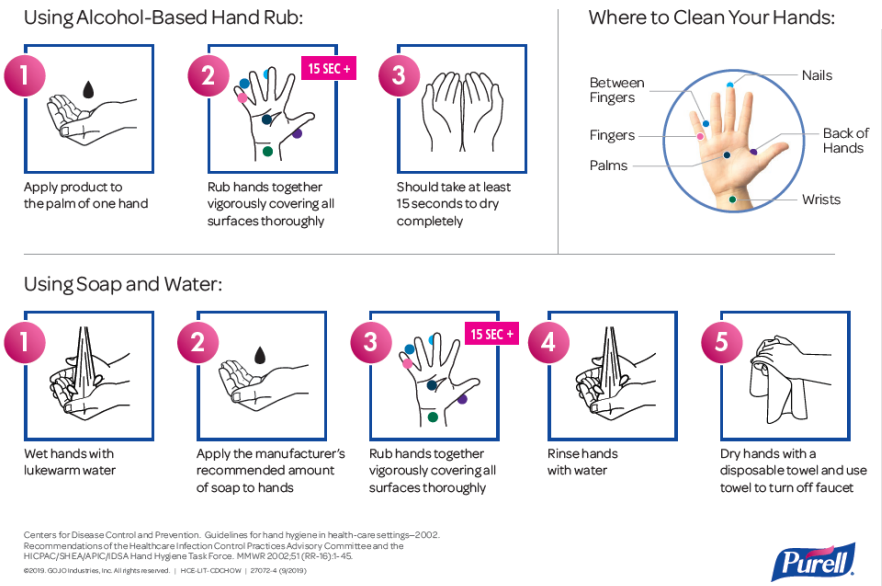
How to Perform Hand Hygiene:



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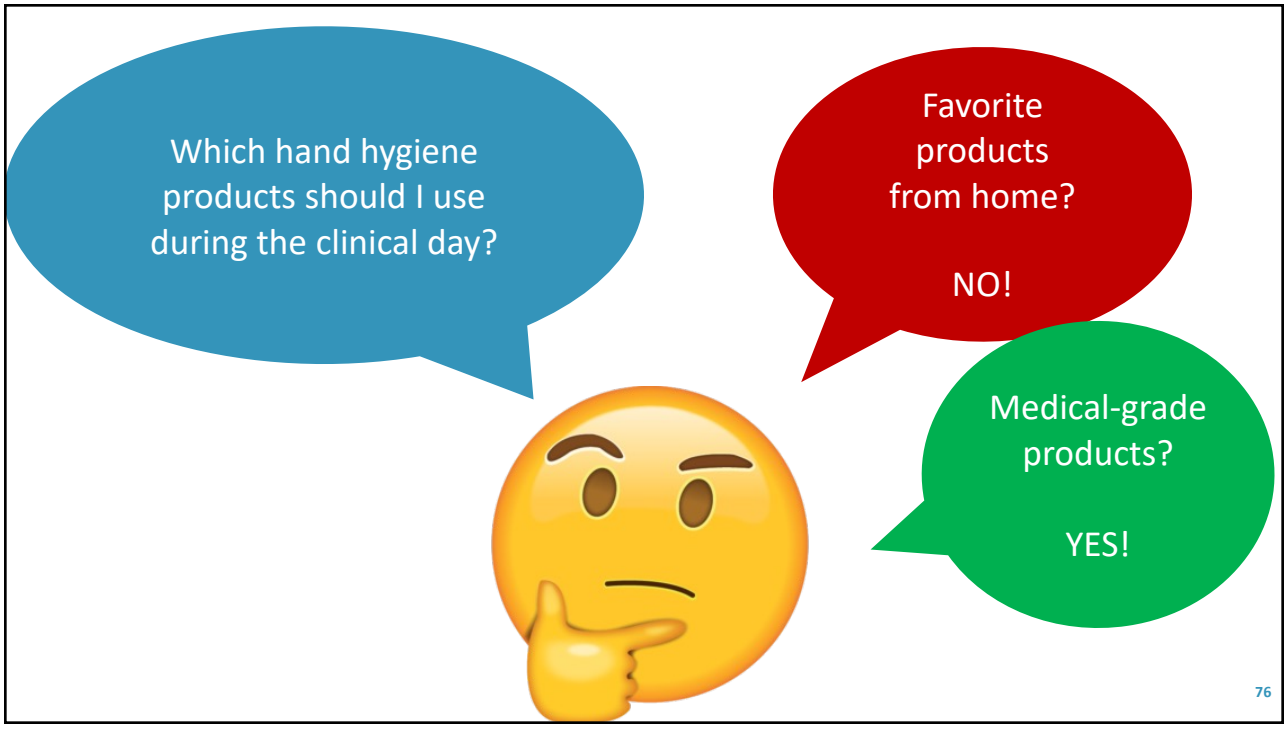

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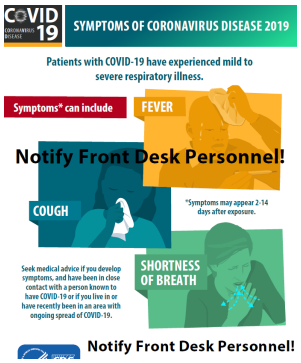
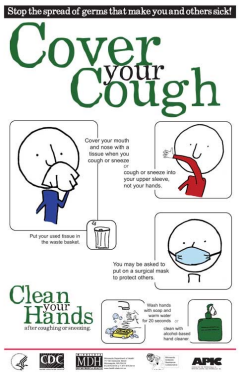
Respiratory Hygiene/ Cough Etiquette





Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care, 2016

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Personal Protective Equipment (PPE):

- Gloves
- Gowns
- Masks
- Eye protection
- Face shields (used WITH mask)

- Major component of Standard Precautions
- Protects skin & mucous membranes from exposure
- Proven effectiveness against microbial pathogens
- Should be removed when leaving treatment areas

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PPE cont.

- Employer's responsibility to clean/maintain
- Appropriate PPE shall be worn in occupational exposure situations
- Remove of PPE:
  - Remove ASAP if exposed to blood or OPIM
  - prior to leaving work area
  - Place in designated area or container
  - Wash hands after removal of PPE
- Masks/eyewear/face shields: wear whenever splashes spray, spatter anticipated.

OSHA®

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Laundry:

- Keep clear separation between clean and soiled through laundry process (transportation and storage)
- Designated area for storing clean linen
- Laundry options:
  - In-office washer/dryer
  - Offsite professional laundry service
- It is not recommended that personnel take contaminated laundry home to wash
- Contaminated laundry will be handled:
  - As little as possible
  - With PPE (gloved eyewear and jacket)
  - Away from food or traffic areas

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Let's Talk Laundry!

81

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Mask/Respirator Selection:

ASTM-1	ASTM-2	ASTM-3	N-95
• Bacterial filtration 98.4% @ 3 microns • PFE ≥ 95% @ 0.1 micron	• Bacterial filtration: 99.9% @ 3 microns • PFE 99.7% @ 0.1 micron	• Bacterial Filtration 99.9% at 3 microns • PFE 99.8% @ 0.1 micron	• NIOSH approved Respirator • PFE: 99.9% @ 0.1 micron

Least Effective → Most Effective

- https://www.cdc.gov/mmwr/PDF/rr/rr5217.pdf

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Use of N-95 Masks in Context of Respiratory Protection Program:

- A written respiratory protection program is required in work environments requiring the use of a respirator.
- Use N-95 or higher-level respirator in combination with other Transmission-Based Precautions when treating symptomatic patients with COVID-19 in hospital settings
- Must be used in context of respiratory protection program:
  - Comprehensive
  - Written
  - Fit testing
  - Training
  - Medical clearance
  - Seal test

(https://www.osha.gov/Publications/OSHA3990.pdf)

OSHA

CDC

ADA American Dental Association

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Recommended Combinations of PPE:

Patients with confirmed or suspected Respiratory Illness

Communities with continued respiratory illnesses

Performing aerosol generating procedures

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Recommended Combinations of PPE:

Communities with LOW Respiratory Illness
AND
Performing NON-aerosol generating procedure

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Head and Shoe Coverings	Face shield/Goggles
Not mandated by OSHA	Required with respirator
Include policy in YOUR office manual	If wearing surgical mask, a face shield must be worn!

86

Eye Hazards in Dentistry

Risks include exposure to:

- Blood and other potentially Infectious materials (OPIM)
- Debris (Tooth materials, dental materials, calculus, pumice, broken dental instruments and burs)
- Chemicals
- Blue light hazards
- Lasers

These injuries may be caused by infection and/or trauma

Debris may hit eyes with a speed of 96 km (60 miles) per hour

Oner B, Ayhan NK. Goze kan ve tukuruk sıcraması sonucu gelisebilecek enfeksiyonlar. *Dis hekimliginde Klinik.* 1994;1:21–23.

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1910.133(a)(1) The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

1910.133(a)(2) The employer shall ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g. clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.

The employer shall ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or wears eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or protective lenses.

88

Emergency Eye Wash: OSHA Standard 29 CFR 1910.1151 (c)

- Eyewash equipment for emergency use where eyes may be exposed to injurious materials
- Flush for a minimum of 15 minutes—then seek medical help
- Temperature should be tolerated
- Should be installed 10 seconds from hazard
- Report and document
- Eyewash equipment required to be inspected annually

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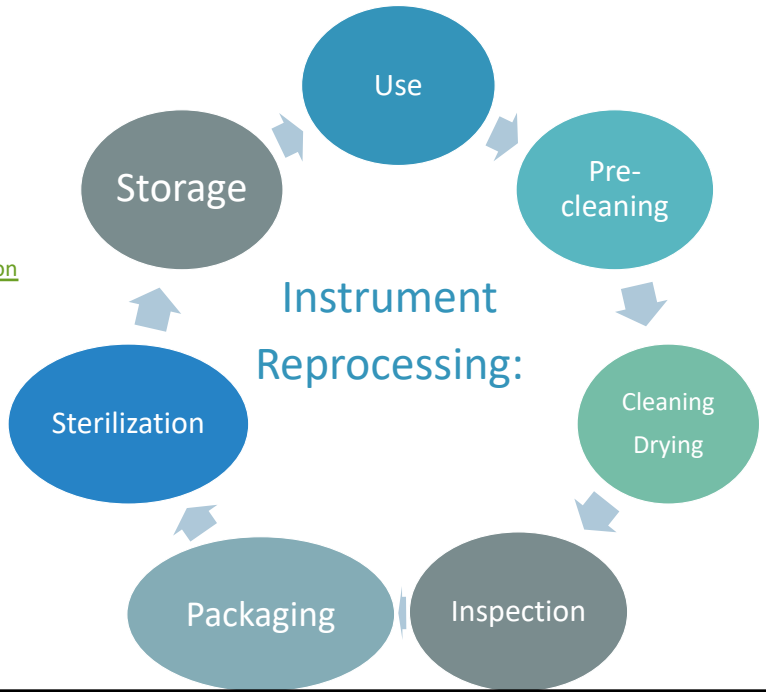
Per OSHA:

Follow standard practices for disinfection and sterilization of dental devices, as described in the CDC Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008 and Guidelines for Infection Control in Dental Health Care Settings – 2003



https://www.cdc.gov/mmwr/PDF/rr/rr5217.pdf

90

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Key Recommendations for STERILIZATION AND DISINFECTION OF PATIENT-CARE DEVICES for Dental Settings

1. Clean and reprocess (disinfect or sterilize) reusable dental equipment appropriately before use on another patient.
2. Clean and reprocess reusable dental equipment according to manufacturer instructions. If the manufacturer does not provide such instructions, the device may not be suitable for multi-patient use.
   a. Have manufacturer instructions for reprocessing reusable dental instruments/equipment readily available, ideally in or near the reprocessing area.
3. Assign responsibilities for reprocessing of dental equipment to DHCP with appropriate training.
4. Wear appropriate PPE when handling and reprocessing contaminated patient equipment.
5. Use mechanical, chemical, and biological monitors according to manufacturer instructions to ensure the effectiveness of the sterilization process. Maintain sterilization records in accordance with state and local regulations.

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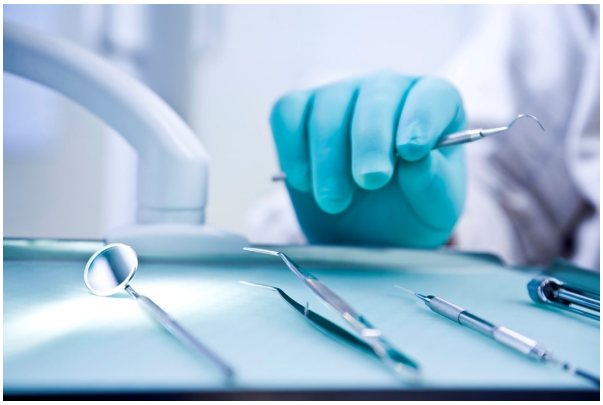
The Instrument Processing Pathway:

Use

Step 1—Contaminated instruments are on your bracket table!

Dispose of sharps in sharps container at point of use



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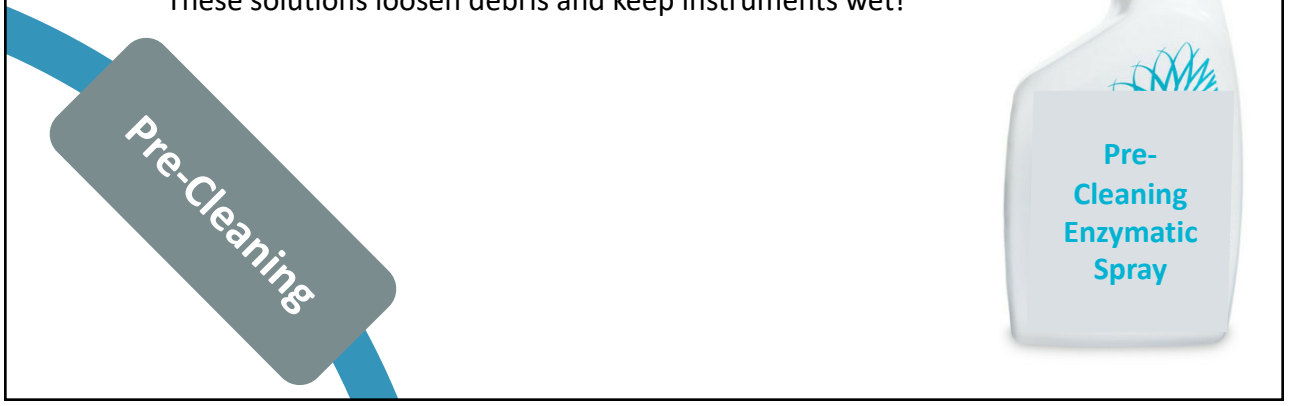
This step is optional

Purpose: Prevent drying of debris on instruments prior to cleaning.
You can use soap and water, ultrasonic cleaning solutions, enzymatic foam sprays.
These solutions loosen debris and keep instruments wet!



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Least Effective, Most Risk

Most Effective, Least Risk

Cleaning
Drying

- If debris remains, disinfectant or sterilant may not penetrate the debris!
- DRY instruments must go autoclave, and DRY instruments must be removed from autoclave

95

How do you know if your ultrasonic or instrument washer is working?

Validation not mandated, but certainly a best practice!

Cleaning
Drying

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Inspection

Inspect for debris and integrity of instrument
Defective instruments (rust, defects or damage) should be pouched separately, labeled “defective”, sterilized, and then removed from service

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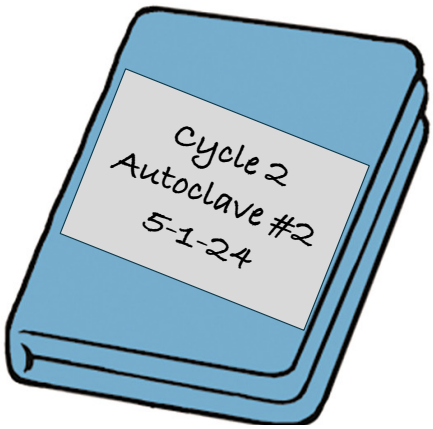
Packaging

Follow IFU of packaging material
Label with:

- Sterilizer number
- Cycle or load number
- Date of sterilization



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Sterilization

Loading the Autoclave:

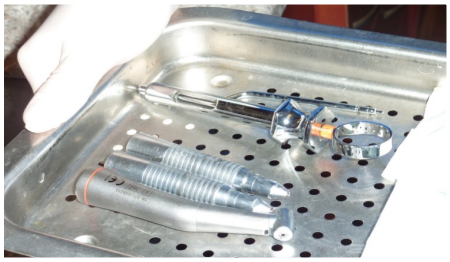
- Load plastic side of pouches UP (in MOST cases)
- Single layer on trays
- Chemical integrator in each load (ideally!)
- With proper setting/cycle on the autoclave

99

Sterilization

Immediate Use Sterilization (Unwrapped Instruments)

- Use a chemical indicator in each cycle
- Allow to dry and cool in sterilizer before handling
- Handle aseptically during removal
- Use instruments ASAP
- Do not sterilize implantable devices unwrapped.



100

Sterilization

Dental Handpieces:

"Dental handpieces and associated attachments, including low-speed motors and reusable prophylaxis angles, should always be heat sterilized between patients and not high-level or surface disinfected.

101

Sterilization

REMEMBER:

Do NOT run handpiece without a bur in place
Remove bur before disassembling handpiece from unit
Remove gross debris with water and gauze
Do NOT use any chemical or disinfectant not approved by manufacturer
Do not immerse handpiece in ultrasonic or other liquid

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Storage

- Instruments MUST be kept sterile until use!
- They should be stored in an area that is clean, dry!
- If packages are compromised, they should be reprocessed
- Open instruments at the point of use!

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Single-Use Items :

Not meant to be reprocessed or reused

Generally, not heat-tolerant

Cannot be reliably cleaned

Examples:

- Disposable prophylaxis angles
- High-volume suction tips
- Air/water syringe tips
- Burs (read product label)

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Monitoring YOUR Sterilization Process:

105

Mechanical Indicators:

Assesses cycle time, temperature, and pressure by observing gauges on sterilizer

Each Load:

- Observe that cycle has completed
- Verify and sign for each cycle

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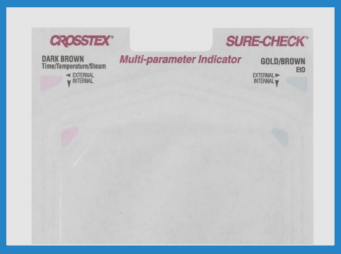
Chemical Monitoring:

- Change in color upon reaching parameter
- Are placed in and/or on each package, if not part of the pouch/pack wrap



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Biological Monitoring:

- CDC recommends weekly biological monitoring
- (and if there are any changes made to your sterilization procedures)
- In case of a positive spore test, repeat BI test and remove sterilizer from service if subsequent failure
- See CDC Guidelines for more info!

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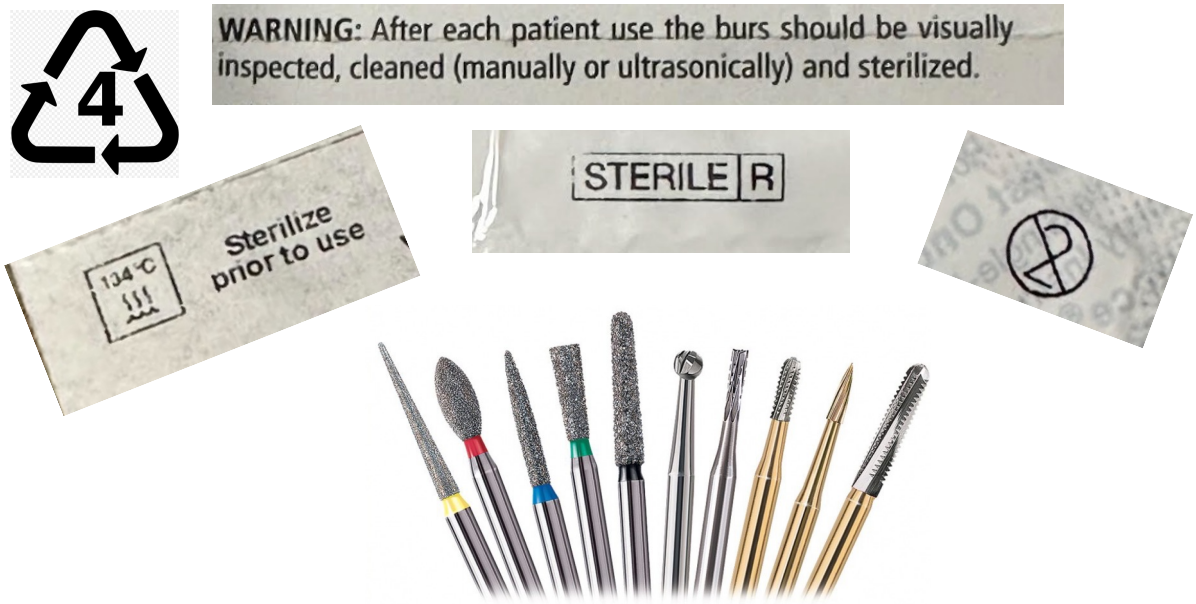

Dental Burs: Read (and follow) IFU!

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Environmental Surfaces

Image courtesy of M. Fluent

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Key Recommendations for ENVIRONMENTAL INFECTION PREVENTION AND CONTROL in Dental Settings

1. Establish policies and procedures for routine cleaning and disinfection of environmental surfaces in dental health care settings.
   - **a.** Use surface barriers to protect clinical contact surfaces, particularly those that are difficult to clean (e.g., switches on dental chairs, computer equipment) and change surface barriers between patients.
   - **b.** Clean and disinfect clinical contact surfaces that are not barrier-protected with an EPA-registered hospital disinfectant after each patient. Use an intermediate-level disinfectant (i.e., tuberculocidal claim) if visibly contaminated with blood.
2. Select EPA-registered disinfectants or detergents/disinfectants with label claims for use in health care settings.
3. Follow manufacturer instructions for use of cleaners and EPA-registered disinfectants (e.g., amount, dilution, contact time, safe use, disposal).

Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care, 2016

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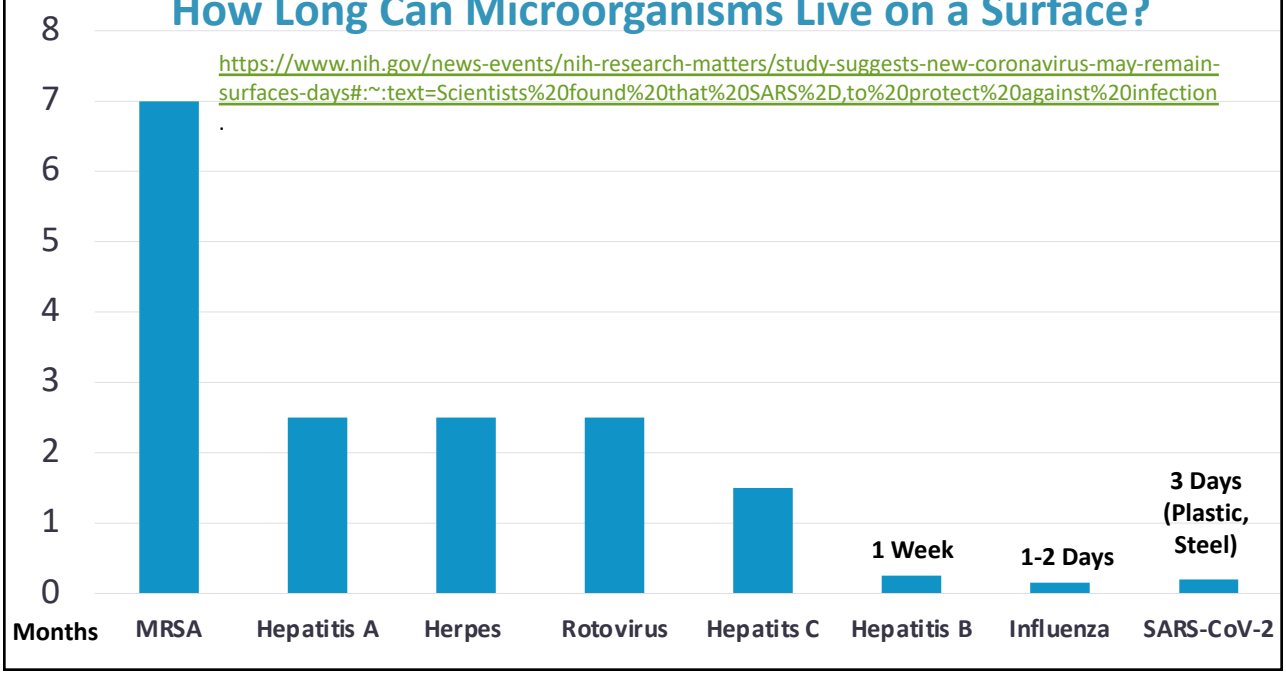
How Long Can Microorganisms Live on a Surface?

https://www.nih.gov/news-events/nih-research-matters/study-suggests-new-coronavirus-may-remain-surfaces-days#:~:text=Scientists%20found%20that%20SARS%2D,to%20protect%20against%20infection.



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Cell Phones: Another Source of Cross Contamination!

	Bacteria per square inch
Toilet Seat	1,201
Kitchen counter	1,736
Pet food dish	2,110
Checkout screen	4,500
Doorknob	8,643
Cell phones	25,127

- Also consider privacy and HIPAA violations

https://www.statefoodsafety.com/Resources/Resources/the-dirty-cell-phone-25-127-bacteria-per-square-inch#:~:text=According%20to%20Seattle%20Times%20journalist,in%20contact%20with%20every%20day.

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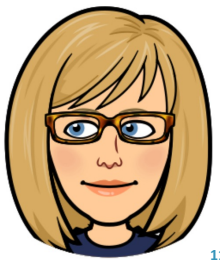
Environmental Surfaces: Your Product label

- Directions for use:
  - One-step or two?
  - Contact time
  - Hazards identification
- PPE requirements
- Storage/Disposal
- Expiration date

READ your product label and the Instructions for use!



- Molinari J, Harte J, Practical Infection Control In Dentistry, 2010

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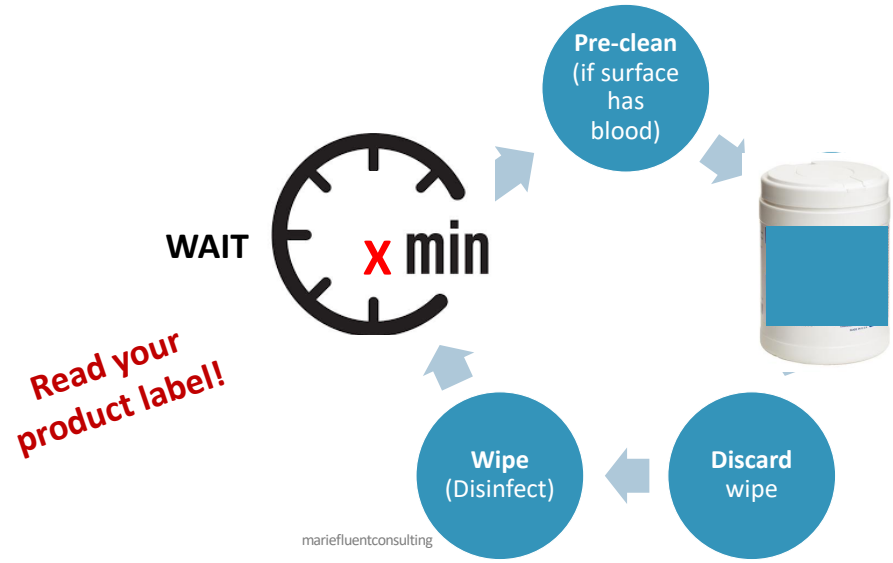
Follow the IFU on the Product Label:



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Sign NOT Required,
But a great idea!

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Barriers

Consider:

- Saliva ejector holder
- Light switches
- Light handles
- Air-water syringe handle

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Tip:

Look for pre-fabricated barrier products for your equipment

118

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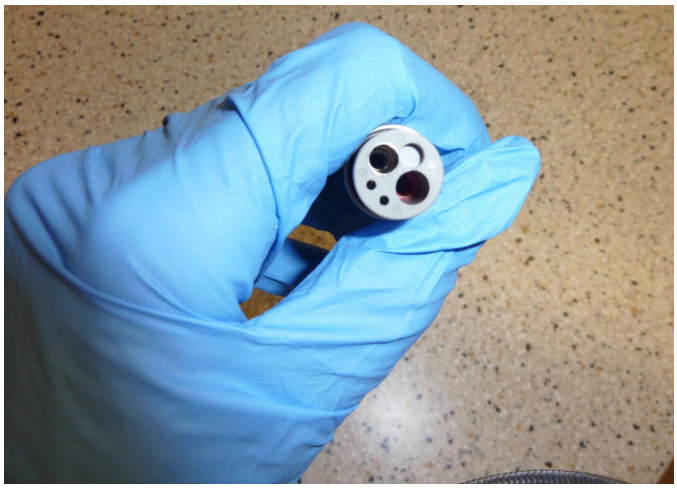
Dental Unit Waterlines:

OSHA Does NOT address this.

WHY?



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How Clean Must our DUW be?

Use water that meets EPA regulatory standards for drinking water (fewer than 500 CFU/ml of heterotrophic water bacteria) for routine dental treatment output water.

See CDC Guidelines:
Dental Unit Waterlines and Water Quality

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Keep food, drinks, cosmetics, contact lenses out of the operatory!

OSHA prohibits eating and drinking in treatment areas where there is a risk of exposure to blood or other infectious materials.

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OSHA Regulations for Regulated Dental Waste:

- Written program needs to be developed
- Must follow state and local regulations
- All personnel who handle potentially infective waste are to be trained and informed of possible safety and health hazards
- Discards sharps ASAP

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Discard contaminated sharps as soon as Feasible

- Place used syringes, needles, scalpel blades and other sharps in appropriate puncture-resistant container located as close as possible to area where items are used.

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Hmm.
What goes into that Red Bag?

Yes!

- Visibly contaminated items (blood, infectious materials)
- Saturated with blood: gauze, cotton rolls
- Blood and body fluids
- Sharps (in sharps container only!)

No!

- Medications
- Loose sharps
- Hazardous and chemical waste
- Household garbage
- Compressed gasses
- Amalgam

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Hazardous Communication Program:

- Conduct Annual Chemical Inventory
- Use labels and signs to communicate hazards
- Primary and secondary container labels
- Annual chemical inventory

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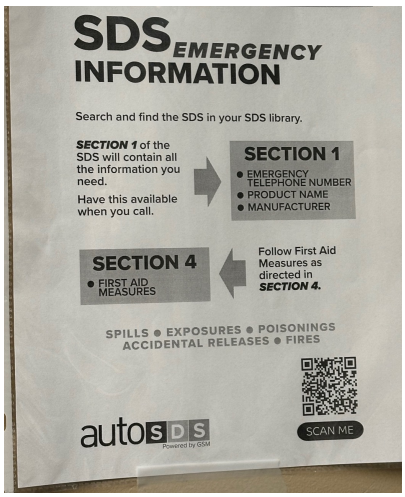

SDS Sheets:

- Needed for each item on the chemical inventory
- Accessible at all times to employees
- Can be stored in many formats
- Train employees on new products and updates to SDS
- Maintain for 30 years
  - Where are they located?
  - How are they updated?
  - How are they sorted?

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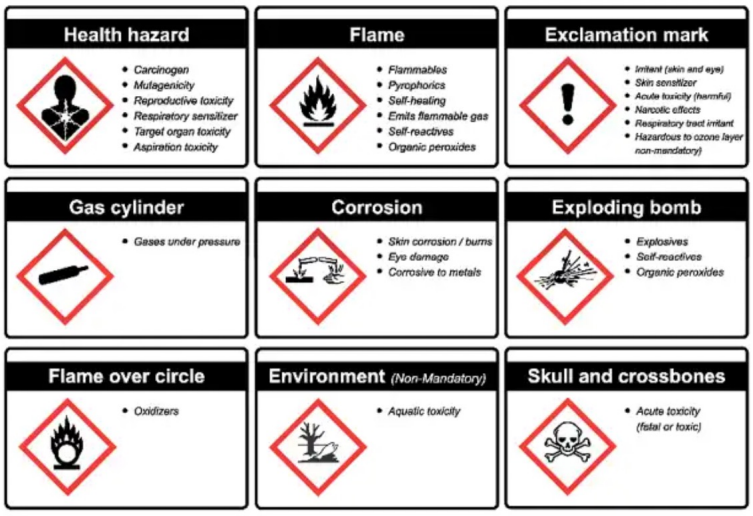
HAZCOM Pictograms:



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Required Workplace Posters

- Right To Know" posters #2105 and #2106
- Safety and Health Protection
- Minimum Wage Act
- Law Prohibits Discrimination
- Notice to All Employers
- Annual Summary of Injury and Illness
  - Form #300 and #300A
  - Self Designated Form
- All required postings are free upon request or can be downloaded from the internet

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Medical Emergencies can happen to anyone- including employees!

Are you prepared?

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Emergency Action Plan:

- Review and updated annually
- Includes:
  - Employee safety
  - Medical emergency plan
    - Cardiac, stroke, diabetic, allergy, seizures
  - Non-medical emergency plan
    - Fire, bomb, weather, electrical, floods, power outage, tornado
  - Workplace violence

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Common OSHA Citations:

Bloodborne Pathogen Standard (1910.1030)	Education and Training of employees
	Lack of written Exposure Control Plan and written documentation
	Biohazard waste handling
	Improper handling of sharps
	Failure to provide post-exposure prophylaxis
	Offer of Hepatitis B vaccine /HBV Vaccine Declination
Respiratory Protection (1010.134)	Written Respiratory protection program in place, lack of fit testing,
	Not obtaining medical clearance for respirator
Hazard Communication (1910.1200)	Training of workers on hazards of chemicals
	Labeling of products with hazard warning
Personal Protective Equipment (1910.132)	Ensuring employees have access to appropriate PPE

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OSHA Resources:

OSHA Dentistry Workers and Employers:
https://www.osha.gov/coronavirus/control-prevention/dentistry

Protecting Workers: Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace:
https://www.osha.gov/coronavirus/safework

Training Requirements in OSHA Standards
https://www.osha.gov/sites/default/files/publications/osha2254.pdf

Worker's Rights:
https://www.osha.gov/sites/default/files/publications/osha3021.pdf

Hazard Communication: https://www.osha.gov/hazcom

Guidelines for Preventing Workplace Violence:
https://www.osha.gov/sites/default/files/publications/osha3148.pdf

Occupational Noise Exposure: https://www.osha.gov/noise

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OSHA Resources continued:

How to plan for Workplace Emergencies and Evacuations:
https://www.osha.gov/sites/default/files/publications/osha3088.pdf

Job Safety Poster:
https://www.osha.gov/sites/default/files/publications/osha3165.pdf

OSHA Fact Sheets: https://www.osha.gov/publications/bytype/fact-sheets

OSHA Inspections:
https://www.osha.gov/pls/imis/establishment.html

Personal Protective Equipment: https://www.osha.gov/personal-protective-equipment

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THANK YOU!

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