ABSENTEE SHAWNEE TRIBAL (AST) HEALTH SYSTEM

Reexamining Dental Infection Controls in the New World of COVID-19

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No conflicts of interest to declare.

Discussion Topics

- **Standard Precautions in Infection Control**
- **List and describe the Hierarchy of Controls in the workplace**
- **Examples of the Hierarchy of Controls in the Dental Practice**
- **Re-opening: AST Dental Clinic**
- **Aerosol mitigation and the most effective ways to mitigate aerosol and microorganisms at the source**

Standard Precautions

➢ Primary way to prevent transmission of infectious agents.

➢ Used for **ALL** patients, regardless of their infection status.

➢ Includes contact with <u>all body fluids</u> (except sweat), regardless of whether blood is present.

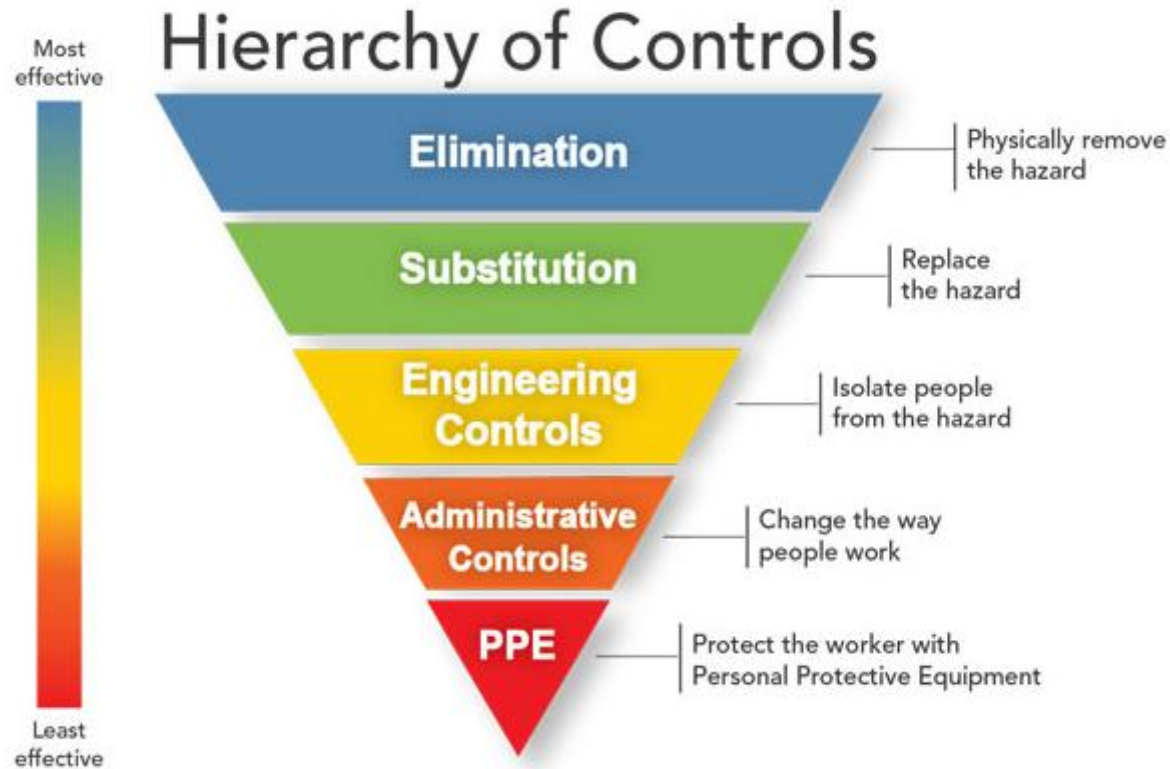## Elements of Standard Precautions

- Hand Hygiene
- Use of PPE (e.g. gloves, masks, eyewear)
- Respiratory hygiene / cough etiquette
- Safe use of sharps
- Safe injection practices (e.g. recapping scoop method)
- Sterile instruments and devices
- Cleaning and disinfecting environmental surfaces

STANDARD PRECAUTIONS
For the care of all patients

Clean hands

Use PPE* if body fluid exposure anticipated

Safe injection practices handle and dispose sharps safely

Clean environment routinely

Disinfect equipment**

Follow respiratory hygiene and cough etiquette

Handle and dispose waste and used linen safely

Content source: National Institute for Occupational Safety and Health National Institute for Occupational Safety and Health

Hierarchy of Controls

Elimination and Substitution (Levels 1 & 2)

- Physically remove or replace the hazard/risk
- Highest levels in the hierarchy
- Can be the most difficult to achieve

Examples of Elimination & Substitution in the Dental Practice

- Set up a screening process to check both employees and patients before they arrive at the clinic (e.g. Call and confirm a patient's health status before appointment)
- Go over COVID-19 questionnaire prior to treating patient
- Use Teledentisry as alternative to in-office care
- Use Silver Diamine Fluoride (SDF) on caries lesions instead of utilizing a dental hand piece
- Hand scaling to remove calculus instead of using an ultrasonic scaler

Hierarchy of Controls

Engineering Controls (Level 3)

- Isolate people from the hazard/risk

- Considered less effective than elimination & substitution

- Can often be used to reduce or remove the risk at the source

Examples of Engineering Controls in the Dental Practice

- Place Plexiglas barriers at check-in/check out areas & provide keyboard covers

- Social distance patients in clinic area (use every other operatory/closed bays)

- Use High Volume Evacuation (HVE) to reduce spatter, spray, or aerosols

- Use Instrument cassettes/plastic containers to hold dental instruments and prevent injuries when transporting

- Pre-procedure mouth rinse to reduce microorganisms

Hierarchy of Controls

Administrative and PPE Controls (Levels 4 & 5)

- Change the way people work

- Limits or protects against exposure to a hazard

- Considered the controls of ~~last resort~~ (perhaps least resort or even essential)

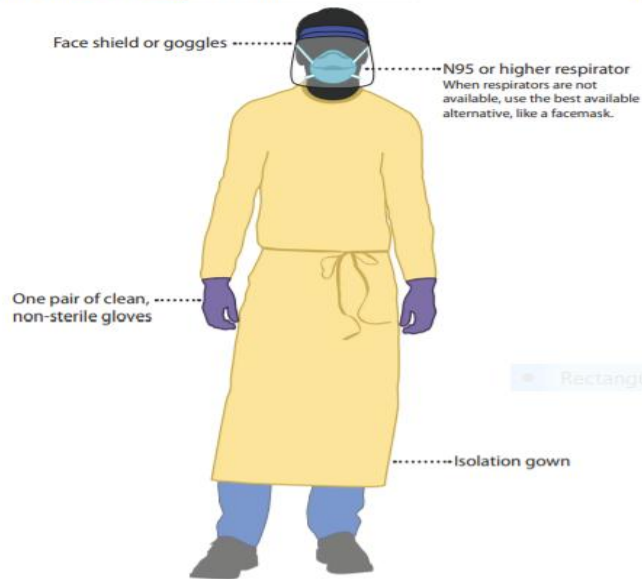### Examples of Administrative & PPE Controls in the Dental Practice

- Restrict the number of personnel entering the patient treatment area

- Adjustments in appointment scheduling

- Provide hand hygiene stations

- Increase the frequency of room and equipment cleaning and disinfection

- Wear utility gloves during instrument reprocessing

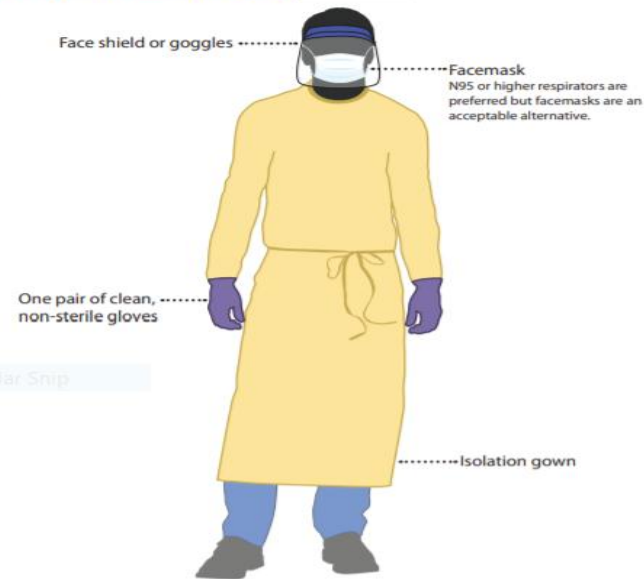- Use personal protective equipment correctly (e.g. Gloves, N95 respirators, …)

Personal Protective Equipment (PPE) Considerations

Preferred PPE – Use N95 or Higher Respirator

Face shield or goggles

N95 or higher respirator
When respirators are not available, use the best available alternative, like a facemask.

One pair of clean, non-sterile gloves

Isolation gown

Acceptable Alternative PPE – Use Facemask

Face shield or goggles

Facemask
N95 or higher respirators are preferred but facemasks are an acceptable alternative.

One pair of clean, non-sterile gloves

Isolation gown

www.cdc.gov/coronavirus

COVID-19 Dental Reopening Team/Infection Control Team

Assembled a COVID-19 Dental Reopening/Infection Control Team
Consist mainly of dental staff (3-4 people)

Goal of Team

- Assign an infection control coordinator (ICC)
- Review guidelines/recommendations for dentistry
- Determine if any new infection control & workflow protocols are needed
- Review current Standard Operating Procedures & update (if necessary)
- Provide staff training & competency testing
- Determine PPE need and availability
- Provide easy access to manufacturer's IFU for all equipment & instruments
- Institute safety measures for patients and staff
- Develop a patient triage and scheduling workflow

Complete Risk Assessment for Dental Clinic

Goal of Assessment

- Impact of COVID-19 on patient services, facility, staff, community
- Are you at high risk for transmission
- PPE burn rate and equipment needs

COVID-19
OCCUPATIONAL RISK PYRAMID

VERY HIGH
HIGH
MEDIUM
LOW RISK

Screening, Scheduling & Patient Management

- Telephonic screening of all scheduled patients prior to appointment

- Teledentisry visit as alternative to in-office care and as a triage tool

- Soft Opening – limit number of scheduled patients & stagger appointment start times

- Morning appointments for patients with increased risk of severe illness

- Consider two columns for scheduling (AGPs and Non-AGPs) and scheduling the AGPs closer to lunch time

Preventative and Infection Control Measures in Clinical Area

OSHA/CDC Precautions and Handwashing Protocols Followed

- Flush dental unit waterlines & air/water– start of day between patients and after lunch

- Use close surgical bays for extractions and AGPs

- Social distance patients in clinic area (use every other operatory)

- Utilize runner/rover dental assistant (when available)

- Patient entry and exit of clinical area controlled

- Donning and doffing in designated areas with No PPE zones established

- Clean and disinfect the room and equipment according to the CDC Guidelines for Infection Control in Dental Health-Care Settings

- Only use EPA approved disinfectants (provide manufacturer's IFU)

Aerosol Mitigation Methods

- Pre-procedure mouth rinses (Chlorhexidine gluconate , 1% Hydrogen peroxide mixture, etc…)

- High Volume Evacuator (HVE) & HVE Isolation Systems (Dry Shied, Isodry, ReLeaf)

- Extraoral suction units (ADS, Pax 2000, etc…)

- Portable germicidal UV-C air purifier

- UV light cabinet and/or wand

- Microcab (reduce solid airborne particles when adjusting dentures, partials crowns)

- Maintain dental unit waterlines and flush regularly

- Reducing the speed of dental handpiece. *"Mechanisms of Atomization from Rotary Dental Instruments and Its Mitigation" published in the December 2020 issue of the Journal of Dental Research:* https://doi.org/10.1177/0022034520979644

Aerosol Mitigation Equipment

Microcab

Extraoral Dental Suction

Germicidal UV- C Air Purifier

UV Light Cabinet/Wand

Aerosol & Microorganism Mitigation at the Source

- Pre-procedure rinse

- HVE's allows providers to capture particles at the source

- HVE Isolation System in conjunction with HVE further reduce the risk of airborne viral transmission

Equipment Maintenance Re-opening Checklist

Water Bottles

Shock all lines several days before opening. Flush all handpieces and syringes until shock begins flowing out. Let them rest for 24 hours, then flush with clean water. If using straws, please shock with Citrisil Tablets following the same procedure.

Computer Systems

Power up the router, switches, server, and workstations. Ensure access to and functionality of schedule and charting modules. Verify sensors and cameras are working and operational in all your operatories

Ultrasonics

Refill and tinfoil test each unit.

Cassette Sterilizers

Refill water tanks and place recommended water level in the discard tank.

Plaster Traps

Replace plaster trap (if not previously discarded).

Air Compressor

Power on, pressure up. Ensure there is pressure to all operatories. Verify compressor comes up to pressure and shuts off once full.

Vac Lines and Pumps

Start vacuum and ensure all SE and VE lines function correctly in the on and off modes and nothing has seized.

Wet Vacs

Ensure the water is turned on before starting it. Let it run for several minutes and ensure there no leaks.

Model Trimmers

Turn water on and ensure each unit drains properly with no leaks.

Hydrims

Fill soap and salt dispensers, then run for one full cycle to prime the soap and salt lines.

Distillers

Refill and start the distillation process to ensure you are prepared with a full container of fresh distilled water.

Water Purification Systems

Run all systems for a minimum of two (2) minutes to flush the lines. If any water was left in the system, shock each operatory line individually before proceeding

Chairs

Power up and run a full test the full range of motion and functionality.

Autoclaves

Fill reservoir with distilled water. Run a cycle to confirm there are no errors or steam leaks.

Mills

Refill coolant tanks.

3D Printers

Refill resin tanks.

Nitrous Tanks

Turn tanks on. Test alarm system. Ensure zone valves are on.

Check list complements of Benco Dental

OSAP.org
The Safest Dental Visit™

OSAP Checklist: Operatory Preparation

Environmental Infection Control

☐ Ensure written policies and procedures for routine cleaning and disinfection of clinical contact and housekeeping environmental surfaces are available.

☐ Ensure dental health-care personnel (DHCP) that perform infection prevention procedures have received job specific training about infection prevention and control management of clinical contact and housekeeping environmental surfaces – upon hire, when procedures and/or policies change and at least annually.

☐ Ensure that training and equipment are available to ensure that DHCP wear appropriate personal protective equipment (PPE) to prevent exposure to infectious agents or chemicals.

☐ Monitor cleaning and disinfection procedures and the use of surface barriers to ensure that they are consistently and correctly performed.

☐ Ensure written procedures are in place and materials are available for the decontamination of body fluid or blood spills.

Disclaimer: This is checklist is an example and is not comprehensive nor definitive.

Helpful Infection Control & Prevention Resources

- CDC : Guidance for Dental settings : Interim Infection Prevention and Control Guidance for Dental Settings During the Coronavirus Disease 2019 (COVID-19) Pandemic

https://www.cdc.gov/coronavirus/2019-ncov/hcp/dental-settings.html

- CDC : Training: Basic Expectations for Safe Care

https://www.cdc.gov/oralhealth/infectioncontrol/safe-care-modules.htm

- Project Firstline website:

https://wwwdev.cdc.gov/infectioncontrol/projectfirstline/index.html

- OSAP website:

https://www.osap.org/

- ADA website:

https://www.ada.org/

- OSHA website:

https://www.osha.gov/

- IHS website:

https://www.ihs.gov/

- NNOHA: Join NNOHA Listserv

http://www.nnoha.org/

- NOHN Network Facebook page

https://www.facebook.com/NOHNOklahoma/

www.cdc.gov/oralhealth/infectioncontrol/guidelines/

Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for afe Care[PDF-1MB]
Infection Prevention Checklist for Dental Settings (Print-Friendly)[PDF-825 KB]
Infection Prevention Checklist for Dental Settings (Fillable Form)[PDF-884 KB]
Recommendations from the Guidelines for Infection Control in Dental Health-Care Settings, 2003[PDF-766 KB]

References

- Centers for Disease Control and Prevention - The National Institute for Occupational Safety and Health (NIOSH): *Hierarchy of Controls*

  https://www.cdc.gov/niosh/topics/hierarchy/default.html

- Centers for Disease Control and Prevention - *Guidelines for Infection Control in Dental Health- Care Settings - 2003*

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

- Occupational Safety and Health Administration - *Dentistry Workers and Employers*

  https://www.osha.gov/coronavirus/control-prevention/dentistry

- Centers for Disease Control and Prevention - *Training: Basic Expectations for Safe Care*
  https://www.cdc.gov/oralhealth/infectioncontrol/safe-care-modules.htm

- Organization for Safety Asepsis and Prevention (OSAP)/DentaQuest Partnership - *Best Practices for Infection Control in Dental Clinics During the COVID-19 Pandemic*

  https://www.osap.org/page/covid-19-best-practices

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Thank You

ABSENTEE SHAWNEE TRIBAL
HEALTH SYSTEM
Prevention. Progress. Pride.

SHAWNEE CLINIC
LITTLE AXE HEALTH CENTER
PLUS CARE