Community Dental Health
Infection Prevention and
Control Guide
{Program Name}
Approved: {DATE}
Reviewed: {DATE}

This document is not intended to be used unless it is personalized by the facility team.

Please read the entire document and personalize to fit your needs.

This document was developed to support Community Dental Health Programs and Community Dental Health Settings. It is intended to provide infection prevention and control guidance for the unique needs of dental healthcare providers in a mobile, portable or community-based setting.

This document can be used as a policy template or standard operating procedure document for mobile, portable or community-based programs but must be customized to include program specific information. Please review the document carefully and adjust verbiage/ processes to meet the needs of the program.

For more information on how to review policy templates and adapt them to the program needs, please visit the Ne ICAP website to review the [Policy Review Checklist](https://icap.nebraskamed.com/wp-content/uploads/sites/2/2019/02/Policy-Review-Guide-2.19.pdf).

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# General Infection Control Guidelines

## Hand Hygiene

Hand hygiene is the most important practice a Dental Healthcare Provider (DHCP) can perform to prevent the spread of disease. Hand hygiene procedures include the use of alcohol-based hand rubs (containing 60%–95% alcohol) and hand washing with soap and water.

In the community dental health dental setting, alcohol-based hand rubs (ABHR) may be a better option than washing with soap and water because of sink availability. Unless hands are visibly soiled (e.g., dirt, blood, body fluids), an alcohol-based hand rub is preferred over soap and water in most clinical situations because it:

* Is more effective than soap at killing potentially deadly germs on hands
* Requires less time
* Is more accessible than handwashing sinks
* Produces reduced bacterial counts on hands
* Improves skin condition with less irritation and dryness than soap and water

### When to Perform Hand Hygiene

For routine dental examinations and nonsurgical procedures, use an alcohol-based hand rub or use water and plain or antimicrobial soap specific for health care settings. Always perform hand hygiene in the following situations:

* Before and after treating each patient
* Before leaving the dental treatment area
* Before gloving and after removing gloves and other PPE
* Before and after eating
* After using the restroom
* When hands are visibly soiled (soap and water)
* After accidental, bare handed touching of instruments, equipment, surfaces or other items that have not been appropriately decontaminated

### Performing Hand Hygiene:

**Using alcohol-based hand rub (follow manufacturer instructions for use):**

* Dispense the recommended amount of product
* Apply product to the palm of one hand
* Rub hands together, making sure that all surfaces of hands and fingers are covered until they are dry (no rinsing is required)

**Hand washing with soap and water (follow manufacturer instructions for use):**

* Wet hands first with water (do not use hot water)
* Apply soap to hands
* Rub hands vigorously for at least 15 seconds, covering all surfaces of hands and fingers
* Rinse hands with water and dry thoroughly with a paper towel
* Use a paper towel to turn off the water faucet

### Storage of Hand Hygiene Products

Store, transport and dispense products according to manufacturer’s instructions, paying close attention to expiration date and storage temperature. Liquid products should be stored in closed containers.

Do not refill or top off products such as liquid soaps, lotions or ABHR as they can become contaminated with bacteria or other microorganisms. Ensure empty containers are washed and dried thoroughly before refilling.

### Hand Hygiene Resources:

CDC Department of Oral Health. 2024. Hand Hygiene for DHCP: <https://www.cdc.gov/dental-infection-control/hcp/summary/standard-precautions.html>

CDC. 2024. Hand Hygiene for Healthcare Workers: <https://www.cdc.gov/clean-hands/hcp/clinical-safety/index.html>

## Personal Protective Equipment (PPE)

PPE are special coverings designed to protect DHCP from exposure to or contact with infectious agents. These include gloves, face masks, protective eyewear, face shields, and protective clothing (e.g., reusable or disposable gown, jacket, lab coat). PPE can also prevent microorganisms from spreading from DHCP to patients and patients to DHCP.

### Types of PPE

#### Masks

DHCP should wear a surgical mask that covers both their nose and mouth during procedures that are likely to generate splashes or sprays of blood or body fluids and while manually cleaning instruments.

The following information should be considered when selecting and utilizing masks:

* Masks must be changed between each patient encounter
* Masks should be changed when they become wet or soiled
* Masks should be changed every hour during long procedures
* The ASTM (American Society for Testing and Materials) level should be considered:
	+ ASTM 1: Lowest level of filtration, no fluid resistance
	+ ASTM 2: Medium level of filtration, no fluid resistance
	+ ASTM 3: High level of filtration and fluid resistance (best for dental treatment and instrument processing)

#### Eyewear

DHCP should wear protective eyewear with solid side shields or a face shield during procedures likely to generate splashes or sprays of blood or body fluids or the spatter of debris.

\***Prescription eyewear is not a substitute for protective eyewear.**

Eyewear should be:

* Rated for chemical and impact resistance (ANSI Z87.1)
* Cleaned and disinfected when visibly soiled or removed according to manufacturer’s instructions

\*Eyewear can be worn for multiple patients if the provider does not touch the eyewear or remove them. Once touched or removed, they should be cleaned and disinfected before being worn again.

Protective eyewear should also be provided to patients during care. For patient eyewear, consider the following:

* Eyewear should be rated for chemical and impact resistance (ANSI Z87.1)
* Eyewear should be cleaned and disinfected according to manufacturer’s instructions between each patient

#### Protective Clothing

DHCP should wear single-use, disposable, protective clothing (e.g., gowns, jackets) to prevent contamination of street clothing and to protect the skin from exposure to blood and body fluids.

Protective clothing should:

* Be worn when there is the potential for splash, splatter or spray during a task
* Have sleeves long enough to protect the forearms
* Be changed when it becomes visibly soiled by blood or other body fluids and between each patient
* Be removed before leaving the work area

#### Gloves

DHCP should wear gloves to prevent contamination of their hands when touching mucous membranes, blood, saliva, or other potentially infectious materials and to reduce the likelihood that microorganisms on their hands will be transmitted to and from patients during patient care.

When using gloves, remember:

* Gloves should be used for one patient only and discarded appropriately after use
* Gloves are single use and should not be washed for reuse
* Always perform hand hygiene immediately after glove removal

Types of gloves:

* Patient exam gloves: Non-sterile gloves used for patient care, examinations, and other nonsurgical procedures involving contact with mucous membranes
* Utility gloves: Thick, puncture and chemical resistant gloves use for certain procedures (e.g., cleaning, disinfection and handling contaminated sharps or chemicals). Utility gloves should not be used during patient care
* Sterile gloves: Sterile gloves are used during surgical procedures, these gloves would not commonly be used in the community dental health setting

### PPE Resources

CDC Department of Oral Health. 2024. Personal Protective Equipment: <https://www.cdc.gov/dental-infection-control/hcp/summary/standard-precautions.html>

CDC. 2024. Sequence for Donning and Doffing PPE: <https://www.cdc.gov/healthcare-associated-infections/media/pdfs/PPE-Sequence-P.pdf>

## Environmental Cleaning and Disinfection

Emphasis for cleaning and disinfection should focus on surfaces that are most likely to become contaminated with pathogens, including clinical contact surfaces (e.g., frequently touched surfaces such as light handles, bracket trays, switches on dental units, computer equipment) in the patient-care area.

DHCP should 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.

DHCP should clean and disinfect clinical contact surfaces that are not barrier-protected with an intermediate-level, EPA-registered hospital disinfectant after each patient.

### Environmental Barrier Use

Surface barriers should be used to cover any hard to clean, clinical contact surfaces. New barriers should be placed over hard to clean surfaces during appointment set up (after surfaces have been cleaned and disinfected) and removed after the patient appointment is completed.

#### Surfaces to Barrier:

Hard to clean, clinical contact surfaces could include:

1. Patient chair/ head rest
2. Any countertop or surface that is being used for patient care (can use patient napkin/ bib)
3. Control switches and buttons on dental unit
4. Hoses on dental unit
	1. Air/ water (A/W) syringe
	2. High-volume Evacuation (HVE suction)
	3. Saliva ejector
	4. Handpiece hoses if used
5. Motor of handpiece according to manufacturer instructions
6. Curing Light according to manufacturer instructions
7. Multi-use materials syringes (e.g. etch, sealant)

### Cleaning and Disinfection Products

Any cleaner/ disinfectant used should be EPA-registered and have a minimum claim of being tuberculocidal. The EPA lists approved for use in dental settings with this claim are:

* [List B: Antimicrobial Products Registered with EPA for Claims Against *Mycobacterium tuberculosis* (TB)](https://www.epa.gov/pesticide-registration/list-b-antimicrobial-products-registered-epa-claims-against-mycobacterium)
* [List S: Antimicrobial Products Effective Against Bloodborne Pathogens: Human immunodeficiency virus (HIV), Hepatitis B and Hepatitis C](https://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-bloodborne)

DHCP should check the EPA-registration list to ensure the cleaner/ disinfectant meets the appropriate level of effectiveness.

Manufacturer’s instructions for use should be consulted to ensure the proper PPE is being worn when using the cleaner/ disinfectant.

### Cleaning and Disinfection Process

Proper environmental cleaning and disinfection is completed in multiple steps, including cleaning bioburden and disinfection (see image below). DHCP should follow the manufacturer’s instructions on the process, including the contact time.

#### Cleaning and Disinfection of Clinical Contact Surfaces **Before Patient Care** in Community Settings

1. Identify the treatment/ working area in the location you will be working at
2. Ensure there is adequate, clean, empty counter space in the immediate working area and a sink available
3. Set up mobile dental equipment
4. Don protective eyewear, mask, protective clothing and gloves as identified by approved cleaner/ disinfectant
5. Clean the identified counter space, patient chair and portable dental unit to remove any existing dust, dirt or other materials with the approved cleaner/ disinfectant, using a new wipe for each area (dental unit, hoses, chair, counter, etc.)
6. Disinfect the surfaces with a new wipe for each surface, ensuring the surface has enough product on it to remain visibly wet for the entire contact time\* (minimum of 3 minutes)
7. Continue setting up treatment/ working area with appropriate barriers and patient care items for patient treatment

#### Cleaning and Disinfection of Clinical Contact Surfaces **After Patient Care**

1. Don protective eyewear, mask, protective clothing and gloves as identified by approved cleaner/ disinfectant
2. Clean the clinical contact surfaces with a wipe, using a new wipe for each area (dental unit, hoses, chair, counter, etc.)
3. Disinfect the surfaces with a new wipe for each area, ensuring the surface has enough product on it to remain visibly wet for the entire contact time\*(minimum of 3 minutes)

\*Contact time, dwell time or wet time is the length of time the disinfectant must remain visibly wet to properly disinfect the surface.



### Cleaning and Disinfection Resources

CDC Department of Oral Health. 2024. Environmental Infection Prevention and Control: <https://www.cdc.gov/dental-infection-control/hcp/summary/sterilization-disinfection.html>

## Instrument Sterilization/ Management

In the community dental health setting, every effort should be made to use single-use, disposable items. When reusable patient items are used, they must be cleaned and sterilized to prevent transmission of disease between patients.

Instrument processing requires multiple steps using specialized equipment. Cleaning to remove debris and organic contamination from instruments should always occur before disinfection or sterilization. If blood, saliva, and other contaminants are not removed, these materials can shield microorganisms and potentially compromise the sterilization process. Sterilization of patient care items is achieved by steam sterilization to inactivate potentially dangerous pathogens, including spores.

Patient-care items (e.g., dental instruments, devices, and equipment) are categorized according to the Spaulding Classification as critical, semi critical, or noncritical, depending on the potential risk for infection associated with their intended use.

* Critical items, such as surgical instruments, periodontal scalers/ curettes and ultrasonic scaling tips, are those used to penetrate soft tissue or bone. They have the greatest risk of transmitting infection and should always be steam sterilized
* Semi critical items are those that come in contact with mucous membranes or non-intact skin (e.g., exposed skin that is chapped, abraded, or has dermatitis). These items have a lower risk of transmission. Because most semi critical items in dentistry are heat-tolerant, they should also be steam sterilized
* Noncritical patient-care items are those that only contact intact skin. These items pose the least risk of transmission of infection. In most cases, cleaning followed by disinfection with an EPA-registered hospital disinfectant is adequate

### Instrument Transport

Because of the nature of community based dental health services, contaminated instruments must be transported back to a central location to be terminally cleaned and sterilized. To maintain a safe environment for DHCP and patients, contaminated instruments should be handled according to CDC recommendations and transported according to the [OSHA Bloodborne Pathogens Standard.](https://www.osha.gov/laws-regs/interlinking/standards/1910.1030%28d%29%282%29%28viii%29)

#### Instrument Transport Process:

1. Instruments should be safely transferred to an OSHA approved transport container during treatment area cleaning/ disinfection
	1. Transport containers must be:
		1. Latchable/ lockable
		2. Puncture proof.
		3. Leak proof.
		4. Color coded red and labeled to include “Biohazard” and “Contaminated Equipment”
		5. Any labels on containers should be wipeable to ensure they can be cleaned and disinfected effectively (laminated, etc.)
2. Utility gloves should be worn during treatment area cleaning/ disinfection and handling contaminated instruments when packing for transport
3. After use and before instruments are placed in transport container, remove visible debris and saliva with a damp gauze
4. Contaminated instruments should be placed in an approved transport container and sprayed with an enzymatic instrument spray to ensure the instruments do not dry out during transport
5. Individual instrument set transport containers should be placed in a single, larger, secondary transport container that also meets the above specifications
6. Instruments can then be transported back to the location identified for cleaning and sterilization

Note: Cleaning and sterilization location should be identified prior to any need for instrument transport. Locations for this process should be a central processing area that is set up at the LPHD. Equipment for cleaning and sterilization should be set up according to the [Sterilization Space and Equipment Management](#_Sterilization_Space_and) section.

### Cleaning and Packaging

#### Instrument Cleaning:

Automated cleaning equipment (e.g., ultrasonic cleaner, washer-disinfector) should be used to remove debris to improve cleaning effectiveness and decrease worker exposure to blood. See the [Central Sterilization Location Workflow Management](#_Central_Sterilization_Location) section of this manual on set up of central sterilization area.

**Instrument Cleaning Process:**

1. All instruments used should be cleaned at point of use with a damp gauze ensuring no bioburden can dry on the instruments
2. Ensure ultrasonic cleaner is correctly set up, filled with enzymatic cleaning solution, degassed and has been tested for efficacy before use
3. Transfer contaminated instruments from transport container to ultrasonic cleaning basket ensuring utility gloves are worn
	1. Clean and disinfect the transport container, inside and out, with approved EPA hospital grade cleaner/disinfectant once it is emptied of contaminated instruments
4. Place the ultrasonic cleaning basket in the ultrasonic cleaner, ensuring all instruments are completely submerged in the enzymatic cleaning solution (Clean & Simple Enzymatic Cleaner)
5. Place the lid on the ultrasonic cleaner to ensure no contaminated aerosols are emitted from the cleaner during the cycle
6. Run the ultrasonic for a cycle time identified in the reprocessing instructions for use for the instruments being reprocessed
7. Using utility gloves, lift the ultrasonic cleaning basket out of the ultrasonic cleaner and rinse the instruments well under running water
8. Place rinsed instruments on a clean towel to be inspected
9. Inspect instruments to ensure the ultrasonic cleaner has removed all visible bioburden from the instruments
	1. If instruments are still visibly soiled, repeat the cleaning cycle in the ultrasonic cleaner
10. Allow instruments to dry before packaging, the following drying techniques can be used:
	1. Air dry instruments
	2. Pat with a clean, dry, lint free cloth

Note: If using ultrasonic cleaner in the community setting, ensure a designated sink is available to dispose of enzymatic solution.

#### Packaging:

After cleaning, dried instruments should be inspected, wrapped, packaged and labeled before heat sterilization. Appropriate labeling can help in retrieving processed items in the event of an instrument processing/sterilization failure.

**Instrument Packaging Process:**

1. While instruments are considered “clean,” they have not been disinfected/ sterilized, a minimum of exam gloves should be worn during instrument packaging
2. Ensure instruments have been cleaned in the ultrasonic cleaner, rinsed well, inspected and dried
3. Package instruments by sets, sealing the packaging according to the packaging instructions for use
4. Label packages with the following information on the seal strip with an “AP” approved Sharpie marker (see photo for correct label placement)
	1. Date of Sterilization
	2. Sterilizer ID (if more than one sterilizer is used)
	3. Load # (if more than one sterilization load is completed on that date)
	4. Operators Initials

### Sterilization and Storage:

#### Autoclave Sterilization:

Sterilization of patient care items is done by steam sterilization to inactivate potentially dangerous pathogens, including spores.

**Instrument Sterilization Process:**

1. While instruments are considered “clean,” they have not been disinfected/ sterilized, a minimum of exam gloves should be worn anytime contaminated instruments are being handled
2. Place labeled packages on tray inserts according to the sterilizer instructions for use and ensure packages are not overlapping or stacked on top of each other
3. Place one (1) Type V Integrator strip in the load with the packages
4. Remove gloves and practice hand hygiene after the contaminated instruments are placed in the sterilizer
5. Close sterilizer door with clean hands, ensuring it is latched
6. Start the sterilizer cycle
7. Allow sterilizer to complete sterilization cycle and entire drying cycle before opening door
	1. Many sterilizer drying cycles can be programmed to extend the drying time if packaging is remaining wet upon completion.
8. Once sterilizer cycle is complete, verify cycle parameters have been met by:
	1. Inspecting all pouches to ensure their internal and external Type I Indicators have changed
	2. Inspecting the Type V Integrator strip to ensure it has met all cycle parameters.
	3. Retrieving cycle data from the sterilizer to ensure all cycle parameters are met, log this data

Note: Detailed instructions on validating cycle parameters can be found in the [Sterilization Equipment/ Cycle Validation Testing and Monitoring](#_Sterilization_Equipment/_Cycle) section.

**Instrument Sterilization Failures:**

The following would be considered sterilization failures and require instruments to be reprocessed:

1. Type I Process Indicator Failure: any Type I Indicators on instrument packages that have not successfully changed should be repackaged and reprocessed
	1. Type I Indicator failures are considered pack specific, if a single pack in a load fails, that pack should be repackaged and reprocessed
	2. This indicates the internal/ external temperature of the sterilization pouch did not meet the minimum requirement and instruments cannot be considered sterile
2. Type V Integrating Indicator Failure:
	1. Type V Integrator failures are considered load specific, if the integrator fails, the entire load should be repackaged and reprocessed
	2. Type V Integrator strips that have not successfully changed indicate either time, temperature or pressure was not met for a successful sterilization cycle
3. Wet Packs: Any instrument packages that are wet when the sterilization cycle is complete should be repackaged and reprocessed.
	1. Wet packs are pouch specific failures, only the pouches that are wet need to be repackaged and reprocessed
	2. Wet paper can wick microorganisms, rendering instruments non-sterile
	3. Wet paper increases the chances the paper will tear, rendering the instruments non-sterile
	4. Consistent or recurring wet packs indicate the need for a process/ equipment review
		1. The [wet pack checklist](https://icap.nebraskamed.com/resource/wet-pack-checklist/) can be consulted
		2. Nebraska ICAP can be contacted to help troubleshoot at (402)552-2881
4. Pouch tears: Any instrument packs that are torn or have had instruments poke through the packaging should be repackaged and reprocessed
	1. Package tears are package specific, only the packages that have tears need to be repackaged and reprocessed

#### Storage:

Once sterilized, all pouches should be inspected for package integrity. Sterile instruments and supplies should be stored in covered or closed storage areas (drawer or cupboard) to prevent the packages from becoming compromised.

Wrapped packages of sterilized instruments should be inspected before opening and use to ensure the packaging material has not been compromised (e.g., wet, torn, punctured) during storage. The contents of any compromised packs should be reprocessed (i.e., cleaned, packaged, and heat-sterilized again) before use on a patient.

### Instrument Sterilization/ Management Resources:

CDC Department of Oral Health. 2024. Standard Precautions. Retrieved from <https://www.cdc.gov/oralhealth/infectioncontrol/summary-infection-prevention-practices/standard-precautions.html/#Sterile>

## Sterilization Equipment/ Cycle Validation Testing and Monitoring

Initial sterilizer effectiveness and ongoing quality assurance testing is required when using steam sterilizers.

### Installation/ Movement/ Repair of Sterilizer Validation Testing

All steam sterilizers should be tested with biological and chemical indicators upon installation, when the sterilizer is relocated, redesigned, after major repair and after a sterilization failure has occurred to ensure they are functioning prior to placing them into routine use.

### Installation/ Movement/ Repair of Sterilizer Resources

Infection Control Today. (2018). *Advice on qualification testing after sterilizer installation*. Retrieved January 29, 2025, from <https://www.infectioncontroltoday.com/view/advice-qualification-testing-after-sterilizer-installation>

#### Installation/ Movement/ Repair Sterilizer Validation Testing Process

1. After installation, movement or repair of any steam sterilizer, validation testing must be completed
2. Place a Biological Indicator test that has been packaged in a sterilization pouch in the sterilizer in the most challenging area of the sterilization chamber
3. Run the shortest sterilization cycle used regularly
4. Remove the Biological Indicator Test once the sterilization cycle and entire drying cycle has been completed
5. Repeat this process twice more for a total of 3 Biological Indicator tests being run in the sterilizer
6. Process sterilizer Biological Indicator tests and a non-sterilized control test from the same test lot according to the manufacturer’s instructions for use
7. Sterilizer should not be used for processing patient care items until 3 negative Biological Indicator tests can be verified
8. Document sterilizer validation testing with date of tests, location of sterilizer and test results

In the event of a Biological Indicator test failure during the sterilizer validation testing process

1. Remove sterilizer from service and quarantine any instruments sterilized by that sterilizer since the last successful Biological Indicator test
	1. Do not use the sterilizer to process any patient care items
2. Perform another Biological Indicator test to verify the first failed test
	1. If you receive another test failure, continue on with the next step
	2. If you receive a passed test, you must follow the validation testing process for equipment Installation/ Movement/ Repair as listed above
3. Contact the service tech for the sterilizer to perform an evaluation and service/ repair the sterilizer
4. Once the sterilizer has been repaired, follow the Installation/ Movement/ Repair Sterilizer Validation Testing Process as listed above before using the sterilizer for patient care items
5. After successful validation testing, all quarantined instruments should be cleaned, repackaged, labeled and sterilized before patient use

### Chemical Indicators/ Integrators

Chemical indicators indicate that the item has been exposed to a certain parameter of the sterilization process. Chemical indicators should be used in conjunction with biological indicators for cycle testing.

Chemical indicators are integrated into the pouch packaging to include both internal and external indicators and show how that the package has been processed through a sterilization cycle, but these indicators do not prove sterilization has been achieved. Chemical indicators are either heat-or chemical-sensitive inks that change color when one or more sterilization parameters (e.g., steam-time, temperature, and/or saturated steam) are present.

Chemical indicators have been grouped into five types based on their ability to monitor one or multiple sterilization parameters. Type I and Type V are used regularly to ensure steam sterilization cycle parameters are being met.

#### Type I Chemical Indicators

Every instrument package should include an internal and external Type I Chemical Indicator. Purchased sterilization pouches have a Type I internal and external chemical indicator printed on them. DHCP should be trained on how to identify these indicators have changed, validating the sterilization parameter (most often temperature) has been met during the sterilization cycle.

Any internal or external Type I Chemical Indicator that has not changed to indicate a successful sterilization cycle should be considered a failure and the instruments in those packages should be reprocessed.

#### Type V Chemical Integrators

Type V Chemical Integrators measure multiple parameters, like time, temperature and pressure, throughout the sterilization cycle. These tests verify that all sterilization parameters are met and are used as an indication of successful sterilization to release instruments for use.

Type V Chemical Integrator tests are purchased separately, and team members should be trained on how to identify these integrators have changed, validating the sterilization parameters they measure have been met during the sterilization cycle.

A Type V Chemical Integrator test strip should be included in each sterilization load. Any Type V Chemical Integrator that has not changed to indicate a successful sterilization cycle should be considered a failure and all the packages in the load should be reprocessed.

### Biological Indicators

Biological indicators are recognized as being closest to the ideal monitors of the sterilization process because they measure the sterilization process directly by using the most resistant microorganisms (i.e., Bacillus spores), and not by merely testing the physical and chemical conditions necessary for sterilization. Since the Bacillus spores used in biological indicators are more resistant and present in greater numbers than are the common microbial contaminants found on patient-care equipment, the demonstration that the biological indicator has been inactivated strongly implies that other potential pathogens in the load have been killed during the sterilization cycle.

A Biological Indicator test should be completed at least weekly for all steam sterilizers in use, even if the sterilizer is not being actively used to process instruments. If a program decides a Biological Indicator test will not be run weekly, they should identify a regular testing plan that will allow them to test the autoclave efficacy with enough time to troubleshoot an issue before the autoclave is needed.

Biological Indicator Testing:

1. DHCP should identify the day of the week upon which biological indicator testing will consistently be performed (i.e., it is important that the routine be established that no more than 7 days should pass between tests)
2. Place a Biological Indicator test that has been packaged in a sterilization pouch in the sterilizer in the most challenging area of the sterilization chamber
3. Run the shortest sterilization cycle used regularly
4. Remove the Biological Indicator Test once the sterilization cycle and entire drying cycle has been completed
5. Process sterilizer Biological Indicator tests and a non-sterilized control test from the same test lot according to the manufacturer’s instructions for use
6. Document regular Biological Indicator testing with the test date, sterilizer identifier (if needed with multiple sterilizers in use), test result, control result and operator

A Biological Indicator test failure indicates the sterilizer is not effectively destroying spores. In the event of a failure the following should be done:

1. Remove sterilizer from service
	1. Do not use the sterilizer to process any patient care items
2. Identify and quarantine any instruments that are dated from sterilization loads the date of the Biological Indicator test or after
	1. These instruments are considered not sterile and should not be used for patient care
	2. Once the sterilizer is functioning properly, they will need to be reprocessed before any patient care activities
3. Perform another Biological Indicator test as outlined above to verify the first failed test
	1. If you receive another test failure, continue on to the next step
	2. If you receive a passed test, you must follow the validation testing process for equipment Installation/ Movement/ Repair
4. Contact the service tech for the sterilizer to perform an evaluation and service/ repair the sterilizer
5. Once the sterilizer has been repaired, follow the Installation/ Movement/ Repair Sterilizer Validation Testing Process as listed above before using the sterilizer for patient care items
6. After successful validation testing, all quarantined instruments should be cleaned, repackaged, labeled and sterilized before patient use

### Physical Monitoring

The physical monitors for steam sterilization include the assessment of cycle time and temperature by examining the sterilizer printout or an assessment of pressure and temperature during the sterilization cycle via the sterilizer gauges or displays.

Review the instructions for use for the sterilizer being used to determine the best method of physical monitoring. Document physical parameters of each load completed.

\*Physical monitoring should be completed every day the sterilizer is used, if no cycles were run during the day, physical monitoring does not need to be done.

### Equipment Validation Testing/ Monitoring Resources

CDC. 2024. Sterilizing Practices. Retrieved from <https://www.cdc.gov/infection-control/hcp/disinfection-sterilization/sterilizing-practices.html>

# Special Procedures

## Denture/ Appliance Cleaning

On site denture or appliance cleaning with an Ultrasonic Cleaner is an effective way to remove gross bioburden and tartar. This process must be done in a way that prevents cross-contamination.

#### Denture/ Appliance Cleaning Process

1. Clean and disinfect ultrasonic cleaner
	1. The ultrasonic cleaner should not be used to clean any other patient care items during denture/ appliance cleaning. The tank should be considered clean
2. Fill ultrasonic cleaner with water and enzymatic solution and degas according to the manufacturer’s instructions for use
3. Don appropriate PPE, including mask, eyewear, protective clothing and gloves
4. Place denture/ appliance into a [PET food grade plastic cup](https://www.americanbeverage.org/education-resources/blog/what-is-pet/#:~:text=PET%20(polyethylene%20terephthalate)%20is%20a,plastic%20in%20the%20United%20States.) with a lid
	1. Polyethylene Terephthalate (PET) food grade plastic cups have been shown to not effect the sonic action of the ultrasonic cleaner
	2. Any patient denture/ appliance should remain contained in the PET cup to ensure no contamination of the solution in the ultrasonic tank
5. Submerge denture/ appliance in a cleaning solution inside the PET cup
6. Place the PET cup into the ultrasonic cleaner, ensuring it stands without tipping over
	1. A beaker/ cup stand can be purchased for the ultrasonic cleaner to assist with this
7. Run the ultrasonic cleaner for at least 20 minutes
8. Remove the PET cup, wearing appropriate PPE
9. In the identified sink, remove the denture/ appliance from the solution and brush with a single-use denture brush to remove remaining bioburden
10. Once denture is clean, disinfect and rinse before returning to the patient

## Denture Adjustments

Denture adjustments to ensure patient comfort may need to be completed. This process should be done in a way that prevents cross contamination.

#### Denture Adjustment Process

1. Clean and disinfect identified patient care area
2. Set up the patient care area
3. Attach straight nose cone handpiece to handpiece tubing and have acrylic burs available
4. Have patient remove denture and identify where sore spots may be
	1. Pressure Indicating Paste (PIP) (PIP single-use packets/ brushes) or a marking stick may be used to help pinpoint area
		1. PIP can be supplied in a multi-use container, to prevent cross contamination, dispense the amount needed onto the tray to be used during the appointment. If more PIP is needed, DHCP must remove gloves, perform hand hygiene, dispense additional PIP onto a clean surface and don gloves before proceeding
		2. Marking sticks are single use and should be discarded after use
5. Use straight nose cone and acrylic bur to reduce the acrylic in the area that is causing discomfort
6. Repeat denture try in and adjustment process until patient is comfortable
7. Clean denture according to the denture cleaning process

# Sterilization Space and Equipment Management

## Central Processing Location, Set up and Workflow Management

The central processing area(s) should incorporate a dirty to clean workflow and be divided into at least three areas:

1. Decontamination (contaminated):
	1. Physical barriers should separate the decontamination area from the other sections to contain contamination on used items. In the decontamination area reusable contaminated supplies are received, sorted, and decontaminated
2. Packaging (contaminated):
	1. The packaging area is for inspecting, assembling, and packaging clean, but not sterile, material
3. Sterilization and Storage (clean):
	1. The sterile storage area should be a limited access area with a controlled temperature (may be as high as 75°F) and relative humidity (30-60% in all work areas except sterile storage, where the relative humidity should not exceed 70%)

The program should identify a space that meets their requirements for a sterilization area. This may be a counter space with room for the sterilization equipment and a packaging/ storage area. Proximity to a sink should also be taken into account as water and a drain will be needed for the sterilization process. The floors and walls should be constructed of materials capable of withstanding chemical agents used for cleaning or disinfecting. Ceilings and wall surfaces should be constructed of non-shedding materials.

The recommended workflow pattern should contain contaminates within the decontamination area and prevent the flow of contaminates to the clean areas. The size and shape of the space used for the central processing area will affect equipment set up and workflow.

Once the workflow has been determined for the space available, equipment can be set up in the appropriate areas. Please refer to the manufacturer’s instructions for each piece of equipment, how to set it up properly and how to maintain it.

Examples of workflows based on physical space include:



**Modern Dental Assisting;** 14th Edition - April 12, 2023; Author: Debbie S. Robinson; Hardback ISBN: 9780323824408

### Central Processing Location, Set up and Workflow Management Resources

CDC. 2024. Sterilizing Practices. Retrieved from <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/sterilization/sterilizing-practices.html>

Pocket Dentistry. 2024. Instrument Processing. Retrieved from <https://pocketdentistry.com/8-instrument-processing/>

# Documentation Requirements

Documentation of infection control processes is critical to ensure that equipment and procedures are being conducted regularly and any actions that might be taken during these processes.

There are documentation templates available from multiple sources or you may create your own logs with the required information. Some brand specific products supply logs for their products, please check your manufacturer’s instructions and tools to find these documents.

In general all records must be kept for at least 3 years, but it is recommended to keep them longer (e.g., the life of the equipment).

Documentation records can be kept as a hard copy or as a digital copy, this preference can be determined when systems are being created. All records must be easily accessible by all staff at all times.

Here are general recordkeeping guidelines for different areas:

### Sterilizer Cleaning and Maintenance records

#### Weekly Cleaning

* Date
* Cleaning Process Points
* Operator Initials

#### Monthly Cleaning

* Date
* Cleaning Process Points
* Operator Initials

#### Monthly Gasket Check

* Date
* Gasket Inspection and Cleaning Process Points
* Operator Initials

Template:

[Nebraska ICAP Sterilizer Maintenance Log Template](https://icap.nebraskamed.com/wp-content/uploads/sites/2/2019/04/Sterilizer-Maintenance-Log.docx)

### Sterilizer Validation Testing Records

#### Sterilizer Qualification Testing

* Date of equipment move/ set-up/ repair.
* Reason for equipment move/ set-up/ repair.
* Date of testing
* Test results.
	+ 3 Biological Indicator test results
	+ Control test result.
* Any actions taken due to test results.
* Operator’s Initials

Template:

[Nebraska ICAP Sterilizer Validation Testing Log Template](https://icap.nebraskamed.com/resource/sterilizer-validation-testing-log/)

#### Sterilizer Load ID/ Class V Testing/ Physical Monitoring

* Date
* Load # of the day.
* Sterilizer ID (if needed)
* Instruments included in load.
* Time In/ Time Out
* Class V Integrator test result
* Sterilization Parameters

Template:

[Sterilizer Load Log](https://icap.nebraskamed.com/wp-content/uploads/sites/2/2019/04/Sterilizer-Test-Log.xlsx) (Daily log)

#### Weekly BI Testing

* Date
* Lot # (All tests used for a test round must come from the same lot #)
* Load #
* Sterilizer ID (If needed)
* Test results.

Template:

[Sterilizer BI Test Log](https://icap.nebraskamed.com/wp-content/uploads/sites/2/2019/04/Sterilizer-test-record.docx)

### Ultrasonic Cleaner Testing Records

#### Daily (when used) Ultrasonic Cleaner Degassing Log

* Date
* Operator’s Initials

#### Weekly Ultrasonic Cleaner Function Test

* Date
* Test result.
* Operator’s Initials

Ultrasonic Cleaner Log is Included in [Sterilizer Load Log](https://icap.nebraskamed.com/wp-content/uploads/sites/2/2019/04/Sterilizer-Test-Log.xlsx) template above

### Dental Unit Waterline Maintenance and Testing Records

#### Regular Dental Unit Waterline Shock

* Date
* Chemical Used
* Time started.
* Time flushed.
* Operator’s Initials

#### Dental Unit Waterline Testing

* Date
* Unit sampled.
* Was it a pooled sample?
* Test type used.
* Sample time.
* Test result.
* Any actions taken due to test results.
* Operator’s initials

[Pro Edge Quick Pass Waterline Test Log](https://proedgedental.com/wp-content/uploads/2022/10/quickpass-log-two-page-v06.pdf)

[Hu-Friedy Waterline Test Sample Log](https://proedgedental.com/wp-content/uploads/2022/10/quickpass-log-two-page-v06.pdf)