

Understanding IPC: Beyond PPE

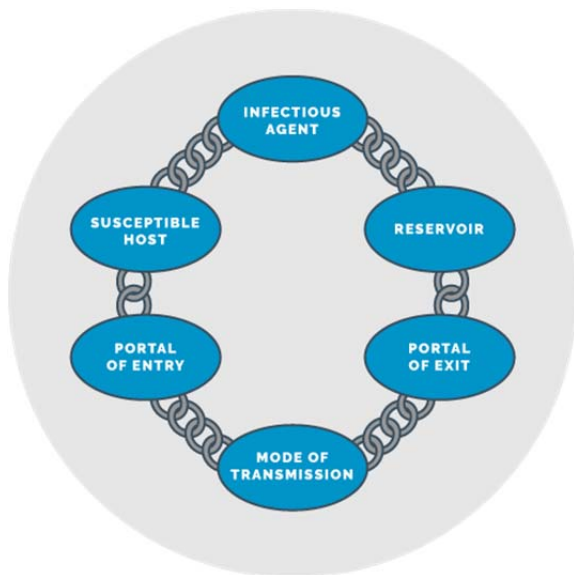
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Understanding Infection Prevention and Control – PPE is not the First Defence

Working in dentistry has always presented risk due to the possibility of disease transmission. To best protect your patients, coworkers and yourself, you need to understand how diseases are transmitted and how to prevent transmission.

Chain of Infection

Understanding the Chain of Infection is important. This is a chain that is **meant to be broken** to stop the disease from spreading. Disease transmission is more likely to occur when a practitioner does not have a clear understanding of how to break the Chain of Infection. You will note that while personal protective equipment (PPE) is one tool to break the chain, there are other precautions that must be considered as a line of defence.



1. **Pathogen** – infectious agent capable of carrying the disease – bacteria, fungi, viruses, prions

Break the Chain through

1.
 - a. understanding infection prevention policies and procedures
 - b. sanitizing or cleaning
 - c. disinfecting
 - d. sterilizing

2. **Reservoirs** – in people, equipment, water

Break the Chain through

1.
 - a. patient screening

- b. reducing the number of staff/patients in contact with each other
- c. handwashing
- d. housekeeping
- e. flushing lines

3. **Portals of Exit** – blood, saliva, skin, excretion, aerosols

Break the Chain through

- 1.
 - a. reduction of aerosols – use of high-volume evacuation and dental dam isolation
 - b. patient/ staff isolation
 - c. respiratory etiquette
 - d. hand washing
 - e. PPE

4. **Modes of Transmission** – can be direct or indirect-physical, contact, droplets, airborne

Break the Chain through

- 1.
 - a. proper PPE fit
 - b. properly donning and doffing PPE
 - c. handwashing
 - d. cleaning, disinfection and sterilization
 - e. redesign or rearrange workplace settings

5. **Portals of Entry** – mucous membrane, respiratory system, digestive system, broken skin

Break the Chain through

- 1.
 - a. handwashing
 - b. PPE
 - c. covering wounds
 - d. physical distancing

6. **Susceptible Host** – immune deficient, diabetes, age, surgery, ADA&C Covid-19 Risk Levels*

Break the Chain through

- 1.

- a. screening patient/staff for level of risk
- b. stress reduction
- c. diet and exercise
- d. immunizations when possible
- e. intact skin

*See *Determining Patient COVID-19 Risk* in the Alberta Dental Association and College's [Expectations and Pathway for Patient Care during the COVID-19 Pandemic](#)

Use PPE Effectively

If you don't wear, [don](#) and [doff](#) PPE properly it will not break the chain. Have a co-worker support you as they watch you put on and take off your PPE. They may notice a breach in infection control practices that you are not aware of.

You also must choose PPE that is appropriate to the level of risk. Alberta Health Services has developed a [Point of Care Risk Assessment \(PCRA\)](#) that can help determine if the task you are about to perform is complying with routine practices guidelines. Refer to our [COVID-19 Return to Non-essential Practice](#) and the ADA&C's [Expectations and Pathway for Patient Care during the COVID-19 Pandemic](#) to determine what PPE is appropriate based on procedure performed.

Infection Prevention and Control

We – every dental practitioner – must be diligent in applying infection prevention and control practices. Every community dental practice should already have their own Infection Prevention and Control Manual including policies specific to the practice. Refer to your manual often. Does it need to be updated? Are there components missing from it?

If you don't apply the basics of proper hand hygiene, cleaning and disinfecting, it won't matter what type of PPE you are wearing. If a surface contains pathogens due to an unclean environment and it is touched by a practitioner wearing gloves, the glove will continue to transfer the pathogen. If you purchase an N95 respirator (or equivalent) and don't have it properly fit tested, you may as well wear any surgical mask that also doesn't seal.

Understand Why

You need to know why you are doing what you are doing.

- What is the purpose of a face shield as compared to safety glasses?
- If you wear safety glasses, do you ensure that you wash your face before leaving work each day?
- Do you understand the modes of transmission and how an aerosol procedure is different than sitting in an operatory recording information during an exam?
- Are you looking at the manufacturer's instructions for use for all products you are using?
- Does a disinfectant require a specific amount of contact time to be effective?

Now, more than ever, we all need to look at our habits and find ways that we can work as a team to supportively educate ourselves in the concepts of infection prevention and control. The [ADA&C IPC Standards](#) and the emails we send you with updates to guidelines for practice are resources to help you safely navigate COVID-19 and beyond. Stay informed, work as a team to support each other in protecting the public and yourselves, look at methods to reduce risk through engineering and environmental controls and put your patients' safety first.