

Root of the Matter: Part One - Infection Prevention and Control: Routine or a Wash?

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Are your “Routine Practices” for infection prevention and control (IPAC) so routine that they may not be up to standard? Are you sure you’re protecting your clients and yourself by proper use of personal protective equipment (PPE)? Is your hand hygiene a wash? Do you feel confident that the disinfection and sterilization measures in your practice setting are keeping your clients safe? One might think that “Routine Practices”, preventing cross-contamination and instrument processing are basic IPAC knowledge for all dental hygienists and that breaches in the standard would not occur. However, the media has recently covered several breaches in IPAC causing dental clinics to be shut down in Ontario, Oklahoma and Colorado. Furthermore, the [May 2017 issue of Access](#) contained information related to an inquiry case involving infection control breaches by a BC dental hygienist.



The College is aware that most registrants are conscious of the guidelines for IPAC and application of these in the practice setting in a manner that upholds the IPAC standards. However, a review is never a bad idea. With summer winding down and children back in school, the College felt this was an ideal time to provide a refresher on a few key IPAC measures. As there are multiple IPAC guidelines, this topic will be shared in a two-part article.

Due to their knowledge, abilities and clinical judgement, dental hygienists are in the perfect position to be leaders within the dental team by consistently implementing and upholding IPAC to ensure client safety. While little has changed with foundational knowledge of IPAC, dental hygienists must remain current with new IPAC best practices, products and evidence-based information related to IPAC standards and apply these in practice.

Breaches in IPAC not only pose a risk to the clinician, but to each client cared for in a dental hygiene clinical setting. When there is a momentary lapse in IPAC measures, there is the potential for the transmission of infectious disease. When it comes to IPAC, even if the dental hygienist is not directly responsible for processing his/her own instruments, as a self-regulated health professional, dental hygienists are responsible for upholding the College of Dental Hygienists of BC (CDHBC) Bylaws. The specific Bylaws that pertain to IPAC include the following:



- [Practice Standard #2](#): the need for a dental hygienist to practice safely.
- [Code of Ethics #1 and #2](#): the need to ensure that care provided upholds the health and welfare of the clients, and that care is provided in a safe environment.

In 2012, the CDHBC in collaboration with the College of Dental Surgeons BC (CDSBC) published [Infection Prevention and Control Guidelines](#). The CDHBC IPAC Guidelines provide greater detail than the information contained in this article. As such, they should be used as a resource in your practice setting to uphold the IPAC standards.

Each clinical encounter is slightly different and therefore professional judgment related to IPAC should be exercised. A limited number of IPAC guidelines have been expanded upon in the following table based on questions and/or concerns brought to the attention of the College. This table includes brief information related to the topic heading along with tips on how to meet the selected IPAC standard.

IPAC – PART ONE^{1,2}	
HAND HYGIENE	
<ul style="list-style-type: none"> • Single most important measure for preventing the transmission of microorganisms • Use plain or antimicrobial liquid soap with running water or a 70-90% alcohol-based hand rub (ABHR) 	
Complete hand hygiene:	<ul style="list-style-type: none"> • When hands are visibly soiled • After multiple applications of ABHR³ • Before and after direct contact with clients • After donning face mask and protective eyewear and before donning gloves • After removing PPE such as gloves and facemask • After contact with environmental surfaces, instruments or other equipment in the dental operatory • After contact with dental lab materials or equipment • Before and after eating or drinking • In view of the client to increase client confidence in IPAC measures in the office • Following personal body functions (e.g., blowing nose or using washroom)
Jewelry:	<ul style="list-style-type: none"> • Interferes with proper hand hygiene and therefore needs to be removed • Carries pathogens and may puncture gloves, therefore should be avoided (other than a simple band)³
Nails and artificial nails:	<ul style="list-style-type: none"> • Harbour microorganisms that can be transmitted to clients, therefore: <ul style="list-style-type: none"> ○ Clean under nails with a manicure stick (nailbrush not recommended) ○ Keep nails short enough to ensure thorough cleaning and prevent glove tears ○ Artificial nails should be avoided as they have been implicated in outbreaks of fungal and bacterial infections in hospitals ○ Ensure nail polish is not chipped ○ Nail art should be avoided³
Splints, casts, complex bandages:³	<ul style="list-style-type: none"> • Reduce effective hand hygiene unless they can be thoroughly washed/disinfected between clients • That prevent effective hand hygiene and/or pose a risk of potential cross-contamination between clients may require the dental hygienist to step back from direct client care until the splint, cast or complex bandage is no longer required
Additional Information:	<p>For Hand Hygiene:</p> <p>Liquid soap:</p> <ul style="list-style-type: none"> • Roll up long sleeves • Run water and keep at a warm, not hot, temperature • Use enough soap to lather all surfaces of the hands (all fingers, thumbs, between fingers, palms, back of hands, base of thumb) and exposed forearms • Rub vigorously for a minimum of 15 seconds

	<ul style="list-style-type: none"> Rinse hands thoroughly in a downward position under the running water <p>ABHR:</p> <ul style="list-style-type: none"> Apply to all hand surfaces and rub until the product has dried <p>Drying hands:</p> <ul style="list-style-type: none"> Use a single use disposable towel to thoroughly dry hands Use the single use towel to turn off water faucet after drying hands <p>Other:</p> <ul style="list-style-type: none"> Hand lotion should be applied regularly to maintain healthy skin Petroleum based lotions affect the integrity of gloves and should not be used Open cuts and areas of dermatitis should be covered with a waterproof bandage prior to donning gloves
PERSONAL PROTECTIVE EQUIPMENT (PPE)	
<ul style="list-style-type: none"> Shields the dental hygienist's personal tissue from blood, saliva or other potentially infectious material Protects the client from potentially infectious material and debris generated during care Should be removed before leaving the working area 	
<p>Gloves:</p> <ul style="list-style-type: none"> Provide protection of the operator hands to reduce contamination 	<ul style="list-style-type: none"> Are not free of micro leaks and may tear; therefore, proper hand hygiene prior to donning and after removal is required Need to be worn when contacting the mucous membrane, non-intact skin (e.g., exposed skin that is abraded or has dermatitis), body fluids or contaminated equipment Are for single client use and must never be re-used Should be put on immediately before appropriate dental hygiene activities Must never be washed and should be discarded immediately after use Should not be worn outside of any room/area where they are required for personal protection Must never touch the face, hair, mask, protective eye wear, or clothing; if unintentional contact occurs, follow the hand hygiene process and don new gloves
<p>Protective eyewear:</p> <ul style="list-style-type: none"> Protects the operator and client's eyes from contamination and/or trauma 	<ul style="list-style-type: none"> May be in the form of safety glasses or a face shield Must be cleaned and disinfected between clients or whenever notably contaminated Should be donned with clean ungloved hands Needs to be provided for clients Must be worn when using a spray to disinfect the operatory and to protect against possible splashes during use of the ultrasonic bath and/or other chemicals <p><u>Note:</u> An eyewash station should be available to manage contact of the conjunctive mucosa with body fluids or chemicals/solvents.</p>
<p>Face mask:</p> <ul style="list-style-type: none"> Protects operator respiratory mucosa from potentially contaminated droplets and chemicals/ solvents 	<ul style="list-style-type: none"> Must cover the nose and mouth and: <ul style="list-style-type: none"> Not contact lips or nostrils Have no gaps on the sides of mask Must be changed: <ul style="list-style-type: none"> Between clients If they become soiled or wet <p><u>Note:</u> The CDC recommends a facemask that provides >95% bacterial filtration efficacy.⁴ Many dental mask manufacturers use the American Society for Testing</p>

	and Materials (ASTM) performance level standards to rate fluid resistance, bacterial and particle filtration. If choosing a dental face mask based on ASTM performance levels, consideration should be given to the dental hygiene procedure being performed.
Protective draping: <ul style="list-style-type: none"> Protects the client's clothing from spatter and debris 	<ul style="list-style-type: none"> Should be in the form of a single use bib Should be secured with: <ul style="list-style-type: none"> A single use client strip, or A bib clip that can be sterilized between clients
Protective clothing: <ul style="list-style-type: none"> Protects personal clothing and skin from aerosols, blood and body fluids and other infectious material 	<ul style="list-style-type: none"> Worn during client care should not be worn outside the dental/dental hygiene office May consist of the following: <ul style="list-style-type: none"> Short-sleeved scrubs Long-sleeved garments which are intended to be client specific and changed between clients <p><u>Note:</u> If skin of the arm is not intact, long-sleeved garments such as an over-gown should be worn over clinic clothing.</p>
RESPIRATORY HYGIENE²	
<ul style="list-style-type: none"> Part of a newly developed protocol by the Center for Disease Control (CDC) to reduce the transmission of respiratory pathogens Applies to the dental professional and/or client with signs of illness (e.g., cough, congestion, runny nose or excessive mucous) 	
Cough etiquette in dental settings:²	<ul style="list-style-type: none"> Should be posted at the office entrance highlighting the following: <ul style="list-style-type: none"> Cover mouth/nose when coughing/sneezing Use disposable tissues Perform hand hygiene after a cough/sneeze Should include providing: <ul style="list-style-type: none"> Tissues for touching contaminated garbage bin lids and/or no-touch garbage cans for tissue trash Signs for proper hand hygiene Masks for those coughing as they enter the office A space for those with respiratory infections as far away from other clients as possible Education for those working in the dental clinic setting on how to prevent the spread of respiratory secretions
SHARPS SAFETY	
<ul style="list-style-type: none"> Includes the prevention of percutaneous injuries involving needles, sharp instruments, burs etc. 	
The dental hygienist should:	<ul style="list-style-type: none"> Keep sharps out of reach of clients Not place an uncapped needle on the tray Use the one-handed scoop technique when recapping or a safe re-capping device Remove all sharps from the tray prior to processing instruments Use heavy-duty utility gloves when handling instruments during transfer for processing Be familiar with the CDHBC Blood and Body Fluid Exposure Management Interpretation Guideline Ensure due diligence when using, cleaning up and disposing of sharps Dispose of sharps in a yellow puncture-proof, leak-proof container clearly labeled "sharps"

		<u>Note:</u> Once the sharps container is full, contact a biomedical waste carrier for disposal.
DENTAL UNIT WATER QUALITY		
<ul style="list-style-type: none"> Dental unit water lines promote bacterial growth and development of biofilm if water is not appropriately treated 		
<ul style="list-style-type: none"> Narrow waterlines can become colonized with microorganisms and may cause safety concerns for those clients who are immunocompromised or have certain respiratory conditions 	<ul style="list-style-type: none"> Do not use waterline heaters Purge waterlines at the beginning of each day for 2-3 minutes including ultrasonic handpieces (without insert) and the air/water syringe (without tip) Purge waterlines for 20-30 seconds between clients If using closed-water delivery systems, follow manufacturer’s instructions for daily and weekly maintenance If general waterline sterility cannot be ensured, use a bulb syringe or single-use disposable product 	
EATING & DRINKING		
<ul style="list-style-type: none"> To prevent occupational exposure to infectious microorganisms, eating and drinking should not occur in the operatory, dental laboratories, or instrument processing area Limit food consumption to designated areas such as the staff lounge or lunch room 		

Oversight of IPAC measures outside the dental hygiene operatory are ultimately the responsibility of the clinic owner, and not necessarily the dental hygienist. However, as a self-regulated health professional, knowledge and modeling of best practice in IPAC will ensure the prevention of disease transmission while upholding safe and ethical practice. Before you see your next client, ensure your “Routine Practices” are part of your daily routine. If there is any area that is not quite up to the CDHBC IPAC Guidelines, this is the perfect time to get back on track in order to protect your clients, yourself and others working in the dental office.

References:

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