LEARNING MODULE

FOR

Routine Practices and Additional Precautions

(IPC-RP-001)

Developed By: Infection Prevention and Control, Nova Scotia Health Authority (NSHA)

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TABLE OF CONTENTS

Purpose

This learning module is to be utilized as a supplement to the Routine Practices and Additional Precautions policy (IPC-RP-001). It includes information necessary to support the policy. It contains a large section on the selection and use of personal protective equipment (PPE) and is intended to be read by all staff, physicians, learners and volunteers who would utilize the policy in their work.

Learning Objectives

Upon completion of the module participants will have a better understanding of the use of routine practices and additional precautions. They will be able to implement the policy to its full capacity.

Module Requirements/Methods

1. Review Routine Practices and Additional Precautions Policy (IPC-RP-001)

2. Review theory content of Learning Module

Theory/Content

Background Information

Microorganisms can be transmitted from symptomatic and asymptomatic individuals, emphasizing the importance of adhering to routine practices at all times for all patients in all healthcare settings.

- **Routine practices** - The primary goal of routine practices is to reduce the risk of acquiring a health care- associated infection (HAI) to a minimum level. At times, routine practices are not sufficient to control the risk and the use of additional precautions (contact, droplet, airborne) is required.
- **Contact precautions** are interventions to be used in addition to routine practices for microorganisms where contamination of the environment or intact skin is a particular consideration. For example MRSA, VRE, and enteric infections.
- **Droplet precautions** are interventions to be used in addition to routine practices to protect staff, patients and visitors from microorganisms that can be spread by droplets, for example, during coughing and/or sneezing. Examples of droplet spread microorganisms include but are not limited to: Respiratory Synctival Virus (RSV), Influenza, Pertussis, etc.
- **Airborne precautions** are interventions to be used in addition to routine practices to protect staff, patients and visitors from microorganisms that can be spread by the airborne route. Examples of airborne spread microorganisms include but are not limited to: Measles, Tuberculosis, etc.

When the patient's condition/clinical presentation is known, refer to the Disease Index/Transmission Based Summary Table for information on route of transmission, incubation periods, periods of communicability, precautions to be utilized, etc.

Engineering controls also help to control the spread of microorganisms. These are measures built into the infrastructure of the healthcare setting and shown to reduce the risk of infection to staff and patients. They include such things as:

1. Single rooms
2. Hand washing sinks
3. Point-of-care placement of alcohol based hand rubs (ABHR)

4. Patient care equipment in good repair
5. Point-of-care sharps containers
6. Sufficient air exchanges per hour appropriate to the care setting.

Routine Practices

Point of Care Risk Assessment

The application of routine practices and additional precautions is based on a point of care risk assessment (PCRA). A PCRA needs to be done by the healthcare worker prior to every interaction with a patient or the patient's environment to ensure the proper control measures are in place to prevent the transmission of microorganisms. The PCRA is based on judgment of the clinical situation (patient's condition, including physical, emotional and mental state) and most current information about the organizations engineering and administrative controls and the accessibility of personal protective equipment (PPE).

Before each patient interaction, the health care worker asks these questions to determine the appropriate Routine Practices and Additional Precautions for safe care:

1. What are the patient's symptoms?
2. What is the degree of contact?
3. What is the degree of contamination?
4. What is the patient's level of understanding and cooperation?
5. What is the degree of difficulty of the procedure being performed and the experience level of the care provider?
6. What is my risk of exposure to blood, body fluids, excretions, secretions, non-intact skin and mucous membranes?

Note: Staff who do not provide direct clinical care to patients may not have access to the answers to the above questions to determine actions. Staff involved in unit activities (porter/escort services, environmental services, laundry services) should take note of any additional precaution signage (contact, droplet, airborne) posted in the patient environment and follow the recommendations for the use of personal protective equipment. Communication with all team members should occur at a unit level.

Hand Hygiene

Follow the 4 Moments of Hand Hygiene:

Moment 1 Before Patient/Patient Environment

Moment 2 Before Aseptic Procedure

Moment 3 After Body Fluid Exposure Risk

Moment 4 After Patient/Patient Environment

Source Control

Source Control measures are strategies used to contain microorganisms from spreading from an infectious source.

Strategies include:

- Triaging promptly in emergency departments and other settings.
- Obtaining travel history.
- Having physical barriers in triage for acute assessment (e.g. plexiglass partitions, PPE availability).

- Having visible signage present for early recognition of symptoms and instructions for patients.
- Having masks, tissues, alcohol based hand rub (ABHR), etc. available for use by patients and family members experiencing symptoms.
- Ensuring symptomatic patients are assessed in a timely manner and early diagnosis and treatment of infection are implemented (e.g. tuberculosis, influenza, noro-like viruses).
- Using and encouraging respiratory hygiene such as covering coughs and sneezes.
- Performing and encouraging hand hygiene.
- Maintaining a space separation of two meters between patients and/or separate waiting areas for patients with and without symptoms of droplet spread illness.
- Implementing strategies to reduce aerosol generation during aerosol generating medical procedures (e.g. bronchoscopy, sputum induction, etc.).

Patient Accommodation and Flow

Single Rooms are preferred for patients at a higher risk of spreading microorganisms. When a single room is not available, consult Infection Prevention and Control (IPAC). When cohorting must occur the following are taken into account:

- Route of transmission of infectious agent (known or suspected) e.g. contact, droplet and airborne.
- Patient risk factors for transmission (e.g. hygiene, wounds, indwelling devices, cognitive status).
- Risk factors of other patients in the unit (e.g. patients undergoing chemotherapy, receiving steroids).

Other strategies that assist in source control include:

- Creating barriers between patients (e.g. pull the privacy curtains). *Note*: Do not touch privacy curtains with soiled hands or soiled gloves.
- Limiting transfers to only those that are medically essential. Work together with IPAC for questions or guidance.

Aseptic Technique

Aseptic technique is utilized for invasive and sterile procedures, including, but not limited to, the insertion of central lines, handling of intravenous systems, spinal procedures, and safe injection practices (including the use of multi-dose vials). Interdisciplinary clinical policies related to these and other procedures will include elements of aseptic technique.

To avoid contamination and waste, the minimum amount of clean supplies (e.g. a 24 hour supply for inpatients) should be kept in patient's rooms and not stored on window sills or near sinks.

Supplies must be protected from dust and moisture to maintain integrity.

Areas for eating and drinking shall be separated by walls from locations where medical devices are stored or handled. (CSA, 2008).

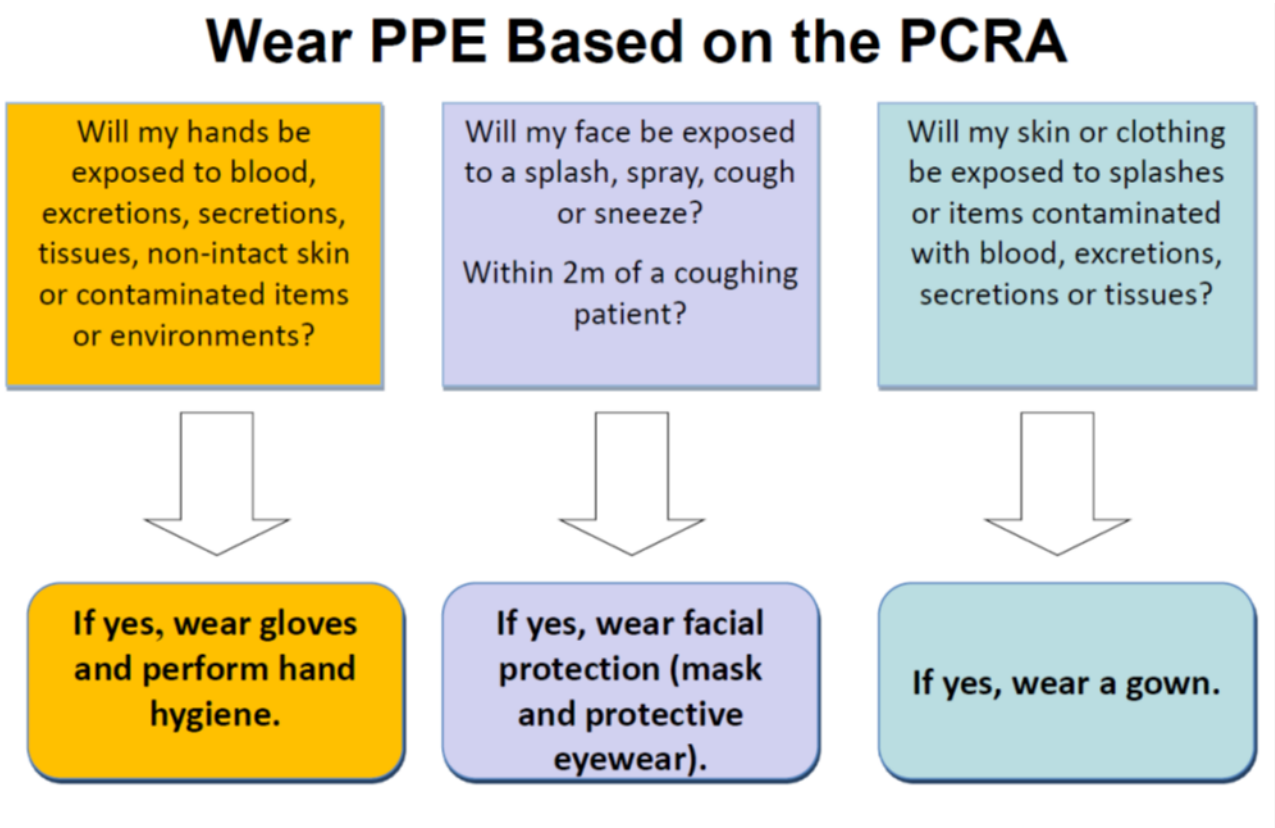
Personal Protective Equipment

PPE is used to prevent the spread of microorganisms to the patient and from the patient/patient environment to the healthcare worker.

The selection of PPE is based on:

- The nature of the interaction with the patient and/or the environment.
- The PCRA (e.g. risk of exposure, patient's symptoms).

NOTE: It is important not to adjust PPE during patient care activities and to remove correctly. Adjusting PPE during patient care and improper PPE removal increase risk of self-contamination.



Gowns

Gowns are worn when there is a risk that clothing may become exposed to blood, body fluids, and excretions, or when close contact may lead to contamination by microorganisms from the patient, materials or equipment.

Gowns used as PPE should be cuffed and long-sleeved, and offer full coverage of the body (front and back) from neck to mid-thigh or below.

Long-sleeved gowns protect the forearms and clothing of the healthcare worker from splashing and soiling with blood, body fluids and other potentially

infectious material. Gowns are rated based on the level of fluid resistance they provide (AAMI rating). Select a gown based on your point of care risk assessment.

Scrubs or laboratory style coats/jackets worn over clothing are not considered to be PPE and must not be worn in place of a gown.

Appropriate Gown Use

- Gowns are to be worn when providing care for patients if PCRA indicates or patient requires additional precautions.
- When use of a gown is indicated, the gown must be put on immediately before the task and must be worn properly, i.e., opening of the gown in the back, tied at top and around the waist.
- Remove the gown after the task and patient for which it has been used. Remove the gown in a manner that prevents contamination of clothing or skin and prevents agitation of the gown.
- Discard used gown immediately after removal into appropriate receptacle.
- Do not re-use gown. Do not go from patient-to-patient wearing the same gown.

Gloves

Gloves are for point-of-care use and are task specific.

Gloves are not required for routine healthcare activities in which contact is limited to intact skin of the patient (e.g. taking blood pressure, auscultation of lungs, medication administration, dressing the patient, etc).

Gloves must be worn when it is anticipated that the hands will be in contact with mucous membranes, non-intact skin, tissue, blood, body fluids, secretions, excretions, or equipment and environmental surfaces contaminated with the above.

Appropriate Glove Use

- Perform hand hygiene before putting on gloves. This includes when changing gloves if they become contaminated. Perform hand hygiene prior to donning new pair.
- Wear the correct size of gloves.
- Gloves must be put on immediately before the activity for which they are indicated after hand hygiene is performed. They are not to be worn from the nursing station, utility rooms, etc.
- Hand hygiene must be performed immediately after glove removal.
- Change or remove gloves if moving from a contaminated body site to a clean body site within the same patient.
- Change or remove gloves after touching a contaminated object and before touching a clean object or the environment (point-of-care only).
- The same pair of gloves must not be used for the care of more than one patient.
- Do not wash or re-use gloves.
- Remove gloves and perform hand hygiene after handling waste and contaminated linen.
- Gloves must be removed and discarded after the activity for which they were used. Do not wear contaminated gloves from one area to another e.g. from patient room to the nursing station, to the elevators, etc.

Facial Protection (Procedure/Surgical Mask and Eye Protection)

Consists of a mask (to protect the nose and mouth) and eye protection (to protect the eyes). The use of either a mask or eye protection without the other, is not effective for the protection of the mucous membranes of the face. Both must be used together.

Wear a procedure/surgical mask and eye protection if there is a risk of sprays or splashes of blood, body fluids, secretions or excretions. Surgical masks have a higher fluid resistance.Eye protection includes:

- Safety glasses or goggles (disinfected after each use if not disposable)
- Safety shields
- Visors attached to masks

Note: Prescription eye glasses/reading glasses are not acceptable as eye protection.

Masks and eye protection must be worn in operating theatres and when performing certain aseptic procedures (e.g. central line insertions, chest tube insertion).

Appropriate Facial Protection Use

- ❖ Perform hand hygiene.
- ❖ Select a mask and eye protection appropriate to the activity.
- ❖ Mask must securely cover the nose and mouth.
- ❖ Change mask if it becomes wet.
- ❖ Do not touch mask while wearing it.
- ❖ Always remove gloves and perform hand hygiene prior to removing facial protection.
- ❖ Remove mask and eye protection correctly after completion of tasks and when leaving the patient. Discard into an appropriate waste receptacle. Clean eye protection if not disposable.
- ❖ Perform hand hygiene after removing the mask and eye protection.
- ❖ Do not allow mask to hang or dangle around the neck.
- ❖ Do not re-use disposable masks or eye protection.
- ❖ Do not fold the mask or put it in a pocket for later use.

N95 Respirators

N95 respirators are used to prevent inhalation of small particles that may contain infectious agents transmitted via the **airborne route**.

- Must be worn by staff transporting a suspicious or confirmed TB patient.
- Health care workers must be fit-tested prior to wearing an N95 respirator. Fit-testing is to occur every 2 years or as per organizational protocol.
  Note: Health care workers who are unable to form a tight facial seal when wearing a respirator (e.g. facial deformity, men with beards) should follow organizational protocols.
- A single-use respirator must only be worn once.
- N95 respirators must be removed after exiting the room.
- Used for **Aerosol-Generating Medical Procedures** (**AGMP**) on patients requiring Droplet Precautions, with signs and symptoms of severe respiratory syndrome, suspected tuberculosis (TB) or a respiratory pathogen for which transmission risks are not yet known. Certain respiratory procedures may generate droplets/aerosols that may expose staff to respiratory pathogens and are considered to be a potential risk for staff and others in the area.

Note: AGMPs for patients with suspected or known illness caused by airborne infectious agents (i.e. TB) must be performed in airborne infection isolation rooms when possible.

Examples of AGMPs

- Endotracheal intubation, including during cardio-pulmonary resuscitation
- Open airway suctioning
- Sputum induction
- Non-invasive positive pressure ventilation for acute respiratory failure (CPAP, BiPAP)
- High flow oxygen therapy (humidified up to a concentration of 60 L per min)
- Use of bag-valve mask to ventilate a patient
- Bronchoscopy
  - For bronchoscopy or sputum induction, use an N95 respirator if the patient has signs and symptoms of severe respiratory syndrome, suspected TB or a respiratory pathogen for which transmission risks are not yet known.

Technique for Putting on and Taking off Personal Protective Equipment

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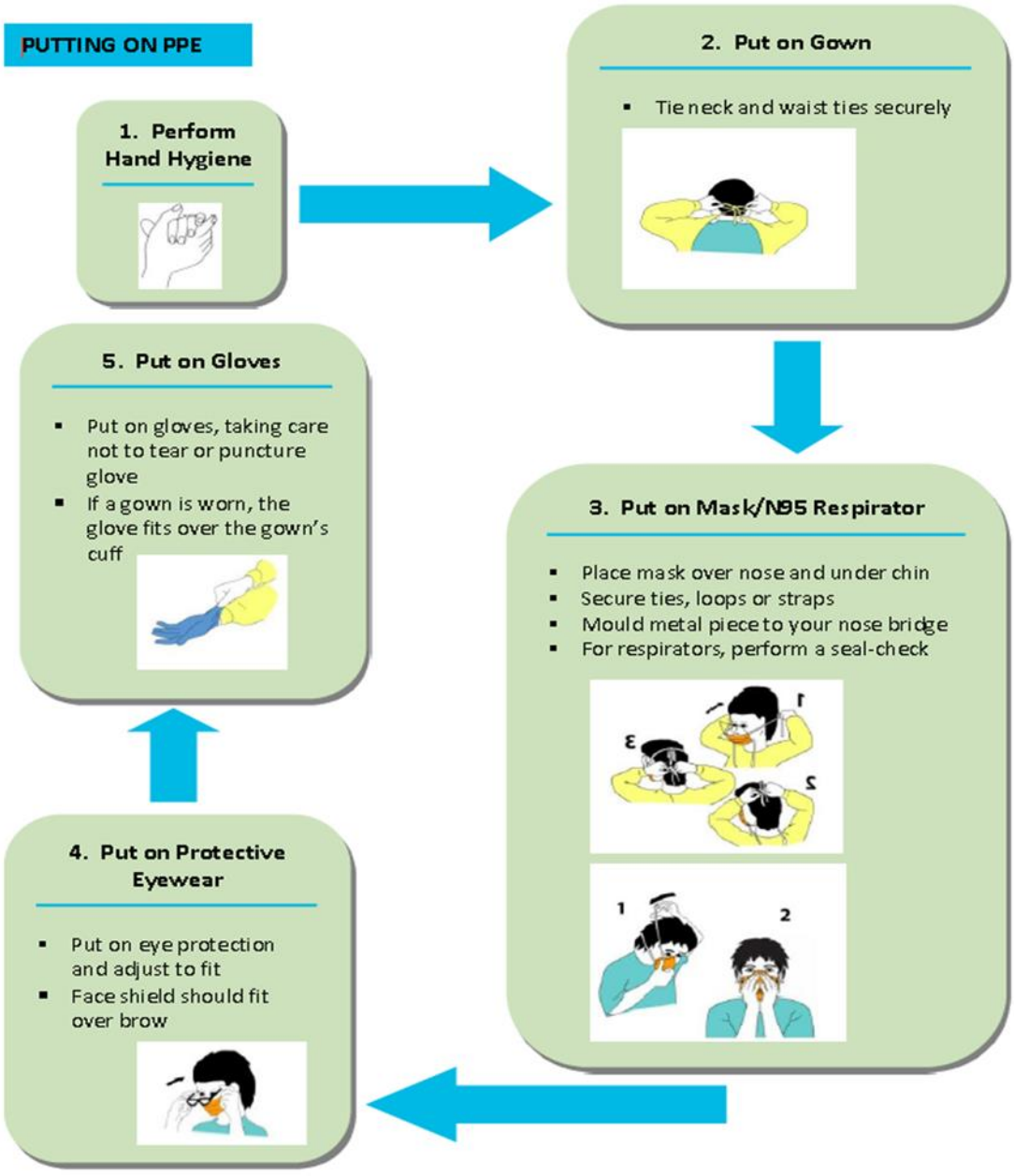
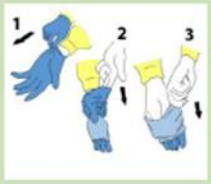


TAKING OFF PPE

1. Remove Gloves

- Remove gloves using a glove-to-glove/skin-to-skin technique
- Grasp outside edge near the wrist and peel away, rolling the glove inside-out
- Reach under the second glove and peel away
- Discard immediately into waste receptacle



2. Remove Gown

- Remove gown in a manner that prevents contamination of clothing or skin
- Starting at the neck ties, the outer, 'contaminated', side of the gown is pulled forward and turned inward, rolled off the arms into a bundle, then discarded immediately in a manner that minimizes air disturbance

3. Perform Hand Hygiene

4. Remove Eye Protection

- Arms of goggles and headband of face shields are considered to be 'clean' and may be touched with the hands
- The front of goggles/face shield is considered to be contaminated
- Remove eye protection by handling ear loops, sides or back only
- Discard into waste receptacle or into appropriate container to be sent for reprocessing
- Personally-owned eyewear may be cleaned by the individual after each use

5. Remove Mask/N95 Respirator

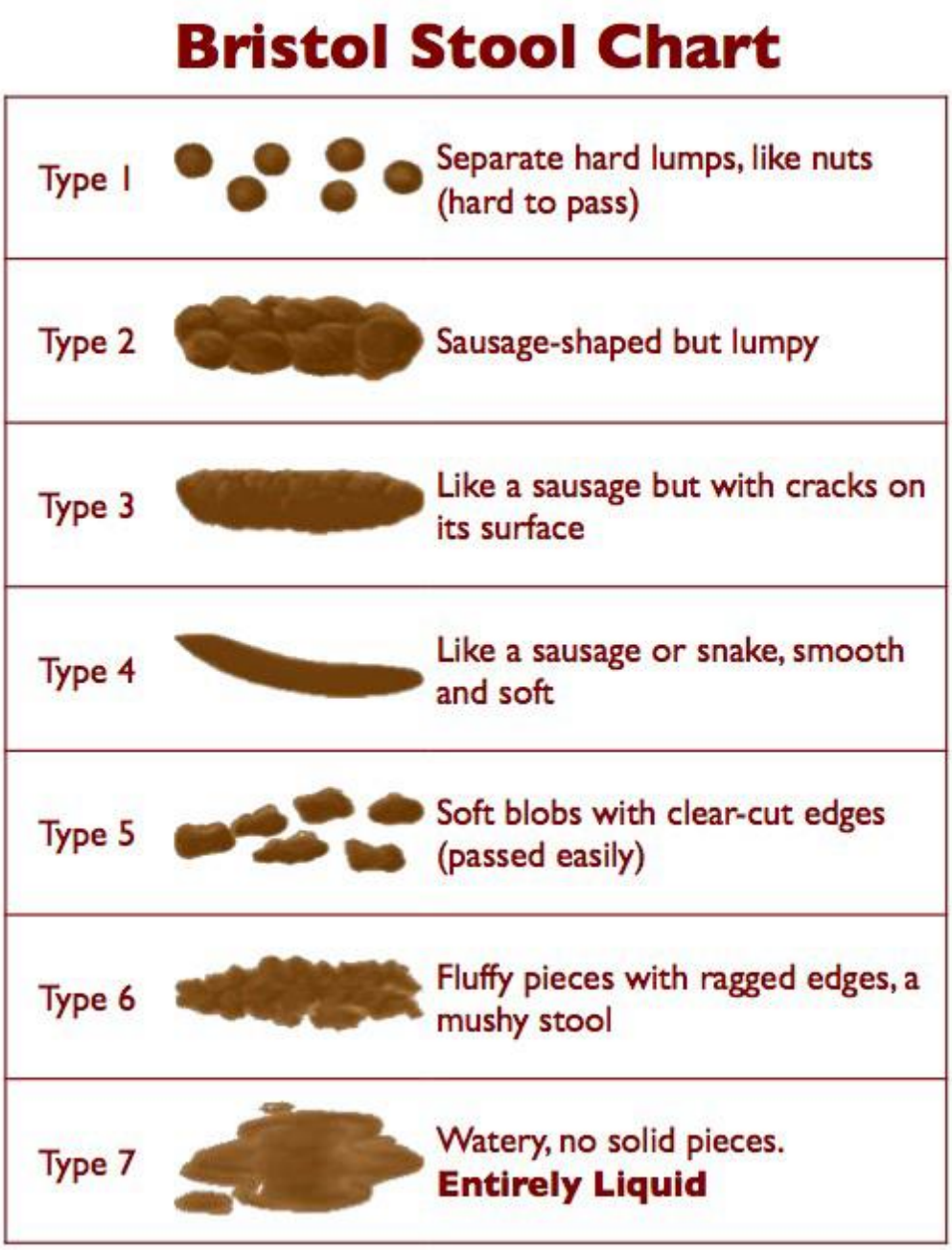
- Ties/ear loops/straps are considered 'clean' and may be touched with hands
- The front of the mask/respirator is considered to be contaminated
- Untie bottom tie then top tie, or grasp straps or ear loops
- Pull forward off the head, bending forward to allow mask/respirator to fall away from the face
- Discard immediately into waste receptacle

6. Perform Hand Hygiene

Contact Precautions for Enteric Purposes

Ongoing assessment and documentation of stools for patients with diarrhea is critical to determine patient status and requirements for continued contact precautions. One method of documentation of stool is use of the Bristol Stool Chart.

The Bristol Stool Chart was developed by Dr. Ken Heaton at the University of Bristol and was first published in the Scandinavian Journal of Gastroenterology in 1997. It is a medical aid designed to classify feces into seven groups.



Retrieved from:

http://www.sthk.nhs.uk/library/documents/stoolchart.pdf

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