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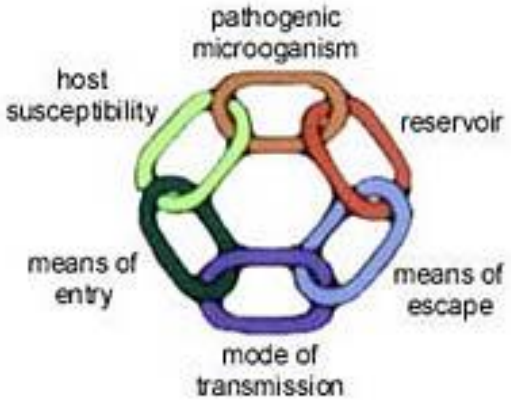

Back to Basics – Routine Practices

Mandy Deeves RN, BScN, CIC
Network Coordinator
North Simcoe Muskoka Infection Control Network

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Objectives

To identify:

- Basic principles of infection prevention and control (IPAC)
- Chain of transmission
- Strategies to “Break the Chain”

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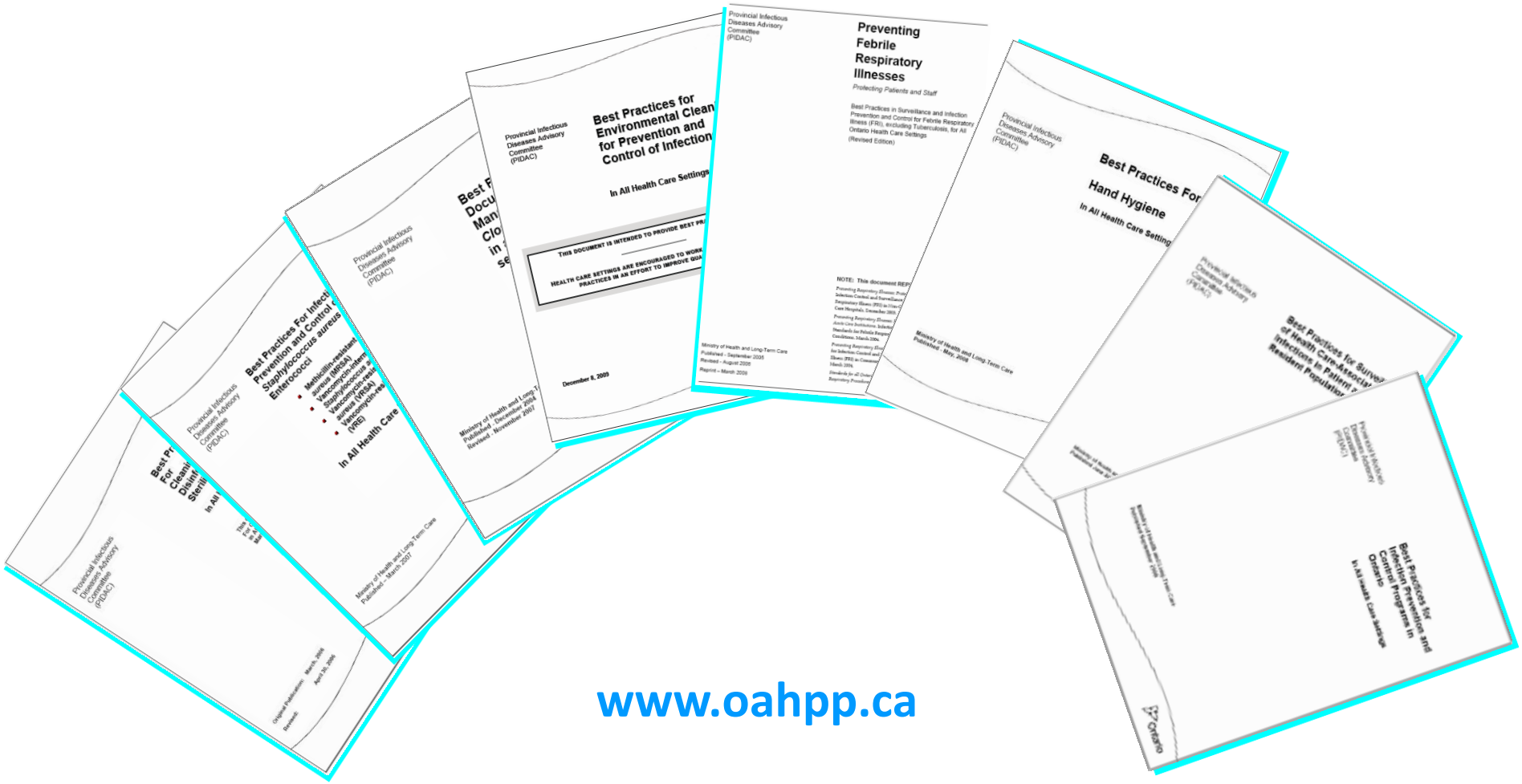
Promoting IPAC Best Practices



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What is Infection Prevention and Control?

- Activities to prevent organisms from causing infections in individuals
- Activities to prevent or stop transmission of organisms and infections between individuals

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Why Infection Prevention and Control?

- Globally:
  - HAI occur in over 1.4 million people
- Canada:
  - About 250,000 a year people pick up infections while being treated for something else.
  - Every year, more than 8,000 patients die from those infections.

Image Source: MS Office ClipArt

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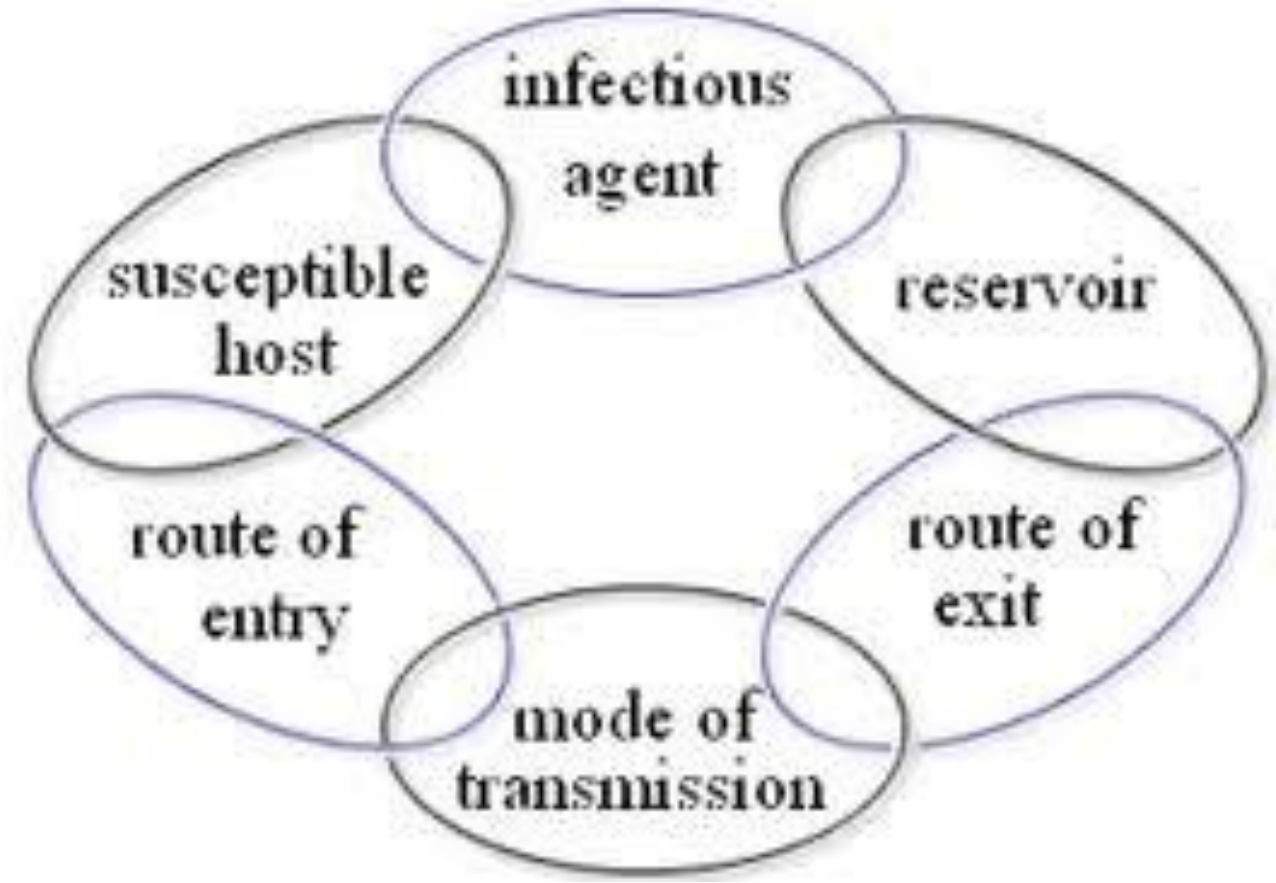
Chain of Transmission

Infection prevention strategies are aimed at "breaking the chain" at one of its links

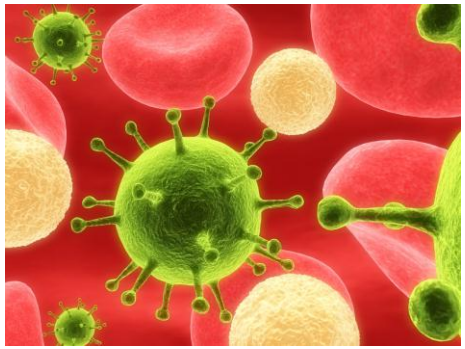
Chain of Transmission



Infectious Agent – The BUG

- Bugs are everywhere!
- Bacteria
  - MRSA, VRE, C. difficile, Salmonella Group A Streptococcus
- Viruses
  - Influenza, Hepatitis B, HIV
- Parasites
  - Giardia, Malaria
- Fungi
  - Candida, Aspergillus

bacteria

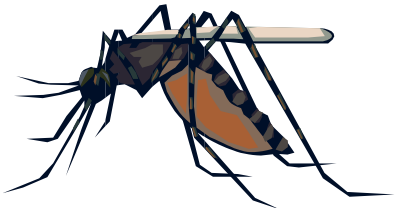


viruses

Image Source: MS Office ClipArt

Reservoir – Hiding Places

- Place where infectious agent can survive, but may or may not multiply:
  - People (Cases and carriers)
  - Food
  - Environment (water, fomites)
  - Animals



Images Source: MS Office ClipArt

Portal of Exit – Way OUT

- How an infectious agent gets out of reservoir
- Human portals of exit:
- Respiratory system
- Genitourinary tract
- Gastrointestinal tract
- Skin/mucous membrane
- Trans-placental
- Blood

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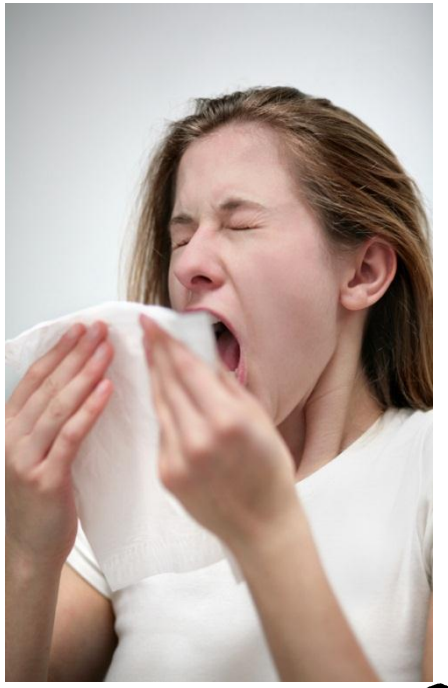
Transmission = Getting Around



Droplet
(>2 metres)

Contact

Direct Contact

vehicle

Vector

Airborne

Images Source: MS Office ClipArt

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Modes of Transmission

- Contact e.g. MRSA, Scabies, Norovirus
- Droplet e.g. Influenza, Bacterial Meningitis
- Airborne e.g. TB, Chickenpox, disseminated Shingles
- Vehicle e.g. Salmonella, Hepatitis A
- Vector borne e.g. West Nile, Malaria

Means of Entry – Way IN

- How the infectious agent enters the host
  - Non-intact skin
  - Mucous membranes
  - Respiratory system
  - Gastrointestinal system
  - Genitourinary system

Images Source: MS Office ClipArt

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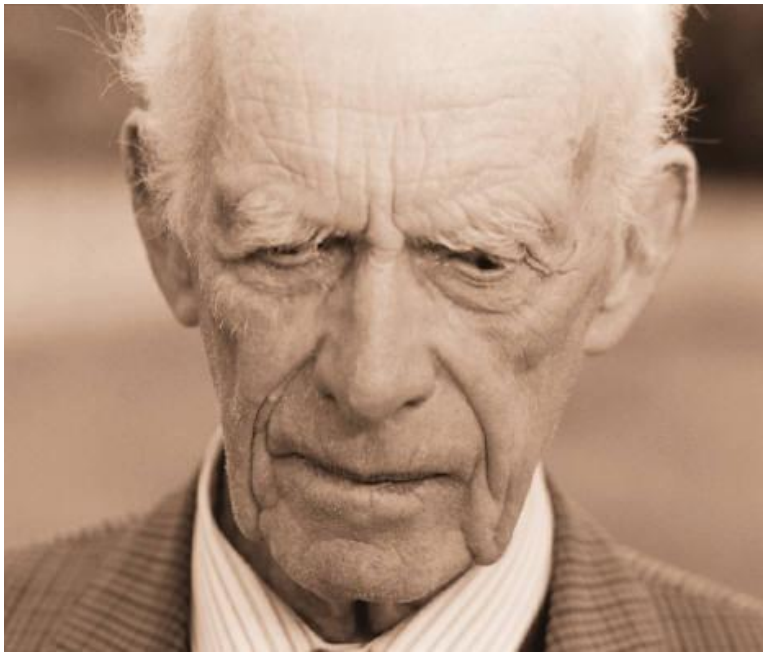
Susceptible Host – The Next Sick Person –

- Anyone who lacks immunity / has reduced resistance to a particular infectious agent
- Host characteristics that influence susceptibility:
  - Age
  - Gender
  - Ethnicity
  - Underlying illness
  - Lifestyle
  - Heredity, etc.



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Infection Prevention Activities to "Break the Chain"

- Identify/manage the agent
- Reduce the reservoir
- Identify mode of transmission and prevent spread
- Reduce host susceptibility

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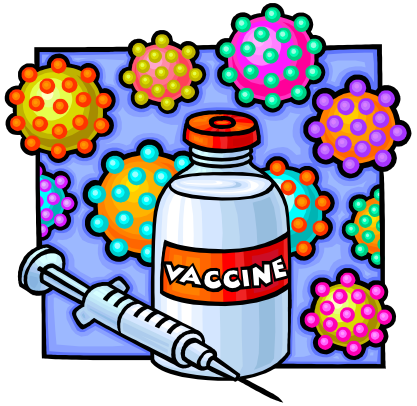
How to Break the Chain - Infection Prevention Strategies

- Identification and management of the causative agent:
- Early identification/diagnosis and treatment
  - Screening for febrile respiratory illness (FRI)
  - Appropriate and timely reporting of suspected and confirmed infections in residents and any change in status
  - Policies for staff to report when they are ill

Reduce the Reservoir



- People
- Environment
- Equipment
- Breaking this link:
  - Early identification and management of colonized/ infected individuals
  - Vaccination
  - Promotion of healthy lifestyle
  - Food safety
  - Effective cleaning, disinfection, sterilization

Images Source: MS Office ClipArt

Routine practices

- Risk assessment
- Hand Hygiene
- Environmental Controls
- Administrative Controls

Images Source: MS Office ClipArt

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Routine practices: Risk Assessment

- Assess the risk of transmission of microorganisms
- Wear appropriate personal protective equipment (PPE)

Start with a Risk Assessment

- Will I get dirty?
- Will I get wet?
- Will I get sprayed?
- Will I breathe something in?
- Will I be injured?

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Glove Use

- Prolonged wearing of gloves is <u>not</u> recommended
  - Increased risk of irritant contact dermatitis
  - Breakdown of the glove material
  - Risk of tears
- Inappropriate use of gloves facilitates the spread of microorganisms
  - Going from room to room with the same pair of gloves
- Gloves must be removed immediately after the activity for which they were used

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Do's and Don't's

- DO: Use gloves routinely when you are in contact with something that is *"ooey, or gooey, or wet and not yours"*
- DO: Limit opportunities for "touch contamination" - protect yourself, others, and the environment
  - DON'T: touch your face or adjust PPE with contaminated gloves
  - DON'T: touch environmental surfaces except as necessary during care activities

Gowns

- Gowns worn
  - to prevent contamination of clothing and/or skin
  - when contact with body substances likely e.g. care of incontinent resident
- Gowns removed carefully and discarded into appropriate receptacle

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Mask/Eye Protection

- Surgical or procedure mask AND eye protection (e.g. goggles) recommended when performing procedures likely to generate splashing or spraying of body substances (e.g. suctioning)

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Donning & Doffing PPE

Routine Practices: Hand Hygiene

Hand hygiene refers to the action of hand cleaning; the removal of visible soil and removal or killing of transient bacteria

- Transient bacteria colonize the upper layers of the skin and are acquired during contact with patients and the environment
- Resident bacteria are found in deeper layers of the skin, generally do not cause HAI, can be beneficial to skin.

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Barriers to Frequent Hand Washing

Factors responsible for poor hand washing rates include:

- Heavy workloads (too busy)
- Poorly located sinks
- Skin irritation caused by frequent exposure to soap and water
- Hands don't look dirty
- Hand washing takes too long

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ABHR

When compared to soap and water hand washing, alcohol based hand rubs have the following advantages:

- ✓ Take less time to use
- ✓ More effective (even with antibacterial soap)
- ✓ Can be made more accessible than sinks
- ✓ Cause less skin irritation and dryness
- ✓ Making alcohol-based hand rubs readily available to personnel has led to improved hand hygiene practices

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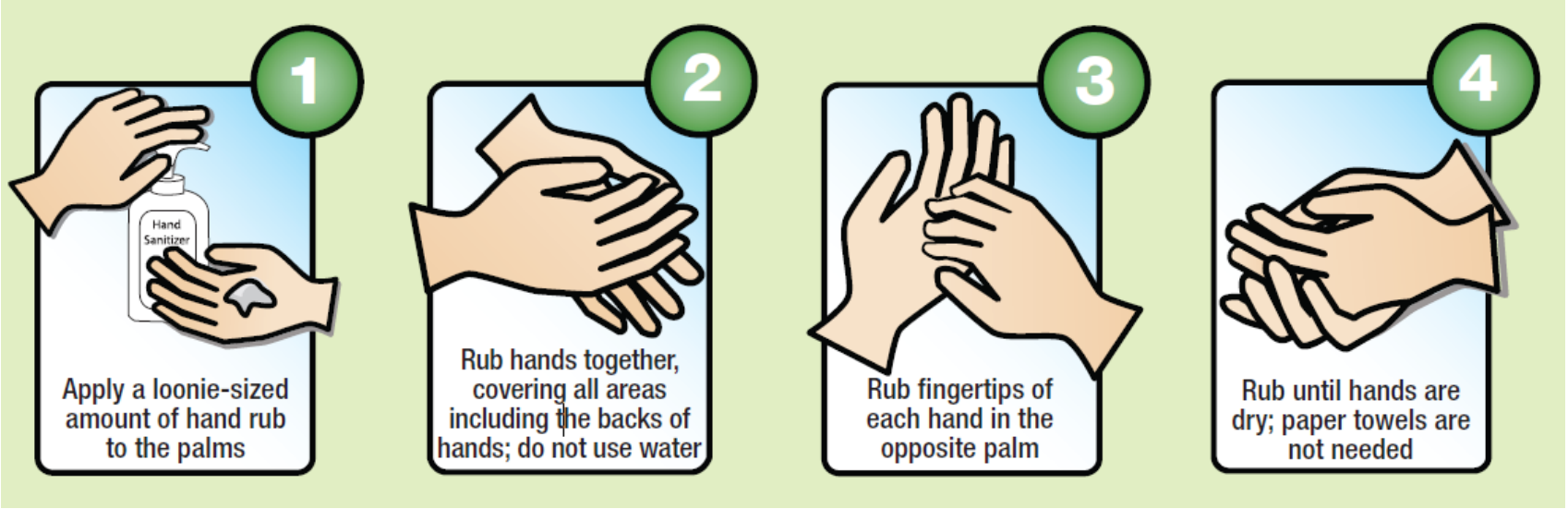
How Do I Use Alcohol Based Hand Disinfectants?

If hands are <u>not</u> visibly soiled or contaminated with blood or body fluids, use an alcohol-based hand rub (minimum 70% alcohol) for routinely cleaning your hands



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Hand Washing Soaps

- Plain soap
  - Act by emulsifying dirt and organic substances, which are then flushed away
  - Physical action of scrubbing and rinsing are important-15 seconds
  - May become contaminated if opened to long, never “top up” or refill
  - Bar soaps only for personal use of a single client only

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Hand Washing Soaps

- Antimicrobial soap:
  - Have residual activity
  - Use in critical care areas, burn units
    - Not recommended in any other client care areas
  - Harsher on the hands than ABHR
  - Frequent use may lead to resistance

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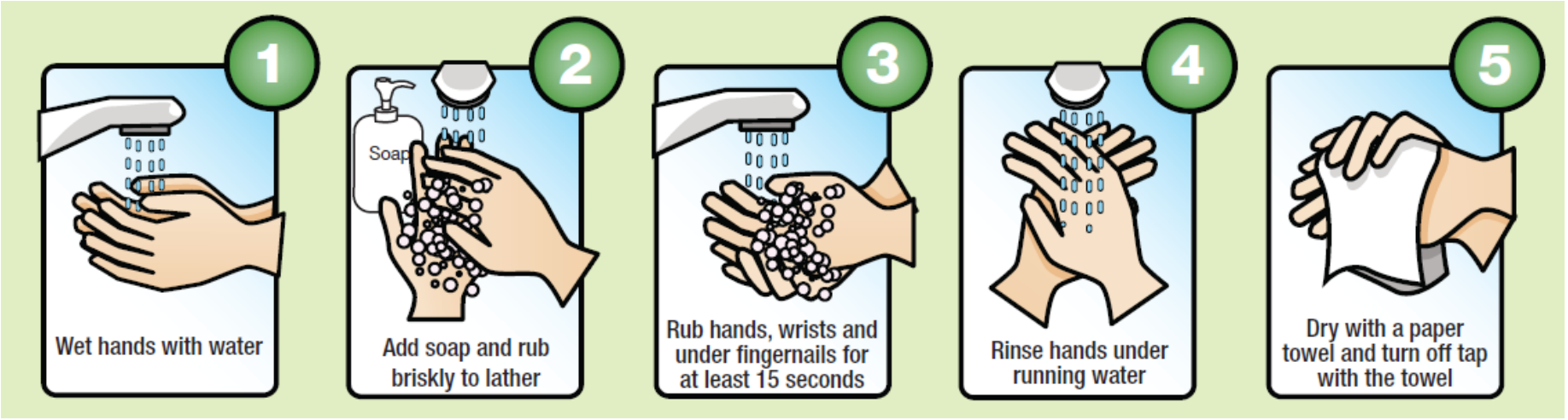
Handwashing with Soap and Water

- The physical action of scrubbing and rinsing are important for effective removal of material from the hands and it has been shown that at least 15 seconds of lathering with soap is required.



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When to Wash Your Hands

- After going to the washroom;
- Before and after taking care of a person
- After any contact with the patient and their environment;
- Before preparing, handling or serving food, or eating;
- After blowing your nose, coughing or sneezing;
- After accidental contamination with blood or other biological fluids;
- Before putting on and removal of PPE
- When your hands are visibly dirty.

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Routine Practices: Environmental Controls

- Accommodation & placement
- Environment and Equipment cleaning
- Handling of sharps

Images Source: MS Office ClipArt

Routine Practices: Administrative Controls

- Staff education and training
- Education of patients
- Respiratory etiquette
- Healthy workplace policies
- Immunization

Images Source: MS Office ClipArt

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Additional Precautions

- Based on the mode of transmission of the infectious disease
- Used in addition to Routine Practices
- Contact, Droplet, Airborne

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What can you do to make it *easier* to follow Routine Practices routinely?

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