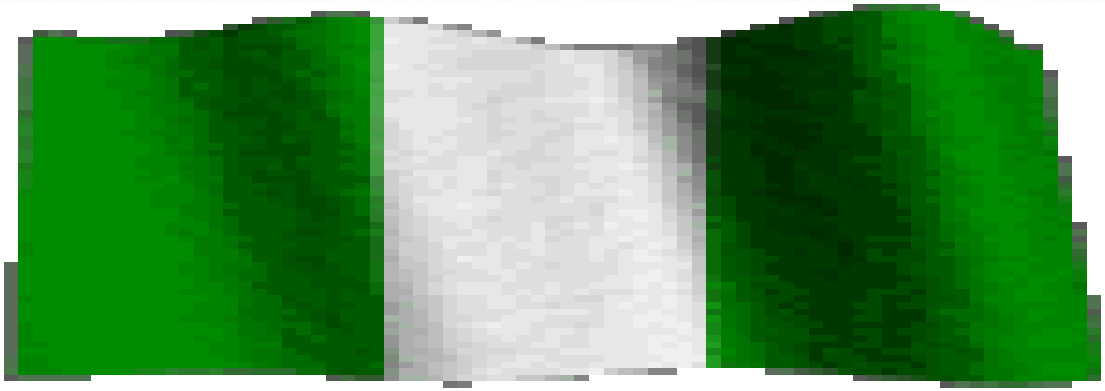
NIGERIAN INSTITUTE OF SCIENCE LABORATORY TECHNOLOGY
(Founded 1971 and Established by Act of the National Assembly No 12 of 2003)
FEDERAL MINISTRY OF SCIENCE AND TECHNOLOGY



INFECTION PREVENTION AND CONTROL (IPC)

NISLT IBADAN

IPC?

- Is a scientific approach and practical solution designed to prevent harm caused by infection to patients and frontline (health) workers.
- IPC practices should be applied ALL THE TIME, not just during an outbreak.
- IPC is a **series of practices** performed in healthcare settings and even at homes to prevent spread of disease-causing germs

The IPC core practices are:

- Standard Precautions
- Transmission-based Precautions

NISLT IPC PRESENTATIONS
Do not Distribute

Goals of Infection Prevention and Control (IPC)

Protect yourself

Protect the community

Protect patients

NISLT PRESENTATIONS Not to be Copied, Sold or Distributed

Terminologies

WHAT ARE GERMS?

- Germs are tiny organisms, or living things, that can cause infections/disease
- Germs are so small that they get into our bodies without being noticed
- Germs live on the skin, mouth, intestines, and breathing passages
- Germs can enter the body through openings such as the nose and mouth and also through breaks in the skin
- It could be bacterial, viral, fungal or parasitic

NISLT IPC PRESENTATIONS
Do not Distribute

INFECTION PREVENTION AND CONTROL

NISLT IRC PRESENTATIONS
Do not Distribute

Infection control is therefore about

- Eliminating,
- Minimizing or
- Preventing

- Hence, the aims are to:
  - Reduce morbidity and mortality
  - Reduce transmission of infection to others
  - Reduce health care costs
  - Improve the quality of health care services

RESPONSIBILITY OF IPC PROFESSIONALS IN RISK MANAGEMENT

NISLT IPC PRESENTATIONS
Do not Distribute

- To Identify risks over which they have some control (unsafe IPC practice)
- To take appropriate and cost effective measures to minimize or eliminate those risks.
- Help healthcare facility to set priorities

RISK ASSESSMENT

- Remember transmission of Influenza, SARS, SARI, COVID 19 etc. get exacerbated or increase if there is:
  1. **Close contact** (usually proximity < 1 metre)
  2. **Direct contact** (with infected patients then self contamination)
  3. **Indirect contact** (with surfaces/objects contaminated with virus then self contamination)
  4. **An aerosol generating procedure** (endotracheal intubation, suctioning, nasopharyngeal aspiration/swabbing)

NISLT IPC PRESENTATIONS
Do not Distribute

- A **risk assessment** helps determine **what measures**

should be used and **when** to use them

PRINCIPLES OF CONTROL OF RISKS

- Eliminate the risk
- Reduce the risk
- Isolate the risk
- Control the source of risk
- PPE utilization
- Discipline

NISLT IPC PRESENTATIONS
Do not Distribute

LET US LOOK AT THE RISK OF SPREAD OF VHF IN HFs

- Health care facilities have been known as venues or vehicles that enhance the spread of VHFs where IPC is not practiced
- Spread to other patients, health care workers and contamination is easy in health care facilities because of many avenues of contact with body fluids
- Infection prevention and control is therefore critical in these places.

NISLT IPC PRESENTATIONS
Do not distribute

- Please Note that When a sick person enters a health facility, many people are at risk of getting sick.

- Infections are caused by germs and follow a chain of disease transmission

NISLT IPC PRESENTATIONS
Do not distribute

FACTORS CONTRIBUTING TO TRANSMISSION OF NOSOCOMIAL INFECTIONS

- Ignorance
- Poor attention to hygiene & overcrowding
- Poor use of PPEs
- Lack of an effective infection control program

NISLIPC PRESENTATIONS
Do not Distribute

OTHER CONTRIBUTORY FACTORS

- Behavioural- hand hygiene, use of PPEs etc
- Structural –water, basins, single rooms
- Patient associated – low immunity
- Organizational – bed occupancy, staff-patient ratio, increase patient movement
- Therapeutic – breaches of normal defence mechanism

NISLT INC PRESENTATIONS
Do not Distribute

PERSONAL PROTECTIVE EQUIPMENT(PPE)

- Wear PPE to avoid direct contact with
  - blood, other body fluids,
  - respiratory secretions, excretions
  - mucous membranes and non-intact skin
- Put on PPE according to the anticipated contact with the above
- Wearing PPE is always procedure-based: put PPE on before procedure, remove directly thereafter and wash hands

NISLT IPC PRESENTATIONS
Do not Distribute

Remember that instruments, equipment, linen, supplies, and hard surfaces can be contaminated with blood and body fluids as well. When **contamination occur it may not be visible.**

RULES ABOUT THE USE OF PPE

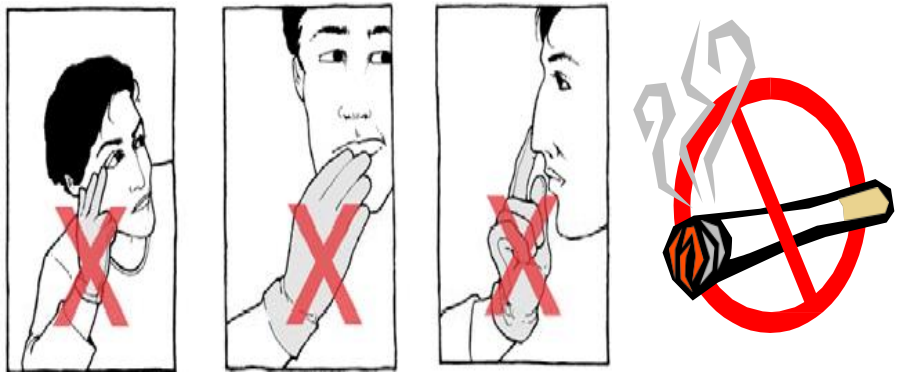
- PPE can be a transmitter of microbes when contaminated.
- Use of PPE to allay personal prejudice or fear without indication for a procedure can sometimes increase the risk of infection
- PPE use is NOT a substitute for poor infection control practice (including engineering) or healthcare/nursing procedure
- All PPE have a limited lifespan and must be discarded after use as indicated, usually after each patient or patient cohort use

NISLT IPC PRESENTATIONS
Do not Distribute

DOs AND DON'Ts OF PPE USE

- Protect yourself, others, and the environment
- Limit opportunities for "touch contamination"
- Avoid touching:
  - your face or mask or adjusting PPE with contaminated gloves
  - environmental surfaces except as necessary during patient care

NISLT IPC PRESENTATIONS
Do not Distribute



USE OF PPE ACCORDING TO LEVEL OF CARE AND RISK

Level of case	Hand hygiene	Gown	Medical mask	Respirator (N95 or FFP2)	Goggle (eye protection) OR Face shield (facial protection)	Gloves
Triage	X		X			
Collection of specimens for laboratory diagnosis	X	X		X	X	X
Suspected or confirmed case of COVID-19 requiring healthcare facility admission and NO aerosol-generating procedure	X	X	X		X	X
Suspected or confirmed case of COVID-19 requiring healthcare facility admission and WITH aerosol-generating procedure	X	X		X	X	X

Source: Pan American Health Organization / World Health Organization. Epidemiological Update: Novel coronavirus (COVID-19). 14 February 2020, Washington, D.C.: PAHO/WHO; 2020

PPE

NISLT IPC PRESENTATIONS
Do not Distribute

Examples of PPEs

1. Gloves

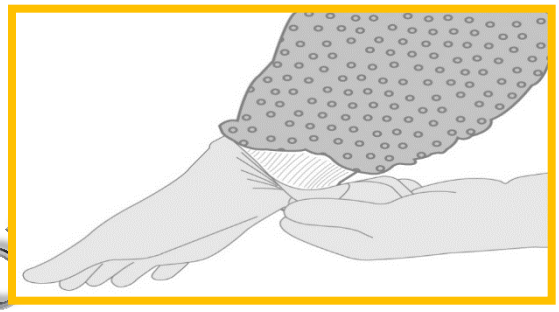
- **Gloves are an essential item of PPE and are used to prevent the healthcare worker from being exposed to direct contact with the blood or body fluid of an infected patient.**

- **Gloves DO NOT replace hand hygiene.**

NISLT IPC PRESENTATIONS
Do not Distri

Source: *https://apps.who.int/iris/handle/10665/69793*

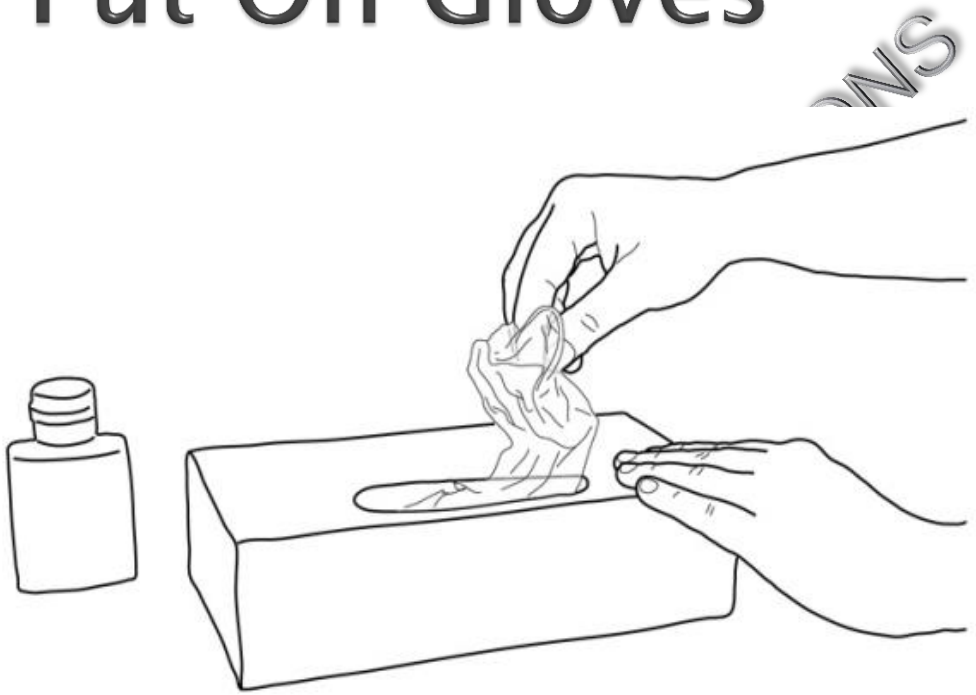
PPE: Gloves



- **Wear gloves** when touching blood, body fluids, secretions, excretions, mucous membranes, nonintact skin.
- **Change gloves** between tasks and procedures on the same patient after contact with potentially infectious material.
- **Remove gloves after use**, before touching non-contaminated items and surfaces, and before going to another patient.
- **Perform hand hygiene** immediately after removal.

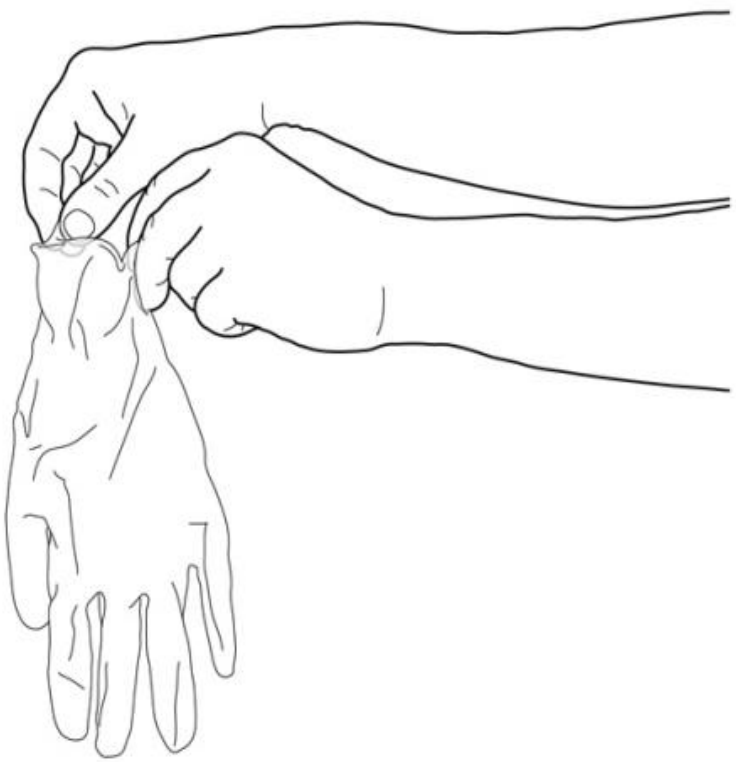
NSLHIPC PRESENTATION
Do not distribute

How to Put On Gloves



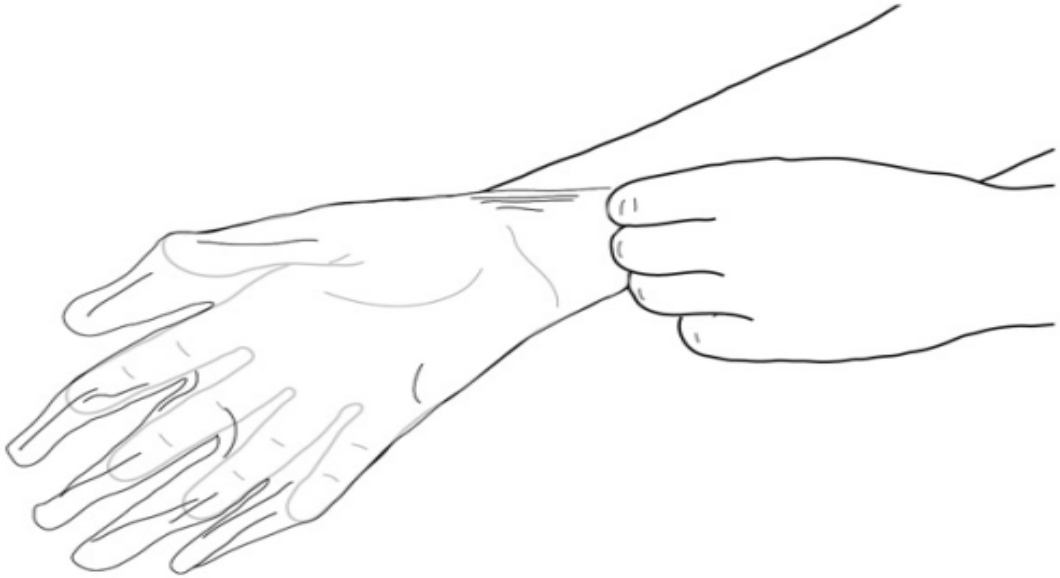
1. Take out a glove from its original box

How to Put On Gloves



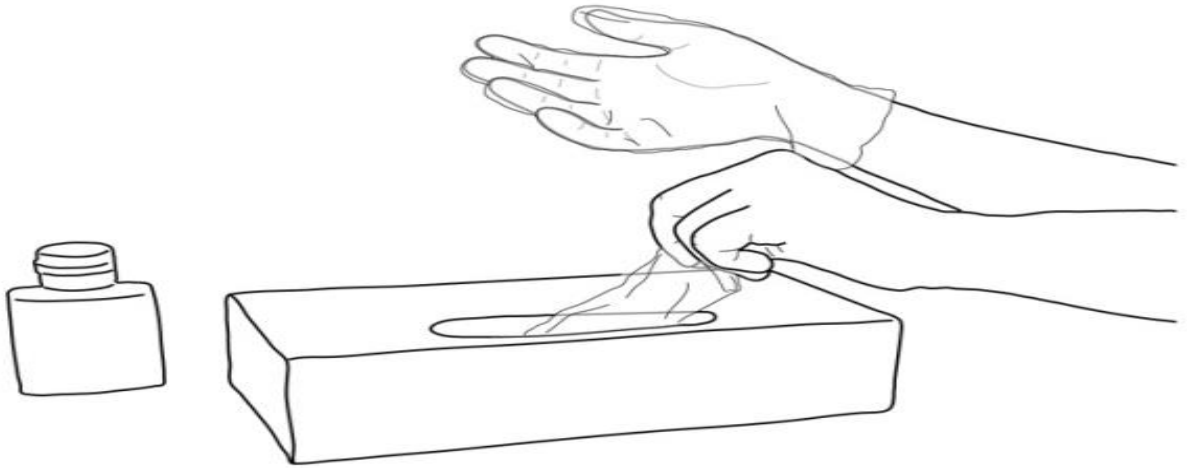
2. Touch only a restricted surface of the glove corresponding to the wrist (at the top edge of the cuff)

How to Put On Gloves



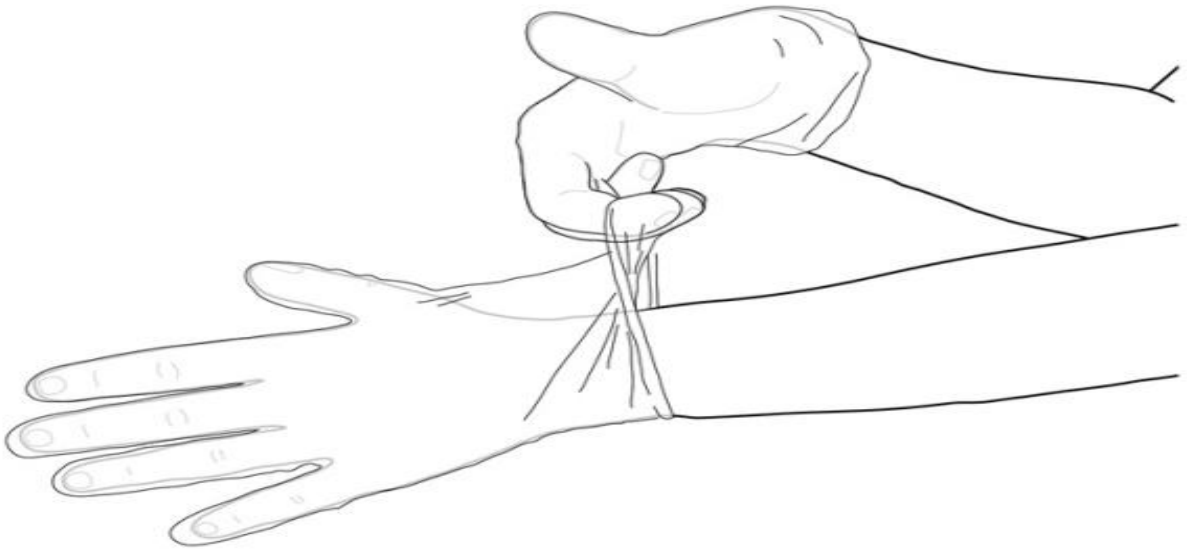
3. Don the first glove

How to Put On Gloves



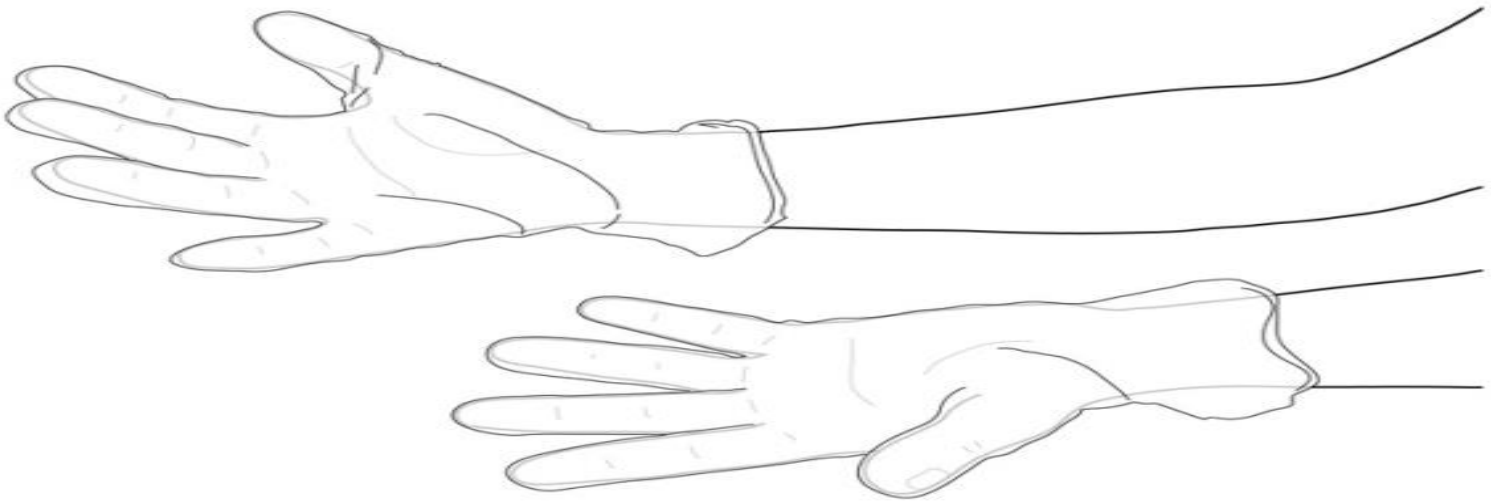
4. Take the second glove with the bare hand and touch only a restricted surface of glove corresponding to the wrist

How to Put On Gloves



5. To avoid touching the skin of the forearm with the gloved hand, turn the external surface of the glove to be donned on the folded fingers of the gloved hand, thus permitting to glove the second hand

How to Put On Gloves

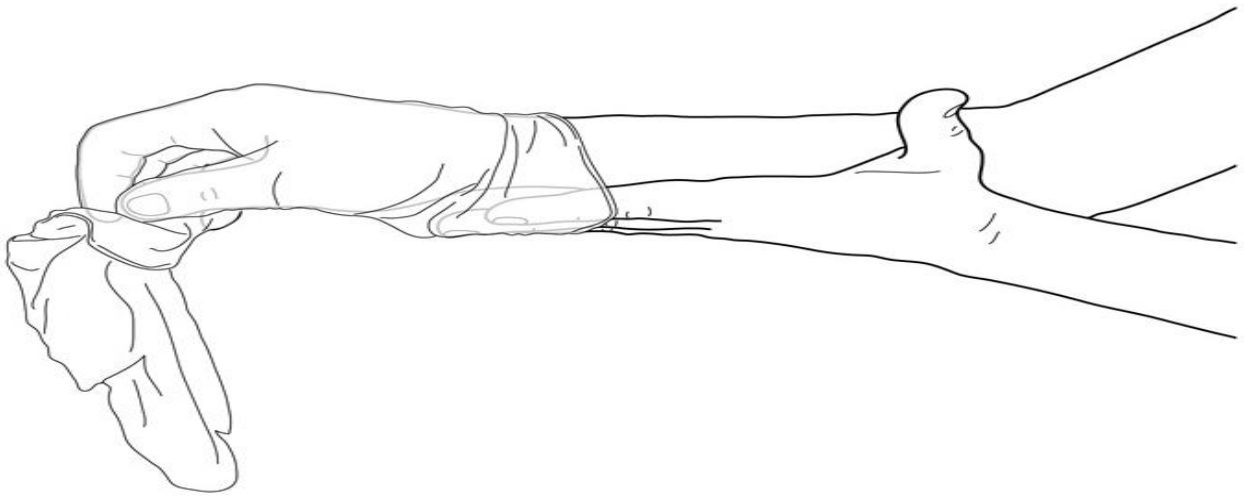


6. Once gloved, hands should not touch anything else that is not defined by indications and conditions for glove use

How to Safely Remove Gloves

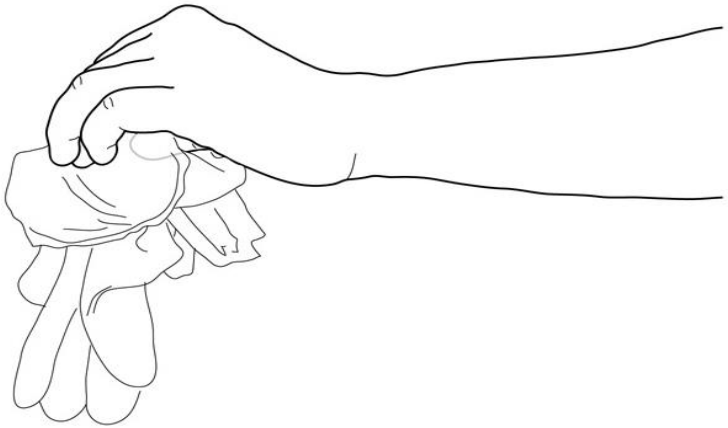
1. Pinch one glove at the wrist level to remove it, without touching the skin of the forearm, and peel away from the hand, thus allowing the glove to turn inside out

How to Safely Remove Gloves



2. Hold the removed glove in the gloved hand and slide the fingers of the unglo-ved hand inside between the glove and the wrist. Remove the second glove by rolling it down the hand and fold into the first glove

How to Safely Remove Gloves



3. Discard the removed gloves

How do I take off the gloves if they are contaminated?

- This procedure takes practice . You should first practice this procedure using a clean pair of gloves until you can perform the procedure without touching the outer surface of the glove with your unprotected skin.

NISLT IPC PRESENTATIONS
Do not Distribute

1.Use your dominate (and still gloved) hand to remove the contaminated gloves by gripping the other glove near the wrist or cuff .

2. Pull the glove down over the hand and turning the glove inside out.

3.Hold the removed glove in the palm of your gloved hand.

PRESENTATIONS

4. Now with your ungloved hand, tuck two fingers inside the cuff of your other glove.

5.Pull the glove down over your hand and turning the glove inside out and over and the other glove.

6. With the glove inside out, dispose gloves in an appropriate biohazard waste container.

PRESENTATIONS
Distribute

2. Gowns (and aprons)

- Gowns are used in addition to gloves if there is **risk of fluids or blood** from the patient splashing onto the healthcare worker's body.
- The same gown can be used when providing care to more than one patient but only those patients in a cohort area and only if the gown does not have direct contact with a patient.
- Plastic aprons should be used in addition to gowns if the material of the gown is not fluid repellent and the task to be performed may result in splashes onto the healthcare worker's body.

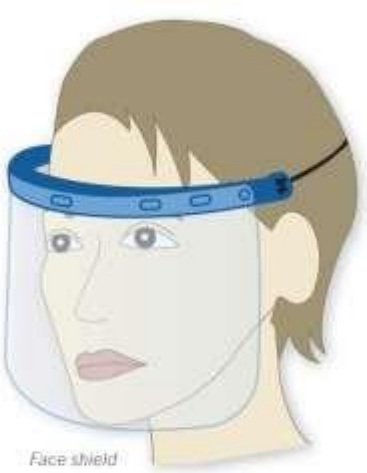
An example of a gown. Other styles of gowns can also be used.

Source: https://apps.who.int/iris/handle/10665/69793

3. Facial mucosa protection (face shield, eye visor, goggles)

- Masks, and eye protection, such as eyewear and goggles, are also important pieces of PPE and are used to protect the eyes, nose or mouth mucosa of the health-care worker from any risk of contact with a patient's respiratory secretions or splashes of blood, body fluids, secretions or excretions.

NSLT IPC PRESENTATIONS

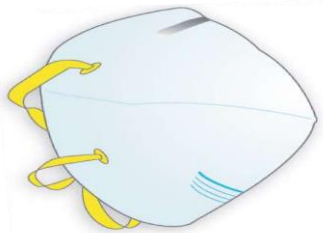


Source: https://apps.who.int/iris/handle/10665/69793

4. Particulate Respirator (N95) or mask?

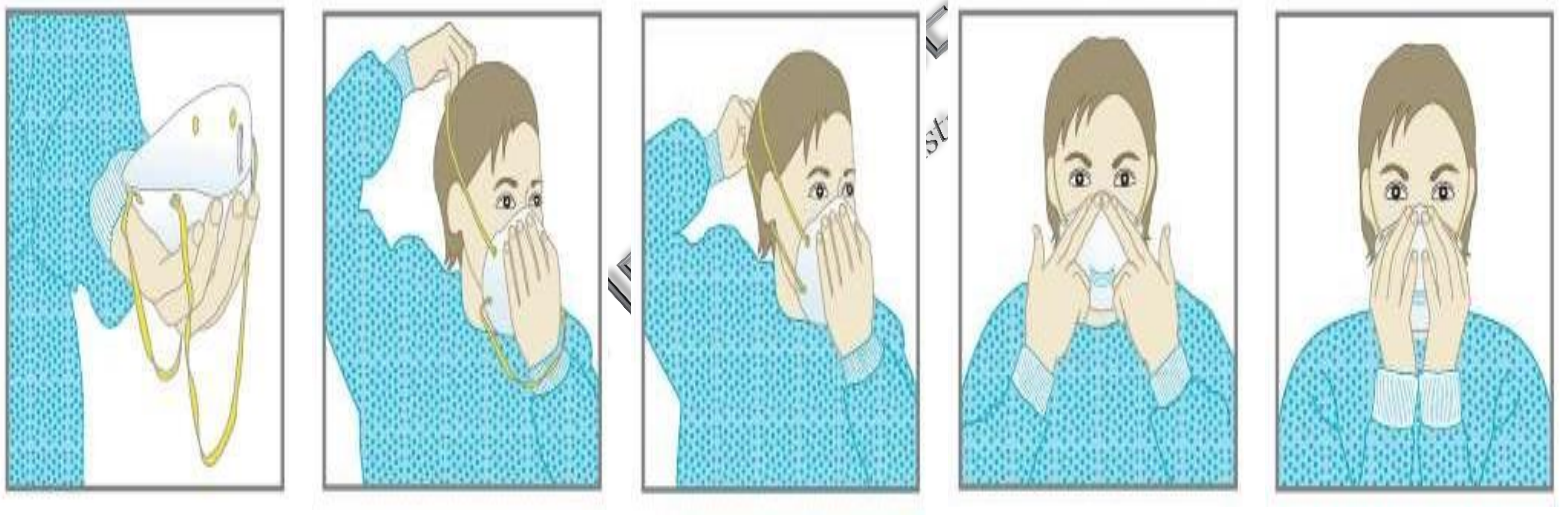
- Once the mask is on, he or she must show how well the mask is fitted to his/her face.
- Any respiratory aerosol-generating procedure (suctioning, intubation, nasopharyngeal swabbing) must NOT be performed without full PPE
  - (particulate respirator and not a surgical mask, long-sleeved gown, goggle, gloves)

NISL IPC PRESENTATIONS
Do not Distribute



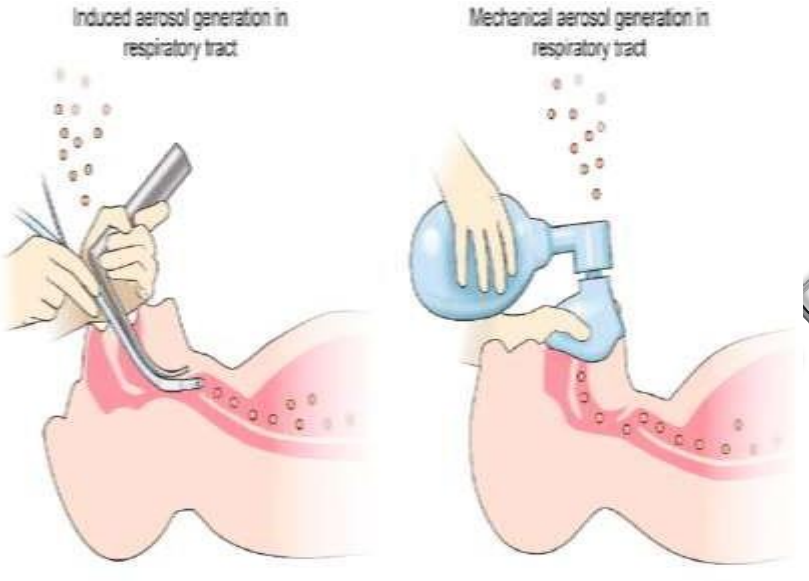
Source:
https://apps.who.int/iris/handle/10665/69793

Perform a particulate respirator seal check



Source:
https://apps.who.int/iris/handle/10665/69793

Aerosol-generating procedures (AGP)



Examples

1. Surgery
2. Manual ventilation
3. Cardiopulmonary resuscitation
4. Sputum induction

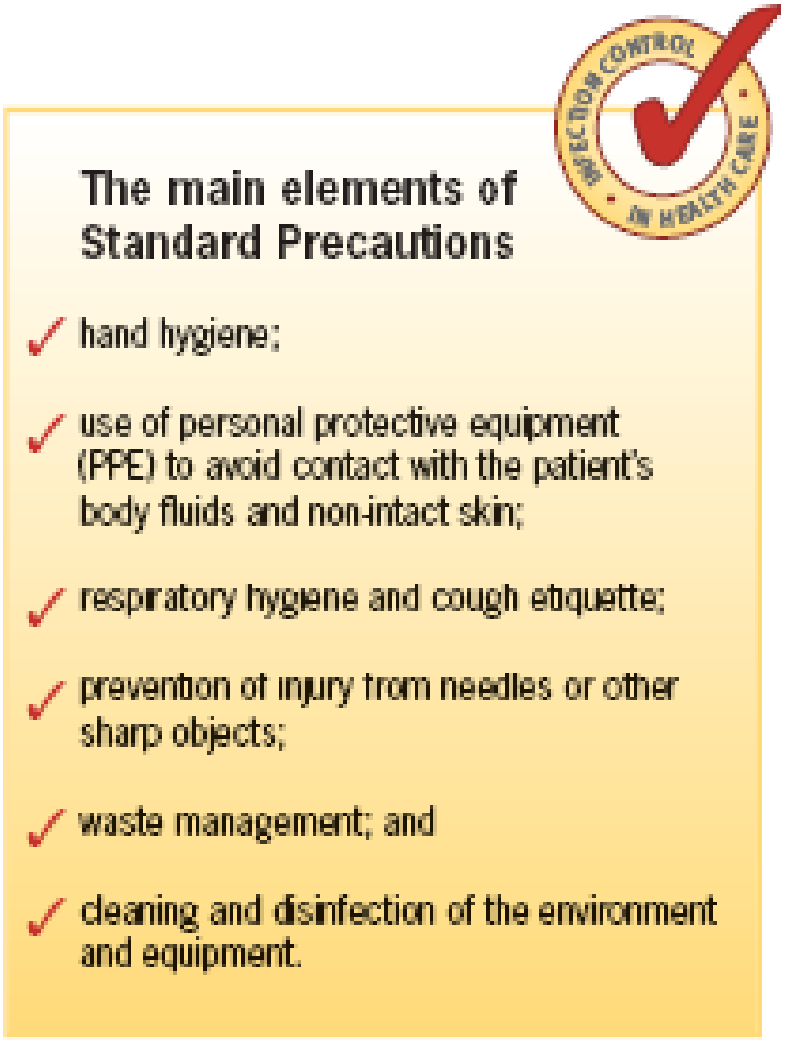
PRESENTATION
Do not Distribute

Number of healthcare providers exposed should be limited

Judson SD et al., Viruses 2019, 11, 940; doi:10.3390/v11100940

Standard Precautions

- Standard precautions provide the foundation for infection control
- Are designed to reduce the risk of transmission of micro-organisms from both recognised and unrecognised sources of infection



NSLT IPC PRES
Do not

Standard Precautions

NISLT IPC PRESENTATIONS
Do Not Distribute

- It is an approach designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources
- Apply to all patients regardless of diagnosis, age or presumed infectious status.

Standard Precautions

Every body fluid should be treated as though it is potentially infectious

Universal precautions (UP)

- Universal precautions are intended to prevent
  - parenteral
  - mucous membrane, and
  - Non-intact skin exposures

- Universal precautions – an approach to IPC
  - Treat all human blood and certain human body fluids as infectious

NISI IPC PRESENTATIONS
Do not Distribute

UP

Body Fluids to Which Universal Precautions Apply

- Blood and other body fluids containing visible blood. Also applies to semen and vaginal secretions, tissues, cerebrospinal fluid (CSF), synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid.

Body Fluids to Which Universal Precautions Do Not Apply

- Feces, nasal secretions, sputum, sweat, tears, urine, and vomitus unless they contain visible blood.

NISLT IPC PRESENTATIONS
Do not Distribute

Standard Precautions – Components

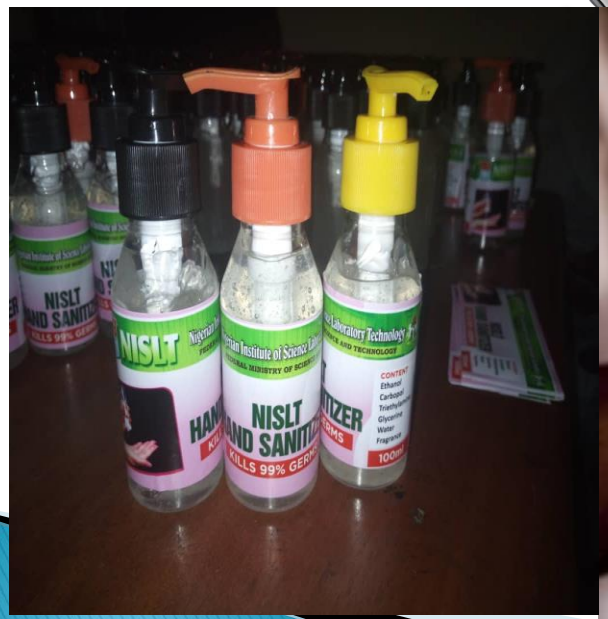
- Hand hygiene
- Use of PPEs
- Respiratory Hygiene and Cough etiquette
- Safe injection practices
- Cleaning, Disinfection of environment
- Cleaning, Disinfection and Sterilization
- Healthcare waste management
- Housekeeping
- Patient placement

NISLT IPC PRESENTATIONS
Do not Distribute

WHAT IS HAND HYGIENE?

Routine cleaning of hands with soap and water or alcohol-based hand rub (ABHR) to remove dirt and germs

IPC PRESENTATIONS
Do not Distribute



- Hand hygiene prevents the spread of many infections in a health-care facility
- Hands should be cleaned after touching people or contaminated objects or surfaces
  - Wash with soap and water or ash, rubbing for 20 seconds before rinsing
  - Rub hands with an alcohol-based preparation until hands dry

NSLIPD PRESENTATIONS
Do not Distribute

Hand Hygiene ---Next lecture

Alcohol based hand rubs are the gold standard for hand hygiene in health care (unless hands are visibly soiled).

Obstacles to hand hygiene in some settings

Lack of facilities (sinks) and or continuous access to clean water, soap and paper towels at the point of care

PRESENTATIONS
not Distribute




When to Perform Hand Hygiene: Home

- Before, during, and after preparing food
- Before eating
- Before and after caring for someone who is sick
- Before and after treating a cut or wound
- After using the toilet
- After blowing your nose, coughing, or sneezing
- After touching an animal or animal waste
- After handing pets or pet food
- After touching garbage

NISLT IPC PRESENTATIONS
Do not Distribute

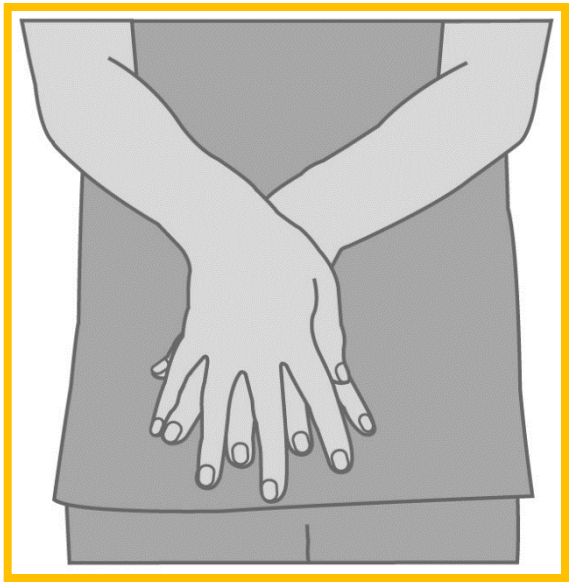
When to Perform Hand Hygiene: Healthcare

1. **Before touching a patient**
2. **Before doing a clean / aseptic procedure**
   - Before accessing a mucous membrane, non-intact skin, an invasive medical device
3. **After body fluid exposure**
   - As soon as possible and after glove removal
4. **After touching a patient**
   - When leaving the patient's side after having touched the patient
5. **After touching patient surroundings**
   - After touching any object or furniture in the patient's surroundings

NISLT RCPRESENTATIONS
Do not Distribute

Hand Hygiene

- **Wash your hands with soap and water**
  - when hands are visibly soiled
- Clean your hands by **rubbing them with an alcohol-based agent**
  - if hands are not visibly soiled
- Disinfect hands by **rubbing them with 0.05% chlorine solution**



NISLT IPC PRESENTATIONS
Do Not Distribute

Performing Hand Hygiene

Use of Alcohol Hand rubs

- Alcohol hand rub or hand sanitizer

Procedure:

- Apply about 5mls of hand sanitizer to palm of hand
- Ensure all 5 surfaces of hands are rubbed vigorously and extend to wrist
- Allow to dry in air.

NB: If hands are visibly soiled however, hand washing should be done instead.

Hand washing

- Soap – liquid preferable
- Running water
- Disposable paper towel

Procedure:

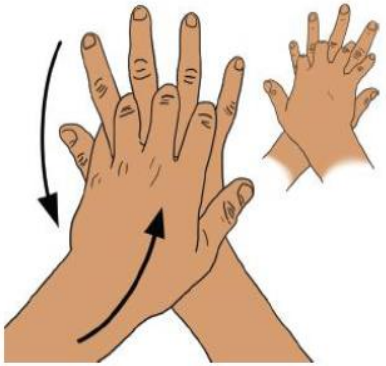
- Wet hands and apply soap
- Ensure all 5 surfaces of hands are rubbed vigorously and wash to wrist
- Rinse under running water
- Dry with paper towel or air dry. **No** shared towels

How to Wash Your Hands

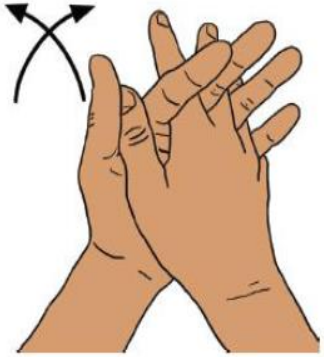
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces.

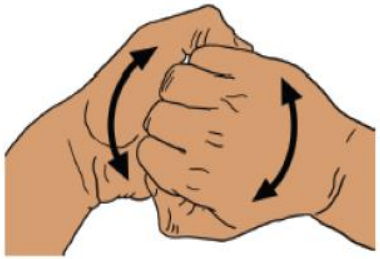
Rub hands, palm to palm,



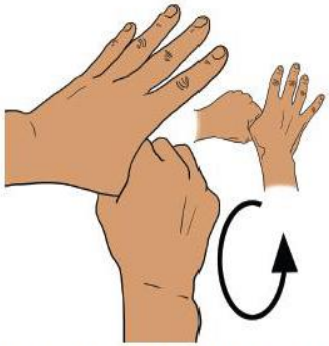
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

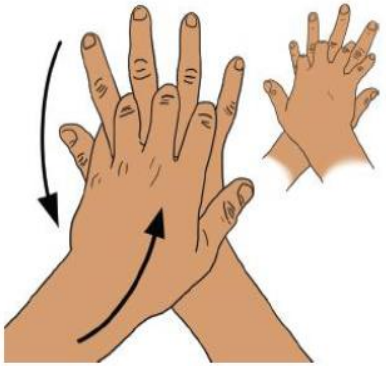
Dry hands thoroughly with single use towel.

How to Wash Your Hands

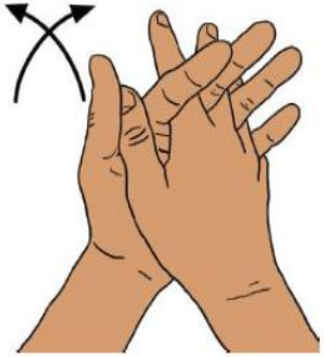
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces

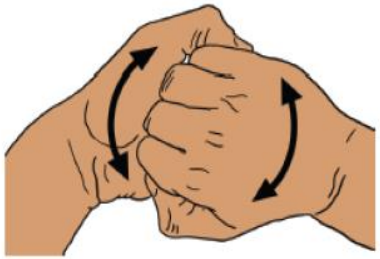
Rub hands, palm to palm,



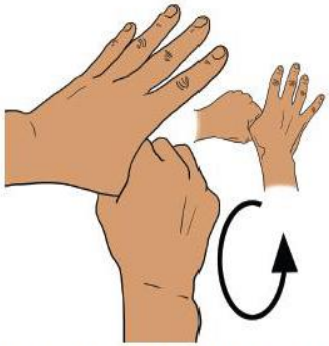
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

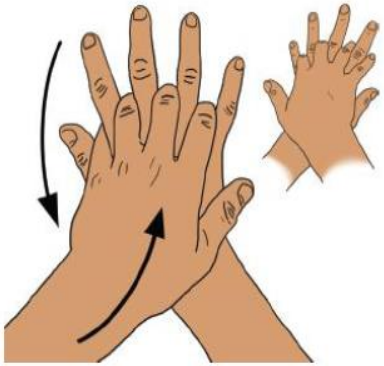
Dry hands thoroughly with single use towel.

How to Wash Your Hands

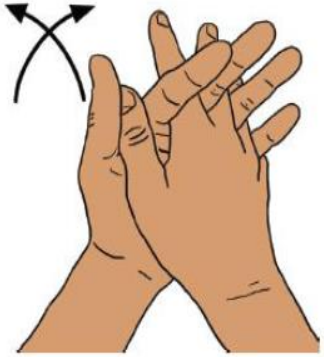
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces.

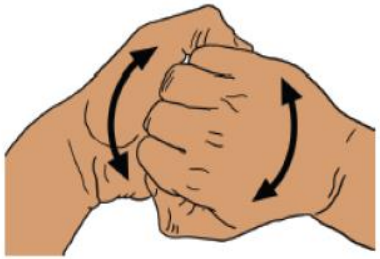
Rub hands, palm to palm,



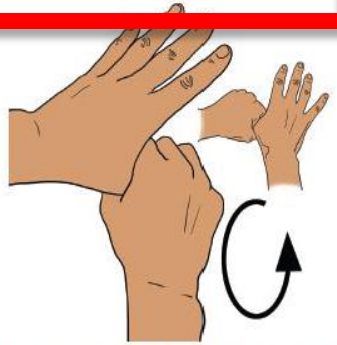
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

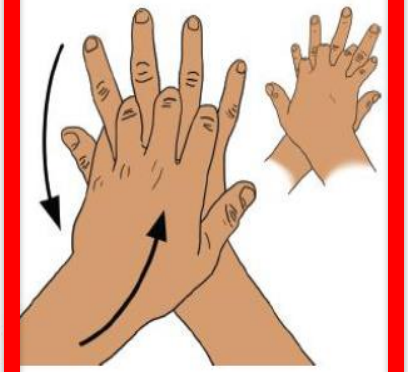
Dry hands thoroughly with single use towel.

How to Wash Your Hands

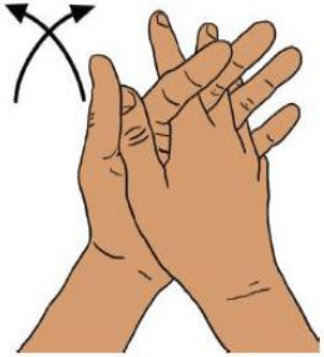
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces.

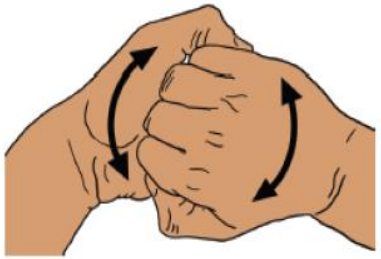
Rub hands, palm to palm,



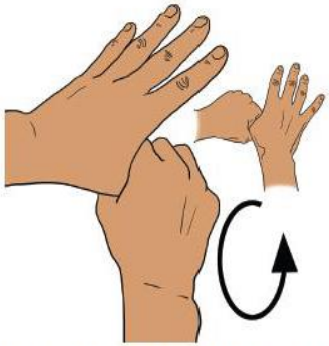
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

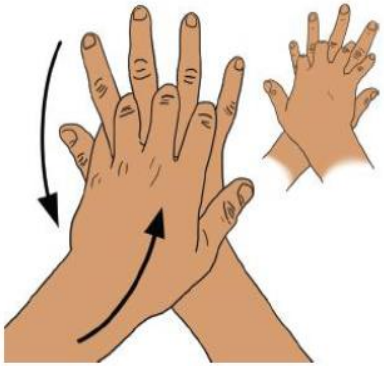
Dry hands thoroughly with single use towel.

How to Wash Your Hands

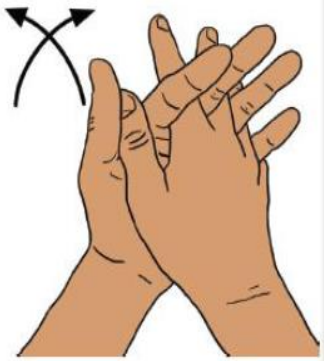
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces.

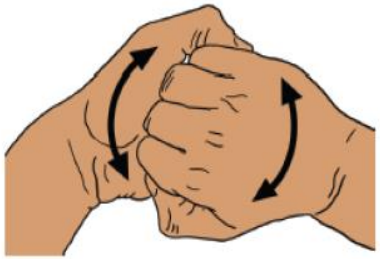
Rub hands, palm to palm,



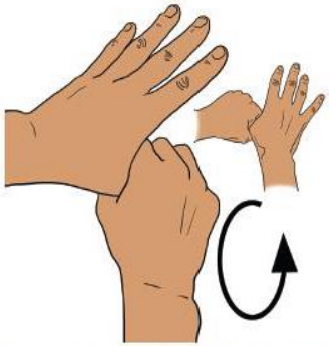
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

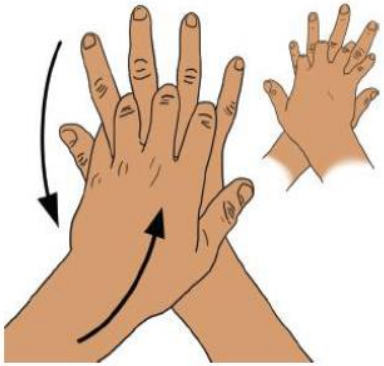
Dry hands thoroughly with single use towel.

How to Wash Your Hands

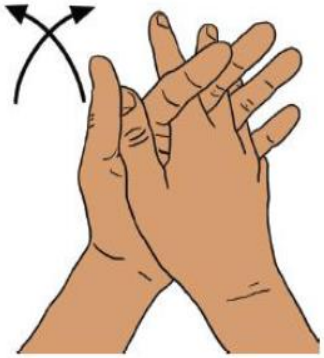
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to

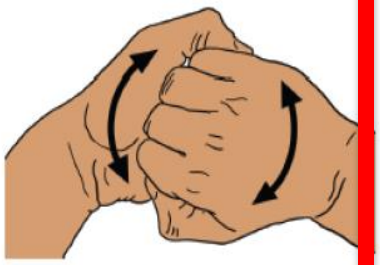
Rub hands, palm to palm,



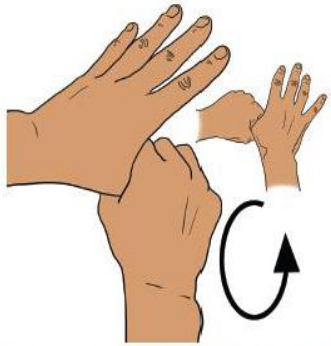
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

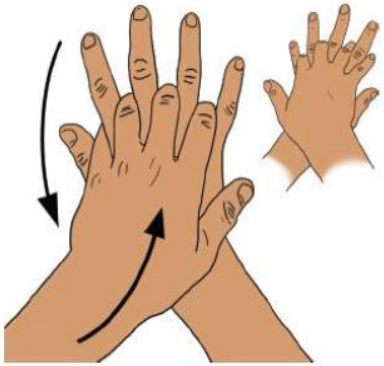
Dry hands thoroughly with single use towel.

How to Wash Your Hands

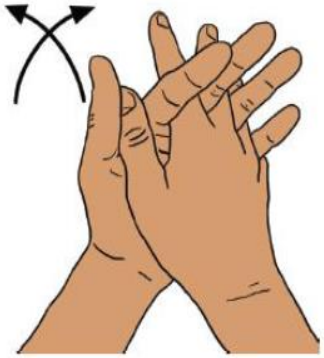
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces.

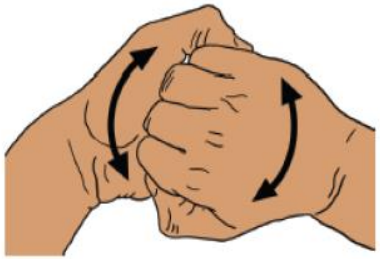
Rub hands, palm to palm,



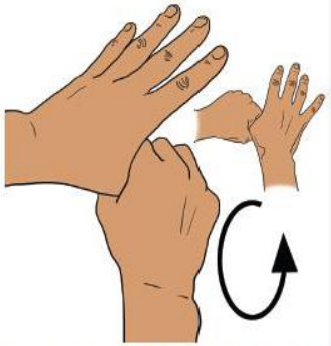
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

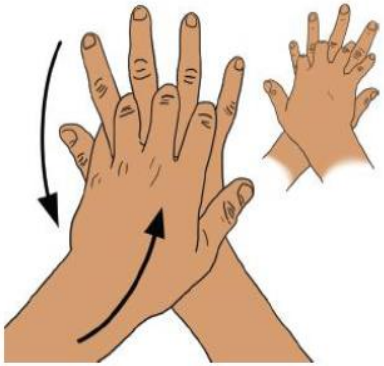
Dry hands thoroughly with single use towel.

How to Wash Your Hands

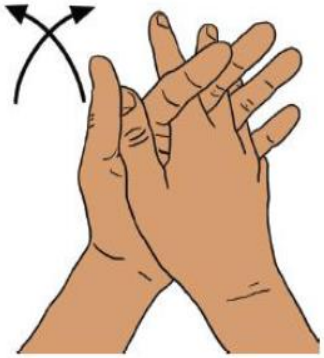
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces.

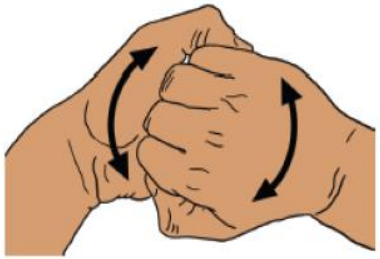
Rub hands, palm to palm,



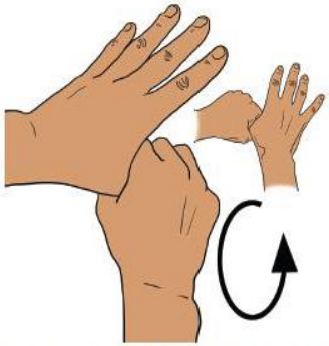
Right palm over left dorsum with interlaced fingers and vice versa



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

Rinse hands with water.

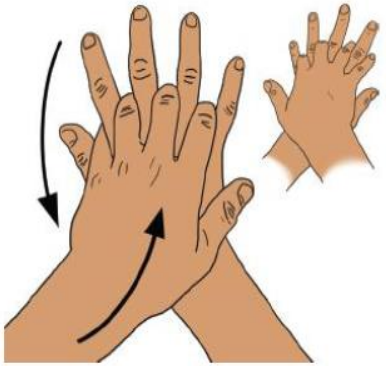
Dry hands thoroughly with single use towel.

How to Wash Your Hands

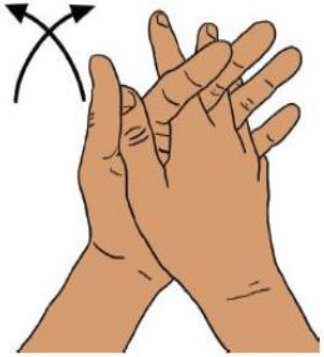
Perform hand hygiene. Duration of the entire procedure: **40-60 sec.**

Wet hands with water and enough soap to cover all hand surfaces.

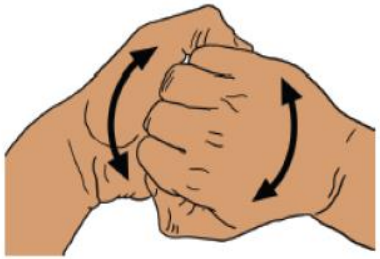
Rub hands, palm to palm,



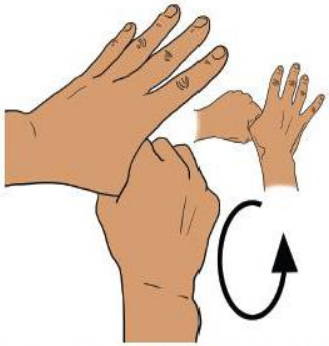
Right palm over left dorsum with interlaced fingers and vice versa,



Palm to palm with fingers interlaced,



Back of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa,

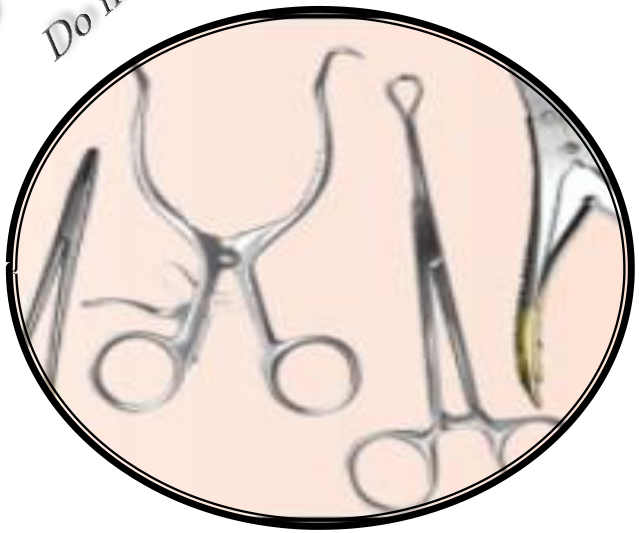
Rinse hands with water.

Dry hands thoroughly with single use towel.

DISINFECTION & STERILIZATION OF EQUIPMENT

Process that eliminates harmful germs from all equipment medical inclusive

PRESENTATIONS
Do not Distribute



IMPORTANCE OF DISINFECTION & STERILIZATION OF EQUIPMENT

NISLT IPC PRESENTATIONS
Do not Distribute

- Equipment and instruments used on a patient become contaminated with germs

- Germs can be transmitted if equipment and instruments are not cleaned, disinfected or sterilized before use on another patient

WHAT IS WASTE MANAGEMENT?

The appropriate, segregation, handling, treatment and disposal of waste at healthcare facilities

IPC PRESENTATIONS
Do not Distribute

Contaminated waste management

- Follow routine procedures for waste management generated at health facilities (segregation of waste)
- Used PPE and other waste material from respiratory health facility should be placed in "biohazard" waste bags inside the room where waste comes from. At collection, this bag can be put inside another bag outside the room and then treated as "normal"
- Gloves must be worn when removing waste bags
- Perform hand hygiene afterwards
- Incinerate waste
- Goggles are re-usable – clean prior to sterilization and re-use

NISLT IPC PRESENTATIONS
Do not Distribute

- **PPE** : mask (or scarf), heavy duty gloves and boots, gown, apron.
- **Clean first then disinfect**, 2 buckets – one each for washing, rinsing
- **Bleach (sodium hypochlorite) 1%** for disinfection of material contaminated with body fluids
  - Several concentrations may be marketed (e.g., 2.5%, 5%)
  - If 5% solution available, mix 1 part 5% solution with 5 parts clean water.
  - If 2.5% solution available, mix 2 parts 2.5% solution with 5 parts clean water.

NISL IPC PRESENTATIONS
Do not Distribute

What is Environmental Cleaning?

Regular and routine cleaning of surfaces

The aims are :

- ✓ To maintain a high level of hygiene in the healthcare facility
- ✓ Prevent the spread of germs to others
- ✓ Reduce germs on surfaces
  - ✓ Surfaces may look clean but germs can live on surfaces for hours to days

NISLT IPC PRESENTATIONS
Do not distribute

Why is cleaning and disinfection important?

- Germs can survive:
  - on medical equipment (e.g. instruments)
  - on surfaces (such as floors and tables)
  - on clothing (including PPE)
- If done correctly, cleaning & disinfection removes and kills most germs

Environmental cleaning and disinfection

- **Clean and disinfect patient areas daily**, with particular attention to frequently touched surfaces – counter tops, door handles, medical equipment.
- **Use bleaching powder** (7g/1L water i.e. 70% available chlorine) for disinfection of
- **toilets/bathrooms**
  - **Clean and dry cleaning/disinfection equipment after each use**. Clean and disinfect mop heads daily and dry thoroughly before re-use
  - Put **used linen** in linen bag inside the room; place in another bag outside the room when taking to laundry area for washing – **treat as soiled/contaminated**

NUST IPC PRESENTATIONS
Do not Distribute

Linen Processing

NISET IPC PRESENTATIONS
Do not distribute

REMEMBER

- Used linen potentially contains large numbers of microorganisms
- It may or may not be visibly contaminated with blood or body fluids
- All used/soiled linen is considered **contaminated** and should be handled with caution

DIRTY

CLEAN

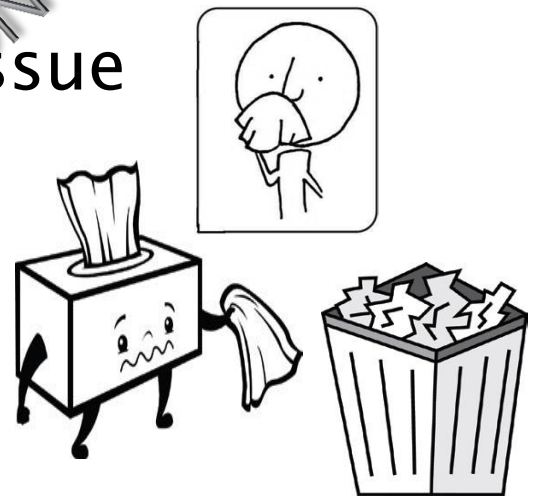
General Precautions for Processing Linen

- Handle soiled/used linen only when required
- Use appropriate PPE
- Never place soiled linen on the floor or on clean surfaces
- Do not shake linen and be vigilant for sharps
- Do not sort or wash linen at point of use/patient-care areas
- Linen sorting area must be separate from folding and storage areas
- There should be adequate ventilation.
- Laundry workers must cover broken skin with plaster

NISLT IPC PRESENTATIONS
Do not Distribute

What is Respiratory Hygiene & Cough Etiquette?

- Covering nose and mouth with a tissue when coughing or sneezing



- Disposing tissues in appropriate waste container

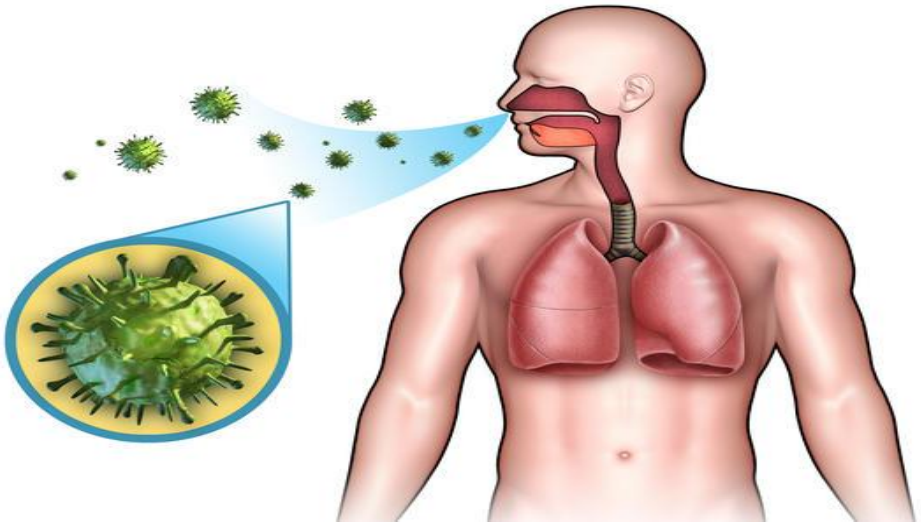
- Performing hand hygiene

- Offering a mask to, and separating coughing patient from others
- HCWS wearing a mask when caring for a coughing patient

NISLT IPC PRESENTATIONS
Do not Distribute

Why Respiratory Hygiene & Cough Etiquette is Important?

Minimizes the risk of transmitting infectious germs to others when a person coughs or sneezes



PPC PRESENTATIONS
Do not Distribute

WHAT TO CONSIDER FOR TRANSMISSION -BASED PRECAUTIONS

NISLT IPC PRESENTATIONS
Do not Distribute

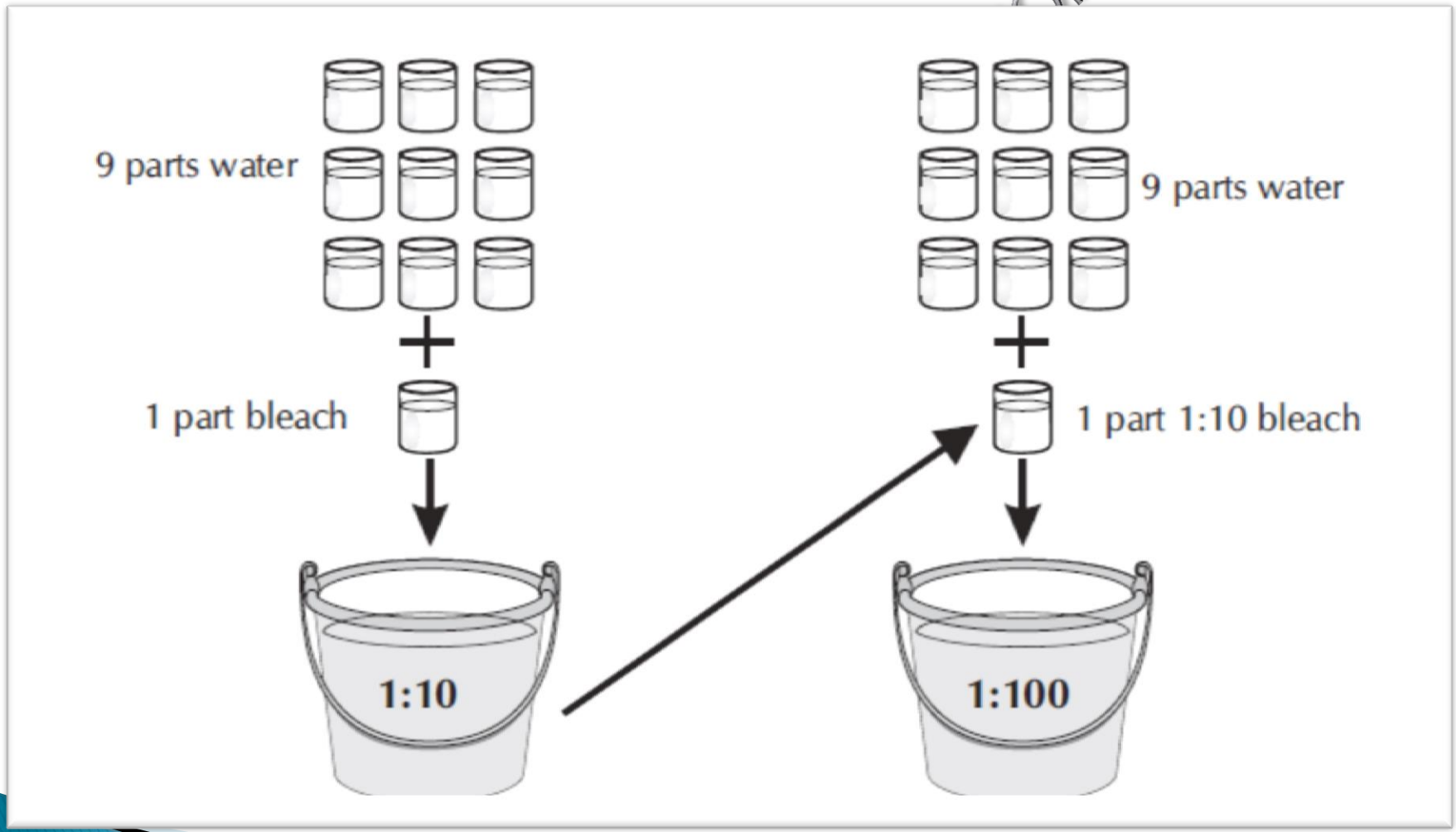
- Patient placement (triage)
- PPE
- Hand Hygiene
- Patient transport
- Equipment
- Environment
- Restricting access of all visitors

THE IDEAL WASTE DISPOSAL

DISINFECTION WITH CHLORINE

Solution	Uses
0.5%	Disinfection of body fluids; Disinfection of corpses; Disinfection of toilets & bathrooms; Disinfection of gloved hands; Disinfection of floors; Disinfection of beds & mattress covers; Footbaths;
0.05%	Disinfection of bare hands and skin; Disinfection of medical equipment; Disinfection of laundry; Washing up of plates and eating utensils;

MAKING THE CORRECT SOLUTION



KEY CONTACT PRECAUTIONS

- Use clean latex disposable gloves and gown whenever you come in contact with a patient
- Remove gloves and gowns immediately following any contact with a patient
- Perform hand hygiene immediately after removing any item of PPE
- Avoid touching your face, eyes or mouth with either gloved or ungloved hands

NISLT IPC PRESENTATIONS
Do not Distribute

KEY CONTACT PRECAUTIONS

- Dedicate specific equipment for use with a single patient.
- If shared equipment are used, clean and disinfect between each patient use.
- Place patient in single occupancy room wherever possible or cohort when not possible.
- All waste from patient room must be bagged and disinfected before leaving the room.

NISLT IPC PRESENTATIONS
Do not Distribute

KEY CONTACT PRECAUTIONS

- Reusable protective clothing should ideally be washed in the hospital and not taken home
- All linen from cases need to be placed in Highly infectious plastic bags (identified) and bags should be sprayed with 1:10 bleach solution
- HCW who handle linen should handle linen with PPEs

NSLT IPC PRESENTATIONS
Do not distribute

Work Practice Controls

NISLT IPC PRESENTATIONS
Do not Distribute

Work practice controls alter how you conduct a task to minimize the risk of exposure. E.g

- Taking an injured person through self care
- Using a dustpan and brush to pick up broken glass or other sharp material
- Taking waste out immediately after cleanup
- Most importantly: Hand hygiene (Follow 5 moments of hand hygiene)

Develop Personal Safe Work Habits

- Wash hands before and after touching each patient
- Wear fresh pair of gloves with each patient
- Wear protective coat and/or apron
- Use protective goggles and or face masks.

Prevention procedures

- **Daily** change of diluted disinfectants
- Correct aseptic techniques
- Proper sterilization, disinfection, disposal
- Education of staff in hospital hygiene
- Source isolation

NISLT IPC PRESENTATIONS
Do not Distribute

Prevention contd

- Wash hands with soap and water before and after procedures. Cover broken skin or open wounds with water tight dressing

- Use protective barriers (PPE) such as gloves, coats, aprons, masks, face shields, biosafety hoods/laminar flow.

NIST IPC PRESENTATIONS
Do not Distribute

Routes of Exposure

- Contact with mucus membranes
- Inoculation – needlestick injuries
- Inhalation
- Ingestion

NISLT IPC PRESENTATIONS
Do not Distribute

What to do when exposed?

- Wash cuts and inoculation injuries with soap and running water. DO NOT SQUEEZE; DO NOT use chemicals (Bleach, disinfectant etc)
- Flush splashes – rinse or irrigate with copious amount of water or saline
  - Need for a First Aid Kit
- Report the incident immediately

NSLTIPC PRESENTATIONS
Do not distribute

Decontamination?

Decontamination ensures an item or object is safe for reuse.

There are three different steps:

- **Cleaning**-physical removal of dirt and germs
- **Disinfection**-kills almost all germs (i.e. 0.5% chlorine)
- **Sterilization-**kills ALL germs using special type of equipment (i.e. autoclave)

NISLT IPC PRESENTATIONS
Do not distribute

Decontamination Process

1. CLEAN and remove visible waste using soap or detergent and water
2. DISINFECT using an effective disinfectant
3. WASH OFF any remaining disinfectant using clean water
4. Air DRY or take outside to dry in the sun

NISLT IPC PRESENTATIONS
Do not Distribute

Risks During Cleaning and Disinfection

- Poor cleaning & disinfection can spread infection to:
  - Patients
  - Cleaners
  - Visitors
  - Staff
- Cleaners should always:
  - Wear appropriate PPE based on risk of exposure
  - Follow recommended steps exactly

NISLT IPC PRESENTATIONS
Do not Distribute

Materials for cleaning and disinfection

- Appropriate PPE: often include gown, rubber gloves etc
- Soap and water
- Cloths and towels
- Bucket and mop
- Disinfectant
- General waste bin
- Waste bin for sharps

NISLT IPC PRESENTATIONS
Do not Distribute

PRINCIPLES OF CLEANING AND DISINFECTION

Why must we clean before disinfecting?

- All dirt and visible waste (e.g. body fluids) must first be removed/cleaned before using a disinfectant
- If we don't clean first, the disinfectant will not work

NISLT IPC PRESENTATIONS
For not distribute

Principles of Cleaning

- The basic principles of cleaning and disinfecting apply to all patient care areas
- Where possible, dedicate cleaning supplies in higher risk areas (e.g. delivery, OR)
  - Cleaning supplies for isolation should be kept and only used in isolation
- Always move from cleanest area to dirtiest area
- Always be sure to clean patient care equipment between each patient use

NISLT IPC PRESENTATIONS
Do not Distribute

The importance of flow during cleaning –

- Cleaners should move from clean areas to dirty areas so that they don't bring additional contamination into cleaner areas of the facility.

NISLT IPC PRESENTATIONS
Do not Distribute

DO NOT Spray Spills

- NEVER spray disinfectant directly on body fluid spills
  - It can create splashes or make the spill bigger
- Instead use towel or cloth to remove visible waste
- Once visible waste has been removed, clean area with disinfectant
- Spraying disinfectant on/to spills can pose an occupational hazard to staff and patients.

NISET IPC PRESENTATIONS
Do not distribute

Decontaminating Reusable Cleaning Supplies

- Any reusable item (cleaning towels, buckets, mops)should be appropriately disinfected after use:
  - ✓ Clean
  - ✓ Disinfect
  - ✓ Wash off using clean water
  - ✓ Dry
- When possible, use disposable towels. Throw towels away in a medical waste bin immediately after use

NISLT IPC PRESENTATIONS
Do not Distribute

RECOMMENDED CLEANING FREQUENCY

ITEM	FREQUENCY
Surfaces (floors, tables, chairs) ETC	At least twice daily when visibly soiled
Plates and utensils	After use
Linen and mattresses	After every use and when visibly soiled
Latrines and toilets	At least twice daily and when visibly soiled

CONCLUSION

- Environmental cleaning and decontamination is an essential IPC practice.
- Surfaces contaminated by blood and body fluids must be cleaned and decontaminated regularly,
- Reusable equipment requires regular cleaning, decontamination and/or sterilization.
- Cleaners should be VERY careful when cleaning the isolation area
- Isolation areas should have their own cleaning supplies that are separate from clean patient care areas
- All waste from the isolation area is considered very contaminated and should be burned

NISLT IPC PRESENTATIONS
Do not Distribute

- The need of having dedicated supplies for cleaners is advocated

For example, a bucket used for mopping should not also be used for holding clean water for hand hygiene.

- Scrupulous hand hygiene – very critical
- Adequate disinfection
- Correct dilutions of disinfectants (1:10) for bleach
- Use of appropriate disinfectants (Hypochlorite/Household bleach)
- Proper use of PPEs
- Decontamination of equipment in-between patients
- Appropriate waste management - disposal

NSET IPC PRESENTATIONS
Do not Distribute

As the majority of transmission occur in the communities, these main measures should be considered :

- Social distancing /separation of AT LEAST 1m between people/ separation of well and sick individuals
- Cough/respiratory etiquette
  - Wear masks always.
  - Sneeze/cough into your sleeve or cover with tissue or scarf or mask.
  - If you have coughed/sneezed into your hands, wash hands immediately with soap and water.
- Hand hygiene / washing
  - Before eating or feeding others, after coughing/sneezing, after touching patients or their bed sheets, clothes and utensils, before and after preparing food, after going to the toilet, after removing masks or gloves.
  - Use hand sanitizer after washing with soap
- Adherence to IPC by ALL is mandatory at home, offices / working places

NISE IPC PRESENTATIONS
Do not Distribute

Thank **you** for listening