



Inspiring Innovation and Leadership

# CORONA VIRUS DISEASE

COVID -19( SARS- CoV 2)

## Infection Prevention and Control Measures

KARATINA UNIVERSITY

# Infection Prevention and Control Measures

- ▶ **Personal Protective Equipment**
- ▶ Wearing of personal protective equipment (PPE) e.g. Face mask, gloves and gown.
- ▶ WHO recommends that a **Face mask** should be worn in Public places.

# Personal Protective Equipment for Transmission-based Precautions

- Contact precaution



Always



- Droplet precaution



- Airborne precaution





## Respiratory Protection



- Purpose: protect from inhalation of infectious aerosols (e.g., *Mycobacterium tuberculosis*)
- PPE types for respiratory protection:
  - N95 masks or particulate respirators only for suspect or confirmed COVID19 cases
  - Half- or full-face elastomeric respirators
  - Powered air purifying respirators (PAPR)

# How to Don a Mask

1. Select appropriate type and size
2. Inspect for nonconformities
3. Place over nose, mouth and chin
4. Fit flexible nose piece over nose bridge
5. Secure mask with ties or elastic as shown on the picture
6. Adjust to fit snugly



# How to Don a Particulate Respirator (N95 Mask)

1. Select a fit-tested respirator
2. Inspect for nonconformities
3. Place over nose, mouth and chin
4. Fit the flexible nose piece over nose bridge
5. Secure on head with elastic
6. Adjust to fit snugly
7. Perform a fit check:
  - Inhale – respirator should collapse
  - Exhale – check for leakage around face



# Steps To Wear A Mask

▶ VIDEO

<https://www.youtube.com/watch?v=bSYCRAPHz0I>

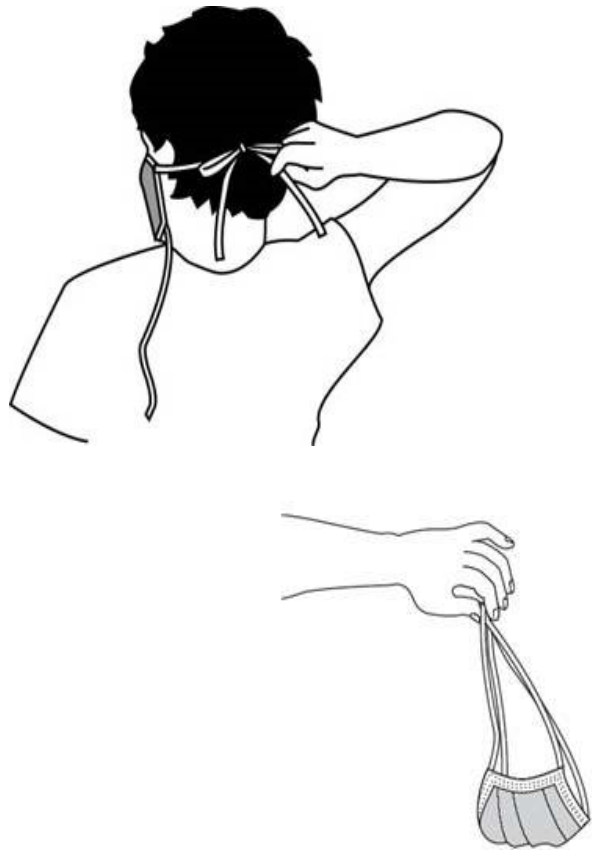
# How to Remove a Particulate Respirator



1. Lift the bottom elastic over your head first
2. Then lift off the top elastic
3. Discard



# How to Remove a Mask



1. Untie the bottom, then top tie
2. Remove from face
3. Discard

# Mask Protection Efficiency



## ▶ **Environmental Hygiene**

- ▶ Cleaning of utensils with soap and hot water & proper waste management
- ▶ Frequently cleaning often-used surfaces (desk, cell phones, computer keyboards, laptops, vehicle handles, gearshifts, and others using detergents or disinfectant .
- ▶ Maintain distance and hygiene practices in transport vehicles
- ▶ Keep the door closed & restrict visitors



▶ **Social distancing**

- ▶ Do not participate in team sports ( e.g volley ball, football, basketball, cricket & weight lifting)

Business and market closure

- ▶ School closures with the school children advised to avoid loitering in the estates and streets.

- ▶ Cancellation of events - Harambees, public barazas, weddings

- ▶ Movement restrictions - Advice on use public transport

- ▶ Two people meeting should keep 1 metre apart.
- ▶ Restriction on public gatherings - places of worship, bars, hotels, supermarkets, weddings, funerals etc.
- ▶ Supervision of burials
- ▶ Reducing crowding at hospitals, this may involve reducing the number of visitor's patients admitted to the facilities can receive.

## ▶ **Personal travel**

- ▶ Avoid travelling as it is a risk to others, self-isolation is likely to be imposed on your return, especially as the situation is highly changeable, and could be altered while you are away, and impact conditions on your return.

## ▶ **Expectations for Returnees in Quarantine**

- ▶ You are required to self isolate yourself for 14 days if you have travelled from a restricted area/country.

- ▶ **Stay home** unless going to hospital. No trips to the office or school, no shopping, no visiting friends, no restaurants. Do not take the bus, tuk tuk, taxi or transport van. **Stay home.**
- ▶ You should have no visitors, and keep one to two metres away from family members. If you must come out of your room, wear a mask.

- ▶ If you are potentially infectious (because you have been exposed to an infected person) you should separate yourself from your partner, your housemates, your children, your elderly relatives.
- ▶ Designate a room for your exclusive use, including a bathroom if possible. Every surface you cough on or touch should be cleaned frequently with a cleanser.
- ▶ Don't share dishes, drinking glasses, cups, eating utensils, towels or bedding with anyone (including your pets). Wash/disinfect these items after you use them.



- ▶ If you must be around other people in your home, you should wear a mask, and everyone else with you should wear one as well. If you are unable to get a mask, create one with a scarf or large handkerchief.
- ▶ Minimize contact with the Elderly members, those with chronic medical conditions, pregnant women.
- ▶ Monitor your health and call if you develop symptoms.

## ▶ Hand Hygiene

- ▶ Frequently wash your hands with running water, for at least 20 seconds, (sing happy birthday twice) and especially after sneezing or coughing.
- ▶ Use an alcohol-based hand-rub(sanitizer) if hands are not visibly soiled
- ▶ Avoid touching your eyes, nose or mouth; remind colleagues of the same (we all need support to make this change)
- ▶ Cease handshakes.

## How to Handwash ...



To effectively reduce the growth of germs on hands, *handwashing* must be performed by following all **11 steps** illustrated on the left.

## How to Use Hand rub

# How to Handrub?

**RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED**

**⌚ Duration of the entire procedure: 20-30 seconds**

**1a**  **1b** 

Apply a palmful of the product in a cupped hand, covering all surfaces;

**2** 

Rub hands palm to palm;

**3**  **4** 

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

Palm to palm with fingers interlaced;

**5** 

Backs of fingers to opposing palms with fingers interlocked;

**6**  **7** 

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

Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

**8** 

Once dry, your hands are safe.

**World Health Organization** | **Patient Safety** | **SAVE LIVES**  
Clean Your Hands

To effectively reduce the growth of germs on hands, *handrubbing* must be performed by following all steps illustrated on the left. This takes only **20-30 seconds!**

# Proper Hand Washing/Rubbing Technique



STEP 1  
Rub palms together.



STEP 2  
Rub the back of both hands.



STEP 3  
Interlace fingers and rub hands together.



STEP 4  
Interlock fingers and rub the back of fingers of both hands



STEP 5  
Rub thumb in a rotating manner followed by the area between index finger and thumb for both hands.



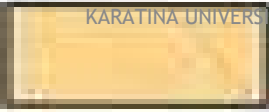
STEP 6  
Rub fingertips on palm for both hands.



STEP 7  
Rub both wrists in a rotating manner. Rinse and dry thoroughly.



**Most frequently missed**



**Less frequently missed**

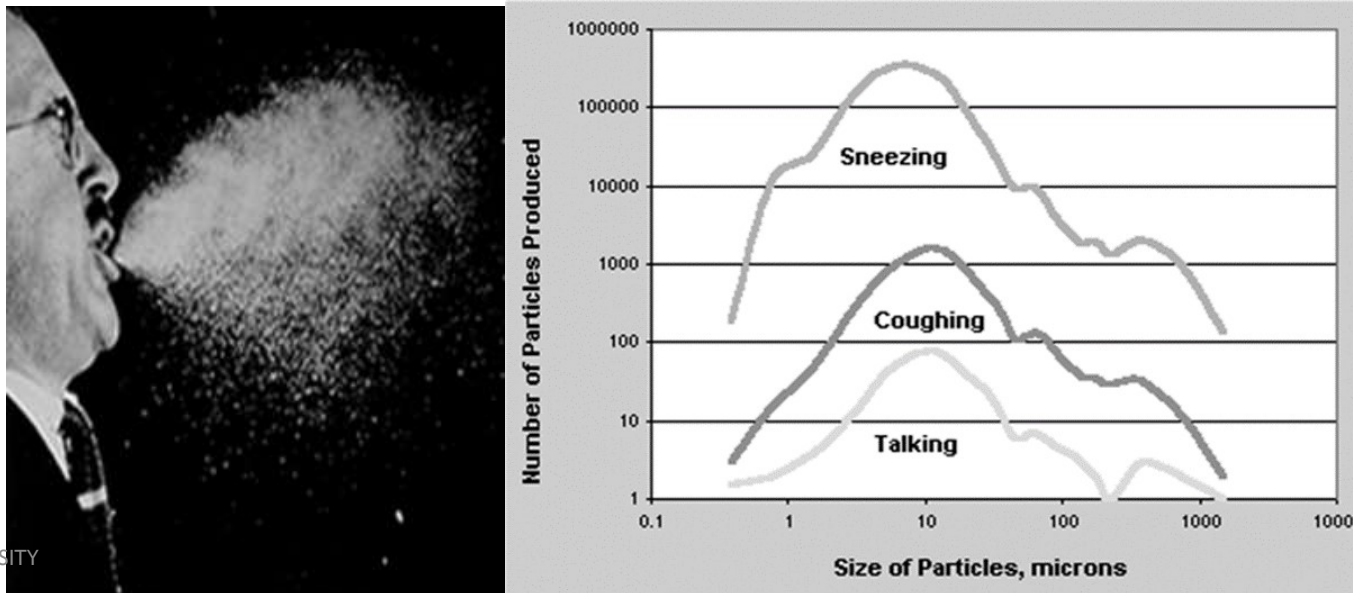


**Frequently missed**

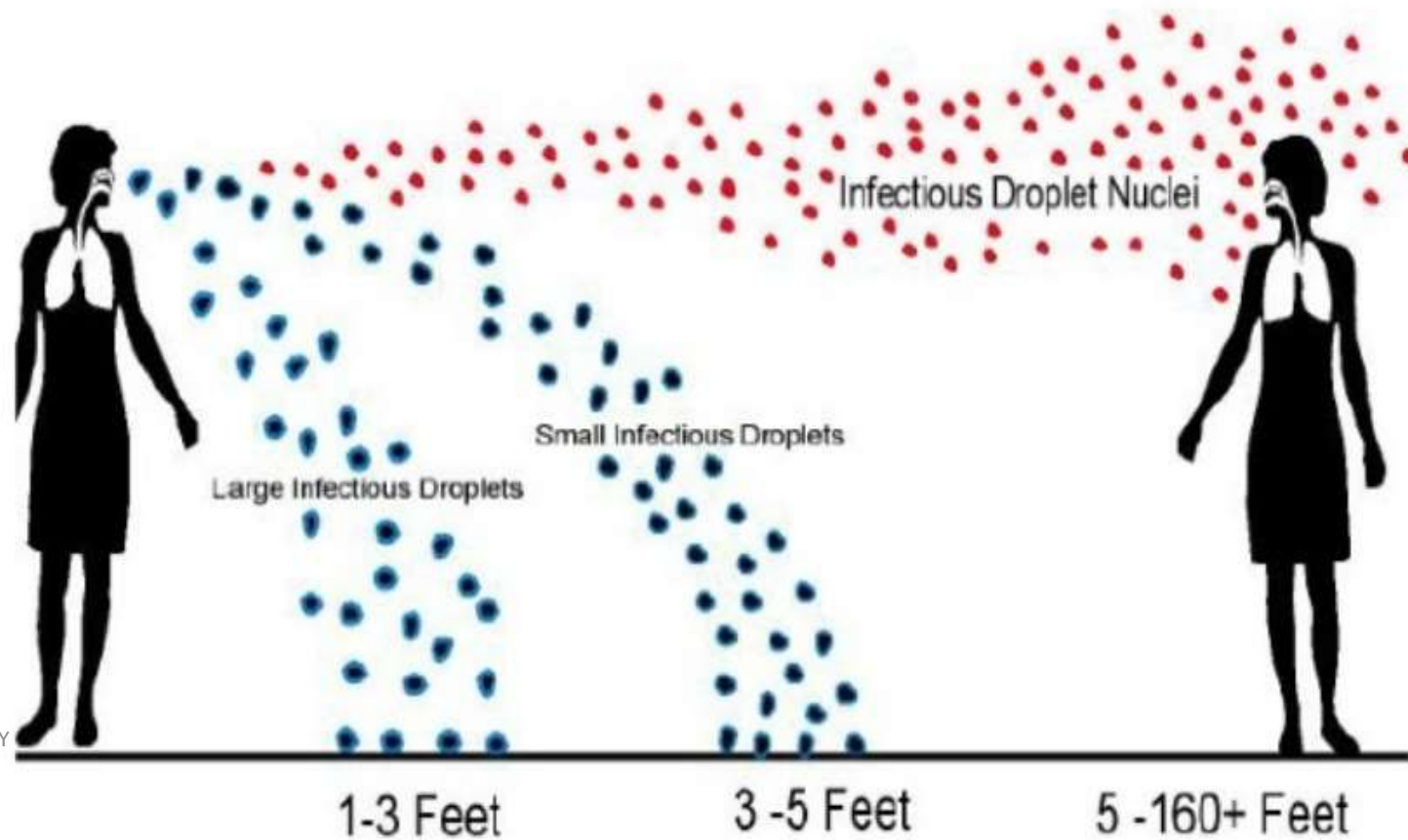


► **Respiratory Hygiene**

- Cough or sneeze into a tissue, or your elbow/sleeves and discard the used tissue. **Do not smoke.**



# Infectious Droplets & Droplet Nuclei travel lengths





- ▶ **Video on how micro-droplets lead to the spread of corona virus disease**
- ▶ Available at <https://www3.nhk.or.jp/nhkworld/en/news/ataglance/844>
- ▶ **That's why we should wear masks to prevent the spread of micro droplets.**

# Corona virus disease in children

- ▶ The data on children is scarce and where available it shows they account for only 0.9% in China, 1.2% in Italy and 5% in USA of the diagnosed cases.
- ▶ Amongst, children, the more severe symptoms like acute respiratory distress syndrome and organ failure were described in those who were less than 12 months.
- ▶ Incubation period could be up to ten days and children are likely to shed the virus even though they have mild symptoms.

- ▶ Children get less severe disease than adults, Mortality and critical illness are rare.
- ▶ Children probably acquire the COVID-19 less often than adults.
- ▶ They mainly acquire the disease from family contacts.
- ▶ Cough and fever are the most common symptoms in children, followed by sore throat, runny nose, some have diarrhoea or vomiting.
- ▶ Neonates do not seem to get severe disease and there is no evidence for vertical transmission as virus has not been identified in amniotic fluid, placenta, cord blood.

# Routine Immunization Services

- ▶ A **fully vaccinated child** is more likely to be protected from vaccine preventable diseases and possible complications of COVID-19. Hence,
- ▶ **Routine immunization services should continue** countrywide with preferential use of smaller less crowded levels 2 and 3 facilities to reduce exposure of children and care givers.
- ▶ **Possible catch-up immunization** activities upon the end of COVID- 19 outbreak should be done for those who **have missed immunization.**

# Isolation Facilities for children.

- ▶ Hand washing and wearing of masks, gowns, and/or gloves may reduce the spread of respiratory viruses
- ▶ Quarantine and isolation may have **negative effects** on the children's **physical and mental health**.
- ▶ It can greatly increase the risk of post-traumatic stress disorder.
- ▶ Therefore isolation facilities for children should include **counselling and play areas**

# Conclusion

- ▶ It is important to remember that as COVID -19 impacts our businesses, our studies, our normal schedules, and our priorities.
- ▶ The steps we take **individually** and **collectively** will contribute to effectively overcoming this threat.

**Thank you**

# References

- ▶ NCoV website <https://www.who.int/health-topics/coronavirus>
- ▶ Disease Outbreak News <https://www.who.int/csr/don/en/>
- ▶ WHO Travel Advice <https://www.who.int/ith/en/>
- ▶ WHO IPC e-learning <https://ipc.ghelearning.org>
- ▶ Ministry of health: <https://www.health.go.ke/wp-content/uploads/2020/03/COVID-19-Press-Release-6th-March-2020.pdf>
- ▶ Interim Guidelines On Management Of Covid-19 In Kenya
- ▶ Guidelines On The Management Of Paediatric Patients During Covid-19 Pandemic