



Infection Prevention and Control

Building Capabilities 2015

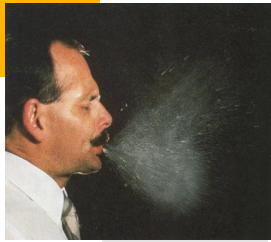
A TRADITION OF INDEPENDENT THINKING



Atishoo!

Respiratory Hygiene and Etiquette

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Cork 2015



Spread of respiratory infections

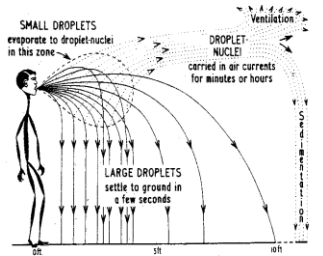
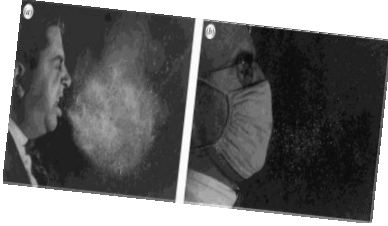


Fig. 67.1 Spread of respiratory infections by droplets and droplet nuclei.



Dispersal of droplets in a sneeze and how this dispersal is attenuated by a cotton mask.



Clark R P , de Calcina-Goff M L J. R. Soc. Interface 2009;6:S767-S782 ©2009 by The Royal Society



What is Respiratory hygiene and cough etiquette ?



1. **Infection prevention and control measures** to decrease the transmission of respiratory illness (e.g., influenza and cold viruses).
2. Droplets released from an ill person's cough or sneeze can **travel for several feet** reaching the nose or mouth of others and causing illness.
3. Viruses can **spread easily from person to person** through direct contact via touching or shaking hands.
4. Droplets can also live for a short time on a variety of objects in the **environment** such as bed rails, door knobs, wheelchairs, or patient care equipment where they can be touched by another person.



Standard precautions = basic level of infection control precautions which are to be used, as a minimum, in the care of all patients.

- Hand hygiene
- **Personal Protective Equipment**
- Waste Management
- Immunisation
- Sharps Management
- Patient isolation
- Decontamination of clinical spillage
- **2007 Respiratory hygiene/cough etiquette, developed during the severe acute respiratory syndrome (SARS) outbreak, is now considered as part of standard precautions.**

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The world health report 2003

Chapter 5: SARS: lessons from a new disease

- **Lesson five** is that **weaknesses in health systems** can permit emerging infections to amplify and spread, and can compromise patient care.
- The strengthening of health systems thus deserves high priority.
- **The people at greatest risk for SARS were health workers who either became infected by close face-to-face contact with patients or by procedures that brought them into contact with respiratory secretions**



Respiratory Hygiene/ cough etiquette, Why ?

2003 lessons (after SARS)

The need for **vigilance and prompt implementation** of infection control measures at the **first point of encounter** within a healthcare setting

These **precautions should be applied to any person with signs** of respiratory illness including cough and increased production of respiratory secretions



| 2003 Guidelines | 2007 Guidelines |
|---|--|
| The term "Nosocomial" | Healthcare Associated (HA) |
| Cough etiquette during flu season | Respiratory Hygiene/Cough Etiquette now a part of Standard Precautions- year round |
| Negative Pressure (TB) Rooms | Airborne Infection Isolation Room (AIIR) |
| Categories: Airborne, Droplet, Contact and RO (Resistant organism) Isolation | Airborne, Droplet and Contact |
| Precaution signs- Airborne, Droplet, Contact, RO, Stop --Childhood illness | RO sign deleted Contact sign now green Yellow "hand wash soap and water only" added All signs stay posted until terminal cleaning completed |
| Family and visitors not encouraged to wear N95 respirator when visiting a patient in Airborne Infection Isolation | Families and visitors will be offered the N95 respirator mask-nursing will offer education on the proper use as indicated |
| Family and visitors do not wear gowns and gloves while visiting in a contact isolation room | Family and visitors are encouraged to wear the appropriate PPE when assisting with direct patient care |

CDC Guidelines 2007



Respiratory Hygiene/Cough etiquette. **Implementation and Tools**

Education

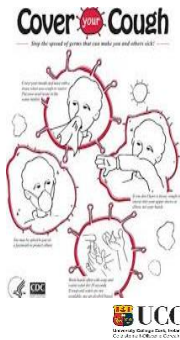
- Staff
- Visitors
- Patients/clients

Visual alerts

- Display posters- available on HPSC website
- Appropriate language and languages
- Computerised information/TV screens

IPC Controls

- Source control measures- covering nose and mouth when coughing/sneezing
- Hands Free Alcohol Dispensers
- Hand hygiene



Respiratory Hygiene/Cough etiquette. **How in the clinical situation ?**

Spatial separation

- Ensure at least 1 metre between symptomatic patients

Starting in the ED

- Staff (administration and clinical) alert to symptomatic patients particularly during outbreaks and annual "Flu season"
- Offer masks to clients/ patients, during "Flu Season"
- Place symptomatic patients in **single rooms** in the ED if possible. **Closed door.**
- **Instruct patient** to wear face protection when exiting the room
- Healthcare personnel advised to observe **droplet precautions** when caring for and examining patients showing signs of respiratory illness



Respiratory Hygiene/Cough etiquette **In-Patient placement**


- Place patients with suspected or confirmed influenza in a **single room** preferably with ante room and en-suite facilities. Negative air pressure

- **Doors** of isolation rooms must **remain closed.**

- Place an **isolation sign indicating the type of transmission-based precautions** on the door (as per local guidelines), ensuring that patient confidentiality is maintained.

- If a single room not available, place patients with ILI at least one meter (3 feet) from other patients.



| | AIRBORNE Precautions | DROPLET Precautions | |
|---|---|--|---|
| Definition | Dissemination of airborne droplet nuclei or small particles containing infectious agents that remain infective over time and distances Maybe dispersed over long distances and inhaled by susceptible individuals who did not have direct contact with the source | Large respiratory droplets , carrying infectious agents, generated by patient coughing, sneezing, talking or undergoing medical procedures involving the respiratory tract Droplets do not remain suspended and fall close (approx 1 metre) to source | |
| PPE Required a. CDC Recommendation b. CUH/CUMH | a. and b. FFP3 facemask | a. Surgical Face Mask b. FFP3 facemask | |
| Infections/ Illnesses | Pulmonary TB Chickenpox Smallpox Measles(rubeola) | Meningitis Whooping cough Mumps Influenza RSV |  |

Education of Patients



Encourage patients/clients to

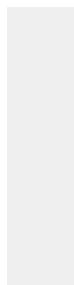
1. Cough/sneeze into a clean tissue and turn the head away from others .
No cotton handkerchiefs !
2. Dispose of tissue into a non-touch waste bin
3. If tissue not available to cough/sneeze into the arm
4. Decontaminate the hands



Respiratory Hygiene/Cough etiquette Patient Support



- Certain patients, for example, the **elderly or children** may require assistance with the containment of respiratory secretions.
- Patients who are immobile will require a **receptacle readily at hand** for the immediate disposal of used tissues and **provided with hand hygiene facilities.**



Health care workers

- HCWs should have **access to an occupational health team** and be offered annual influenza vaccination
- HCWs should **self monitor** for Influenza Like Illness (ILI).
- HCWs with ILI symptoms should not attend work and should immediately report symptoms to their line manager.



PPE Ebola



Surgical Face mask



A **surgical mask** is intended to **prevent the release of potential contaminants from the user** into their immediate environment. It is also used to **protect the wearer from large droplets, sprays and splashes of body fluids. Does not effectively filter** small particles from air.

Facemasks also **do not provide complete protection because of the loose fit** between the surface of the facemask and your face

Not designed to fit tight to face

Respirator (Non powdered) FFP2/FFP3



Reduces wearer's exposure to particles including small particle aerosols and large droplets

Designed to fit tight to face creating a seal around the perimeter of the respirator to improve protection.

Effectively filters large and small particles from air.

Powered air purifying respirators (PAPR)



Respirators

Approved models:

- N95 - Filters at least 95% of airborne particles.
- Surgical N95 - A NIOSH-approved N95 respirator that has also been cleared by the Food and Drug Administration (FDA) as a surgical mask.
- FFP3 3M



Respirators are not designed for children or people with facial hair. A proper fit cannot be achieved on children and people with facial hair

Fit Testing

How is the proper respirator size determined?

Proper respirator size is determined through a fit test

If employees have a beard or moustache, is their respirator still effective?

Tight-fitting facepiece respirators must not be worn by employees who have facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function.

- Respirators that do not rely on a tight face seal, such as hoods or helmets, may be used by bearded individuals





How to Don a Mask

- Place over nose, mouth and chin
 - Fit flexible nose piece over nose bridge
 - Secure on head with ties or elastic
 - Adjust to fit
- Some masks are fastened with ties, others with elastic.



How to Don a Particulate Respirator

- Select a fit tested respirator
- Place over nose, mouth and chin
- Fit flexible nose piece over nose bridge
- Secure on head with elastic
- Adjust to fit
- Perform a fit check –
 - Inhale – respirator should collapse
 - Exhale – check for leakage around face



Removing a Mask

- Untie the bottom tie, then top tie
- Remove from face
- Discard into non touch waste bin
- Carry out hand hygiene



Removing a Particulate Respirator

- Lift the bottom elastic over your head first
- Then lift off the top elastic
- Discard into non touch waste bin
- Carry out hand hygiene



Respiratory Hygiene/Cough etiquette Checklist

- Ensure **supplies** of tissues, waste bins and hand hygiene facilities
- Ensure **rapid triage** at admission source
- HCWs should have access to an **occupational health team** and be offered **annual influenza vaccination**
- HCWs should **self monitor** for ILI.
- HCWs with ILI symptoms should not attend work and should immediately report symptoms to their line manager.

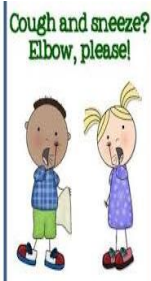
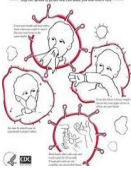






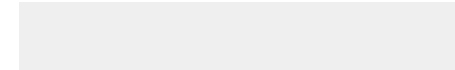
Cover your mouth and nose with a tissue when you cough or sneeze. Put used tissue in the waste basket and wash your hands thoroughly. If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands.

Cover Cough

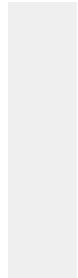


Remember the Flu season is approaching!! !!





- Siegel J.D et al: 2007. Guideline for Isolation Precautions : Preventing Transmission of Infectious Agents in Healthcare Settings
- CDC : Basic Infection Control and Prevention Plan for Outpatient Oncology Settings. <http://www.cdc.gov/HAI/settings/outpatient/basic-infection-control-prevention-plan-2011.pdf>
- CDC : Respiratory Hygiene/Cough Etiquette in Healthcare Settings <http://www.cdc.gov/flu/professionals/infectioncontrol/resphygine.htm>
- **The world health report 2003** www.who.int/whr/2003/chapter5/en/index5.html
- HPSC : Infection prevention and control of suspected or confirmed influenza in healthcare settings 2013



Questions ?



"The patient in the next bed is highly infectious. Thank God for these curtains."

