NATIONAL INSTITUTE FOR OCCUPATIONAL HEALTH

Division of the National Heralth Laboratory Service

Occupational health interventions for COVID-19 in healthcare facilities during the 3rd wave

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Denkleiers • Leading Minds • Dikgopolo tša Dihlalefi

Objectives

- To discuss the rational for OHS intervention following our experience working with COVID 19 pandemic in healthcare facilities

“The
health & safety of health workers is a global priority to prevent collapse of healthcare systems and transmission from
hospital to the community”

Wilson et al. Anaesthesia 2020

COVID-19 at work

- Occupational Disease vs. workplace issue

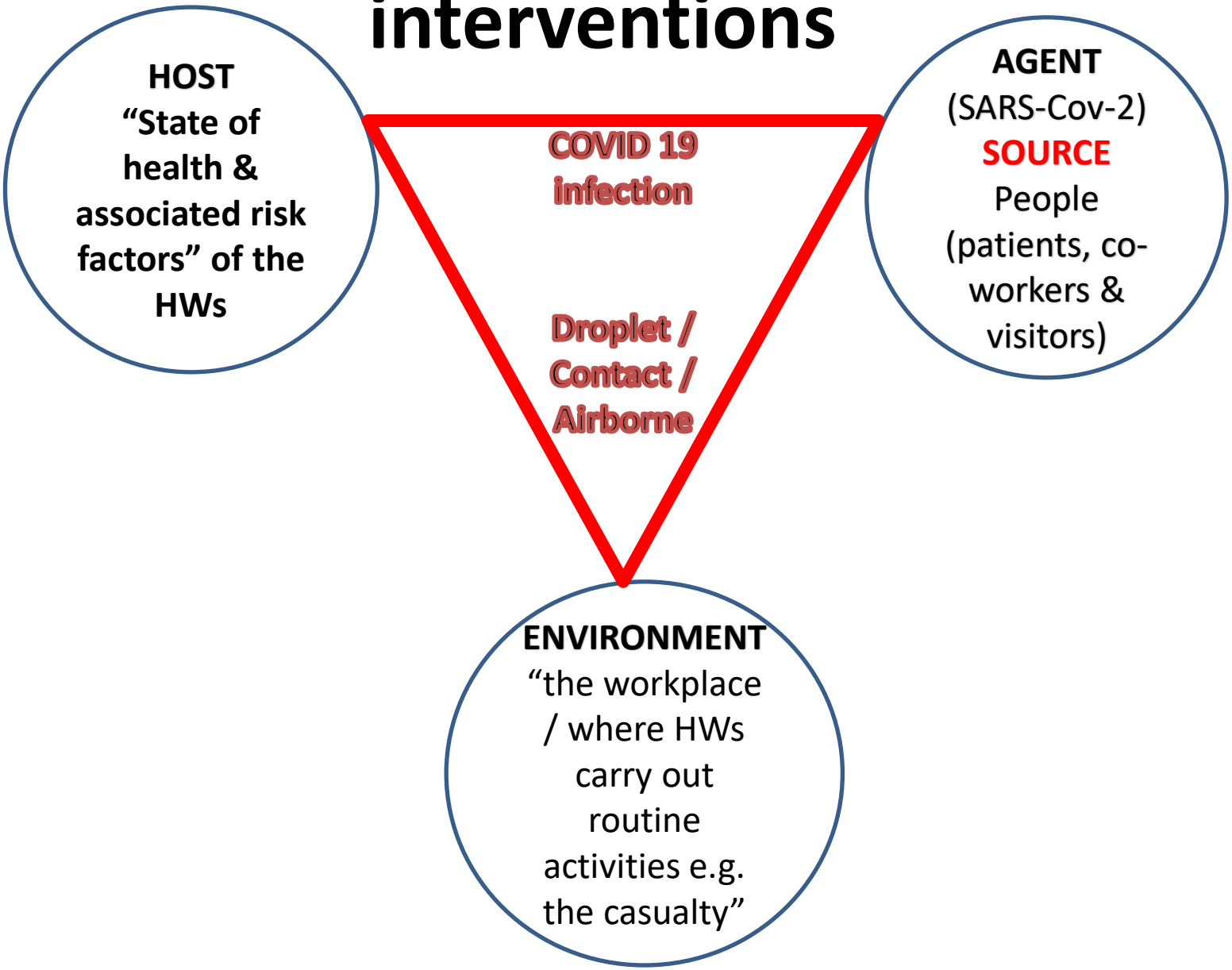
GENERAL NOTICES • ALGEMENE KENNISGEWINGS

DEPARTMENT OF EMPLOYMENT AND LABOUR

NOTICE 387 OF 2020

DIRECTIVE ON COMPENSATION FOR WORKPLACE-ACQUIRED NOVEL CORONA VIRUS DISEASE (COVID-19)

Basics in planning COVID-19 OHS interventions



Factors to consider in OHS interventions in healthcare settings

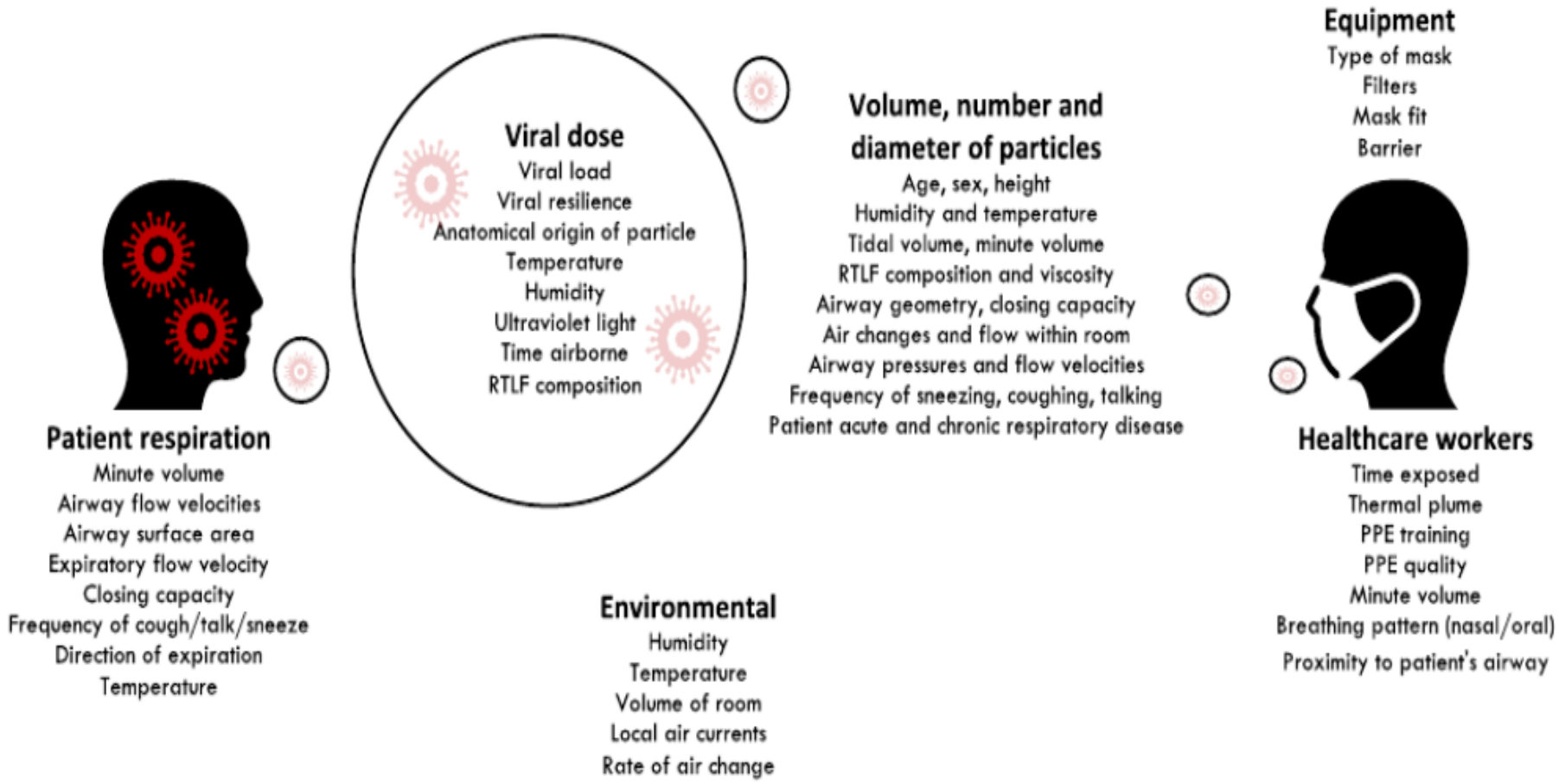


Figure 1 Key determinants of healthcare worker aerosol transmission in spontaneously breathing patient. RTLF, respiratory tract lining fluid; HCW, healthcare worker; PPE, personal protective equipment.

Source of infection in hospital

SARS-CoV-2 infection risk in Healthcare

- Exposure risk factors:
  - being in the same space with an infected patient
  - Contact with ≥ 1 infected patient
- Work close contacts
  - longer duration of verbal interaction
  - sharing a tea room
  - Sharing of transport
- Symptom severity as a factor correlating with SARS-CoV-2 transmission

Ng OT, 2021

Mode of transmission of SARS-CoV-2 in healthcare settings

Droplet precautions to be observed…, with the addition of airborne precautions around Aerosol Generating Procedures – WHO /NDOH/NICD

International Journal of *Environmental Research and Public Health*

Review

Modes of Transmission of Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2) and Factors Influencing on the Airborne Transmission: A Review

Mahdieh Delikhoon [1], Marcelo I. Guzman [2], Ramin Nabizadeh [3] and Abbas Norouzian Baghani [3,*]

Contents lists available at ScienceDirect

Atmospheric Environment

journal homepage: http://www.elsevier.com/locate/atmosenv

ELSEVIER

Community evidence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission through air

Guozhen Lin [a,1], Shiyu Zhang [b,1], Yi Zhong [c,1], Lin Zhang [d], Siqi Ai [b], Kuibiao Li [e], Wenzhe Su [e], Lan Cao [e], Yuteng Zhao [f], Fei Tian [b], Jinrong Li [g], Yinglin Wu [b], Chongshan Guo [c], Rongfei Peng [h], Xinwei Wu [i], Pingsheng Gan [h], Wei Zhu [j,**], Hualiang Lin [b,***], Zhoubin Zhang [k,*]

Clinical Infectious Diseases

VIEWPOINT

IDSA Infectious Diseases Society of America | hivma hiv medicine association | OXFORD

Airborne Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2): What We Know

Jonathan M. Samet, Kimberly Prather,[2] Georges Benjamin,[3] Seema Lakdawala,[4] John-Martin Lowe,[5] Arthur Reingold,[6] John Volckens,[7] and Linsey C. Marr[8]

Anaesthesia

Peri-operative medicine, critical care and pain

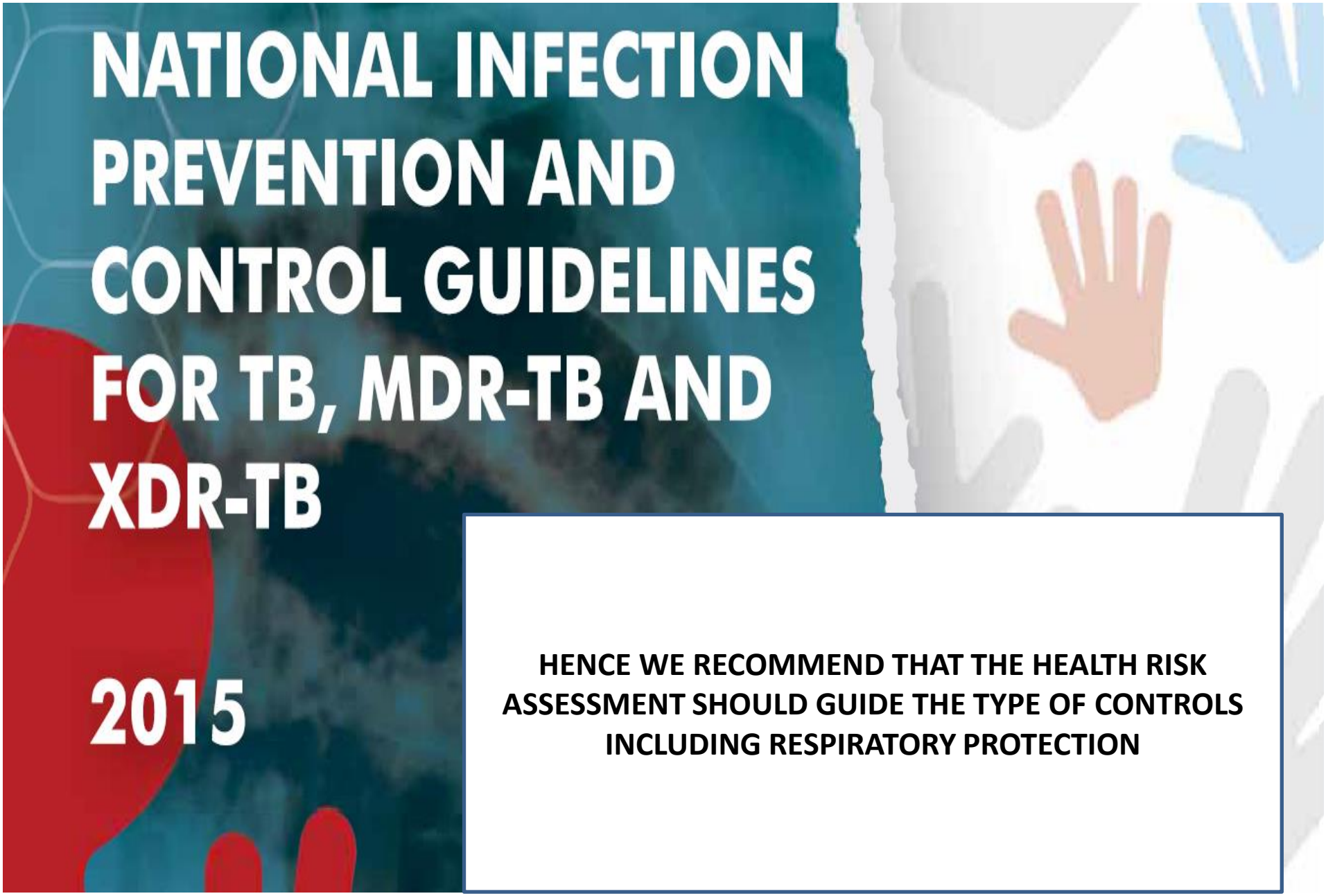
Association of Anaesthetists

Review Article | Free Access

Airborne transmission of severe acute respiratory syndrome coronavirus-2 to healthcare workers: a narrative review

N. M. Wilson, A. Norton, F. P. Young, D. W. Collins

First published: 20 April 2020 | https://doi.org/10.1111/anae.15093 | Citations: 135


NATIONAL INFECTION PREVENTION AND CONTROL GUIDELINES FOR TB, MDR-TB AND XDR-TB
2015
HENCE WE RECOMMEND THAT THE HEALTH RISK ASSESSMENT SHOULD GUIDE THE TYPE OF CONTROLS INCLUDING RESPIRATORY PROTECTION

Work environment

- Ventilation
  - Natural ventilation – inadequate
  - Mechanical ventilation
    - Installing high-efficiency air filters
    - Increasing ventilation rates in the work environment
    - Installing physical barriers, such as clear plastic sneeze guards.
    - Specialized negative pressure ventilation in some settings, such as for aerosol generating procedures (e.g., airborne infection isolation rooms in healthcare settings and specialized autopsy suites in mortuary settings).
- Hygiene
- Reduce congestion

Role of leadership

- National & Provincial government

- Local Management – critical role
  - Lacks the culture of OHS
  - OHS a secondary thought if at all
  - Preoccupied with provincial compliance “ticking boxes”
  - Health & Safety Committees
    - Not empowered

COVID-19 workplace programme

- COVID-19 OHS Standard Operating Procedures at facility level & training

- Facilities have NO budgets for COVID-19 OHS / IPC
  - none of the facilities increase their investment timeously
  - Silos with a multidisciplinary team (IPC & OHS)
  - Infrastructure & Equipment
    - Perverse incentive? decisions made at a provincial level!

COVID-19 Information

- lack of an Occupational Health and Safety Information System;
- Locally collected information not utilized for decision making & planning locally!
- No / poor sharing of information with workers
  - Rely on formal management platforms

What we hoped to find & the reality

- SARS-CoV-2 OHS programme:
  - Prevent disease before it ever occurs
    - Policy
    - Identify hazards & controls
    - No regular cleaning of environment
    - Soap & water NOT always available
    - Education & training (continuous)
    - Vaccinations
    - Behavior change
      - Social distancing not always adhered to!
    - Health Promotion
  - Detecting & treating disease COVID-19 ASAP
    - Screening
    - Testing & Treatment
  - manage long-term implications
    - Vocational rehabilitation
    - Placement & compensation
    - Mental health
    - Procedure on Incapacity Leave and Ill-health Retirement

Based on our observations we recommend more targeted but simple interventions in a continual manner

Below are some simple but essential interventions

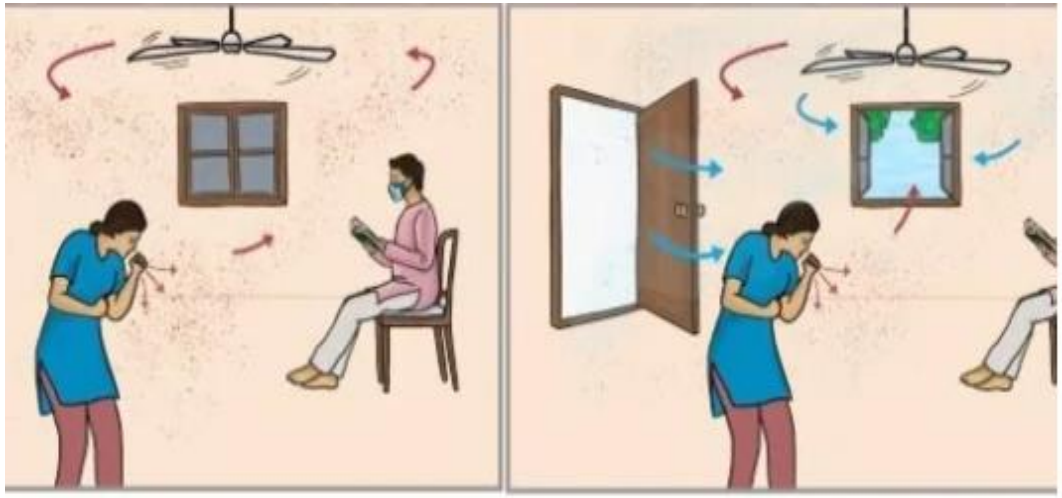
COVID-19 standard operating procedure

- "…is a **procedure specific to your facility** that describes the activities necessary to complete tasks in accordance with regulations/policy…."

- Example of an SOP steps to take when an employee tests positive for COVID-19

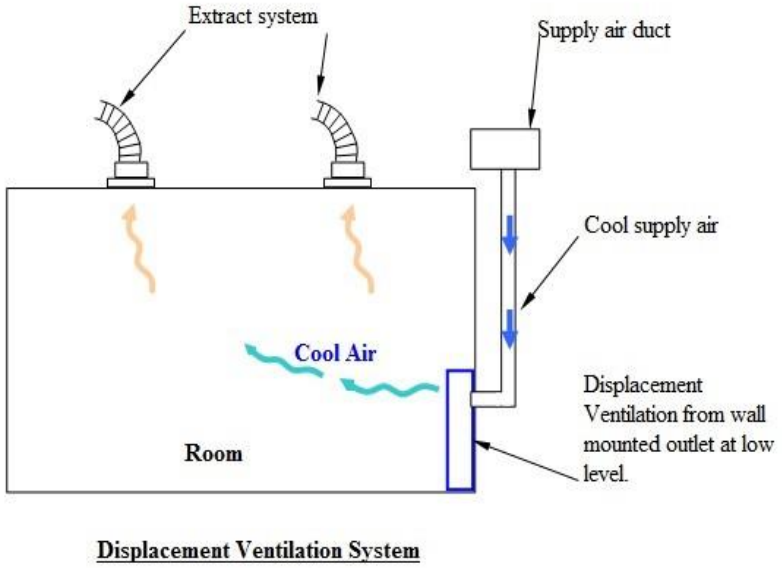
Communication

Keep the breathing air clean / ventilation



Poor ventilation windows and doors closed

Good ventilation windows and doors open



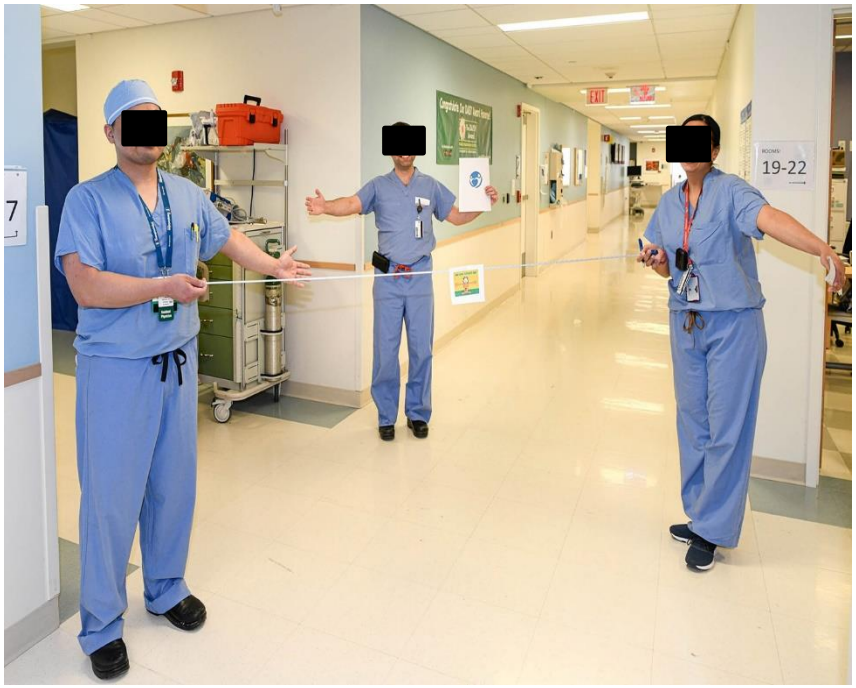
Displacement Ventilation System

Always open doors & windows if you can OR

ask your for mechanical ventilation

Be HealthWISE

Social distance



Be HealthWISE

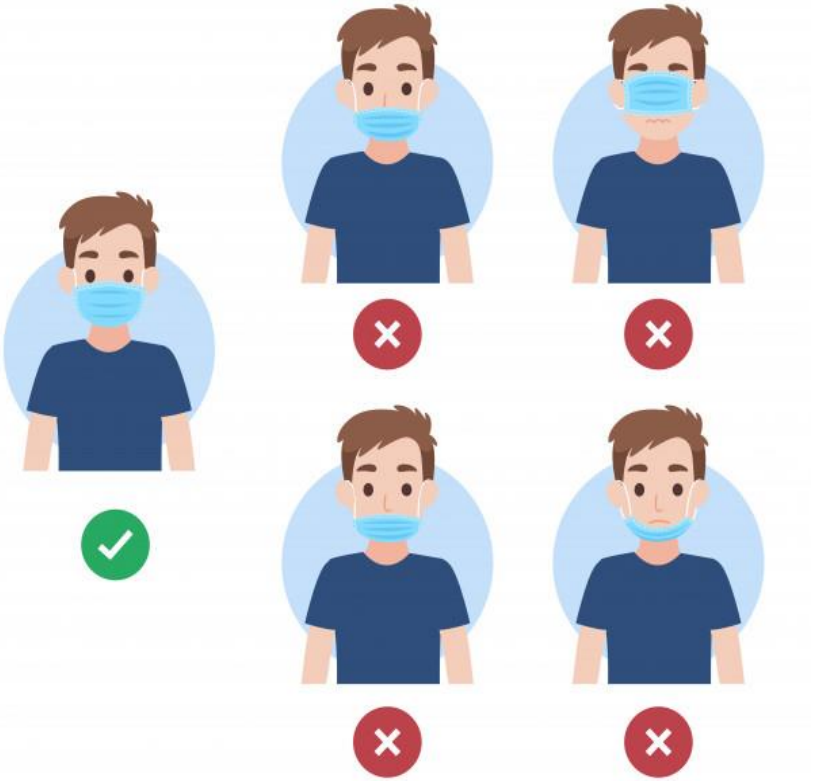
Keep your hands & environment clean

Regularly clean frequently touched surfaces.

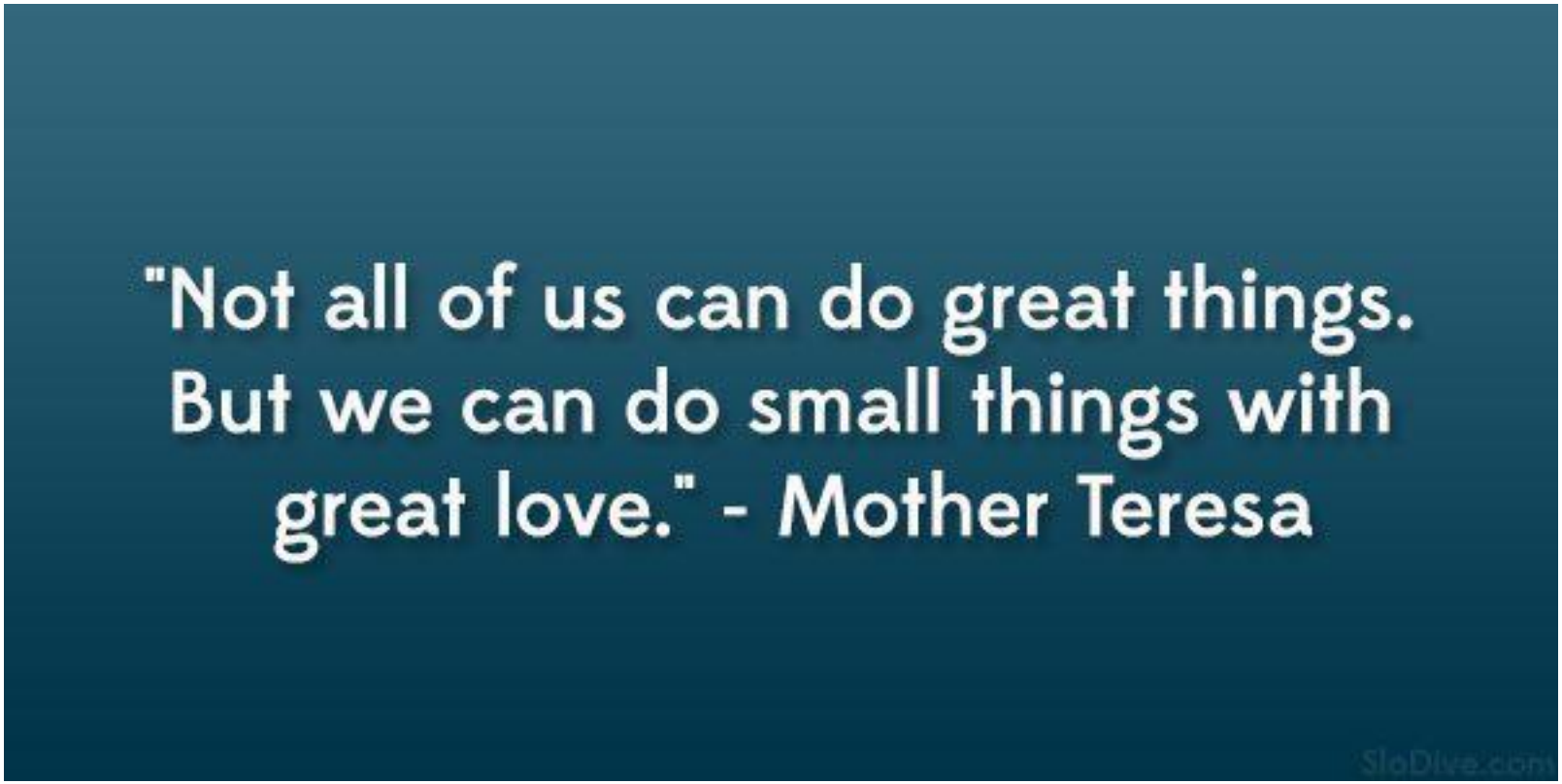
Wash hands thoroughly with soap and water.

Be HealthWISE

Wear your mask correctly – cover nose & mouth at all times



Be HealthWISE


"Not all of us can do great things.
But we can do small things with
great love." - Mother Teresa

Ngiyabonga