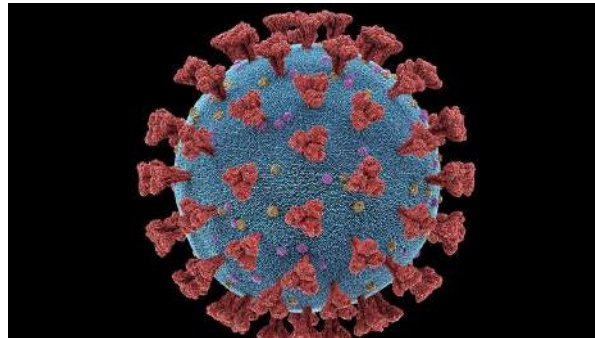
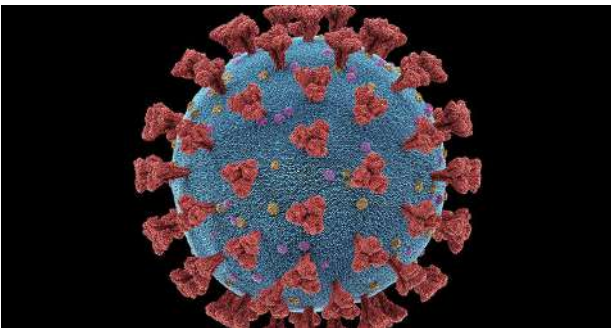


Title: IPC for First Responders, Law Enforcement, A& E units

Presented: AC Vorndran- ICAN
26 August 2020



Preventing and controlling
transmission of COVID 19 infection



Outline

- What all first responders should know about COVID19Summary on COVID19 pandemic
- Who is First responders- EMP/Police/ A& E staff
- Departmental changes needed during outbreak
- How to protect them &What can they do to protect themselves
- Burnout and how to improve mental health
- Correctional services



COVID19- 1st responders

- Coronavirus disease 2019 (COVID-19) is a respiratory illness caused by a virus called SARS-CoV-2. Symptoms often include cough, shortness of breath, fever, chills, muscle pain, sore throat, or new loss of taste or smell.
- Our understanding of how the virus spreads is evolving as we learn more about it. The virus is thought to spread mainly from person-to-person:
- Recent studies indicate that the virus can be spread by people who are not showing symptoms.

There are 2 common routes people could become infected:

1. Secretions can be directly transferred into the mouths or noses of people who are nearby (within 2 metres) or possibly could be inhaled into the lungs.
2. It is possible that someone may become infected by touching a person, a surface or object that has been contaminated with respiratory secretions and then touching their own mouth, nose, or eyes (such as shaking hands or touching door knobs then touching own face).



COVID19- 1st responders - EMS

- COVID-19 differs in many ways from Ebola virus disease (EVD), therefore, requires different types of precautions.
- Excessive use of PPE designed for EVD is unnecessary and may waste valuable resources.
- adhere to recommendations specific for COVID-19.
- At all times, prehospital EMS personnel must strictly adhere to applicable standard precautions and agency protocol.
- In addition, special precautions are recommended for all EMS personnel when providing care for a known or suspected case of COVID-19.
- The following precautions are recommended for:
 - Suspected COVID-19 patient: **standard + contact + droplet precautions**
 - Suspected COVID-19 patient and aerosol-generating procedures: **standard + contact + airborne precautions**



Who is seen as First responders

- All EMS personnel including 911 responders and interfacility transfers- across multiple EMS structures and including:
- Police departments
- Ambulance services
- Hospital-based units— like Accident and emergency departments
- Fire services are also included as they respond to emergency medical calls and may do so with or without an ambulance.



Recommended actions & infection prevention and control (IPC) practices

- Modify the questions asked by telecommunicator to enable response team to be prepared
- EMS Employer Responsibilities- employer needs to ensure safe environment and adequate PPE & supplies for staff
- Screen all EMS Personnel for Signs or Symptoms of SARS-CoV-2 Infection at the Start of Each Shift
- Assess All Patients for SARS-CoV-2 Infection
- Implement Standard precaution Measures at all times
- Encourage Physical Distancing
- Implement Universal Use of Personal Protective Equipment
- Create a Process to Address to SARS-CoV-2 Exposures Among EMS Personnel and Others



Recommendations for 911 Police/EMS - Modify Caller Queries

- Municipalities and local EMS authorities should coordinate with state and local public health, SAP/EMRs, and other emergency call centers to address the modified caller queries about SARS-CoV-2 infection.
- Information about a patient who might have SARS-CoV-2 infection should be communicated immediately to EMS personnel before arrival
- encourage the Standard base precaution in use of cloth face coverings for all persons /patients who are able to wear them safely at the scene prior to EMS arrival.
- Police/ EMS units that respond to calls for ill travellers at airports or other ports of entry to country(maritime ports or border crossings) should be in contact with the quarantine station of jurisdiction for the port of entry



Assess All Patients for SARS-CoV-2 Infection

- If call centre-telecommunicators advise is suspected SARS-CoV-2 infection, based on symptoms /close contact with individual SARS-CoV-2 infection, EMS personnel should put on appropriate PPE before entering the scene.
- If no information about the possible COVID19 patient , staff should take precaution when engaging with any patient or family members by: physical distancing of 1-2 m.
- Initial assessment should begin from a distance of at least 1-2 meter if possible from the patient. If the patient's condition allows, the patient may be directed to meet the EMS crew at an appropriate location outside or in a more ventilated area.
- All patients (if tolerated), regardless of COVID-19 symptoms, should be instructed to practice source control. Patient contact should be minimized to the extent possible until a cloth face covering or facemask is on the patient.
- If possible, EMS personnel should ask the patient about signs and symptoms of the patient or had recent close contact with someone with SARS-CoV-2 infection.
- If SARS-CoV-2 infection is suspected, Proper PPE should be worn ,if infection is not suspected, EMS personnel should follow standard procedures and use appropriate PPE for evaluating and providing care to the patient.



What all First responders Need to Know(1)

- Do not work if you are sick. Follow your department's return-to-work policy after recovering from the illness.
- Contact your supervisor and occupational health program immediately if you are exposed to a patient with suspected or confirmed COVID-19 when you are not wearing recommended personal protective equipment (PPE).
- Complete any occupational exposure report forms required by your organization.
- If you are permitted to continue working, take additional precautions, including wearing a facemask and monitoring for symptoms and fever for 14 days after you were exposed to the patient.
- Wear the following PPE for all patient interactions where COVID-19 is suspected or confirmed:
 - a. Fit tested NIOSH-approved N95 or higher level respirator, or a facemask if a respirator is not available
 - b. N95 respirators or respirators that offer a higher level of protection should be used instead of a facemask when you are performing or present for an aerosol-generating procedure.
 - c. If you use a respirator, you must be clean-shaven because facial hair can cause respirators to leak around the face seal.
 - d. A single pair of disposable examination gloves
 - e. Eye protection, such as face shield or goggles, unless you are wearing a full-face respirator
 - f. Gown or apron

What all first responders Need to Know (2)

- If your PPE becomes grossly contaminated or compromised (e.g., torn), discard and replace.
- Follow CDC /WHO guidance if you are reusing, reprocessing, and storing PPE.
- Have patients wear facemasks or cloth face coverings for source control, if they can tolerate it.
- Limit the number of providers in the patient compartment to minimize possible exposures.
- Use registered hospital-grade detergents and disinfectant to disinfect all surfaces of ambulances, gurneys, clipboards, radios, and other frequently touched surfaces or equipment according to the manufacturer's recommendations.
- Launder reusable personal protective clothing (e.g., uniforms) if they become contaminated.
- Use alcohol-based hand sanitizers with greater than 60% ethanol or 70% isopropanol, or wash hands with soap and water for at least 20 seconds .
- Avoid touching your eyes, nose, and mouth.



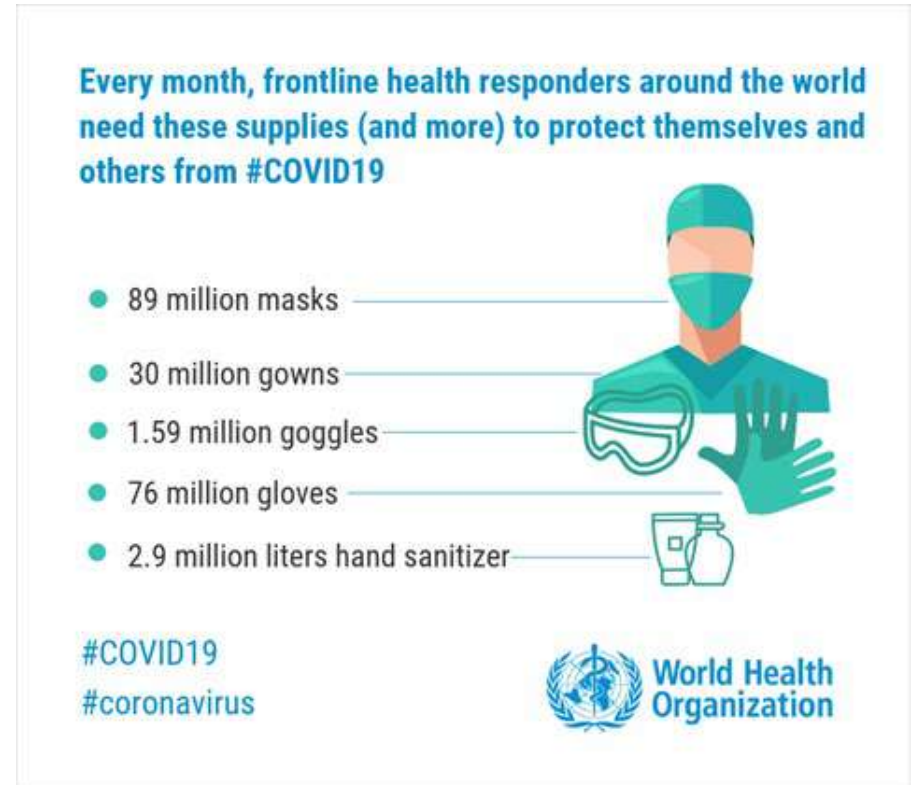
IPC Recommendations

- Standard base precautions should always be applied
- As part of the standard of care, all providers must perform HH before and after all patient care activities regardless of the etiology of the patient presentation
 - Gloves are never a substitute for hand hygiene. All personnel should avoid touching their face while working.
 - Transmission base precautions when more is known about patient and conditions.



Personal protective equipment (PPE)

- If not possible to maintain a 2 metre distance away from an individual, disposable gloves and a disposable plastic apron are recommended.
- Disposable gloves should be worn if physical contact is likely to be made with potentially contaminated areas or items.
- If there is a risk of anticipated contamination with splashes, droplets of blood or body fluids, use of a fluid repellent surgical face mask & disposable eye protection (such as face visor or goggles)
- When using a fluid repellent surgical face mask, you should mould the metal strap of the mask over the bridge of the nose and make sure the mask fits snugly under the chin, around or across any facial hair if present.
- Clean your hands thoroughly with soap & water or alcohol sanitiser before putting on or taking off PPE.
- In all circumstances where some form of PPE is used, the safe removal of the PPE is crucial.



PPE for Covid

LEVEL OF CARE	HAND HYGIENE	MEDICAL MASK	RESPIRATOR (N95 OR FFP2)	GOWN	GOGGLE OR FACE SHIELD	GLOVES
Suspected case of COVID-19 1 meter assessment (ambulance crew)	X	X				X
Driving WITH patient compartment isolated	X	X				
Driving WITHOUT patient compartment isolated	X	X				
Suspected or confirmed case of COVID-19 requiring medical transport and NO aerosol-generating procedure	X	X		X	X	X
Suspected or confirmed case of COVID-19 requiring medical transport and WITH aerosol-generating procedure	X		X	X	X	X
Cleaning the ambulance	X	X		X	X	X

Emergency Medical Services (EMS)

Setting	Target Personnel or Patients	Activity	Type of PPE or Procedure
Ambulance/transfer vehicle	Clinical staff	Care for and transport of suspected COVID-19 patients to a referral health care facility	Surgical mask A40 suit (apron not practical when worn outside, especially if windy) Non-sterile Gloves Eye protection (goggles or visor)
	Clinical staff	Intubation and suctioning of suspected COVID-19 patients	N95 Respirator A40 suit (apron not practical) Non-sterile Gloves Eye protection (goggles or visor)
	Suspected COVID-19 patient	While being transported	Surgical mask
	Cleaners	Cleaning the vehicle after transport of suspected COVID-19 patients to the referral facility	Surgical mask Apron Eye protection (goggles or visor) Long rubber utility cleaning gloves (ideally up to elbow) Closed work shoes

Aerosol-generating procedures

- Aerosol-generating procedures in pre-hospital care include:
 - i. Bag valve mask (BVM) ventilation
 - ii. Oropharyngeal suctioning
 - iii. Endotracheal intubation
 - iv. Nebulizer treatment
 - v. Continuous positive airway pressure (CPAP)
 - vi. Bi-phasic positive airway pressure (biPAP)
 - vii. Resuscitation involving emergency intubation

Cardiopulmonary resuscitation (CPR)

- Providers must exercise caution when performing these procedures and perform them only if and when medically necessary. It is important to keep procedures for respiratory support up to date with current guidelines.
- To decrease droplet generation, providers should consider metered dose inhalers instead of nebulizers and use a BVM or ventilator with a HEPA filter on the exhalation port.

Ambulance or A&E unit cleaning & decontamination

Before Decontamination and Disinfection:

- Following patient transfer, the back doors of the ambulance should be left open so that sufficient air exchange may occur.
- Appropriate supplies must be available.

Yellow caution tape or alternative system for marking off the decontamination area

PPE for personnel performing decontamination

Leak proof biohazard bags , garbage bags

Disposable rags /soap

Alcohol based hand sanitizer

Absorbent towels

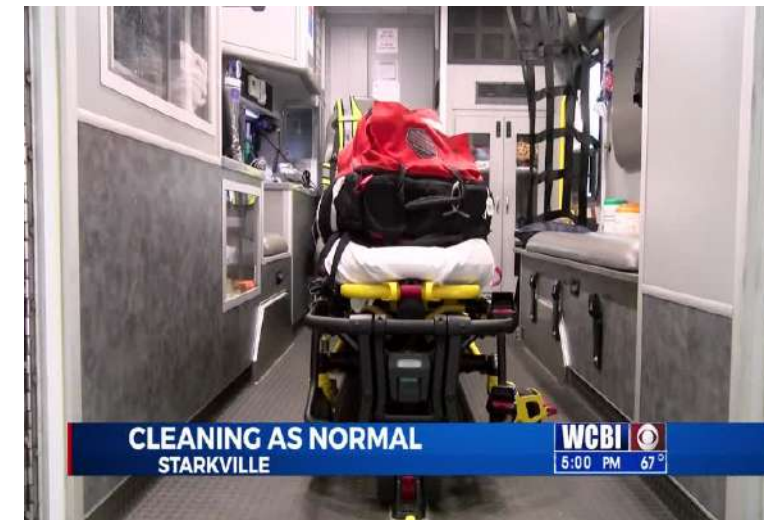
Bleach or alcohol-based disinfecting solution or disinfectant wipes

- Decontamination team - The vehicle operator and patient care provider or a separate team may be used.



During disinfection / decontamination

- All visibly soiled surfaces should be cleaned then decontaminated starting from the ceiling of the vehicle and working down to the floor in a systematic process.
- All surfaces that may have had contact with the patient or materials that were contaminated during patient care (eg. Control panels, floors, walls, work surfaces, stretcher, rails, etc) must be thoroughly cleaned including the underneath and base of the stretcher.
- To conduct cleaning, providers should follow routine cleaning and disinfection procedures for pre-cleaning.
- This can be done with water and soap. This pre-cleaning must be followed by the application of a high-grade disinfectant to any potentially contaminated surfaces or objects.
- Coronaviruses have a lipid envelope which makes a wide range of disinfectants effective
- Ensure adequate ventilation especially when using chemicals.
- Doors should remain open while cleaning the vehicle.



After disinfection/decontamination:

- All waste, including PPE and wipes, should be considered infectious waste and discard as normal infectious waste will be handled and disposed off.
- Linen should not be shaken. It should be contained and laundered according to standard operating procedures.
- Ambulance can then be returned to service

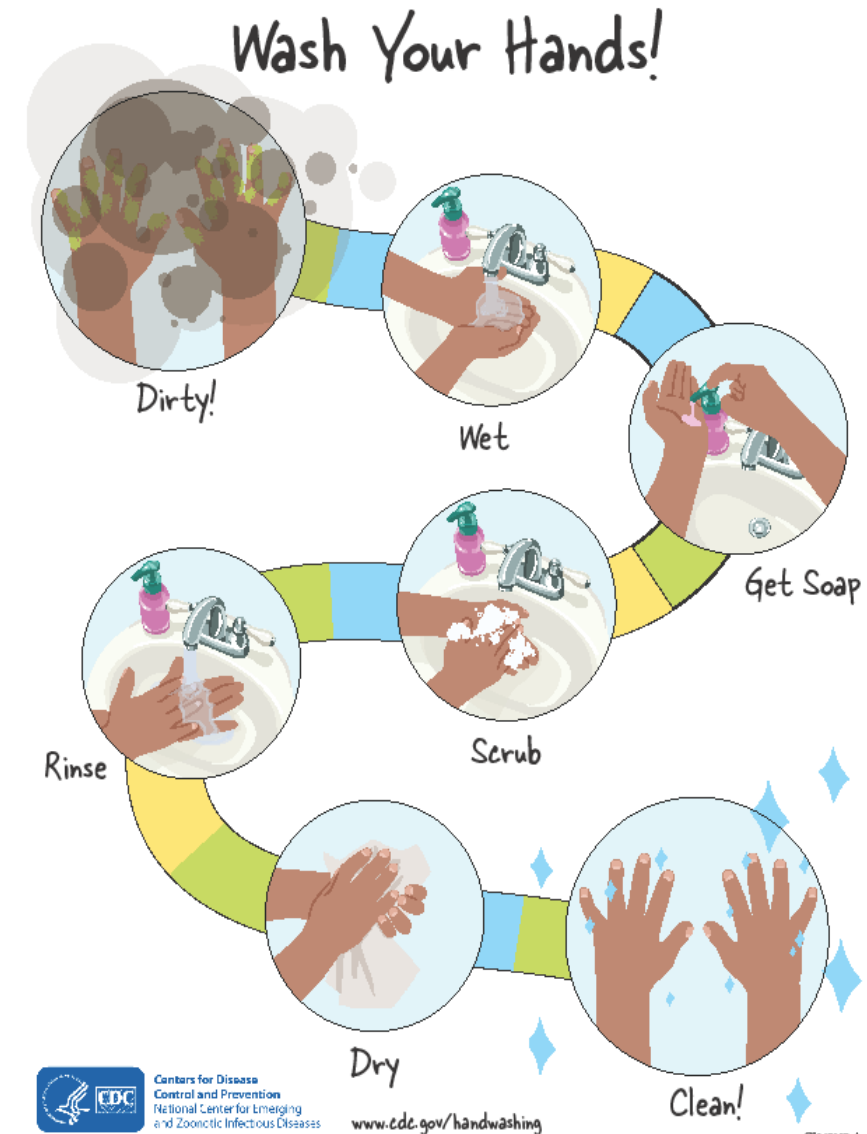
Waste:

All waste must be disposed of according to organization protocols as well as local and national regulations substances.

(Best practice may be to transfer waste to the hospital for disposition).

EMS Employer Responsibilities

- Develop IPC policies and procedures for EMS units to ensure safe Donning and doffing of PPE
- Provide all EMS personnel with job- or task-specific education and training with regular refresher trainings
- As part of Occupation health and safety, fit test of N95 respirators, training and equipped with PPE for their task will assist in safe environment for staff
- EMS units should be provided adequate supplies (ABHR, PPE and cleaning equipment) so EMS personnel can adhere to recommended IPC practices.
- Ensure that cleaners own or contracted to clean and disinfect transport vehicles and equipment are educated, trained



Screen all EMS Personnel - Start of Each Shift

- Screen all EMS personnel and visitors for [symptoms](#) consistent with COVID-19 and exposure to others with SARS-CoV-2 infection.
- Screen EMS personnel at the start of each shift. Screen visitors prior to entry to the facility (e.g., firehouse or EMS station).
 - Actively take their temperature and confirm absence of symptoms consistent with COVID-19. Fever is either measured temperature $\geq 38^{\circ}$ or subjective fever.
 - Ask them if they have been advised to self-quarantine because of exposure to someone with SARS-CoV-2 infection.
- Promptly manage anyone with symptoms of COVID-19 or who has been advised to self-quarantine:
 - EMS personnel should don a facemask if not already wearing one, return home, and notify occupational health services to arrange for further evaluation.
 - Visitors should be restricted from entering the facility.





EMS PROVIDERS

How to stay safe on the job

Why does your safety matter?

As an EMS provider, you are critical to public health and safety. You are also at high risk for injuries and exposures at work. **More than 22,000 EMS providers visited emergency departments each year for all types of work-related injuries from 2010-2014.***



You are most at risk for:



Protect yourself:



Sprains and strains

Practice safe lifting. Use equipment, ask for help, and use good body mechanics.



Exposures to blood and body fluids

Use personal protective equipment (PPE) and follow standard precautions.



Falls

Wear slip-resistant footwear, don't rush, and choose the best walkways.



*Reichard et al. (2017). Occupational injuries and exposures among emergency medical services workers. Prehospital Emergency Care.



Access EMS injury data and prevention resources:
www.cdc.gov/niosh/topics/ems



Learn about Federal initiatives related to EMS: www.ems.gov

COVID-19

How can you protect yourself?



Wash your hands frequently and thoroughly with soap



Cover face with a tissue or your elbow when coughing or sneezing



Then throw the tissue in a waste bin



Maintain social distancing



Avoid touching your eyes, nose and mouth

Source: WHO



Implement Standard Base precaution for source control

- Source control refers to use of cloth face coverings or facemasks
- Patients and family members should be wearing their own cloth face covering prior to the arrival of EMS personnel and throughout the duration of the encounter
- If they do not have a face covering, they should be offered a facemask or cloth face covering, as supplies allow.
- Facemasks and cloth face coverings should not be placed on young children under age 2, anyone who has trouble breathing, or anyone who is unconscious, incapacitated or otherwise unable to remove the mask without assistance.
- If a nasal cannula is used, a facemask should (ideally) be worn over the cannula. Alternatively, an oxygen mask can be used if clinically indicated
- EMS personnel should wear a facemask at all times while they are in service, including in breakrooms or other spaces where they might encounter co-workers.
- Educate EMS personnel about the importance of performing hand hygiene immediately before and after any contact with their respirator or facemask.



IPC issues to combat Covid in the emergency room

- Aim to minimize the number of clinical interactions that a patient is exposed to.
- Multiple, repeated clinical assessments should be avoided unless strictly necessary.
- Training on IPC- TBP, PPE, HH,
- Provision of supplies – adequate and proper quality
- Patient care equipment-Reusable (communal) non-invasive equipment must be decontaminated:
 - i. between each patient and after patient use
 - ii. after blood and body fluid contamination
 - iii. at regular intervals as part of equipment cleaning
- Appropriate storage location for equipment should be considered as well as its decontamination e.g. relocating and ultrasound machine out of a high-risk area such as a resuscitation room to an area where it is less likely to get contaminated but is still rapidly available.
- Environmental cleaning



Communicating with Patients and their Families

- Emergency departments need to restrict access to visitors so that safe social distancing can be maintained.
- Exceptions may be considered on a case by case basis for those who are critically ill, dying or considered socially vulnerable, or children who will need at least one competent adult.
- Staff should consider strategies that reduce the risk of patients feeling stigmatized or frightened as a result of PPE. This is especially important in the Paediatric area and with vulnerable patients.
- Use of clear communication, explaining PPE, in a variety of formats (posters, information leaflets etc) is advised
- Clear signage on the floor for patients.



Environmental Cleaning

- The emergency department should be regularly cleaned.
- There should be sufficient cleaning capacity so that clinical spaces can be rapidly returned to use.
- Keeping the emergency department clean is a collective responsibility of all staff working there.
- Initiatives that increase staff engagement should be encouraged
- Follow general IPC Guidelines on cleaning , containing spills, cleaning of high touch surfaces, top to bottom



Additional strategies

- Having separate waiting areas for different age children (e.g. under 5s, and older children-to reduce risk to older children who are more likely to be compliant), and for those at different clinical pathway stages (e.g. triage, awaiting results)
- Aim for rapid turnover from waiting areas
- Reduce equipment in resuscitation rooms to ease cleaning
- Not examining the throat unless absolutely necessary (i.e. will it make a difference to management?)
- Use of photos on PPE revealing the true appearance clinical staff under the PPE!



Implementing Safety Practices for Critical Infrastructure Workers

- Critical Infrastructure workers who have had an exposure but remain asymptomatic
 - a) **Pre-Screen:** Employers should measure the employee's temperature and assess symptoms prior to them starting work. Ideally, temperature checks should happen before the individual enters the facility.
 - b) **Regular Monitoring:** As long as the employee doesn't have a fever or symptoms, they should self-monitor under the supervision of their employer's occupational health program.
 - c) **Wear a Mask:** The employee should wear a face mask at all times while in the workplace for 14 days after last exposure.
 - d) Employers can issue facemasks or can approve employees' supplied cloth face coverings in the event of shortages.
 - e) **Social Distance:** The employee should maintain 6 feet and practice social distancing as work duties permit in the workplace.
 - f) **Disinfect and Clean work spaces:** Clean and disinfect all areas such as offices, bathrooms, common areas, shared electronic equipment routinely.



ADDITIONAL CONSIDERATIONS

- Employees should not share headsets or other objects that are near mouth or nose.
- Employers should increase the frequency of cleaning commonly touched surfaces.
- Employees and employers should consider pilot testing the use of face masks to ensure they do not interfere with work assignments.
- Employers should work with facility maintenance staff to increase air exchanges in room.
- Employees should physically distance when they take breaks together. Stagger breaks and don't congregate in the break room, and don't share food or utensils.



Steps for workers

Do

- Take your temperature before work.
- Wear a face mask at all times.
- Practice social distancing in the workplace as work duties permit.

Don't

- Stay at work if you become sick.
- Share headsets or objects used near face.
- Congregate in the break room or other crowded places.

Steps for employers

Do

- Take employee's temperature and assess symptoms prior to their starting work.
- If an employee becomes sick during the day, send them home immediately.
- Test the use of face masks to ensure they do not interfere with workflow.
- Increase air exchange in the building.
- Increase the frequency of cleaning commonly touched surfaces.

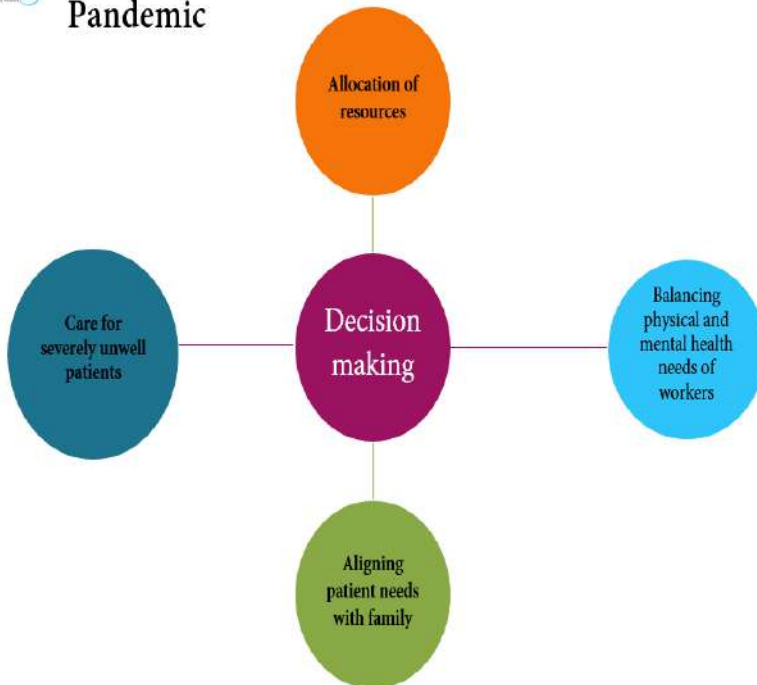


Stress and burnout for Frontline workers

A cross-sectional study of 1257 frontline health care workers in COVID-19 affected regions of China describes the challenging conditions faced by medical staff, with the significant stressors summarised as follows: [\[Kang L et al., 2020\]](#)



Dilemmas for Health Care Workers during Covid-19 Pandemic



Greenberg et al. Managing mental health challenges faced by healthcare workers during covid-19 pandemic BMJ 2020;368:m1211



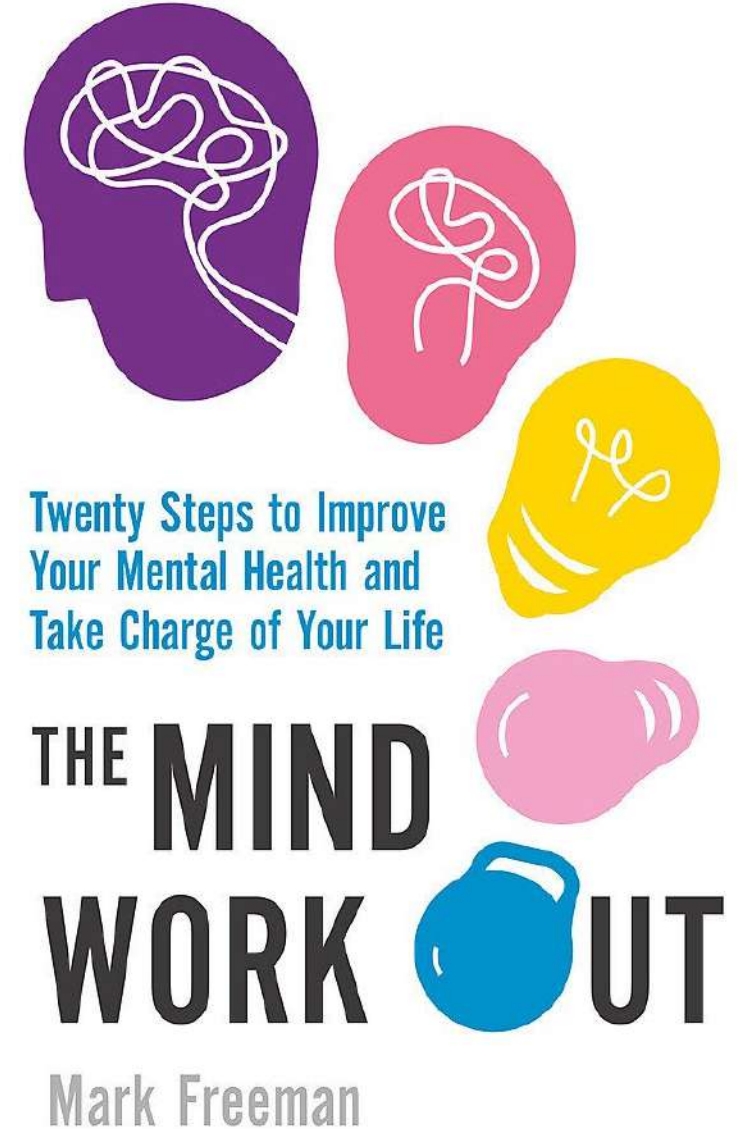
Frontline medical staff surveyed in the above study were found to have considerable rates of depression (50.4%), anxiety (44.6%) and insomnia (34.0%); 71.5% of participants reported non-specific symptoms of psychological distress.

The study also identified that women and those in frontline roles in the most severely affected regions had a greater risk of depression, anxiety and increased distress.



STRESSORS FOR HEALTH CARE WORKERS DURING COVID-19 PANDEMIC

- Shortages of personal protection equipment and lack of clarity around indications for its use
- Intense scrutiny of international media
- Isolation from family and other supports
- Fears of transmitting the virus to family and others
- Rapidly expanding workload with an increasing number of suspected and confirmed cases
- Progressively depleted workforce due to illness and isolation of staff
- Incidents of hostility and even aggression towards medical personal
- Lack of effective treatments for unwell patients



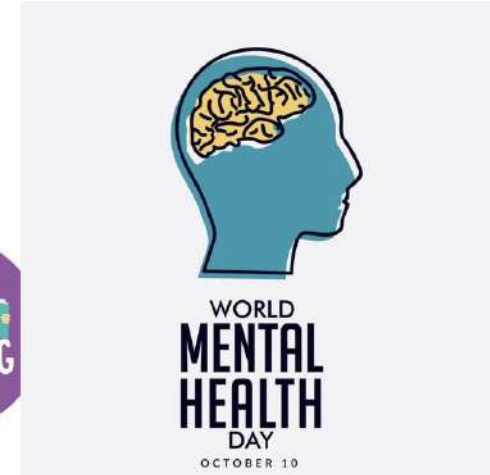
Recognize the symptoms of stress you may be experiencing

- Feeling irritation, anger, or denial
- Feeling uncertain, nervous, or anxious
- Feeling helpless or powerless
- Lacking motivation
- Feeling tired, overwhelmed, or burned out
- Feeling sad or depressed
- Having trouble sleeping
- Having trouble concentrating
- **Know about stress-related disorders, compassion fatigue, burnout:**



Tips to cope and enhance your resilience.

- Communicate with your co-workers, supervisors, and employees about job stress.
 - Talk openly about how the pandemic is affecting your work.
 - Identify factors that cause stress and work together to identify solutions.
 - Ask about how to access mental health resources in your workplace.
- Remind yourself that everyone is in an unusual situation with limited resources.
- Identify and accept those things which you do not have control over.
- Recognize that you are performing a crucial role in fighting this pandemic & you are doing the best you can with the resources available.
- Increase your sense of control by keeping a consistent daily routine when possible —
 - Try to get adequate sleep and rest
 - Make time to eat healthy meals.
 - Take breaks during your shift to rest, stretch, or check in with supportive colleagues, co-workers, friends and family.
- When away from work, get exercise when you can. Spend time outdoors either being physically activity or relaxing. Do things you enjoy during non-work hours.
- Take breaks from watching, reading, or listening to news stories, including social media.
- If you feel you may be starting to misuse alcohol (including prescriptions), ask for help.
- If you are being treated for a mental health condition, continue with your treatment and talk to your provider if you experience new or worsening symptoms.





COVID-19 CAN SPREAD QUICKLY IN CORRECTIONAL AND DETENTION FACILITIES

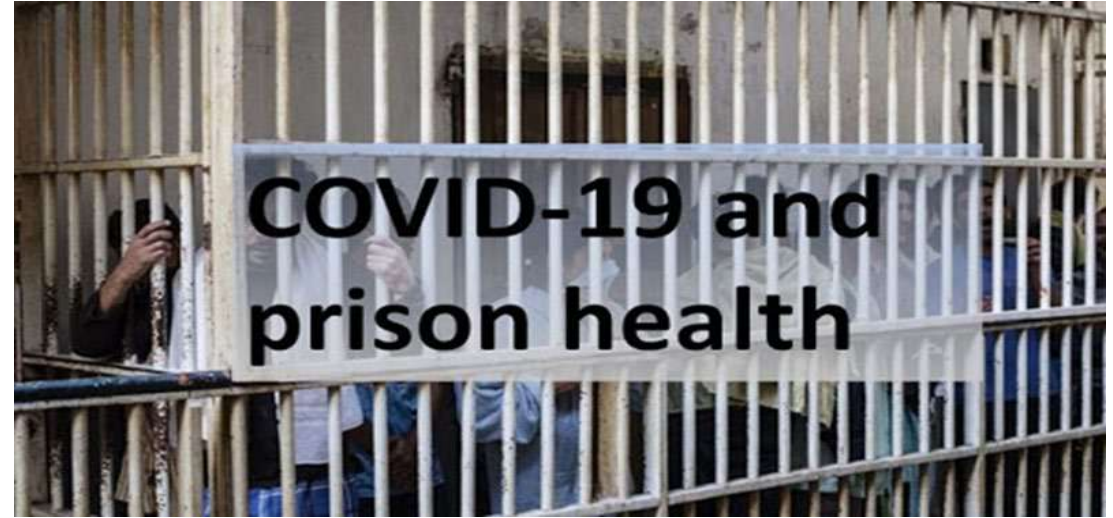
**Strategies
to stop the
spread
include:**

- 1 Regular symptom screenings
- 2 Isolating people with symptoms
- 3 Physical distancing
- 4 Intensified cleaning
- 5 Infection control training
- 6 Disinfection of high-touch surfaces
- 7 Cloth face coverings

Correctional and Detention Facilities

Operational Preparedness:

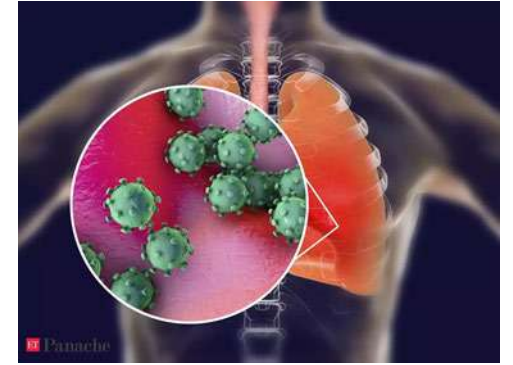
- Develop information-sharing systems with partners.
- Review existing influenza, all-hazards, and disaster plans, and revise for COVID-19.
- Coordinate with local law enforcement and court officials.
- Encourage all persons in the facility to take the following actions to protect themselves and others from COVID-19.
- Post signs throughout the facility and communicate this information verbally on a regular basis.



Health Care Professional from the Department of Health assists an inmate to fill forms for testing.

Prevention.

- Correctional and detention facilities can prevent introduction of SARS-CoV-2 and reduce transmission- reinforcing good hygiene practices among inmates ,staff, visitors (increasing access to soap and paper towels), intensifying cleaning/disinfection practices & implementing social distancing strategies.
- Because many individuals infected with SARS-CoV-2 do not display symptoms, the virus could be present in facilities before infections are identified.
- Good hygiene practices, vigilant symptom screening, wearing cloth face coverings (if able), and social distancing are critical in preventing further transmission.
- Testing symptomatic and asymptomatic individuals and initiating medical isolation for suspected and confirmed cases and quarantine for close contacts, can help prevent spread of SARS-CoV-2.



Management.





COVID-19: Important information for visitors to our prisons

Contact Information Correctional Services National Operations Centre:
(012) 307 2217
Department of Health (WhatsApp) number:
060 012 34 56
Coronavirus 24-hour hotline number: 0800 029 999




Coronavirus COVID-19

Prevention

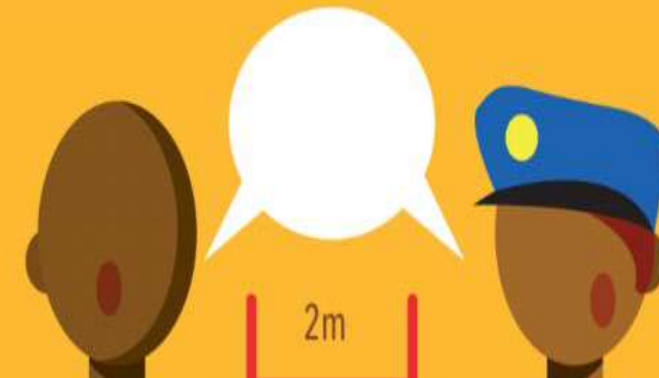
- 
Wash
your hands
well and
often to avoid
contamination
- 
Cover
your mouth
and nose with
your arm when
coughing and
sneezing
- 
Greet
with an elbow
bump and keep
a safe distance
- 
Clean
and disinfect
frequently
touched objects
and surfaces

Symptoms
A Cough > Shortness of Breath > Breathing Difficulties > Fever (High Temperature)



HOW WILL THIS IMPACT PRISONS?

Preventing COVID-19 from entering the prison will require significant yet temporary changes to the regular prison routine. This may include access into the prison, restrictive movement, and limited prisoner activities.

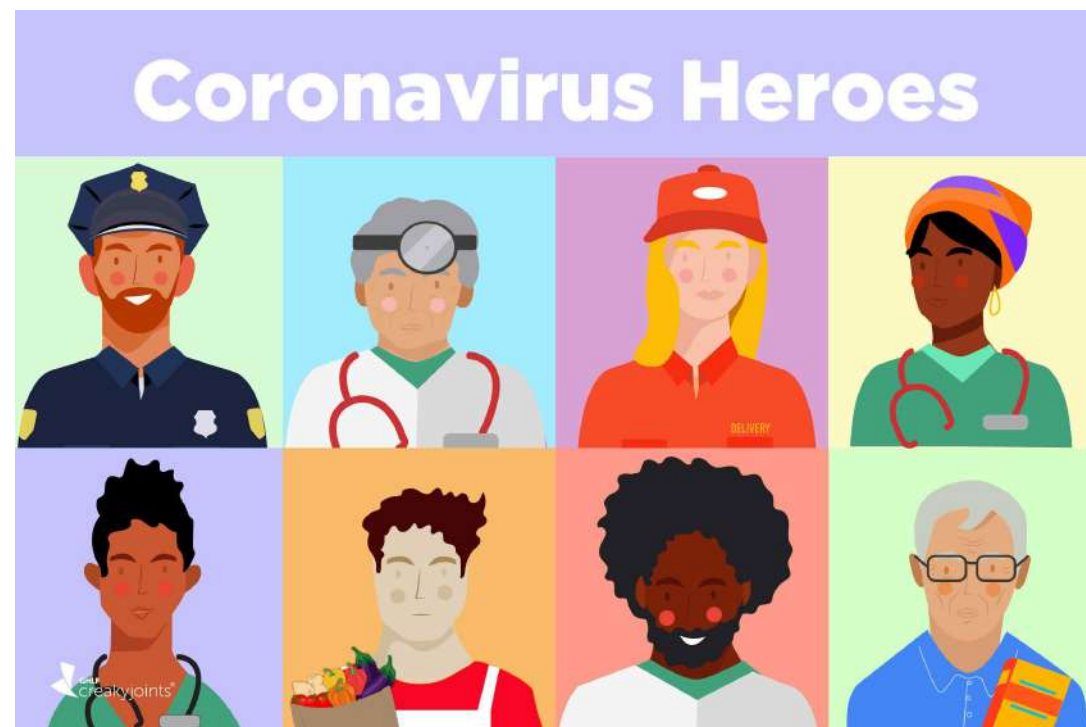


Golden rule- take home

- Always follow Standard base precaution in all situations
- Ensure that the call centre adjust the questions they ask before responders goes out to assist them to be more prepared.
- First responders to always follow IPC standards and protect themselves.
- Environmental cleaning is still as normal, clean and then disinfect the high touch areas
- Waste management as for normal infectious waste
- PPE according to risk assessment and procedure
- Keep mental health in mind and seek advise if any symptoms appears.
- Always be safe while saving lives

References

1. NIOSH Interim Training for Emergency Responders: Reducing Risks Associated with Long Work Hours
2. CDC Interim Guidance for Emergency Medical Services (EMS) Systems and 911 Public Safety Answering Points (PSAPs) for COVID-19 in the United States
3. CDC Strategies for Optimizing the Supply of PPE
4. The EMS Infectious Disease Playbook, published by the Office of the Assistant Secretary for Preparedness and Response's Technical Resources, Assistance Center, Information Exchange (TRACIE) at <https://www.ems.gov/pdf/ASPR-EMS-Infectious-Disease-Playbook-June-2017>.
5. 19 Circular H25/20: Guidelines for PPE use during the coronavirus disease 2019 (COVID-19) Western Cape Government: Health 25 March 2020



thank you