

Corona Virus Infection Prevention among Health Care Workers

Sanjay Kumar Dabhi*

Assistant Professor, Govt. College of Nursing, New Civil Hospital, Surat, Gujarat, India

ABSTRACT

Background: Pneumonia of unknown origin was noted down to China office of the WHO on December 31st 2019. This Pneumonia of unknown origin is recognized by WHO as a SARS-CoV-2 which is generally known as Novel corona virus which leads to highest mortality rate all around world including frontline health care workers specially called corona warriors. The COVID-19 corona virus has banged the world off its axis. We won't return to anything approaching normal that is, life without social distancing, quarantines, masks, school closures and other control measures until most of the world has been vaccinated against the virus. Everyone, therefore, has the same question on their mind: How fast will a vaccine be ready? Health-care workers are crucial to any health-care system. During the ongoing COVID-19 pandemic, health-care workers are at a substantially increased risk of becoming infected with severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) and could come to considerable harm as a result. There are only things that can reduce the transmission among health care workers are Prevention is better than cure. That's why every health care worker must aware about the WHO strategies to reduce or limit the transmission of corona virus infections.

Objectives & Aims: To reduce risk transmission of infection among health care workers **Conclusion:** Health care workers being the frontline COVID warriors must have adequate knowledge and skills to manage COVID-19 cases effectively. All the health care workers who are assigned to care of the Covid-19 patients must know about the infection prevention or limit the transmission of deadly disease. They must be aware to keep themselves updated with the new guidelines on COVID 19 as per WHO protocol. This will improve their confidence in dealing with such cases and patient outcome as well. This review articles provides awareness among health care workers and help them to reduce transmission of infection during care of covid-19 patients and also help to reduce the mortality among the corona warriors (health care workers). Key words: Frontline workers, Covid-19, SARS-Cov-2, Pandemic, Novel Corona, Deadly disease, Preventive measures of Covid-19, Reduce risk transmission of Covid-19.

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INTRODUCTION

Pneumonia of unknown origin was noted down to China office of the WHO on December 31st 2019 [1]. This Pneumonia of unknown origin is recognized by WHO as a SARS-CoV-2 which is generally known as Novel corona virus which leads to highest mortality rate all around world including frontline health care workers specially called corona warriors [2].

The COVID-19 corona virus has banged the world off its axis. We won't return to anything approaching normal – that is, life without social distancing, quarantines, masks, school closures and other control measures – until most of the world has been vaccinated against the virus. Everyone, therefore, has the same question on their mind: How fast will a vaccine be ready? [3]

Health-care workers are crucial to any health-care system. During the ongoing COVID-19 pandemic, health-care workers are at a substantially increased risk of becoming infected with severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) and could come to considerable harm as a result [4, 5]. There are only things that can reduce the transmission among health care workers is "Prevention is better than cure". That's why every health care worker must aware about the WHO strategies to reduce or limit the transmission of corona virus infections.

IPC strategies to prevent or limit transmission of COVID-19 among health care workers (WHO)

1. Ensuring triage, early recognition & sources control. (isolation patient with suspected covid-19) [6, 7, 8]

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*Corresponding author: Sanjay Kumar Dabhi, Assistant Professor, Govt. College of Nursing, New Civil Hospital, Surat, Gujarat, India, Tel: 9824961594; E-mail: princess1012012001@yahoo.com

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2. Applying standard precautions for all patients and HCWs.
3. Implementing empirical additional precautions (droplets and contact and whenever applicable airborne precautions)
4. Implementing administrative controls
5. Using environmental and engineering controls

Ensuring triage, early recognition & sources control (Isolation patient with suspected covid-19)

- Encourage HCWs to have a high level of clinical suspicion.
 - Establish a well equipped triage station at the entrance to the facility supported by trained staff.
 - Hand hygiene and respiratory hygiene is essential for all [8].
 - Post sign in public area reminding symptomatic patients.
1. Applying standard precautions for all HCWs.

Standard precautions includes

- Hand hygiene,
- Respiratory hygiene: ensure that the following respiratory measures are used.
- Ensure that all patient cover their nose and mouth with tissue or elbow when coughing or sneezing [8]
- Offer medical mask to patients with suspected cases. While they are in waiting area. Use N-95 mask preferable for HCWs. Perform hand hygiene after contact with respiratory secretions.
- Use of PPE according to risk assessment,
- Injection safety precautions,
- Proper waste management,
- Proper linen,
- Environment cleaning and
- Sterilization of patient care equipments.

Use of PPE according to risk assessment

The rational, correct & consistent use of PPE also helps reduce the spread of pathogens. PPE effectiveness depends strongly on adequate and regular supply, adequate staff training, appropriate hand hygiene and appropriate human behavior [9].

Environment cleaning and Sterilization of patient care equipments

- It is important that environmental cleaning & disinfection prevention procedures are followed consistently & correctly. Thoroughly cleaning environmental surfaces with water & detergent and applying commonly used hospital level disinfectant (such as sodium hypochlorite) are effective and sufficient procedures.
- Medical devices & equipments, laundry, food service utensils & medical waste should be managed in accordance with safe routine procedures.

Implementing empirical additional precautions

Contacts & droplet precautions

- In addition to using standard precautions, patients should be placed in adequately ventilated single rooms. For general ward

with natural ventilation is considered to be 60L/s per patient.

- When single rooms are not available, patients should be grouped to gather with social distancing.
- All patients' beds should be placed at 1 metre.
- Where possible, Team of HCWs should be designated to care exclusively covid-19 patients to reduce the risk of transmission.
- HCWs should use medical mask.
- HCWs should wear eye protections (goggles) or face shield to avoid contamination of mucous membranes.
- HCWs should wear a clean, non sterile long sleeved gown.
- They should also use gloves.
- The use of boots, coverall and apron is not required during routine care.
- Equipments should either be single use or disposable.
- After patient care, appropriate doffing and disposal of all PPE & hand hygiene should be carried out. A new set of PPE is needed when care is given to different patient.
- 12. HCWs should refrain from touching eyes, nose & mouth with potential contaminated gloves or bare hands.
- Avoid moving & transporting patient out of their room. If requires, use portable x ray machines or other designated diagnostic equipments. If transport is required, use predetermine transport route to minimize exposure. Patients must wear medical mask.
- Notify the area of receiving patients as early as in advance before the patient's arrival to take them necessary precautions.
- Routinely clean & disinfect surfaces with which the patient is in contact.
- Maintain a record of all HCWs and all persons entering a patient's room.

Administrative measures related to HCWs

- Provision of adequate training [10].
- Ensuring an adequate patient- staff ratio.
- Establishing a surveillance process for ARI among HCWs.
- Adequate supplies of PPE & other items.
- Educating public.
- Drafting policies.
- Adherence to guidelines [10].
- Control and avoid crowds & maintain social distancing
- Ensuring that HCWs & the public understand the importance of promptly seeking medical care.
- Monitoring the HCWs compliance with standard precautions & provide mechanism for improvement as needed.

Using environmental & engineering controls

- Adequate ventilation & adequate environmental cleaning in health care facilities.
- Separation of at least 1 meter should be maintained between all the patients.

- Ensure that cleaning & disinfection procedures are followed consistently & correctly.
- Cleaning environment surfaces with water & detergent and applying commonly used hospital disinfectant (such as sodium hypochlorite) is effective & sufficient [10].
- Manage laundry, food service, utensils & medical waste in accordance with safe routine procedures.

CONCLUSION

Health care workers being the frontline COVID warriors must have adequate knowledge and skills to manage COVID-19 cases effectively. All the health care workers who are assigned to care of the Covid-19 patients must know about the infection prevention or limit the transmission of deadly disease. They must be aware to keep themselves updated with the new guidelines on COVID 19 as per WHO protocol. This will improve their confidence in dealing with such cases and patient outcome as well. This review articles provides awareness among health care workers and help them to reduce transmission of infection during care of covid-19 patients and also help to reduce the mortality among the corona warriors (health care workers).

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COMPETING INTERESTS

There are no any competing interests.

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