Pocket Book for Infection Prevention and Control Measures for

COVID-19

in Healthcare Settings

2nd Edition

Prepared by:

Government of Nepal
Ministry of Health and Population
Department of Health Service

December 23, 2021

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Foreword

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Forewords

Infection prevention and control in health care facilities has become more challenging for the world. Compliance with IPC measures has critical implications for Health Care Workers safety, patient protection and the care environment. The timely development of second edition "Pocket book for Infection Prevention and Control Measures for COVID-19 in the Healthcare Setting" will provide hands on reference to the Health Care Workers and also helps to sensitize Health Care Workers for the proper implementation of IPC measures. I would like to express my sincere thanks to Nursing and Social Security Division for the revision of this **"Pocket book for Infection Prevention and Control Measures for COVID-19 in the Healthcare Setting".**

I would like to thank Director of Nursing and Social Security Division, steering committee members and technical working group for their tireless effort in bringing out this second edition of this book. Similarly, I would like to extend my warm appreciation to all the contributors who gave their valuable input for the completion this document. I am thankful to World Health Organization for technical and financial support in development of this concise yet comprehensive pocketbook. I assume that this pocketbook will play a crucial role for the compliance of IPC measures in the health care setting and used by large number of Health Care Workers.

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Preface

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Preface

The first edition of **"Pocket Book for Infection Prevention and Control (IPC) Measures for COVID-19 in the Healthcare Setting"** was published in the year 2020 with the emergence of the first wave of COVID-19. It was widely used in all the health facilities for better implementation of infection prevention and control measures. Since then, there were various updates available nationally and internationally in the IPC measures related to COVID-19. Based on those updates, there was a need for the revision of this pocket book. To cater that need, revision of first edition is done and this second edition has been prepared. The second edition is expected to be utilized by large number of Health Care Workers (HCWs) who are working in different level of health facilities. Similarly, it might be beneficial for those HCWs who wants to be updated on newly developed guidance documents related to IPC.

I would like to express my sincere gratitude to Ms. Bala Rai, Section Chief of Nursing Capacity Building Section and other officers of Nursing and Social Security Division (NSSD) for their immense effort to complete this task. Similarly, I would like to offer my appreciation to Dr. Amrit Pokhrel, Epidemiology and Disease Control Division (EDCD), Dr. Pomawati Thapa, Curative Service Division (CSD), Ms. Laxmi Gurung, Infection Control Society of Nepal (ICSON) core working group for their contribution for the development of this IPC pocket book, second edition. Likewise, I would like to extend my gratitude to Ms. Sadhana Paudel, (WHO) for her tireless effort for the completion of second edition of IPC pocket book. I am thankful to all contributors and stakeholders for their input, guidance and assistance throughout the process of the revision and development of this second edition "Pocket Book for Infection Prevention and Control Measures for COVID-19 in the Health Care Setting". I hope this support will be continuous for future activities too.

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Acknowledgement

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Acknowledgement

During the initial days of COVID-19 pandemic, due to lack of adequate knowledge on transmission and severity of disease, healthcare workers went through a kind of fear while providing care to the patient. In order to break the chain of transmission and protect healthcare workers, there was immediate need to develop easy reference documents on Infection Prevention & Control (IPC). This gap was fulfilled by Epidemiology and Disease Control Division with the development of first edition of "Pocket book for Infection Prevention & Control". With the emerging variants and increased knowledge regarding the transmission, updated guidelines and protocol, development of second edition was felt. With the joint effort of Epidemiology and Disease Control Division, Nursing and Social Security Division along with other division of Departments of Health Services, second edition of "Pocket book on Infection Prevention and Control Measures for COVID-19 in health care setting" has been developed.

I would like to express my sincere gratitude to World Health Organization, Infection Control Society and others who joined hands to support the development of this concise yet comprehensive pocketbook. I believe this pocketbook will help all the healthcare workers to manage the cases with proper adherence to the IPC measures and help break the chain of transmission.

23rd Dec 2021

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Acronyms

ABHR:	Alcohol Based Hand Rub
AGP:	Aerosol Generating Procedure
CDC:	Center for Disease Control and Prevention
CD4:	Cluster of Differentiation 4
CVP:	Central Venous Pressure
HepB:	Hepatitis B
HCW:	Health Care Worker
HFNO:	High Flow Nasal Oxygen
IPC:	Infection Prevention and Control
NMC:	Nepal Medical Council
PCR:	Polymerase Chain Reaction
PPE:	Personal Protective Equipment
TT:	Tetanus Toxoid
UV:	Ultra-Violet
WHO:	World Health Organization

Table of Content

1. Introduction to Second edition

This is the second edition of the "Pocket book for Infection Prevention and Control Measures for COVID-19 in the Healthcare Setting" developed by Ministry of Health and Populations (MoHP) Nepal.

The first edition was adapted from the Interim Guidance for Caring of Patients with COVID-19 in Healthcare settings, Nepal Medical Council (NMC) and aligned with Infection Prevention and Control during health care when coronavirus disease (COVID-19) is suspected or confirmed Interim Guidance, WHO (19 March 2020). The rationale for this second edition is to expand the scope of the earlier IPC pocketbook, bringing together updated recommend-ations from Ministry of Health and Population, WHO's guidance documents, and other scientific studies.

This second edition provides updated technical guidance on;

- Cleaning and disinfection,
- Dead body management,
- Healthcare waste management,
- Administrative and engineering control,
- Patient transport,
- Recommended areas for donning and doffing.

2. Background

Infection Prevention and Control (IPC) measures, when implemented correctly, helps to prevent disease transmission from person to person and plays a major role in the prevention and control of hospital acquired infections including COVID-19. Health care workers also face a higher risk of getting infected, getting sick and dying, as well as chances of bringing the infection (COVID-19 and other infections) home to their families while caring for sick patients. It is therefore paramount that IPC strategies and policies are implemented in all facilities providing health

care and that such strategies are adopted properly by all those working in the health care setting.

The first edition of the "Pocket Book for Infection Prevention and Control Measures for COVID-19 in Healthcare Settings" was developed by MOHP on May 12, 2020. This pocketbook will provide immediate reference material to health care workers on IPC measures to be taken according to the tasks to be performed in their day-to-day work whilst caring for suspected and confirmed COVID-19 patients.

Based on international guidelines, technical guidance documents and findings from scientific research this 2nd edition of pocketbook has been developed.

3. Purpose of the Pocket Book

The purpose of this pocketbook is to help all staff working in the health care setting to apply appropriate IPC strategies and measures while performing task e.g., environmental cleaning and providing care to patients including those with suspected or confirmed COVID-19 infection.

4. Target groups

All personnel working in all areas of the health care settings: medical doctors, nurses, paramedics, technicians, laboratory, administrative and all support staff.

5. Organizational preparedness for improving IPC measures

- Facilities should have their own IPC policy which is aligned with national strategy.
- All staff working in the health facility should be oriented on:
  - standard universal precautions,
  - transmission-based precautions
  - prevention of occupational hazards
- Care givers should be oriented and instructed on the use of standard infection control precautions.
- Resource management: Administrators should ensure adequate stocks of personal protective equipment (PPE), to meet the needs, including contingency stock, and maintain emergency medical logistics.
- Capacity Building: All health care facilities should have an IPC focal person who should ensure IPC trainings and drills are conducted regularly, for all health care workers, and ensure IPC audits are performed regularly.

Aim of prevention of transmission in healthcare facilities is:

- To protect patients, healthcare workers, and support staff from exposure to COVID-19 virus and other hospital acquired infections.

6. Transmission of SARS-CoV-2

The SARS-CoV-2 mainly spreads between people when an infected person is in close contact with another person. Transmissibility of the virus depends on the amount of viable virus being shed and expelled by a person, type of contact they have with others, the setting and what IPC measures are in place[1].

Virus can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing, breathe heavily and talk. These particles range from larger respiratory droplets to smaller aerosols. A person can be infected when aerosols or droplets containing the virus are inhaled or come directly into contact with the eyes, nose, or mouth. The virus can also spread in poorly ventilated and/or crowded indoor settings, where people tend to spend longer periods of time. This is because aerosols remain suspended in the air or travel more than 1 metre[2].

People may also become infected by touching surfaces, objects or material that have been contaminated with the viable virus e.g., when touching their eyes, nose, or mouth immediately after touching a contaminated surface without cleaning their hands.

7. Infection prevention and control strategies and activities

It is critical to ensure that at least the IPC standard universal precautions are put in place in all health facilities, in all levels of the health service to provide the minimum protection to patients, health workers, caregivers, and visitors. When IPC measures are followed properly, they can protect HCWs, patients and visitors from an array of infections.

Screening and Triage

Screen all persons for COVID-19 at the first point of contact with the health facility to allow for early recognition of illness, followed by immediate isolation of suspected and confirmed cases.

Standard Universal Precautions

Standard universal precautions are a set of infection control practices used to prevent transmission of disease that can be acquired by contact with blood, body fluids etc. These measures are to be used when providing care to all individuals, whether they appear infectious or symptomatic. Details of the Standard precaution has been described below.

Transmission based Precautions

Transmission-based precautions are additional precautions for patients who might be infected or colonized with certain pathogens for which mode of transmission is known. Details of the Transmission based precaution has been described below.

7.1 Screening and Triage.

Appropriate IPC precautions should be implemented at all points of entry into the health facility as follows:[2]

- Staff should be trained on the signs and symptoms of COVID-19 and the most recent case definitions as given in box 1.

Box 1: Case Definition[3]

- Suspected case: A patient with fever, cough, shortness of breath, chills, muscle pain, new loss of taste or smell, diarrhea or sore throat in the last 14 days **AND**
  Has no alternative explanation of the symptoms
- Probable case: A suspected case for whom testing for the COVID-19 virus is inconclusive **OR**
  A suspected case for whom testing could not be performed for any reason.
- Confirmed case: A person with laboratory confirmation of SARS-CoV-2 by RT-PCR or antigen test, irrespective of clinical signs and symptoms.

With better understanding of the presenting features of COVID-19 disease, clinical criteria3 have been updated and should be meet the following criteria as given on table 1.

- Screen all persons presenting to the facility by using the screening clinical criteria (refer table 1)

Table 1 Screening questionnaire[3]

A. Symptoms: Do you have any of following symptoms?					
1. Acute onset or worsening of at least two of the following symptoms or signs ☐ fever (measured or subjective) ☐ chills ☐ rigors ☐ myalgia ☐ headache ☐ sore throat ☐ nausea or vomiting ☐ diarrhea ☐ fatigue ☐ congestion or runny nose	OR	2. Acute onset or worsening of any one of the following symptoms or signs: ☐ Cough ☐ shortness of breath ☐ difficulty breathing ☐ olfactory disorder ☐ taste disorder ☐ confusion or change in mental status ☐ persistent pain or pressure in the chest pale, gray, or blue-colored skin lips, or nail beds, depending on skin tone ☐ inability to wake or stay awake.	OR	3. Severe respira tory illness with at least one of the following ☐ Clinical or radio graphic evidence of pneumonia, ☐ Acute respiratory distress sydrome (ARDS).	
B. Travel history or contact with traveler[4]					
	Have you recently returned from travel in, or been living in an affected area in the past 2 weeks?			☐ Yes ☐ No	
	Have you been in close contact in the past 2 weeks with someone returning from travel in an affected area?			☐ Yes ☐ No	
C. Exposure: Did you have any exposures to any of the following?					
	Close contact with anyone with fever or respiratory illness of unknown cause.			☐ Yes ☐ No	
	Known or suspected COVID-19 positive contact.			☐ Yes ☐ No	

Close contact is generally defined as being within 6 feet for at least 15 minutes (cumulative over a 24-hour period), but it depends on the exposure level and setting. For example, in the setting of an aerosol-generating procedure in healthcare settings without proper PPE, this may be defined as any duration.

- Temperature screening of all persons should be performed at the entrance of the facility.

- Based on screening algorithm, promptly triage all suspected cases and send to isolation room or designated waiting area for COVID-19 patients.
- Screening areas should be separated for patient with symptoms and without symptoms.
- Screening area should be set up in a well-ventilated area with following equipment.
  - Adequate supplies of personal protective equipment (PPE) for HCW and mask for patient/visitors if they are not wearing mask.
  - InfraRed thermometer and screening questionnaire.
  - Functioning hand hygiene stations accessible to all.
  - Ideally, use of glass/perspex separation screens that provide a barrier between health workers and patients.
  - Waste disposal bins with closing lids
- Screening personnel should wear appropriate PPE as given in table
- Display information and signage explaining; the signs and symptoms of COVID-19, how and when to perform hand hygiene, how to wear a mask properly etc. at the entrance of, and throughout the facility.

7.2. Standard Universal Precautions

Standard universal precautions[2] are basic level of infection control measures that are meant to reduce the risk of transmission of pathogens. They are to be used, as a minimum, in the care of all patients5 and hence should be applied routinely in all health care settings for all patients. Standard precautions include:

- Hand Hygiene
- Respiratory hygiene
- Use of appropriate PPE
- Cleaning and disinfection
- Waste management
- Safe injection practice

7.2.1. Hand Hygiene

Hand hygiene is one of the most effective preventive measure against COVID-19 and many other infections. All staffs working in the health

Figure 1 : Five Moment of Hand Hygiene

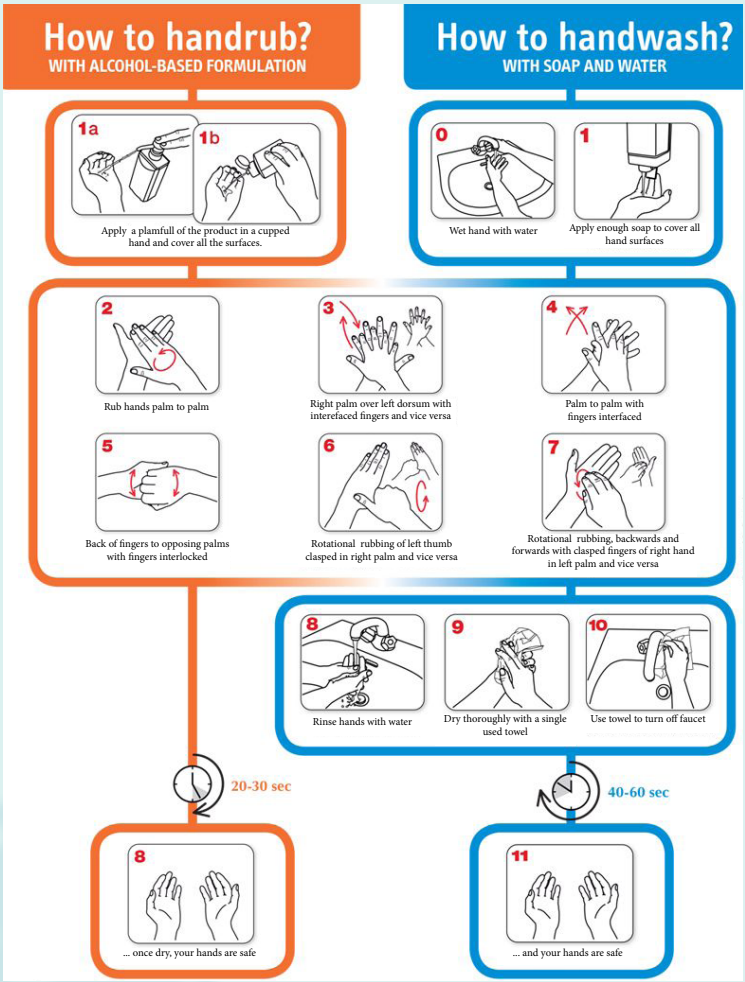
facility should be trained on appropriate technique and duration for performing hand hygiene.

For optimal hand hygiene, all HCWs should apply WHO's 5 Moments for Hand Hygiene approach as follows:

- Soap and water are recommended if hands are visibly dirty, greasy, or contaminated with bodily fluids. Hands should be washed thoroughly with soap and water for 40-60 seconds as shown in Figure 2.

- Use Alcohol-based hand rub (ABHR) at least 70% if hands are not visibly soiled[2] using a palmful (3-5ml) of ABHR[6] and rub both hands for 20-30 seconds as given on Figure 2. Use the proper technique and duration for hand hygiene and ensure hands are dried before touching a patient.

Figure 2: Steps of Hand Hygiene



7.2.2. Respiratory Hygiene

All individuals should be made aware of safe respiratory hygiene and be asked to adhere to the respiratory hygiene measure in the health facility as given in figure 3 and 4.

Figure 3: Respiratory Hygiene

Figure 4: Respiratory Hygiene

7.2.3. Use of appropriate PPE

The use of appropriate PPE reduces exposure to COVID-19 infections and other infections.

Full PPE includes:

Figure 5: Personal Protective Equipment

Mask (Any type)

Face Shield Or Goggles

Disposable cap

Gloves

Shoes Cover

Plastic apron

Gown or Cover all

PPE in this figure shown all kinds of PPE but HCW should wear according to risk of the exposure. It is not compulsory to wear all kind of PPE in all setting by all persons.[6]

Mask

All persons entering in health care facilities should wear appropriate mask at all times within the health facility.

- Always use well-fitting mask.
- Masks with bands or ties worn tightly behind the head (rather than ear loops) can reduce gaps at the sides and improve the consistency of the mask fit.
- Always use a clean and dry mask and not use damp, soiled, torn masks.
- Do not share your mask with others.
- Always dispose a used mask in a bin that can be closed with a lid
- Always perform hand hygiene after touching or removing your mask.
- Reuse of surgical mask not advisable.

Medical/Surgical Mask

N 95 Mask

Other PPE

Other PPE should be worn according to risk of exposure and type of activities should be performed as given in the table 2.

Table 2: Recommended PPE according to the task to be performed while caring COVID-19 patients[7]

Setting	Target Personnel	Activity	Type of PPE
Inpatient and Outpatient Facilities			
Screening	Health workers	Preliminary screening not involving direct contact.	• Medical mask • Eye protection (goggles or face shield) When physical distance is not feasible and/ or glass/ plexiglass screen is not available.
Patient room/ ward (any inpatient or outpatient setting where patients are cared)	Health workers	Providing direct care to patients with COVID-19, in the absence of aerosol- generating procedures (AGPs)	• Medical mask • Gown • Gloves • Eye protection (goggles or face shield)
	Cleaners	Entering the room of patients with COVID-19	• Medical mask • Gown (fluid resistant gown or gown + apron if body fluid exposure is anticipated) • Heavy-duty gloves • Eye protection (if risk of splash from biological material or chemicals is anticipated) • Closed work shoes/boots
Surgical Setting (e.g. Operation Theatre, Surgical Procedure and Dental Surgery room)			
Operation theatre	Health Workers	Performing surgical procedure	• Medical mask or respirator if AGP is anticipated • Fluid resistant gown or gown + apron • Gloves • Eye protection
During Patient Transport	Staff involved in patient Transport	Transport COVID-19 patient to and from surgery	• Medical mask • Eye protection
		Transport patient without COVID-19 to and from surgery	• Medical mask
		Assisting patient with COVID-19 from bed to transport	• Medical mask • Gown • Gloves • Eye protection

Additional Settings in Inpatient and Outpatient Facilities			
Areas of hospital where patients are not allowed (e.g., canteen)	Health Workers	Any activity that does not involve contact with patients	• Medical mask
Laboratory	Lab Technician	Manipulate respiratory samples	• Medical mask • Gloves • Eye protection • Lab coat and gown should be worn according to the biosafety level of the laboratory
Administrative areas	Staff	Administrative tasks that are not performed in patient occupied areas and do not involve patient contact	• Medical or validated non-medical fabric mask
COVID-19 Dedicated Intensive/Semi Intensive Care Units and Severe Acute Respiratory Infection Treatment Areas			
Patient care areas	Staff including Health workers	Where AGPs are frequently performed but no direct interaction with patient.	• N-95 mask/Respirator
Patient room	Health care-workers	Providing direct care to patients with COVID-19	• Respirator • Fluid resistance gown or gown + apron • Gloves • Eye protection
	Cleaners	Cleaning the Occupied room of the patient with COVID-19 in ICU/Semi-ICU	• N-95 mask/Respirator • Fluid resistance gown or gown + apron • Heavy duty gloves • Eye protection • Boots or closed work shoes

Ambulance or transfer vehicle	Health workers	Transporting patients with suspected or confirmed COVID-19 to the referral health care facility	• Medical mask • Gown • Gloves • Eye protection
	Driver/ Ambulator	Involved only in driving the patient with suspected or confirmed COVID-19, and the driver's compartment is separated from the patient	• Medical mask
		No direct contact with patient with suspected or confirmed COVID-19, but no separation between driver's and patient's compartments	• Medical mask
		Assisting with loading or unloading patient with suspected or confirmed COVID-19	• Medical mask • Gown • Gloves • Eye protection
	Cleaners	Cleaning after and between transport of patients with suspected or confirmed COVID-19 to the referral health care facility.	• Medical mask • Fluid resistant gown or gown + apron • Heavy duty gloves • Eye protection (if risk of splash from organic material or chemicals) • Boots or closed work shoes

Note: Based on health care workers values and preferences about having the highest perceived protection and where widely available health facilities can provide cap/head cover while performing AGP.

The effectiveness of PPE depends on;

- quality and condition (all PPE should be intact -no holes / breakages)
- correct size for the wearer (good fit or appropriate size),
- correct donning and doffing procedure
- correctly and properly maintained (applies to re-usable PPE com modities)

- prompt access to sufficient supplies
- appropriate hand hygiene
- supervision and regular monitoring and feedback by IPC personnel.

Figure 6: Steps for Donning

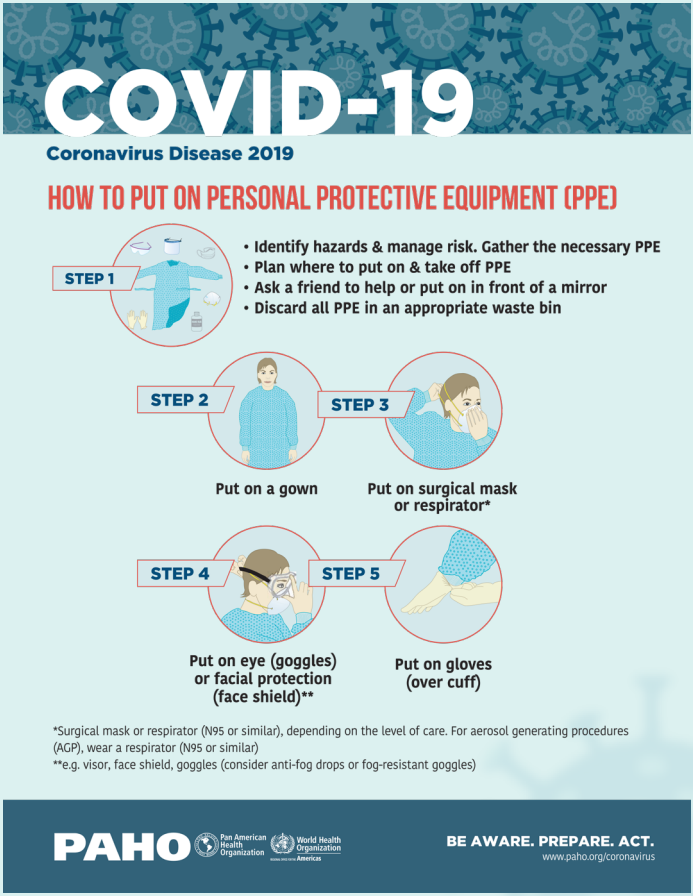


Figure 6: Steps for Doffing

Donning and Doffing area

Proper donning and doffing facilities are an important factor to mitigate transmission of infection amongst health care workers. Surface/areas should be at least 4 m^2 per user with partition,[8] and at least 6 m^2 per user without a partition.

Recommendation for Donning and Doffing area[9]

- Location of the doffing area should be located directly next to the patients' area with an exit directly onto the staff area; exit and entry points should be clearly identified and labelled
- There should be a physical barrier (door) or a clear horizontal signage on the floor to assuring a physical separation of 2 meter between the doffing area and patient/staff area
- There should be a functioning hand hygiene station (Alcohol Based Hand Rub or soap and water); disposable tissues for respiratory hygiene; waste bin with closing lid, made available at all times at the doffing exit
- All staff members practice good hand hygiene

Extended use of PPE should be considered during a supply shortage[7]

- Minimizing the need for PPE in the health care setting (e.g., use of physical barriers to reduce exposure to the COVID-19 virus, such implementation of glass or plastic windows in areas of the health care facility where patients first present, e.g., at reception/OPD/ Triage and screening areas, or at pharmacy windows where medication is collected)
- Ensuring rational and appropriate use of PPE. **Consider using specific PPE only if in direct close contact with the patients or when touching the environment** e.g., wearing a surgical mask and face shield, not using gloves or gown over the scrub suit if entering the patient's room only to ask questions or make visual checks. Restrict number of HCW from entering rooms of COVID-19 patients if they are not involved in providing direct care.

1. Consider coupling activities to minimize the number of times a room is entered e.g., check vital signs during medicine rounds
2. Extended use of surgical masks (use without removing for up to 6 hours, when caring of COVID-19 patients (however if the mask becomes wet, soiled, splashed with chemicals or body fluids or if it becomes difficult to breath, it should be changed immediately)
3. Restrict visitors unless essential, encourage online social media chats and messaging
4. Extended use of gowns when providing care of a cohort or patients with COVID-19 (however if gown becomes wet, soiled or damaged or exposed to splash of chemicals, infectious substances or body fluids, it should be changed immediately
5. Reprocessing N95 using Vapor or Hydrogen peroxide, Ethylene oxide or UV radiation lamp. Once the N95 is repurposed it should be returned to original owner.

7.2.4. Cleaning and disinfection

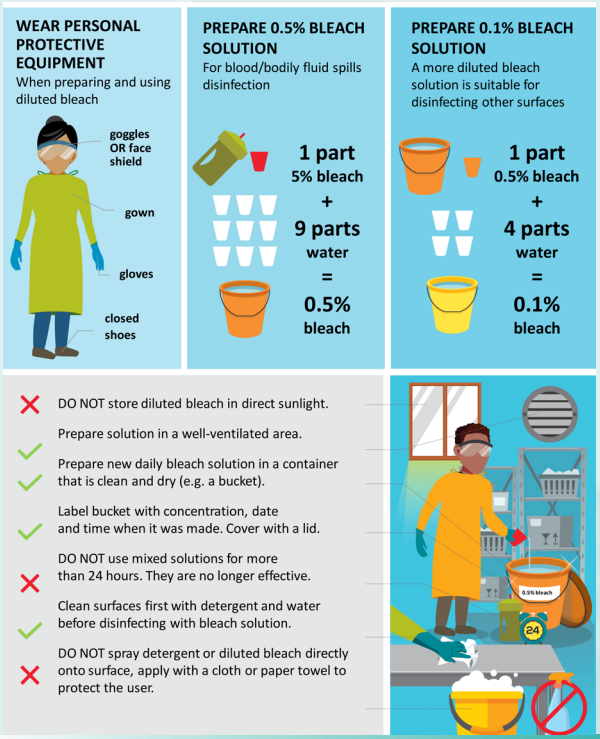
Cleaning and disinfection [10,11] of the environment and equipment's should be followed consistently and correctly.

- Chlorine solutions and other disinfectants are inactivated by the presence of organic matter (blood, other proteinaceous material, dirt), heavy metal ions, low temperature, or ultraviolet irradiation. Both WHO and CDC recommend cleaning with detergent and water before applying disinfectant.
- Disinfectant solution should always be prepared in well ventilated areas and used according to manufacturer's recommendation. Concentrations with inadequate dilution during preparation may reduce their effectiveness. High concentrations increase chemical exposure to users, as well as those preparing the solution, and may also damage surfaces.
- Disinfectant should be applied adequately in the areas and should remain wet and untouched for recommended contact time for disinfectant to inactivate pathogens.
- Cleaning should progress from cleanest to dirtiest areas and from the higher to lower levels.
- Disinfectant solutions become contaminated during cleaning and progressively less effective if the organic load is too high. Thus, disinfectant solutions must be discarded after each use and fresh solution should be prepared for each cleaning shift.
- Cleaning equipment should be well maintained; washed with

detergent, rinsed, dried and stored in designated place when not in use and clothes or uniforms used while cleaning should be reprocessed (Cleaned) properly after each use.

- Commonly used disinfectants are chlorine-based solution such as Sodium hypochlorite, calcium hypochlorite, hydrogen peroxide, ethanol alcohol. Among them chlorine-based solutions are common in Nepal. The concentration of the solution is based on type of equipment and area to be disinfected.
- Do not mix different disinfectants during preparation and usage.
- Chlorine solutions should be stored in opaque plastic containers, in a well-ventilated, covered area that is not exposed to direct sunlight.
- Chlorine solution should be prepared according to the following instruction (Figure 7)

Figure 7: How to prepare chlorine solution



Recommendation for cleaning and disinfection of different patient areas and equipment (Refer table 3)

Table 3. Cleaning and Disinfection[10,11]

Patient area/ equipment	Frequency	Solution	Additional Guidance
Reusable dedicated equipment (e.g. stethoscope, oximeter, thermometers etc.)	In between use	Ethyl alcohol 70%	• If possible, allocate one per patient • Clean and disinfect items after each use
Screening/triage area	At least twice daily	0.1% chlorine-based solution or equivalent disinfectant	• Focus on high-touch surfaces, then floors (last)
Inpatient rooms / cohort – occupied	At least twice daily, preferably three times daily, in particular for high-touch surfaces	0.1% chlorine-based solution	• Focus on high-touch surfaces, starting with shared/common surfaces, then move to each patient bed; use new cloth for each bed if possible; then floors (last)
Area of spillage of blood or bodily fluids	As soon as spillage occurs	Disinfect the spillage area with 0.5% chlorine-based solution	• Confine the spill and wipe it up immedately with absorbent (paper) towels, cloths, or absorbent granules (if available) that are spread over the spill to solidify the blood or body fluid (all should then be disposed of as infectious waste)
Inpatient rooms – unoccupied (terminal cleaning)	Upon patient discharge/transfer	0.1% chlorine-based solution	• Low-touch surfaces, high-touch surfaces, floors (in that order); waste and linens removed, bed thoroughly cleaned and disinfected

Outpatient / ambulatory care rooms	After each patient visit (for high-touch surfaces) and at least once daily terminal clean	0.1% chlorine-based solution	• High-touch surfaces to be disinfected after each patient visit • Once daily low-touch surfaces, high-touch surfaces, floors (in that order); waste and linens removed, examination bed thoroughly cleaned and disinfected
Hallways / corridors	At least twice daily	0.1% chlorine-based solution	• High-touch surfaces including railings and equipment in hallways, then floors (last)
Patient bathrooms/ toilets	Private patient room toilet: at least twice daily Shared toilets: at least three times daily	0.1% chlorine-based solution	• High-touch surfaces, including door handles, light switches, counters, faucets, then sink bowls, then toilets and finally floor (in that order) • Avoid sharing toilets between staff and patients
Assistive devices, [12] such as wheel-chairs, crutches, bath chairs, commode chairs and hoists	After each use	Disinfect with Ethyl alcohol 70%[12] or 0.1% chlorine-based solution	• Clean with soap and water if there is any dust and bodily fluids. • If devices can be damaged by chlorine solution ethyl alcohol 70% can be use.
Reusables: utility gloves, heavy duty gloves, plastic aprons, goggles/ visors, boots	After each use	Decontaminate with 0.5% [10,11,13] chlorine based solution.	• Drop in bucket with soap and water then decontaminate. • Ideally all items should be designated and labelled with the user's name.

Note: Environmental surfaces should also be cleaned and disinfected immediately whenever visibly soiled or if contaminated by a body fluid (e.g., respiratory secretion, blood etc.)

Care of soiled linen [10]

- All laundry and linen used in the care of suspected or confirmed COVID-19 patients, is considered as 'Infectious' and should be handled accordingly.
- Soiled laundry should be placed in clearly labeled, leak-proof bags or containers, after removing solid excrement if any.
- Linens can be machine washed with warm water at 60-90°C (140–194°F) with laundry detergent.
- If machine washing is not an option, laundry should be soaked in hot water and soap in a large drum using a stick to stir, while taking precautions to avoid splashing. Then the drum should be emptied, and the laundry soaked in 0.05% chlorine-based solution for 30 minutes. The linens should finally be rinsed with clean water and fully dried in sunlight.
- All individuals dealing with cleaning and disinfection procedures or handling soiled linen COVID-19 patients (suspected or confirmed) should wear appropriate PPE as recommended in table 2.

7.2.5. Waste Management

The management of various types of waste produced during the care of suspected or confirmed COVID-19 patients, should be done according to the "Healthcare Waste Management Interim Guidance for COVID context 3 July 2020".[14] **All COVID-19 related waste is considered to be infectious waste, so all the waste (including the waste normally considered general waste)**[14,15] should be collected in the red bins as infectious waste and transported/ stored/ treated and disposed as per the "Health Care Waste Management Standard Operating Procedure 2020."[16]

Table 4: Recommended steps for health care waste management[14]

SN	Steps	Recommendation
1	Minimization	• As much as possible minimization of the waste production should be done.
2	Segregation	• Segregation should be done according to type of waste and in different bin with lid. • It is recommended that the infectious waste must be segregated in different colored bins. Refer figure 5
3	Collection	• All infectious wastes should be collected safely in clearly labeled lined containers and sharp waste in sharp-safe boxes. • All the waste bins should be empties once it is ¾ full and cleared away from the patients' areas at least once a day. • Even the waste segregated as non- hazardous from a health care setting should be collected in strong bags (preferably red colored bio-hazard bags) and closed completely before collection and disposal by municipal waste.
4	Transportation	• Designated trolly should be used for waste transportation; one trolly for the hazardous waste and other for general waste. Trollies should be properly labelled, easy to load/ unload, easy to clean and without shar edge. • Waste should be transport through less crowed ways and the areas of less movement of people.
5	Storage	• Segregated waste should be stored in secured storage area; locked room or large container with secured lid to avoid unauthorized entry and entry of animals and birds. • Storage place for highly Infectious waste, disposable medical devices, pathological wastes and sharp wastes must be selected sealed or tiled to allow easy disinfection and need to be identified as an infectious waste area by using the biohazard sign. • Storage times for such infectious waste (e.g. the time gap between generation and treatment) should not exceed 24 hours.

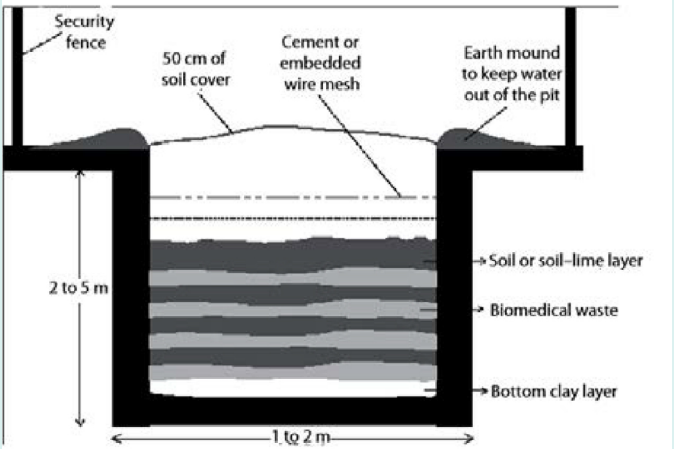
6	Treatment	• This waste should be treated, preferably on-site, with use of non-combustion or steam-based treatment technologies such as autoclaves, microwaves to the extent possible and then safely disposed. • Sharp wastes should be first decontaminated, which then can be disposed of in concrete-lined sharps pits on facility premises or encapsulated by mixing waste with immobilizing material, such as cement, before disposal. • Chemical disinfection (chlorine-based solution) could be another option for local and low resource context. • Consider environmentally friendly treatment methodologies and solutions to minimize both general and medical waste at point of use, segregation, disposal and collection.
7	Disposal	• Treated waste can be dispose on allocated municipal land field. • The health care facilities with limited resources may consider secured, small burial pits for different types of hazardous waste. It is practical for only limited periods of time (1-2 years) for relatively small quantities of waste. (Refer figure 9). • Liquid infectious waste can be disposed of directly into a closed sewer system (Utility sink drain or flushable toilet) or onsite septic tank. If this is not available, such waste should be poured directly into a pit latrine. If infectious waste is disposed in sink or toilet, rinse thoroughly with water and clean and disinfect the areas with 0.5% chlorine-based solution to remove residual waste.

 # The burning of wastes is discouraged.

Figure 8: Color Code for Waste Segregation

Source: HCWM SOP 2020

Figure 9: Burial Pit



Source: Health care waste management Interim guidance for COVID-19

General Instruction for Waste Management

- If there is secured storage area, some general waste items such as water bottles, paper, cardboard, packing materials can be left for at least 7 days before sending for disposal as usual municipal waste.
- To reduce the risk of reusing PPE (e.g. masks) these items should be torn/cut or destroyed
- Recycling activities should be avoided to prevent human contact with any potentially infectious domestic and medical waste.

7.2.6. Safe injection practice

Safe injection practice are those practices which helps to prevent injection related harm to patient, exposure of HCW to any risk related to sharp and protect community from risk associated with sharp waste. That includes adherence to proper IPC measures while giving injection, use of aseptic technique while preparing, delivering injections, prevent sharp injuries, safe disposal of sharp.

7.3. Transmission based precautions/ Isolation Precautions

Transmission-based precautions, also called isolation precautions. These are used in addition to standard precautions for patients known or suspected to have infections that represent an in microorganisms for which extra precautions are needed to prevent transmission. In the context of COVID-19 following precautions should be taken.

7.3.1 Isolation and cohorting of patients with suspected and confirm cases[2]

Isolate patients with suspected or confirmed COVID-19 in single rooms or, if unavailable, cohort them in the same room, using the following principles:

- Designate a dedicated team of health workers, where possible, for care of patients with suspected or confirmed COVID-19. Restrict the number of health workers in contact with each COVID-19 patient.
- Confirmed COVID-19 patient should be separated from suspected or probable cases.
- Isolation and cohort room should be well-ventilated.
- Avoid moving and transporting patients out of their room or area unless medically necessary. Use designated portable medical imaging equipment and/or other designated diagnostic equipment and ensure these are clean and disinfect after each use.
- If transport is required, use predetermined transport routes to minimize exposure for staff, other patients and visitors,
- The patient and all persons accompanying the patient (if necessary) in the vehicle should perform hand hygiene prior to entering the vehicle and wear a surgical/medical mask and other appropriate PPE.
- Ensure that other health workers/persons who are transporting patients perform hand hygiene and wear appropriate PPE as recommended on table 2.
- Maintain a record of all staff entering the patient's room.

7.3.2 Contact and droplet precaution[17]

For suspected and confirmed COVID-19 patients, contact and droplet precautions should be applied according to the activity to be undertaken. Contact precautions prevent indirect transmission from contact with a suspect or confirmed COVID-19 patient and/or contaminated surfaces or equipment. Droplet precautions prevent large droplet transmission of respiratory viruses and include medical mask and eye protection as recommended in table 2.

- Follow all Standard Precautions while caring COVID-19 confirmed or suspected cases.
- Place all cases in well ventilated room and limit patient's movement outside their care area.
- Use appropriate PPE (medical mask and if there is risk of droplets use long sleeve water resistance gown and face shield).
- Use either disposable or dedicated equipment (e.g. stethoscopes, blood pressure cuffs, pulse oximeters and thermometers). If equipment needs to be shared among patients, clean and disinfect between each patient use.[18]
- Avoid contaminating environmental surfaces that are not directly related to patient care (e.g. door handles and light switches) and refrain from touching their eyes, nose and mouth with potentially contaminated gloved or ungloved hands.

Table 5: Duration of contact and droplet precautions for patients with COVID-19 [19,20,21]

SN	Condition	Criteria
1	Asymptomatic cases all three criteria should be met.	a. At least 10 days have passed since the first positive COVID-19 diagnostic test b.No symptoms have developed subsequent to the first positive test c.The patient does not have an underlying severe immuno compromising condition

2	Symptomatic cases /mild to moderate COVID-19 cases. all criteria should be met.	a. At least 10 days since first positive COVID-19 test for and at least 10 days since the initial onset of symptoms of COVID-19 b. At least 3 days (>72 hours) after resolution of fever with out the use of antipyretic/ medication c. Resolution of respiratory signs and symptoms d. The patient does not have an underlying severe immuno compromising condition
3	**Symptoatic severe COVID-19 patient** all three criteria should be met.	a. At least 3 days (>72 hours) after resolution of fever without the use of antipyretic/ medication b. Resolution of respiratory signs and symptoms c. Time-based criteria will be at least 14 days have passed since the initial onset of symptoms
	Critical and immunocom-promised COVID-19 patient, all three criteria should be met:	a. At least 3 days (>72 hours) after resolution of fever with out the use of antipyretic/ medication b. Resolution of respiratory signs and symptoms c. At least 20 days have passed since the initial onset of symptoms OR Two consecutive negatives PCR test results at least 24 hours apart (if test-based strategy is chosen).
Test based strategy is no longer recommended except for immunocompromised host of severely infected patients as noted below. In majority of cases, test-based strategy results in prolongation in isolation in the patient who may continue to shed SARS-COV-2 RNA which is no longer infectious.		
Note: If the asymptomatic patient or HCW is immunocompromised, they will need at least one negative SARS-CoV-2 test result by molecular method (PCR) before.		

Severe immunocompromising condition: immunodeficiency virus infection with CD4 count <350 cells/mm3, treatment with immuno-suppressive medications including high dose steroids (prednisolone >20 mg), cancer chemotherapy, leukemia, transplant, etc.)

7.3.3 Airborne precaution

In settings where aerosol generating procedures (AGPs) of COVID-19 suspected or confirmed cases are performed, airborne in combination with contact precautions should be used.

1. Follow all standard precaution; use the appropriate PPE, including fit-tested particulate respirators (N95 or equivalent, or higher level of protection), gloves, long-sleeved gowns, eye protection (goggles or face shield).
2. When performing aerosol-generating procedures whenever possible, use adequately ventilated single rooms, negative pressure rooms with a minimum of 12 air changes per hour or at least 160 L/second/ patient in facilities with natural ventilation is recommended.
3. Avoid the presence of additional/unnecessary persons/individuals in the room during procedure.
4. ICUs where aerosol-generating procedures are frequently performed, the health worker may choose to wear a particulate respirator/N95 mask throughout their shift.
5. There is insufficient evidence to classify high-flow nasal oxygen (HFNO) and nebulizer therapy as an aerosol-generating procedure that is associated with transmission of COVID-19; therefore, airborne in combination with contact precautions should be used.

Box 2. Aerosol generating procedures	
• Nebulization therapy • Cardio-pulmonary resuscitation • Manual ventilation • Non-invasive ventilation • Intubation, extubating and related procedures • Open suctioning • Tracheostomy procedures • Bronchoscopy	• High flow nasal oxygen • Sputum induction • Obtaining nasopharyngeal or oropharyngeal swab • Dental procedures • Otorhinolaryngology procedures • Upper gastrointestinal endoscopy • Autopsy of the decease suspected or confirmed COVID-19 patient

7.3.4 Dead body management [22]

Nepal had developed 2nd version of dead body management protocol on 2077-6-25. Bodies of the persons who died from confirmed or suspected COVID-19, should be managed according to protocol.

Box 3. Instructions for Dead Body Management
Safely remove all medical devices e.g. Intra venous cannula, catheter, CVP line etc. and clean all insertion site with 0.5% chlorine solution and close with gauze piece.
Plug all orifices e.g. nose, mouth, ears to prevent and control body fluid leakage.
Wrap the whole body in a white cloth as per rituals of patient and place the wrapped body in; a body bag, plastic bag, or waterproof cloth.
Provide the opportunity for family members to view the body prior to the body being placed into the body bag (Use medical mask and gloves and 2 meters physical distance). Don't open the body bag once it has been closed.
Safely collect all used soiled linen in a leak proof bag and wipe the outer part of the bag with 0.1% chlorine-based solution. Reusable items (watch, ornaments etc.) can be used after cleaning and disinfection with at least 70% isopropyl alcohol.
All medical equipment used for patient care should be disinfect with 0.5% chlorine-based solution or 70 % ethanol alcohol for the equipment which are not tolerated to chlorine-based solution or sterilize as per manufactural instruction.
If there is a delayed in conducting the funeral, the body should be stored properly and with dignity in the hospital mortuary.
After the dead body has been removed: Clean and disinfect the area (bed, table, stretcher, vehicle etc) and the surrounding area (e.g. floor, locker etc.) where the body was kept with 0.5% chlorine-based solution,
Postmortem for person who have died from suspected or confirmed COVID-19 is not recommended. If postmortem is requested for criminal investigation it should be performed according to the National protocol that outlines the strict IPC measures to be followed during the postmortem.

Note: If family or relatives want to take the body for funeral, they should follow the recommended IPC measures.

All public health measures should be followed strictly by all people involved in the funeral process. PPE should be worn properly and according to risk of exposure.

Table 6: Recommended PPE for dead body Management (Dead body management protocol 2)[22]

SN	Particulars	Necessary Equipment
1.	Autopsy	1. Cover all 2. Full sleeve water-proof gown 3. Gloves (2 pairs) 4. face shield/ Googles 5. N 95 Masks for Aerosol-generating procedure or surgical mask 6. Boot 7. Head cover (Cap) 8. Shoes cover - knee length
2.	Person involved in dead body management	1. Water-proof apron 2. Gloves 3. Surgical mask 4. Googles 5. Boot
3.	Person in mortuary house	1. Water-proof apron 2. Gloves 3. Surgical mask 4. Googles 5. Boot 6. Full sleeve water-proof gown
4.	Relatives /person involve in funeral	1. Gloves 2. Surgical mask
5.	Vehicle Driver (Dead body Transfer)	1. Gloves 2. Surgical mask
6.	Suspected dead with COVID 19 but COVID 19 test shows negative result	1. Water-proof apron 2. Gloves (Nitrile) 3. Surgical mask 4. Googles 5. Boot

8. Administrative control measures[2]

In addition to ensuring adherence to the standard universal precaution and transmission-based precaution, administrative control is another measure for the prevention of infection within the health facilities. As a part of administrative control, health facility should;

- Provide training to their health workers and support staffs on IPC measures and precautions.
- Ensuring adequate staff to patient ratio.
- Provide adequate stocks of PPE and cleaning materials and disinfectant.
- Support their staff on infection prevention and control activities and create enabling environment for infection prevention and control program.
- Provide vaccination (COVID-19, HepB, TT) to the health care workers, Support staffs, cleaners etc. as per need.
- Implement policies for visitor control within the facilities.
- Develop facility-based IPC protocol/manual with IPC program
- IPC focal person should be designated.
- Maintain duty roster of HCW and support staffs specially at the time of emergency.

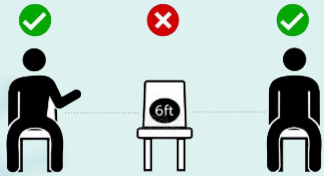
8.1. Visitor control

- Restrict visitors unless it is essential e.g., pediatric patients, in order to mitigate transmission of the COVID-19 virus within the health facility.
- Encourage the use of alternative methods for interaction between patients, family members e.g., telephone contact, messaging and other social media platforms
- Essential visitors should be allowed access, consideration should include caregivers of pediatric patients, limit access to one designated care giver
- Encourage family members to assign a single visitor or caregiver who is not at high risk of severe COVID-19 disease, restricting movement of visitors within the health facility.
- Maintain a record of all visitors who have been designated and eligible to visit.
- Educate and supervise all visitors on adhering to appropriate IPC measures, signs and symptoms of COVID-19 and what to do if they develop symptoms (discontinue visiting and designate an alternative person to take up the role as care giver and clear signage and poster in various areas.

9. Environmental and engineering controls[2]

Environmental and engineering controls are an essential part of infection prevention and control, aim to reduce the concentration of infectious respiratory aerosols (i.e., droplet, nuclei) in the air and the contamination of surfaces and inanimate objects. They include standards for adequate ventilation adapted to specific areas in health facilities, appropriate structural design, spatial separation and adequate environmental cleaning.

- Spatial separation between patient of 2 meter should be maintained and use of physical barriers such as glass or plastic windows can also reduce health workers exposure to SARS-COV-2, in the areas such as screening and triage areas, registration desk of emergency department and at the pharmacy.
- Label or mark on the floor for physical distancing where people should be stand for que.
- Seating arrangement should be done with physical distance of 2 meter in waiting area, hallway.
- Adequate ventilation including natural ventilation, is important to reduce SARS-CoV-2 transmission.



Maintain Physical distance

- A well-designed, maintained, and operated system can reduce the risk of COVID-19 spread in indoor spaces by diluting the concentration of potentially infectious aerosols through ventilation with outside air and filtration and disinfection air.
- In areas of the health care facilities, where COVID-19 cases are cared for, but aerosol-generating procedures are not performed, adequate ventilation is 60 litres/second per (L/s/patient) for naturally ventilated areas or 6 air changes per hour (ACH) (equivalent to 40 L/s/patient for a 4x2x3 m3 room) for mechanically ventilated areas.
- AGPs should be performed in the room with negative pressure patient ventilation system, with airborne precautions.

10. Patient Transport

COVID-19 confirmed patients should not leave their room during the isolation period, unless necessary for medical reasons. It is important to ensure the adequate IPC measures are followed during the transportation of suspected or confirmed COVID-19 cases,

- Movement or transporting of COVID-19 confirmed and suspected cases should be restricted for performing essential diagnostic and therapeutic tests or procedures only.
- If transportation is necessary, the transport services and personnel at the destination facility and persons receiving the patient should be advised to take the required precautions.
- All patients are required to wear a surgical mask when leaving and adhere to respiratory hygiene.
- Transfer to other facilities should be avoided (unless medically indicated).
- Ambulance cleaning and decontamination measures should be implemented immediately after the transfer of the patient in accor dance with the recommendations on environmental cleaning along with safe waste management practice.
- All healthcare workers, driver, cleaners who are involved in the patient transfer should wear PPE as recommended in table 2.

11. Additional measures for healthcare professionals and healthcare facility staff

The risk of transmission of the COVID-19 virus within health care facilities should be considered high. The following precautionary measures are recommended to mitigate the risk:

a. Healthcare workers who have contact with patients should wear scrubs for the duration of their work which should be cleaned daily

b. At home, if possible, healthcare workers who have managed COVID-19 patients should practice physical distancing to minimize the risk of transmission to other household members, especially those who are at high risk of severe COVID-19.

c. Health care facility may provide additional facilities for the staff who has accidental exposure to infection for e.g. staffs quarantine ward, provision of quarantine or isolation in any other institutional quarantine center.

12. Integrating Gender, Equity and Human Rights (GER) in Clinical Management (CM) of COVID-19

Gender, equity and human rights matter in health and clinical management. The men and women, girls and boys, or any individual of gender and sexual identity experience differences in health status, exposure to risk and vulnerability, access to and use of services, health-seeking behaviour, experiences in health care settings, and health and social outcomes ddue to their biological and social standing in the society. Health inequities manifest in differential exposure, vulnerability, access, health outcomes and consequences, so it is very important to recognise these aspects and provide health services from gender, equity, and human rights perspectives. In response to COVID-19, the following aspects are suggested to strongly consider while managing COVID-19 patients in health facility settings.

1. Providing respectful care towards all patients

Naturally, we envision a relationship between patients and service providers characterized by caring, empathy, support, trust, confidence, and empowerment, as well as gentle, respectful, and effective communication to enable informed decision making. While dealing with the patients of COVID-19 and non-COVID-19 at clinical sites, health workers/providers need to be aware about the differences, providing fair treatment and respecting and protecting the rights of an individual. Health workers/ providers need to:

- Demonstrate equal and fair treatment/ behavior irrespective of an individual's age, sex, caste, ethnicity, socioeconomic status, education, sexual orientation, family/ cultural background, disabilities or any other characteristics.

- Respect the right to information, informed consent and refusal; right to confidentiality, privacy, dignity, choices/preferences, equitable care; and self-determination; right to freedom from harm, ill treatment and discrimination; and right to timely healthcare and to the highest attainable level of health.

Managing social stigma - Dos and Don'ts

DO – Use respectful and dignified verbal, and body language
Don't – Use offensive verbal and body language.*
DO - talk about the new coronavirus disease (COVID-19)
Don't - attach locations or ethnicity to the disease, e.g., "Chinese Virus".

DO - talk about "people who may have COVID-19" or "people who are presumptive for COVID-19"
Don't - talk about "COVID-19 suspects" or "suspected cases".

DO - talk about people "acquiring" or "contracting" COVID-19
Don't talk about people "transmitting COVID-19" "infecting others" or "spreading the virus" as it implies intentional transmission and assigns blame.

DO - speak accurately about the risk from COVID-19, based on scientific data and latest official health advice.
Don't - repeat or share unconfirmed rumours.

DO - talk positively and emphasise the effectiveness of prevention and treatment measures.
Don't - emphasise or dwell on the negative, or messages of threat.

DO - emphasise the effectiveness of adopting protective measures to prevent acquiring the coronavirus, as well as early screening, testing and treatment.

For more information:
*National Guidelines for Disability Inclusive Health Services, 2019
covid19-stigma-guide.pdf (who.int)

- Avoid unintended biases towards women, girls, (with or without disabilities) or any clients based on their identity and socioeconomic backgrounds.
- Be aware of social stigma and Dos and Don'ts. Refer the box - there are some dos and don'ts on language[1] when talking about the COVID-19[2] .
- Be aware of gender related biases, be non-judg mental.
- Be culturally sensitive and appropriate to age.
- Be aware of rights of childbearing women and respect those while providing care to them[3].
- Be aware on data for men and women on predisposing factors, delays in seeking care, co-morbidities for the COVID-19 and risk groups and link to diseases as well as possible biological differences in COVID-19 impact over men and women. Even though COVID-19 infections are distributed equally among men and women, evidence shows more deaths among men due to biological factors, resulting presumptively due to a more robust immune response among women.
- Be aware in regards with non-health effects of COVID-19 pandemic. Evidence suggests women have borne the brunt of non-health impacts, including job and wage losses, increases in un paid work in homes including health work, increases in violence against women, especially intimate partner violence, and lack of adequate social protection. They have also faced lack of access to needed non-COVID-19 health services, especially sexual and reproductive health services.

1 Disability inclusive guidelines in English FINAL
2 covid19-stigma-guide.pdf (who.int)
3 Microsoft Word - Final_Respectful_Care_Charter_12-15-11.docx (who.int)

2. Responding to gender-based violence (GBV)/ violence against women and girls (VAWG)

The high prevalence of GBV/VAWG in Nepal is an ongoing challenge. NDHS 2016 reports 22% women experience physical violence. Global data show 1 in 3 women has experienced lifetime physical and/or sexual violence, mainly by an intimate partner. More importantly, available evidence points to significant increases GBV/VAWG increase in any emergency situation, and it has been exacerbated in COVID-19 situation and this has alarmed all actors working against GBV/VAWG. The

What is gender - based violence (GBV)?

Gender based violence refers to harmful acts directed at an individual based on their gender. It is rooted in gender inequality, the abuse of power and harmful norms. GBV is a serious violation of human rights and a life-threatening health and protection issue**.** GBV is committed in many forms such as physical, emotional/psychological, sexual, cultural/social, economic or any kind that endangers the safety, health and well-being of an individual.

Domestic Violence refers to violent or aggressive behavior within home involving intimate partner and immediate family members.

risks of violence that women and their children face during the current COVID-19 crisis cannot be ignored. “There never are excuses for violence”. Health systems have an important role in ensuring that services for survivors of gender-based violence remain accessible during the COVID-19 pandemic. The routine screening of GBV is NOT recommended by WHO during COVID-19 response. WHO guidance includes the dos and don’ts to be followed in this regard[4]. In case of a patient/client who comes to the health facility and discloses experience of violence, it is most important to respond[5].

4 See 2014, WHO, UNW, UNFPA. Health care for women subjected to intimate partner violence or sexual violence: A clinical handbook: https://www.who.int/publications/i/item/WHO-RHR-14.26

5 See 2020 WHO: COVID-19 and violence against women: What the health sector / system can do: https://www.who.int/reproductivehealth/publications/vaw-covid-19/en/

Five Actions for Health workers/providers to respond to GBV/VAWG

1. Be aware of the increased risk and health consequences of GBV/VAWG in the context of COVID-19.
2. Recognize the signs and know when and how to ask about violence.
3. If violence is disclosed, act to provide timely care for physical, sexual, reproductive and mental health.
4. If violence is disclosed, provide First-line support and medical care to survivors. The first-line support is most important, and it involves 5 simple tasks of LIVES:
   - LISTEN: listen to women, girls closely, with empathy, and without judging.
   - INQUIRE: assess, identify and respond to person's various needs and concerns.
   - VALIDATE: show that you understand survivor's experience, feeling and believe her.
   - ENHANCE SAFETY: discuss a plan to protect the survivor from further harm if violence occurs again.
   - SUPPORT: support her by helping her connect to information, services, and social support.
5. Share information about available support, identify referral path ways and refer to other essential services.

Health facilities can identify and provide information about services available locally (e.g. hotlines, shelters, psychosocial counselling) for survivors, including opening hours, contact details, and whether services can be offered remotely, and establish referral linkages. It is important to understand women and girls of marginalised groups and with disabilities are likely to have additional risks and needs. WHO-National Federation of Disabled Nepal (NFDN), Yes We Can Project has set-up district level virtual help desk with woman peer counsellor to address the needs of women and girls with disabilities. The contact numbers are available on request from the National Coordinator of this project (nc@nfdn.org.np).

Remember: Safety, respect, confidentiality and non-discrimination in relation to GBV survivors and those at risk are vital considerations at all times.

3. Considerations for managers

Many women are at the forefront of the COVID-19 response. Study-[6]shows globally, women make up 70 per cent of the health workforce, especially as nurses, midwives and community health volunteers, and account of the majority of service staff in health facilities as cleaners, launderers and caterers. This scenario obtains in Nepal as well. Despite the large number, women are often not reflected in decision-making in response to COVID-19. Further, women are still paid less than their male counterparts and hold fewer leadership positions in the health sector and enjoy lower job security and social protection. Masks and other protective equipment designed and sized for men leave women at greater risk of exposure. The lack of adequate attention to the menstrual hygiene needs of women health workers during long shifts is an added workplace-related challenge.

So, Managers need to be aware of the above gaps and ensure from management aspect if the needs of women especially who are at forefront are prioritized and fulfilled. This means:

- The health care workers and caregivers have access to women/gender-friendly personal protective equipment (PPE) and menstrual hygiene products, i.e., the different sizes and also the design of the PPE needs to be made available and accessible considering the feminine and menstrual hygiene need.
- Flexible working arrangements need to be made to balance the burden of care specially for pregnant and breastfeeding mothers.
- Women health workers take the leadership and decision-making roles.
- Equal treatment and pay, paid leave and other social protection measures are ensured to women health workers in the public and private sectors.

6 UN Women | Explainer: How COVID-19 impacts women and girls

4. Managing disaggregated data (Sex and Age disaggregation of data)

While the COVID-19 pandemic has affected everyone, women and girls (with or without disabilities), people from marginalised groups have been facing specific and often disproportionate economic, health, and social risks due to deeply entrenched inequalities, social norms, and unequal power relations. Therefore, understanding the gender-differentiated impacts of the COVID-19 crisis through sex and age, caste/ethnicity, disability disaggregated data is fundamental to policy and program responses that can reduce vulnerable conditions and build the agency of girls and women and marginalised groups placing gender and equity at their centre.

To manage the disaggregated data, the case reporting form of clinical management as well as vaccine monitoring form should include at least sex, age, disabilities, caste/ethnicity, co-morbidities, and health care worker status, and this should be reported in regular reporting system. Analysis by this disaggregation should be prioritized by the health facilities and higher levels to identify any gaps and develop priorities for interventions. The same can be used to analyse health inequities among different vulnerable groups, and to review, take appropriate actions and report periodically.

5. COVID-19 vaccination

There is a gender gap in COVID-19 vaccination. Evidence shows that in low-income countries, like Nepal women (with or without disabilities) have lower access to mobiles or digital devices in comparison to men[7], as a result less women may face challenges in being able to register through online and digital portals for COVID-19 vaccination. Older women and people from rural, remote and urban poor households may be similarly disadvantaged.
Similarly, women's typically lower levels of education and rates of access to radio, mobile, and/or internet or limited access to accurate and credible information can increase the risks of the spread of fear, rumours, and misinformation about vaccines reducing immunisation uptake. And the same case might be for the elderly people.

7 Gavi_Guidance-to-address-gender-barriers-in-MRS-immunisation_ENG.pdf

For women, there are other factors that might act as barriers to access to timely and complete vaccination, such as women's care roles/ responsibilities and time poverty, decision-making power on health seeking and use of resources in households, lower education and literacy, limited mobility from access to safe transport and gender-related constraints on their ability to move about on their own, anticipated or perceived discrimination in health care settings, experience of harassment and violence etc. Older women may be particularly disadvantaged. Considering all these factors there needs to be ensured equitable access to vaccination:

- Compare the actual distribution of those covered by 1st and 2nd dose of the vaccine with the expected distribution, by age and sex of various eligible groups, if women and elderly prioritized for vaccine.
- Plan to offer vaccination to pregnant and lactating women in priority target groups.
- Be aware of the related barriers to vaccine enrolment/registration and follow-up
- Use differentiated vaccine delivery strategies to effectively reach women, elderly and gender-diverse people. For example, in a few places, designated vaccine counters were set-up for persons with disabilities including accessible transportation to vaccine facilities.
- Monitor vaccine implementation progress and equitable access through selected priority indicators disaggregated data by sex and age, disability, and caste/ethnicity.
- Promote leadership and encourage participation of vulnerable groups in COVID-19 service delivery. For example, in Nepal, the groups of disabled people have taken leadership and participation in successful vaccine advocacy, data-driven advocacy, risk communica tion, access audits, identification of vulnerable household of persons with disabilities etc.

References

1. Coronavirus disease (COVID-19):How is it transmitted? Q&A, 30 April, 2021
https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19-how-is-it-transmitted

2. Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed. Interim Guidance, WHO, 12 July, 2021.
https://apps.who.int/iris/handle/10665/342620

3. Coronavirus Disease 2019 (COVID-19) 2021 Case Definition, Central for Disease Control and Prevention. Access on 23 Nov,2021
https://ndc.services.cdc.gov/case-definitions/coronavirus-disease-2019-2021/

4. Pocket Book of Clinical management of COVID -19 in Health care setting. 2nd edition, MoHP
https://edcd.gov.np/resources/download/pocket-book-of-clinical-management-of-covid-19-in-healthcare-setting-2nd-edition

5. Infection control standard precautions in health care. Epidemic and pandemic alert and response, WHO, 2006
https://www.who.int/csr/resources/publications/4EPR_AM2.pdf

6. Guide to Local Production of WHO-recommended Hand rub Formulations. WHO, Revised April 2010.
https://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf

7.Rational use of PPE for coronavirus disease (COVID-19) and considerations during severe shortages. Interim Guidance, WHO-23 December 2020
https://apps.who.int/iris/handle/10665/331215

8. Wundavalli L, Singh S,Singh AR, et al. How to rapidly design and operationalize PPE donning and doffing areas for a COVID-19 care facility: quality improvement initiative. BMJ Open Quality 2020;9:e001022. doi:10.1136/bmjoq-2020-001022

9. Ensuring a safe environment for patients and staff in COVID-19 health-care facilities A module from the suite of health service capacity assessments in the context of the COVID-19 pandemic. WHO, INTERIM GUIDANCE 20 October 2020
https://apps.who.int/iris/handle/10665/336257

10. Environmental Cleaning & Disinfection in context of COVID-19, Interim Guidance; Ministry of Health and Population, 03-03-2077
https://drive.google.com/file/d/1ux1Vm6ps9ZnbUp3nB6BqgYhNjvat-Fn__/view

11. Cleaning and disinfection of environmental surfaces in the context of COVID-19 WHO-Interim guidance, 15 May 2020
https://apps.who.int/iris/handle/10665/332096

12. Guidelines for assistive devices disinfection during COVID-19 Epidemic. Rehabilitation International,
http://www.riglobal.org/guidelines-for-assistive-devices-disinfection-during-covid-19-epidemic. Access on 15 November 2021

13. Prvu Bettger J, Thoumi A, Marquevich V, et al, COVID-19: maintaining essential rehabilitation services across the care continuum. BMJ Global Health 2020;5:e002670.
https://gh.bmj.com/content/5/5/e002670

14. Health Care Waste Management in the context of COVID-19 Emergency, MoHP Interim Guidance (3 July 2020)
https://drive.google.com/file/d/1Kcj0-zqjVMHQPAX4ocshrbhKqsAk-11JU/view

15. Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19: interim guidance, WHO, UNICEF, 29 July 2020
https://apps.who.int/iris/handle/10665/333560

16. Health care waste Management Standard Operating Procedure 2020. MoHP
https://dohs.gov.np/standard-operating-procedure-on-hcwn/

17. COVID-19 clinical management: living guidance. World Health Organization, 25 January 2021.
https://apps.who.int/iris/handle/10665/338882.

18. Clinical management of COVID 19. interim guidance WHO, May 27 2021
https://apps.who.int/iris/handle/10665/332196

19. Interim Clinical Guidance for patients with COVID-19 in health care facilities. Clinical guidance update 2 Nepal Medical Council, Oct-21-2020.
https://nmc.org.np/files/4/NMC%20Clinical%20Guidance%20Update%20%202_Oct_21_2020.pdf

20. Infection Prevention and Control When COVID-19 Is Suspected. Interim Guidance, Nepal Medical Council, June 2020.
https://nmc.org.np/files/4/Nepal%20medical%20council%20interim%20guidance%20for%20infection%20prevention%20and%20control%20when%20COVID-19%20is%20suspected.pdf

21. Criterial for releasing COVID-19 patient from Isolation. Scientific Brief, WHO, 17-6-2020
https://www.who.int/news-room/commentaries/detail/criteria-for-releasing-covid-19-patients-from-isolation

22. कोभिड-१९को कारण मृत्यु भएका व्यक्तिहरुको शव व्यवथापन सम्वन्धी संक्षिप्त कार्यविधि दोश्रो संशोधन, २०७७ (स्वीकृत मितिः २०७७/०६/२५, मा मन्त्री स्तरीय)
https://drive.google.com/file/d/1kU_EZ3AYg0dWwODiCPE9iPw83duj4xST/view

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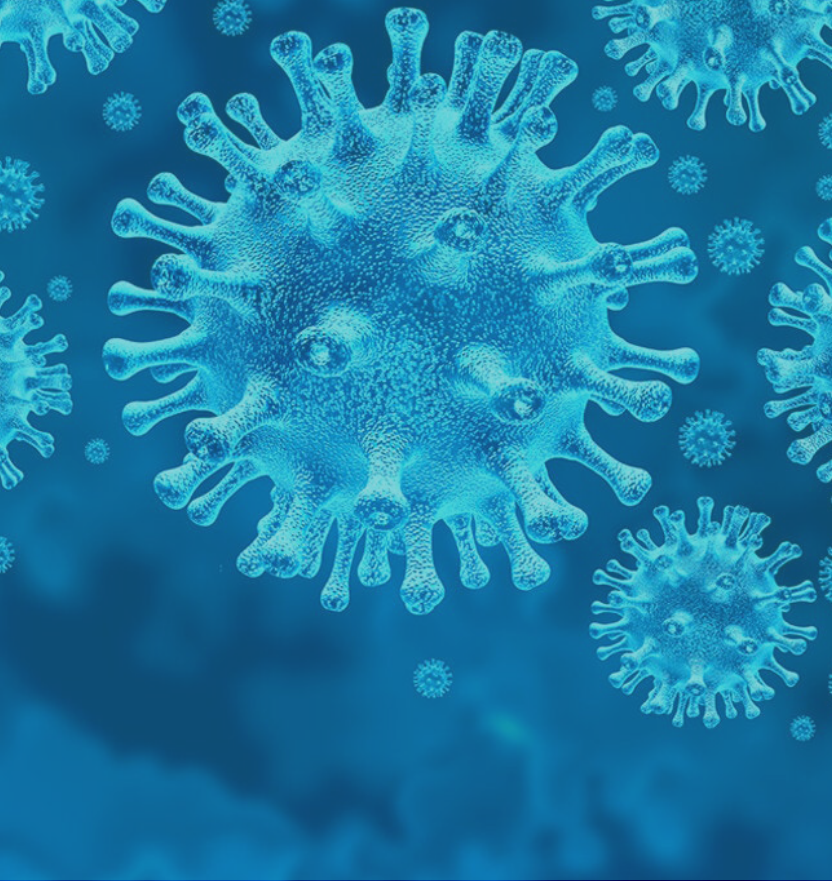
Notes



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