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Healthcare
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Participant Handbook

Customised Crash Course Programme for COVID Warriors

Sector
Health

Sub-Sector
Allied Health & Paramedics

Occupation
COVID Frontline Worker
(Basic Care Support)

Reference ID: **HSS/Q5104, Version 1.0**
NSQF level: 4

COVID Frontline Worker (Basic Care Support)

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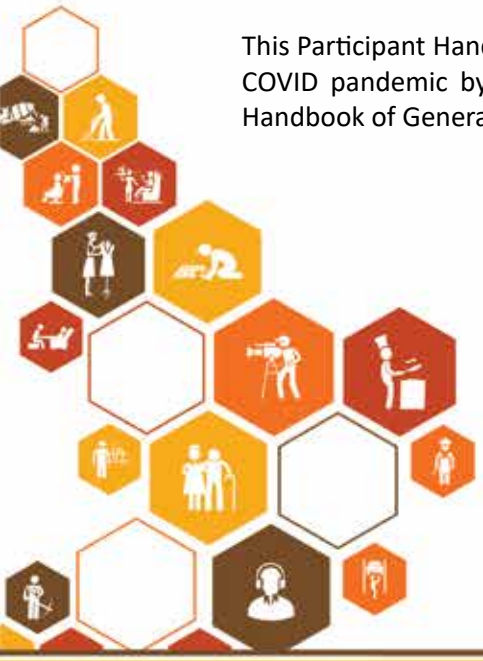
This Participant Handbook is designed to skill individuals for basic care of patient during COVID pandemic by selecting required competencies, appropriately from Participant Handbook of General Duty Assistant HSS/Q5101, version2.0.



"Skilling is building a better India. If we have to move India towards development then Skill Development should be our mission."

Shri Narendra Modi
Prime Minister of India

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Certificate

COMPLIANCE TO
QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

HEALTHCARE SECTOR SKILL COUNCIL

for

SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of

Job Role/ Qualification Pack: **"COVID Frontline Worker (Basic Care Support)"** QP No. **"HSS/ Q5104 , NSQF Level 4"**

Date of Issuance:
Valid up to*: May, 2022

*Valid up to the next review date of the Qualification Pack or the 'Valid up to' date mentioned above (whichever is earlier)

Authorised Signatory
(Healthcare Sector Skill Council)

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The efforts of Team HSSC is especially appreciated for supporting the development of this book.

HSSC dedicates this book to youth of the country who desire to come forward to fight COVID 19 and learn specialized skills, an invaluable asset for providing the care while making a career in the Healthcare Sector and wish to be part of the most Noble profession of saving lives.

About this book

This Participant Handbook is designed to enable training for the specific Qualification Pack(QP). Each National Occupational Standards (NOS) is covered across Unit/s.

Key Learning Objectives for the specific NOS mark the beginning of the Unit/s for that NOS.

- Discuss the difference between disease outbreak, epidemic and pandemic.Identify correct behavioural practices to be followed to prevent self-infection and spread of the disease to a certain extent.
- Explain social distancing, self-quarantine and self-isolation.
- Identify potential fomites and personal protective equipment (PPE) to be used at workplace.
- Describe common practices and guidelines pertaining to management of waste, measures for dealing with stress and anxiety, and procedure of reporting symptoms.
- Assist nurse in bathing and grooming the patient.
- Assist patient in dressing-up.
- Support individuals to eat and drink.
- Assist patient in maintaining normal elimination.
- Transferring patient within the hospital.
- Communicating appropriately with co-workers.
- Prevent and control infection.
- Assist nurse in observing and reporting change in patient condition.
- Assist nurse in measuring patient parameters accurately.
- Respond to patient's call.
- Clean medical equipment under supervision of nurse.
- Transport patient samples, drugs, patient documents and manage changing and transporting laundry/ linen on the floor.
- Carry out last office (death care).

Symbols used in the book have been listed below.

Symbols Used

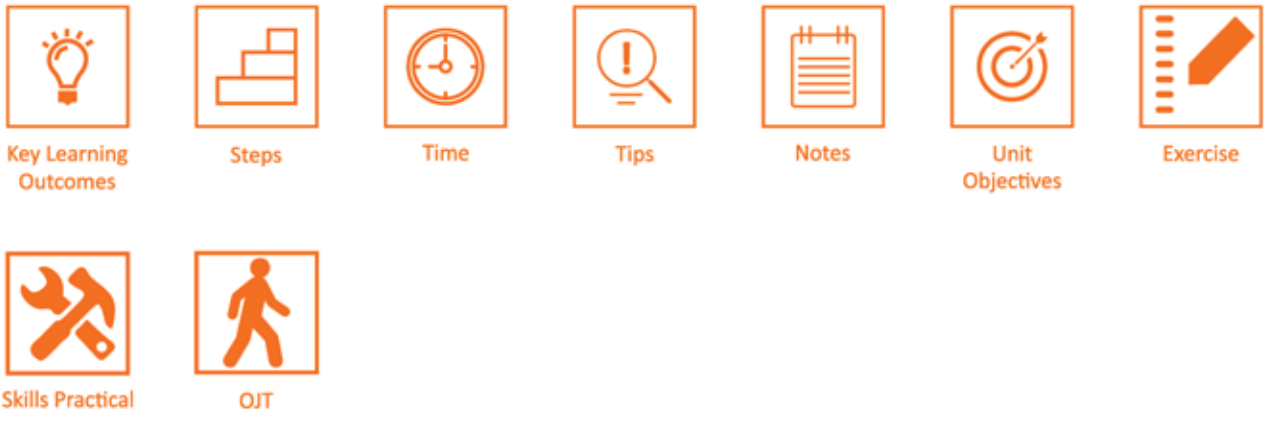

Table of Content

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GOVERNMENT OF INDIA
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1. Health & Hygiene

Unit 1.1 – General Practices for an Outbreak/Pandemic

Unit 1.2 – Safety and Sanitisation Guidelines

Unit 1.3 – Other Common Practices & Guidelines

HSS/N9622

Key Learning Outcomes

At the end of this module, you will be able to:

1. Discuss the difference between disease outbreak, epidemic and pandemic
2. Identify correct behavioural practices to be followed to prevent self-infection and spread of the disease to a certain extent
3. Explain social distancing, self-quarantine and self-isolation
4. Identify potential fomites and personal protective equipment (PPE) to be used at workplace
5. Describe common practices and guidelines pertaining to management of waste, measures for dealing with stress and anxiety, and procedure of reporting symptoms

UNIT 1.1: General Practices for an Outbreak/Pandemic

Unit Objectives

After having studied this module, the learner will be able to:

1. Differentiate between disease outbreak, epidemic and pandemic
2. Explain the rules and guidelines for epidemic/pandemic
3. Distinguish between self-quarantine and self-isolation
4. Discuss norms for maintaining social distance during a pandemic

1.1.1 Disease Outbreaks, Epidemics and Pandemics

What is a Disease Outbreak?

The term 'outbreak' means 'sudden breaking out' or 'occurrence' of a disease, or anything unpleasant. Disease outbreak specifically refers to a sudden occurrence and exponential rise of a disease beyond anyone's expectation and across any community, geographical area, or a country.

Disease outbreak is often caused by an infection which is transmitted to a person from another person, animal, environment or any other source. It may also be caused due to exposure to chemicals or radioactive materials. However, there are times when the cause of outbreak remains unknown. In fact, there is no certainty about the duration of a disease outbreak, for it may last a few days, weeks, months, or even years.

As per the World Health Organisation (WHO) data, disease outbreak happens every year in the form of influenza or the like in different parts of the world. At times, even a single case of an infectious disease is enough for it to be categorized as an outbreak. This is more so in case of a rare disease or that which has serious public health implications, for example, foodborne botulism.

DDT or mercury related diseases are examples of chemical related outbreaks, for example, Zika outbreak in 2015. Aedes mosquito spread the Zika virus in Brazil, America and South East Asia. It caused brain anomalies in the new borns when pregnant women were infected. Most of these infections were asymptomatic.

What is an Epidemic?

Epidemic refers to an infectious disease that spreads actively and substantially across a specific location affecting large number of people within a short span. In fact, epidemics of 21st century are observed to be spreading more rapidly to far off regions than others.

For example, no one had heard of Severe Acute Respiratory Syndrome (SARS) before 2003, but it affected over 8,000 people and killed one out of ten of them. Similarly, epidemic of Middle East Respiratory Syndrome (MERS) across Middle East in 2012-2013, and the Ebola epidemic in West Africa in 2014 caused fear and panic as well as inflicted massive damage to the economy. Ebola epidemic of 2014 was a viral haemorrhagic fever caused by the Ebola virus. It spreads from infected bats and fluids of infected humans. It was located in the Sub-Saharan Africa mainly.

What is a Pandemic?

When an epidemic spreads across various countries, it becomes pandemic. It affects larger number of people across the globe, causing greater number of deaths as compared to an epidemic. In addition to adversely affecting people, it has a drastic impact on the economy at large. Since pandemics pose far greater challenge than disease outbreaks and epidemics, the measures undertaken to deal with them are quite stringent, such as partial or complete lockdown imposed during covid 19 in 2020.

Influenza pandemic have been the most widely reported. There have been five of them in the past 140 years-the most severe was in 1918 (Spanish flu) and the most recent being the swine flu (2009). It happens when a new strain of the influenza virus is transmitted from any animal species to humans.

The following figure shows some key highlights of a pandemic:

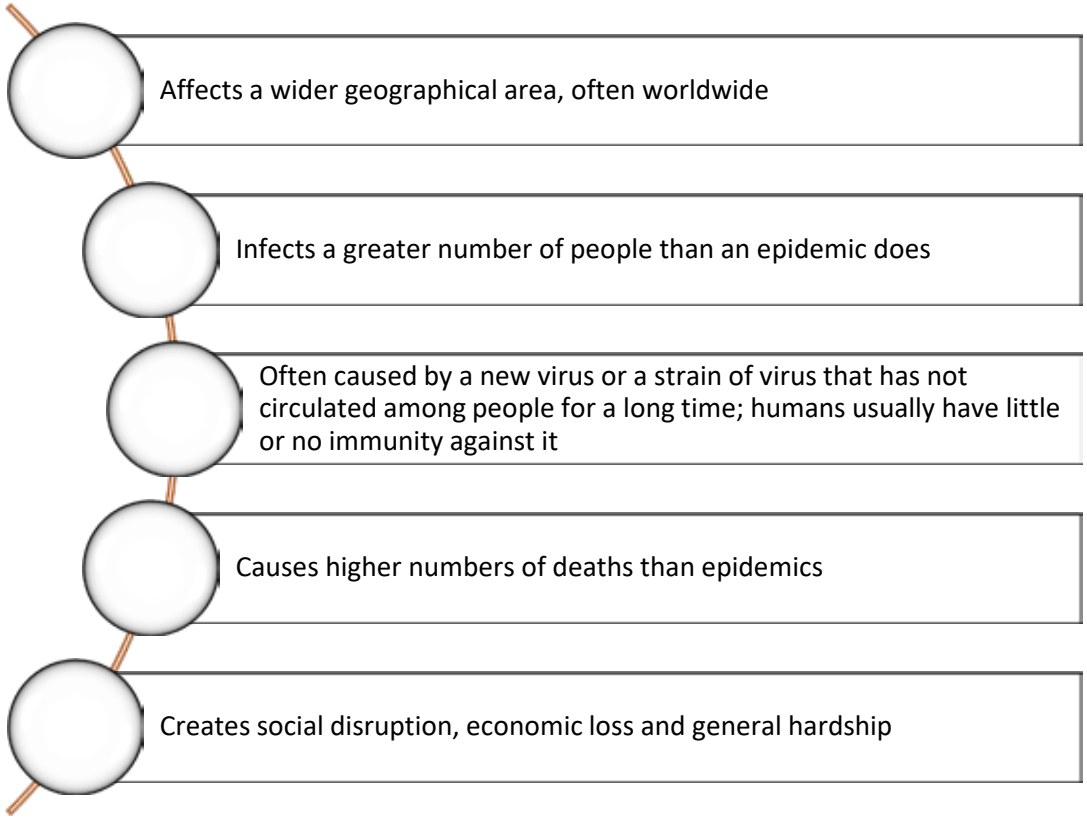

Fig. 1.1.1: Key highlights of a pandemic

1.1.2 Rules and Guidelines during Epidemic/Pandemic

As explained earlier, epidemics and pandemics have a tremendous impact on a large population—across a specific location or various countries respectively. The most significant defence against the outspread of disease is rules and guidelines. It is imperative to adhere to these guidelines for prevention and control of disease. However, first one needs to understand how the viruses/pathogens spread in humans though different means.

The spread of viruses/pathogens in humans is shown in the following figure:

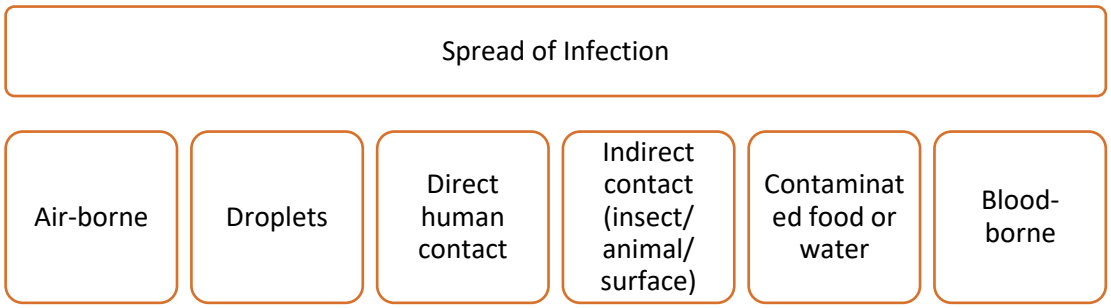

Fig. 1.1.2: Spread of infection

There are four main guidelines to be followed during an epidemic/a pandemic, as shown in the following figure:

Fig. 1.1.3: Guidelines to be followed during epidemic/pandemic

Personal Hygiene

Personal hygiene is significant for prevention of infectious diseases and promotion of overall well-being. It refers to self-care practices for maintaining cleanliness at personal level and preserving health. These practices include bathing every day, washing hands with soap, wearing clean clothes, brushing teeth, grooming and so on. Personal hygiene entails maintaining not only cleanliness but also healthy habits as preventive measures for safeguarding oneself from catching any infection. It becomes all the more important to follow these practices during epidemics and pandemics as the nature of the disease is infectious, i.e., it spreads by coming in contact with infected people or things. Therefore, maintaining personal hygiene is not an option but a compulsion to secure oneself from becoming vulnerable to any infection.

Some points for maintaining personal hygiene are shown in the following image:

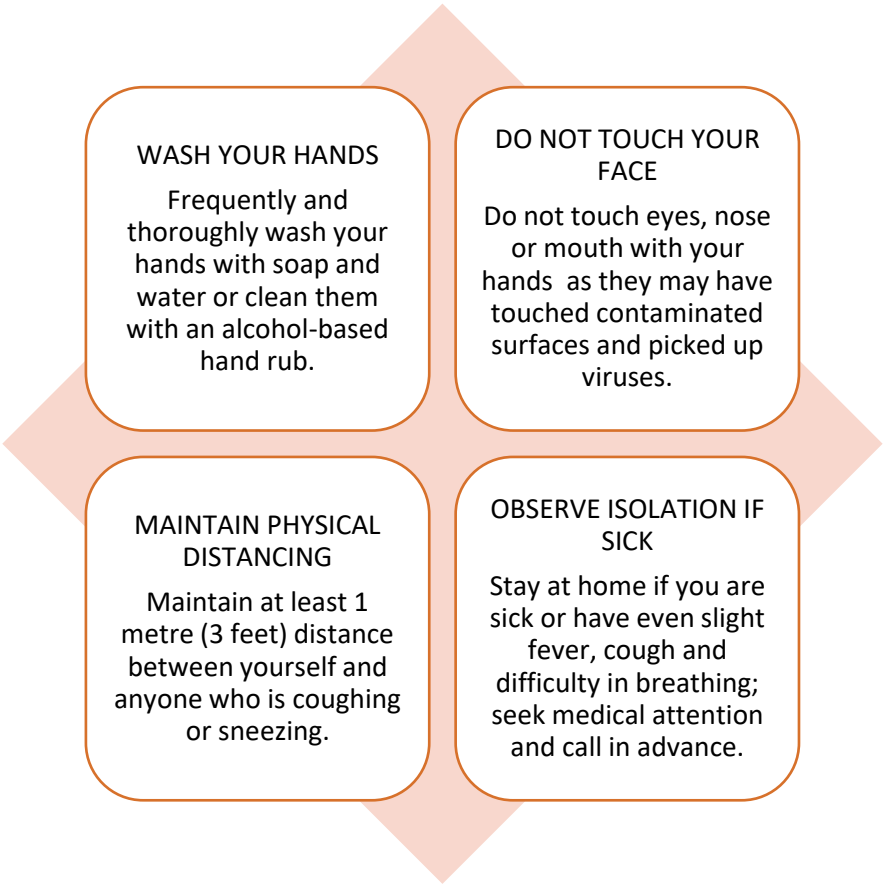

Fig. 1.1.4: Maintaining personal hygiene

Hand Hygiene at Workplace

At work, our hands are exposed to all types of surfaces during the day, as everything we do involves hands in one way or the other—be it when shaking hands with people, eating meals, working on laptop, using mobile phone or common landline phone and so on. This makes them prone to various germs and viruses that can lead to sickness. It is for this reason that proper hand washing is on the top of personal hygiene routine. In fact, it is also one of the simplest and most effective ways to protect oneself and family members from falling prey to illnesses such as cold, cough, flu and gastroenteritis (these can all be contracted or passed on through poor hand hygiene). It is imperative to follow proper hand washing techniques at home and workplace to prevent the spread of diseases.

Some key highlights of maintaining hand hygiene at workplace are shown in the following figure:

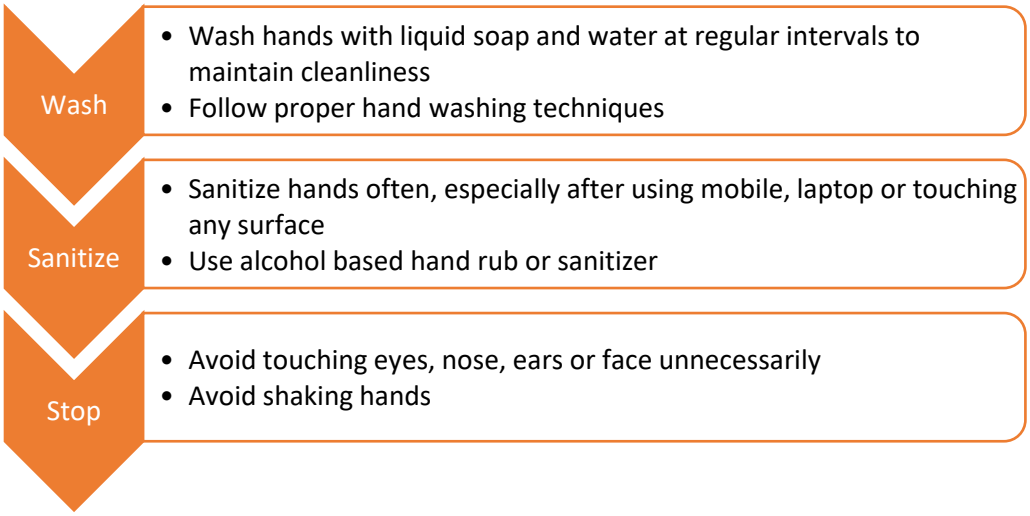

Fig. 1.1.5: Maintaining hand hygiene at workplace

Steps

The detailed process for maintaining hand hygiene using different commodities is shown in the following set of images:

Fig. 1.1.6(a): Maintaining hand hygiene with soap and water

Fig. 1.1.6(b): Maintaining hand hygiene with alcohol-based sanitizers

Respiratory Hygiene

As the name suggests, respiratory hygiene is all about undertaking preventive measures to prevent the transmission of infection via the respiratory tract. It helps reduce the spread of viruses and pathogens, especially during epidemic or pandemic of an infectious disease.

The effective practices to maintain respiratory hygiene at workplace are shown in the following figure:

Cough/Sneeze Etiquette	Face Masks
• Cough or sneeze in the elbow • Use tissues to clean after coughing/sneezing	• Wear appropriate face mask at work place • Avoid touching face and mask unnecessarily • Dispose it off properly in closed bins after use

Fig. 1.1.7: Maintaining respiratory hygiene at workplace

The cough/sneeze etiquette is shown in the following image:

Fig. 1.1.8: Cough and sneeze etiquette

Guidelines for using face masks are given in the following figure:

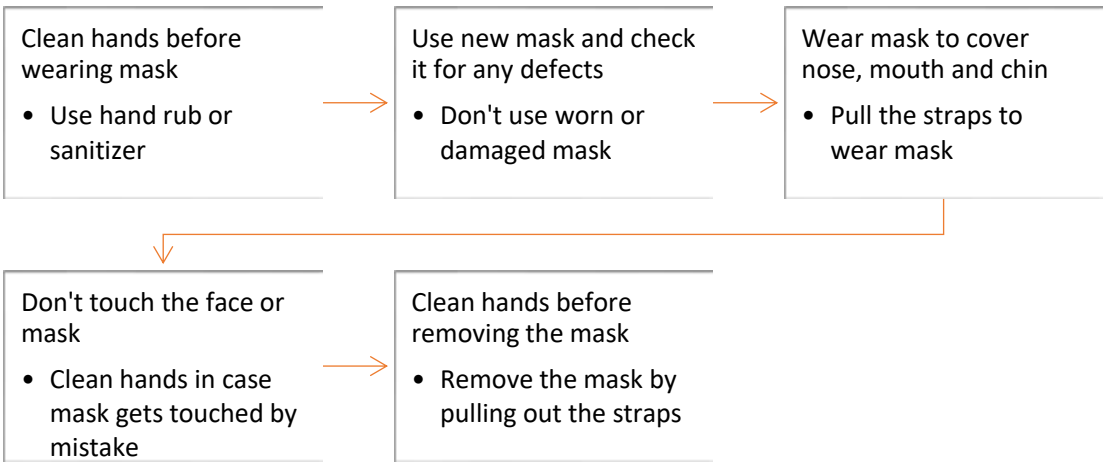

Fig. 1.1.9: Guidelines for using face masks

Steps

The following image shows steps to wear and dispose a surgical mask:

Fig. 1.1.10 (a): Wearing a surgical mask

Steps

The following image shows steps to wear a non-surgical mask:

Fig. 1.1.10 (b): Wearing a non-surgical mask

Types of Face Masks

Face masks play a significant role in protecting the wearer from catching any kind of infection. There are mainly two types of masks, namely, medical masks and non-medical masks (fabric masks) but there are different styles as shown in the following image

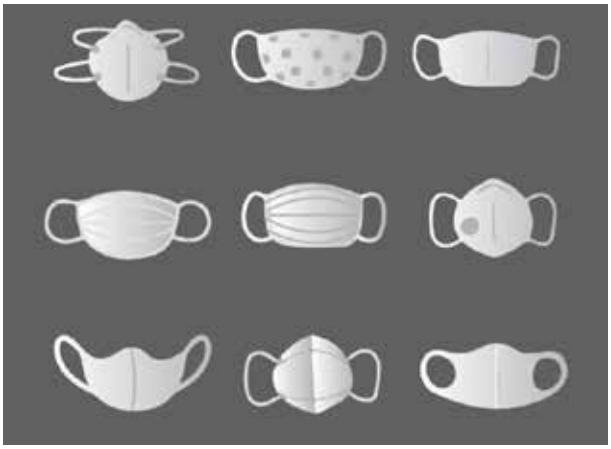

Fig. 1.1.11: Types of face masks

Face masks are worn to protect the wearer and the people surrounding him/her from infection that is carried in the droplets sprayed from coughing, sneezing and talking. They are typically worn to cover the nose and the mouth. There are many types of face masks available and they can be broadly divided into those worn by the healthcare staff and those worn outside a hospital.

Masks worn by non-healthcare givers are largely to protect themselves from dust and microbes. The protection offered depends on the material used and the number of layers. Some common types of masks used by people when they step out of the house are shown in the following images:

Cloth Masks

Surgical Masks

N95 Masks

Fig. 1.1.12: Common type of face masks worn in public place or workplace

Cloth Masks – A simple bandana made of cotton may be fashionably apt but offers virtually no protection from disease bearing droplets. Neck gaiters and balaclavas are effective only if made of cotton. Masks made of synthetic material may lead to more harm than good. There are anecdotal reports of masks made from old T shirts, but these are also equally non effective. For a cloth mask to be effective it should be made of tightly woven 100% cotton and sewn in three layers. Adding a polypropylene filter (which carries an electrostatic charge to trap small particles) can increase the filtration efficiency of a cloth mask to up to 70%. These are reusable masks and should be washed daily after use.

Surgical Masks – These are flat thin paper like masks which filter out 60% of inhaled particles. It provides barrier protection against large droplets but does not have an airtight seal. They are of single use type and should be discarded after each use. When a middle layer of melt blown yarn and a nose clip is added, they are effective in filtration of approximately 95 % of particles.

N95 Masks – These are personal protective devices and are made of melt blown yarn. They are able to filter out 97% of air borne particles. They are tight-fitting masks and have to be worn carefully lest some leakage occurs. People suffering from respiratory distress should not use an N 95 mask. They can be reused a number of times provided proper sanitizing methods are used to disinfect the masks. Masks that have a valve protect the user from the air borne particles that are outside but do not protect the people surrounding the user if he/she is infected.

Social Distancing

We come in contact with people at work place who could be asymptomatic carriers of infection, which makes us all vulnerable unknowingly. An asymptomatic person is someone who shows no symptoms is spite of being infected. In certain cases, even the infected person does not know that he or she is infected without symptoms and is a potential carrier of infection.

Something as simple as talking, coughing or sneezing is enough to spread the infection from an infected person to others. It so happens that tiny droplets that are sprayed while talking, coughing or sneezing may contain virus that is transmitted to the person close by.

That is why social distancing becomes all the more important. Social distancing simply means maintaining physical distance of at least 1 meter (3 feet) from others. It is an effective preventive measure to protect oneself from catching any infectious disease from an infected person. This helps to slow down the spread of disease and safeguard those who are not infected.

The following image shows the sitting arrangement ideal for maintaining social distancing:

Fig. 1.1.13: Social distancing at workplace

Workplace Hygiene

Workplace hygiene is as important as personal hygiene. It has various verticals spanning the work area, meeting etiquette and so on, and has a significant role in prevention of a disease outbreak. It not only helps in keeping oneself safe but also protects others and the environment.

Some key points for maintaining workplace hygiene are given in the following figure:

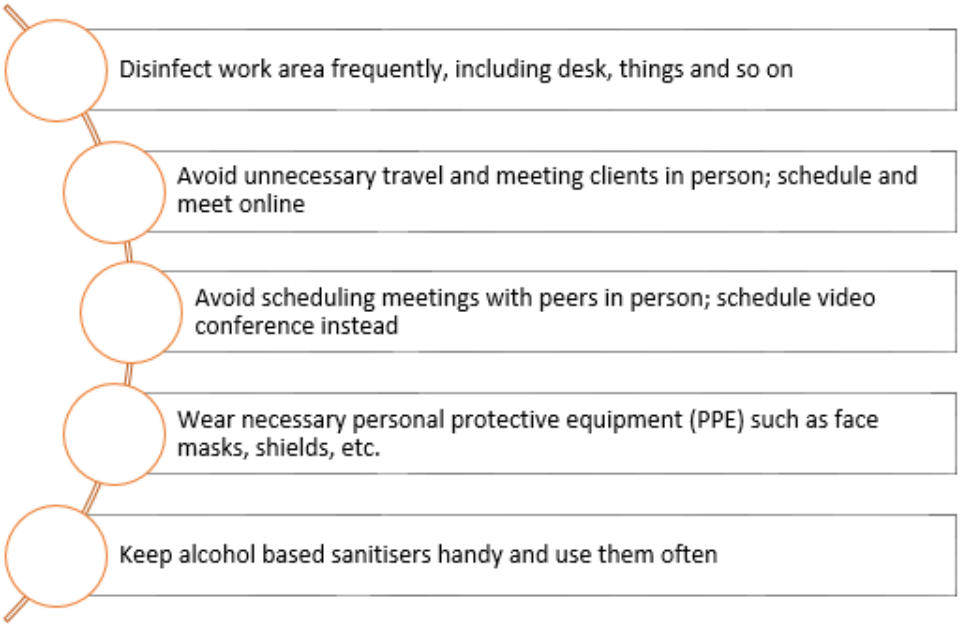

Fig. 1.1.14: Maintaining workplace hygiene

The following figure summarises the do's and don'ts to be practiced at workplace:

Do's

- Use non-contact greeting methods
- Clean hands at the door and keep washing hands regularly
- Disinfect surfaces such as doorknobs, tables and desks regularly
- Stay home if you are feeling sick
- Stay at home if anyone in your family is sick
- Use video conferencing instead of physical meetings
- Ensure you meet people in well-ventilated rooms and spaces

Don'ts

- Shake hands when meeting someone
- Touch your face and leave your mouth uncovered while coughing and sneezing
- Travel unnecessarily
- Get too much stressed if work is not going as planned
- Feel lonely and depressed; instead ensure you talk to people who will uplift your mood

Fig. 1.1.15: Good practices while moving out of home

1.1.3 Self-quarantine vs. Self-isolation

Several preventive measures are undertaken during an epidemic or a pandemic to contain the spread of the disease. Self-quarantine and self-isolation are two such effective ways to prevent the transmission of infection from an infected person to non-infected persons. Both of them are based on social distancing on a broader level, for in both the instances an individual needs to separate oneself from others for a certain period. However, although they are similar, there is a difference between the two.

What is Self-quarantine?

Self-quarantine entails isolating oneself at home or any other place for a period of minimum fourteen days or so. It is meant for people who have been exposed to someone infected with the virus, have travelled during an epidemic/a pandemic, have attended any public gathering, or have been amidst a crowd. If a person has been in any of the above or similar situation then it is not an option but mandatory as per the guidelines that he or she should self-quarantine to prevent any infection or disease from spreading further. If any of the symptoms of infection begin to develop, then the person should contact a medical provider on a priority basis and follow the advice.

What is Self-isolation?

Self-isolation also entails isolating oneself at home or any other place for a period of seventeen days or so. However, it is meant for people who have already tested positive for the virus/infection that has led to the epidemic/pandemic. This is the key difference between self-isolation and self-quarantine. In this case, the person has already caught the infection and needs to isolate to contain the spread of the virus and recover from the disease.

Every disease outbreak, epidemic or pandemic has certain signs and symptoms. For example, in case of Covid 19, symptoms entail fever, cold, cough, shortness of breath and so on. It is recommended to go for the test in case of development of any of these symptoms and follow the advice of the medical provider. As long as the symptoms are manageable, it is often advised to self-isolate at home, but in case of severe complications, the individual is admitted to the hospital.

Both, self-quarantine and self-isolation, involve maintaining personal hygiene and adhering to the guidelines as given in the following figure:

Stay in a well-ventilated room
Restrict movement
No direct contact or face to face interaction with anyone
Wear face masks to prevent the spread of virus
Keep your utensils and belongings separate
Stock up your essentials or go for contactless delivery
Stay active by doing some exercise or yoga

Fig. 1.1.16 (a): Guidelines for self-quarantine and self-isolation

Guidelines for environmental sanitation during self-quarantine and self-isolation are mentioned in the following figure:

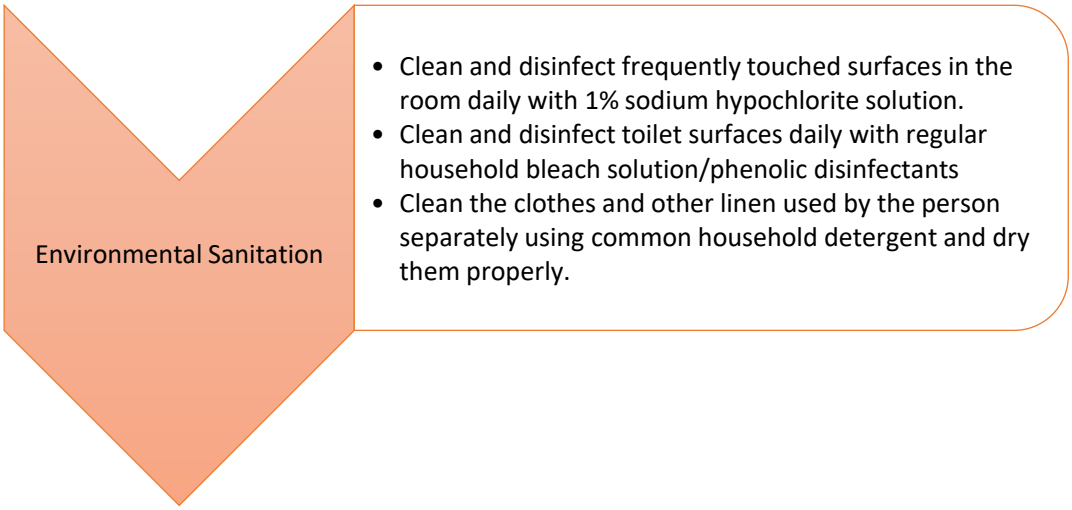

Fig. 1.1.16 (b): Environmental sanitation guidelines for self-quarantine and self-isolation

1.1.4 Social Distancing

As explained earlier, social distancing refers to maintaining physical distance of at least 1 meter (3 ft.) between oneself and others. It also entails not going out in crowded areas or public gatherings during a disease outbreak, an epidemic, or a pandemic. Social distancing combined with strict adherence to personal hygiene routine, respiratory hygiene and workplace hygiene is highly effective in containing the spread of infections/diseases.

Why Practice Social Distancing?

Social distancing protects those who are not infected, as it limits the opportunities of coming in contact with contaminated surfaces or infected people, especially outside home. It is all the more effective in case the epidemic is caused due to a communicable disease, for in such cases the virus can spread from the infected person to other people through droplets of cough or sneeze. The best defence is to wear appropriate face mask and maintain social distance during all interactions, even at home.

Some tips for social distancing are shown in the following figure:

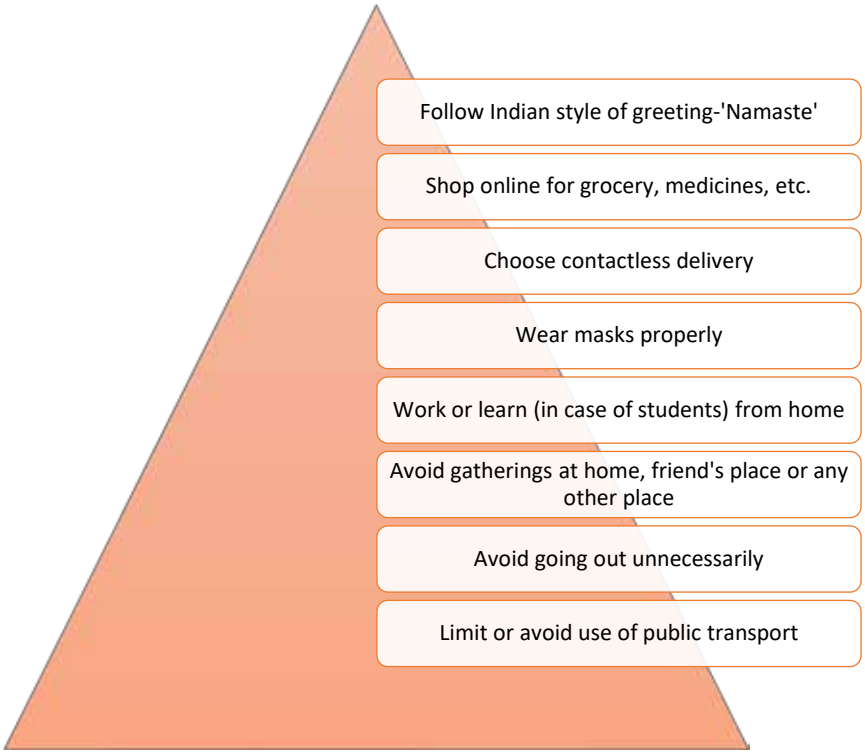

Fig. 1.1.17: Social distancing tips

Some practices while meeting people out of home are shown in the following image:

Fig. 1.1.18: Greeting while avoiding physical distance

Tips

- Key distinction between a disease outbreak, an epidemic and a pandemic is in terms of geographical area it spreads across ranging from a community to a country or countries.
- Self-quarantine and self-isolation are two effective ways to prevent the transmission of infection from an infected person to non-infected persons.
- Social distancing combined with strict adherence to personal hygiene routine, respiratory hygiene and workplace hygiene is highly effective in containing the spread of infections/diseases.

Activity

1. Identify which of the following statements are true or false.
   a. Disease outbreak, epidemic and pandemic are all same types of infection outbreaks.
   b. Non-surgical mask is a substitute of surgical mask.
2. If soap and water are not available, one can clean hands with which of the following?
   a. Tissues
   b. Cloth
   c. Sanitizer
   d. Surf
3. Personal hygiene includes which of the following?
   a. Hand hygiene
   b. Workplace hygiene
   c. Social distancing
   d. Work from home

Role Play

1. Inspect adherence to social distancing at workplace

Team Activity

1. Demonstrate ways to maintain social distancing at work place

Practical

1. Demonstrate how to wear mask properly
2. Demonstrate hand washing technique

UNIT 1.2: Safety and Sanitisation Guidelines

Unit Objectives

After having studied this module, the learner will be able to:

1. Discuss personal and workplace hygiene practices
2. Explain potential fomites at workplace
3. Describe appropriate use and disposal of Personal Protective Equipment (PPE)

1.2.1 Personal & Workplace Hygiene Practices

Good personal hygiene is an effective means to protect oneself and others from illnesses in general and catching infection during a disease outbreak, an epidemic or a pandemic. Personal hygiene entails adopting healthy practices to upkeep personal cleanliness and appearance. It is often mistaken to be akin to cleanliness but it is much broader than that as it includes habits required to maintain health and wellbeing. These practices include washing hands, sanitising hands, bathing, oral care, self-care and so on. In case of people who do not adhere to personal hygiene routine on a regular basis, their body becomes a breeding ground for all types of germs and viruses.

Hand hygiene is an essential part of maintaining personal hygiene. Our hands are the potential carriers of viruses as they are exposed to all types of surfaces and used for carrying out all the tasks during the day. In fact, it is no exaggeration to mention that personal hygiene routine begins with hand hygiene. Keeping them clean and healthy is of prime importance as this would safeguard oneself and others from infections and illnesses.

Washing hands is the quickest and simplest way to get rid of viruses, protect oneself and others, and prevent diseases from spreading. Hand hygiene routine has already been explained in detail in the previous unit. Here we shall learn about when and how to wash hands to stay healthy.

The following images show hand washing techniques:

Fig. 1.2.1: Hand Washing Technique

Fig. 1.2.2: Washing hands with soap and water

Steps

The following figure shows the steps to wash hands properly:

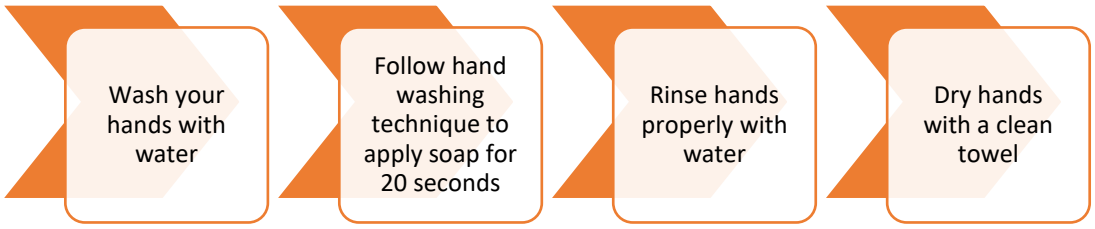

Fig. 1.2.3: Steps to wash hands properly

The Centers for Disease Control and Prevention (CDC) recommend washing hands at certain times, as shown in the following figure:

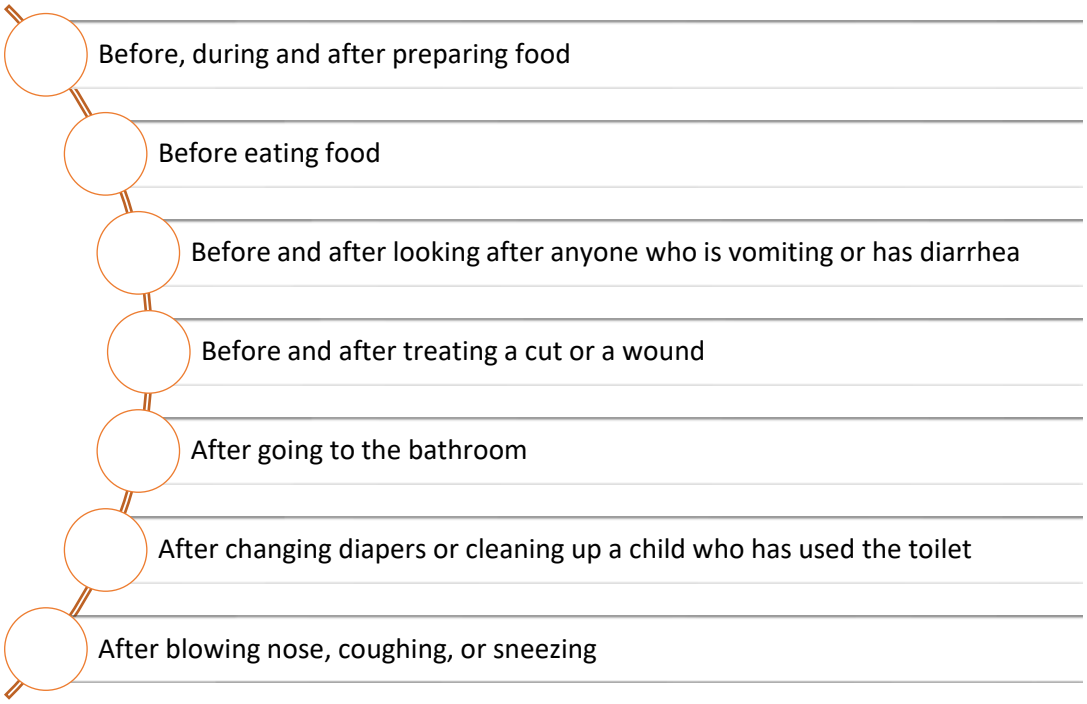

Fig. 1.2.4: Key times to wash hands as recommended by CDC

If soap and water are not available, one must use alcohol-based sanitiser (containing at least 60% alcohol). Although cleaning hands with sanitisers is not a substitute for cleaning them with soap and water, but in case they are not available or one needs to clean hands when not dirty, sanitisers are a good alternative. They help in reducing germs and viruses but don't eliminate them completely, and thus they are less effective in case of dirty or greasy hands.

The following image shows how to use a hand sanitiser:

Fig. 1.2.5: Use of hand sanitiser

Steps

The following figure shows the steps to use sanitiser for cleaning hands:

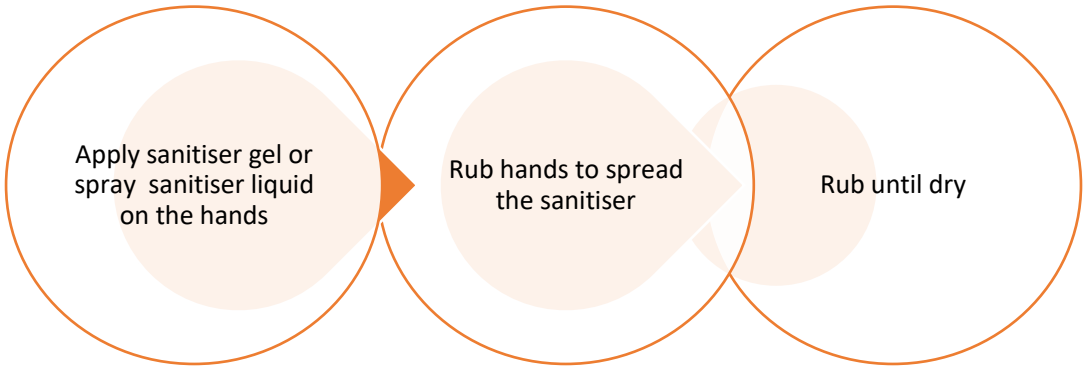

Fig. 1.2.6: Steps to sanitise hands properly

Personal hygiene should extend to workplace, which is all about keeping the work area clean, tidy and disinfected. This would be required more frequently and regularly during an epidemic or a pandemic. It so happens that often personal hygiene gets priority over workplace place hygiene, whereas both should get equal importance. If required one must modify the setting of the work area to facilitate social distancing and wear necessary PPE as per the profile of the job. In case the work entails meeting the public, then in addition to facemask one must use face shield and sanitiser after any kind of exchange with a person.

In addition to wearing necessary PPE such as masks, gloves and shields, cleaning and disinfecting the work area is also important. It should be carried out with a solution containing 1% sodium hypochlorite disinfectant and a disposable cleaning cloth. Ensure to disinfect the frequently used devices such as laptop, mobile, mouse and so on.

Steps

The following figure shows the steps to perform cleaning and disinfection of work area:

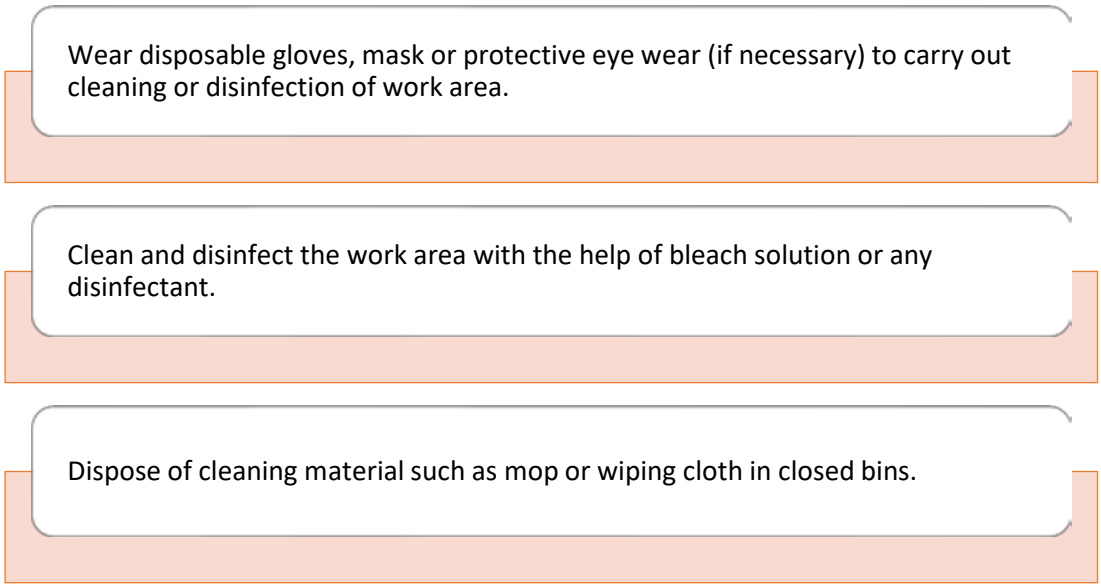

Fig. 1.2.7: Steps to perform cleaning and disinfection of work area

1.2.2 Potential Fomites at Workplace

Fomites refer to all those objects or surfaces that can become contaminated with viruses when touched by an infected person and can further transmit the infection to those who touch the surfaces next. It is all the more important to clean and disinfect fomites as viruses and germs survive for hours or even months on these surfaces, if not cleaned. Example of fomites include doorknobs, light switches, remote controls, elevator buttons and so on.

Fomites are not just pertinent with respect to disease outbreak, epidemic or pandemic but even in normal circumstances these fomites lead to rapid indirect transmission of viruses, leading to spread of communicable diseases. Thus, cleaning and disinfection of these fomites with a disinfectant solution must be carried out on frequent basis for a healthy workplace environment. Any lapse can be a threat to the health of one and all. Moreover, on a personal level, one can ensure not to touch these surfaces directly but to use any disinfectant tissue or wipe and dispose of it immediately in a closed bin.

A list of potential fomites at workplace is shown in the following figure:

Potential fomites at workplace	Common areas such as pantry, printing stations, etc.
	Vending machines, coffee mug handles, etc.
	Conference or meeting rooms
	Door handles or doorknobs
	Electronic devices such as laptops
	Telephone receivers
	Elevator buttons
	Desks or countertops

Fig. 1.2.8: Potential fomites at workplace

The following image shows cleaning and disinfection of workstation:

Fig. 1.2.9: Disinfecting workstation

Following image shows cleaning and disinfection of mobile:

Fig. 1.2.10: Disinfecting mobile

1.2.3 PPE to be used at Workplace

PPE refers to protective facemasks, gloves, clothing, helmets, face shields, eye protective wear or other equipment designed to protect the wearer from the spread of infection or illness. PPE should be used in combination with other recommended preventive measures such as maintaining personal hygiene, respiratory hygiene and social distancing, for lack of doing so makes the person vulnerable to viruses and infections.

Let us take an example of Covid 19 pandemic to understand the use of PPE. Covid 19 virus gets transmitted from one person to another through close contact and droplets. Thus, wearing appropriate type of PPE is imperative depending upon the work setting and risk of exposure. The type of PPE used in order to protect oneself is different from the type used when caring for an infected person, as health care workers need extra protection in terms of respirators and fluid resistant gowns. Although PPE is one of the effective means to prevent the spread of virus, it gives benefit only when followed with other preventive measures explained earlier.

Steps

The steps to put on PPE for precaution are given in the following figure:

Fig. 1.2.11: Steps to put on PPE

The guidelines for use of PPE are given in the following figure:

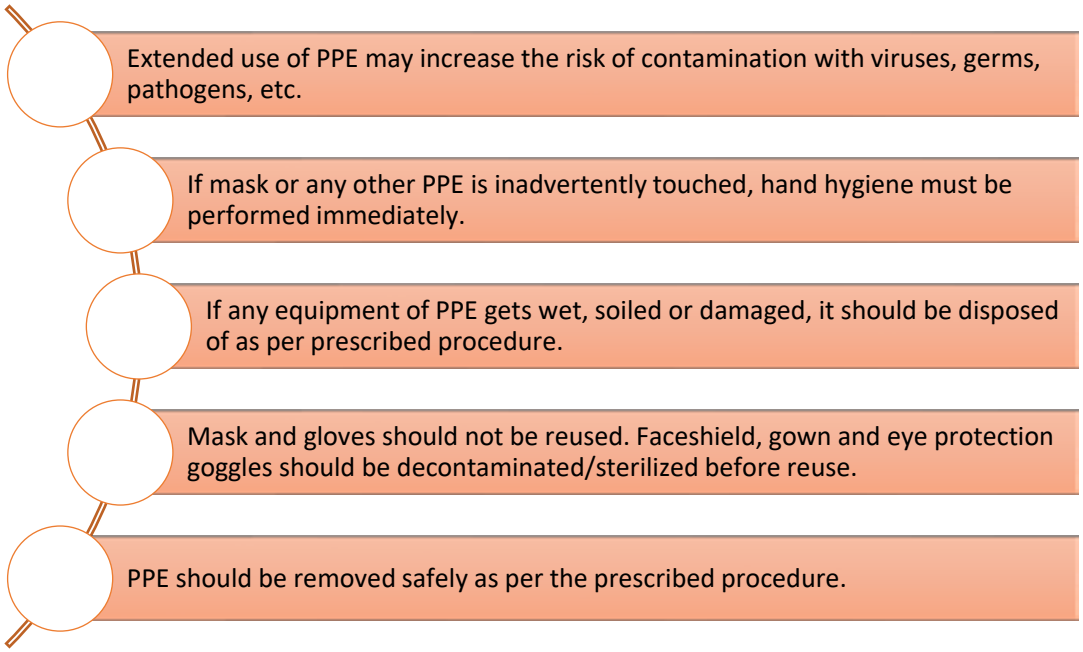

Fig. 1.2.12: Guidelines for use of PPE

Steps

The steps to take off PPE after use are given in the following figure:

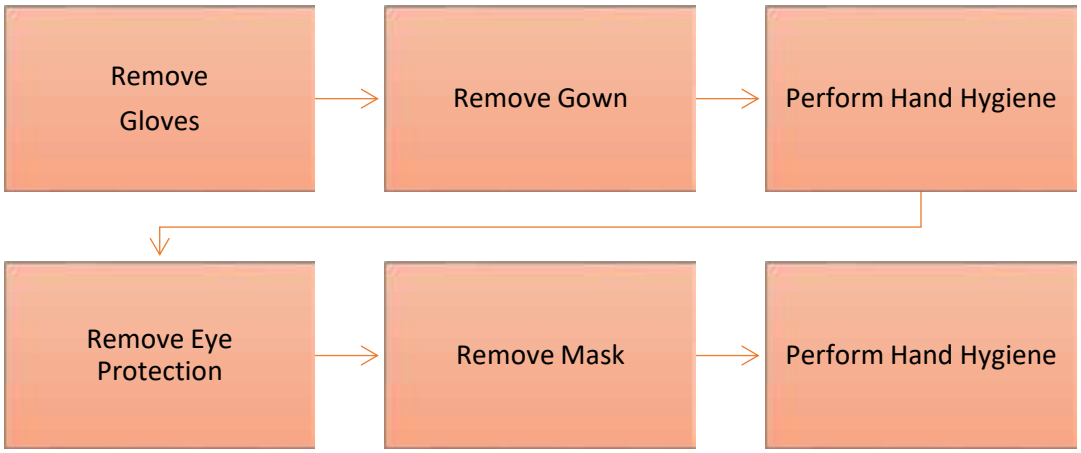

Fig. 1.2.13: Steps to take off PPE

The different PPE required by different professionals is shown in the following set of images:

Fig. 1.2.14 (a): PPE for healthcare professionals

Fig. 1.2.14 (b): PPE for grocery, poultry, or other professionals who work with wet products

Fig. 1.2.14 (c): PPE for other professionals, typically working in offices

Let us now learn about the correct methods of taking off PPE as shown in the following set of images:

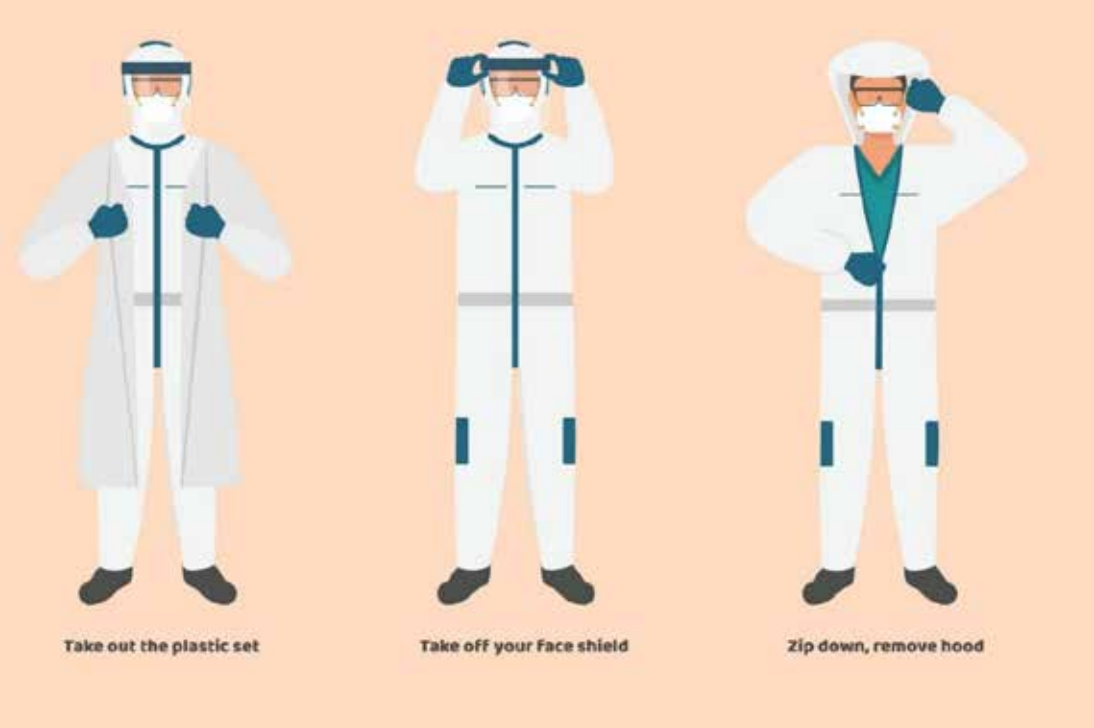

Fig. 1.2.15 (a): Procedure to remove PPE for healthcare professionals

Fig. 1.2.15 (b): Procedure to remove PPE set, boots, leg cover and gloves

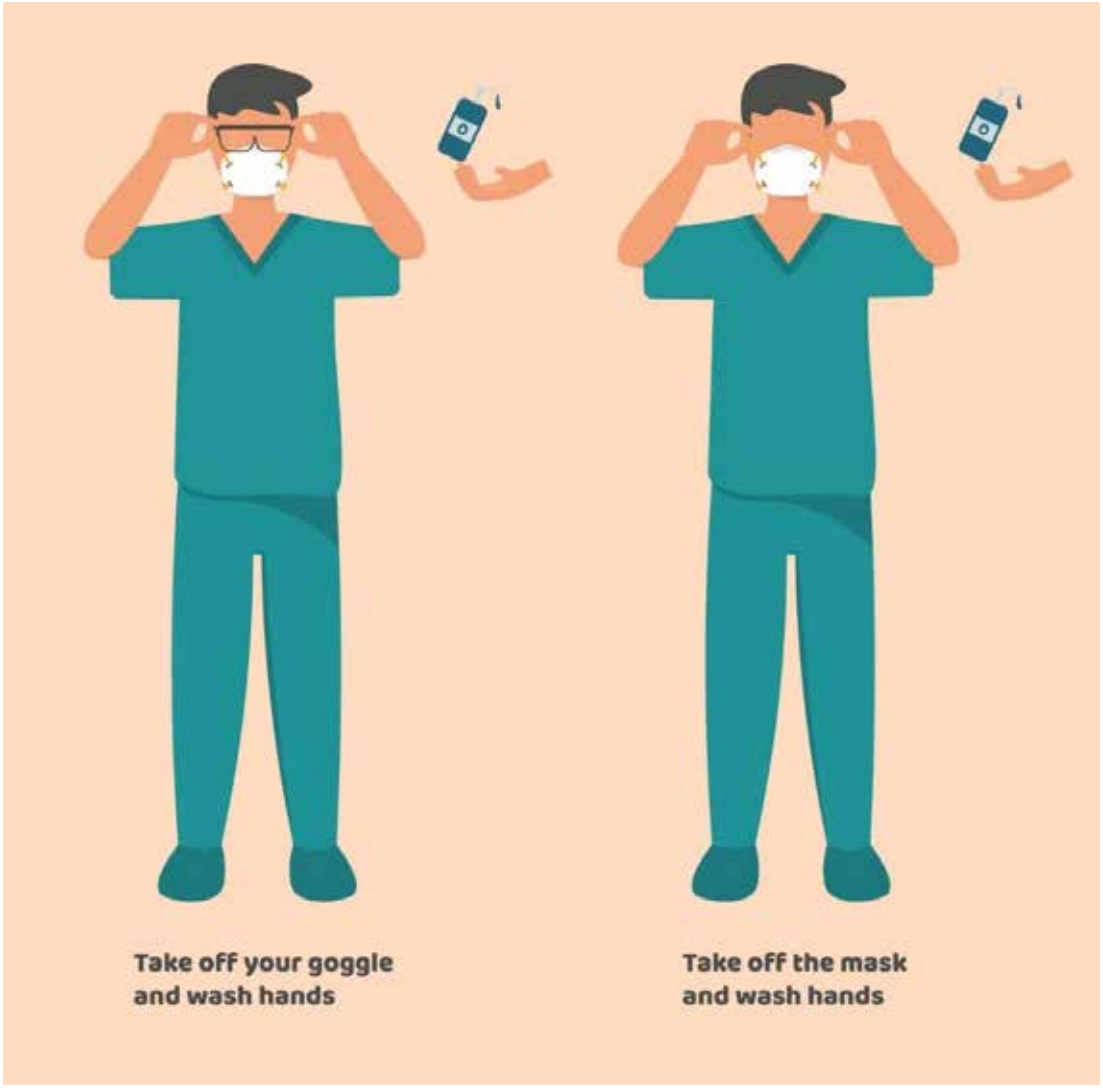

Fig. 1.2.15 (c): Procedure to remove goggles and masks

Tips

- Washing hands is the quickest and simplest way to get rid of viruses.
- Workplace hygiene entails wearing necessary PPE as well as disinfecting the work area.
- Surface touched frequently become potential fomites capable of spreading the infection.
- PPE should be worn in the following sequence: gown, mask, eye protection and gloves.
- PPE should be removed in the following sequence: gloves, gown, eye protection and mask.

Activity

1. Identify which of the following statements are true or false.
   a. Self-quarantine is done at home and self-isolation is done in a hospital.
   b. Hands should be washed after every meal.
2. Which of the following items is not part of PPE?
   a. Hand sanitiser
   b. Mask
   c. Protective eye wear
   d. Gown
3. List two potential fomites at workplace.

   _____

   _____

   _____

   _____

Team Activity

1. Demonstrate cleaning and disinfection of work area

Practical

1. Demonstrate steps to put on and take off PPE
2. Identify potential fomites at workplace

Role Play

1. Supervise cleaning and disinfection of potential fomites

UNIT 1.3: Other Common Practices & Guidelines

Unit Objectives

After having studied this module, the learner will be able to:

1. Discuss the importance and process of identifying and reporting symptoms to the concerned authorities
2. Explain the importance and mechanism of proper collection, transportation and safe disposal of waste
3. Select different types of waste and various types of colour coded bins/containers used for disposal of waste
4. Discuss the ways of dealing with stress and anxiety and providing support during an epidemic or a pandemic

1.3.1 Identifying and Reporting Symptoms

Identifying and reporting the symptoms of a disease can help a great deal in seeking timely care and taking immediate actions to prevent further spread of the disease. This is one of the best early control measures in case of a disease outbreak, an epidemic or a pandemic. For example, in case of Covid 19, researches across the world have identified the sequence of symptoms, such as fever, cough, sore throat, shortness of breath, fatigue, aches and pains, headaches, runny nose and so on, which help differentiate Covid 19 from common cold and flu.

It is mandatory for the workplace to have a formal documentation procedure pertaining to identification and reporting of symptoms as per the organisational policy. The employee must immediately inform the concerned officer in-charge and complete the required documentation accordingly in this context.

In addition to this, one needs to inform the local authorities appointed for the purpose and follow the prescribed procedure as given in the following figure:

Be aware of symptoms	Stay informed about the symptoms of the infection
Report to officer in-charge/local authorities	As soon you identify symptoms, inform the person concerned at workplace and local authorities as per your location
Follow reporting procedure	Fulfill documentation with complete details required as per workplace reporting procedure and local reporting procedure
Seek immediate consultation and undergo testing	Consult the appointed medical specialist and undergo the required test to determine the result at the earliest
Decide on self-isolation or hospitalization	Follow the advice of medical specialist, as per the intensity of symptoms, to either go for isolation at home or admission to the recommended hospital
Inform your contacts	Let those who have come in contact with you recently know about your test status and advise them to take necessary measures as per the recommendations of medical specialist

Fig. 1.3.1: Steps to be followed for identification and reporting of symptoms

1.3.2 Handling Waste

Waste management has a significant role to play in controlling the spread of infection. It entails following prescribed procedures for proper collection, segregation, transportation and disposal of waste. During a disease outbreak, an epidemic or a pandemic, waste from households and organisations can transmit infectious germs and viruses and thus pose risk to the health of people. That is why it is imperative to follow health and safety guidelines for waste management at home as well as workplace.

Steps

The guidelines to dispose of waste outside home during a pandemic, for example Covid 19, are given in the following image:

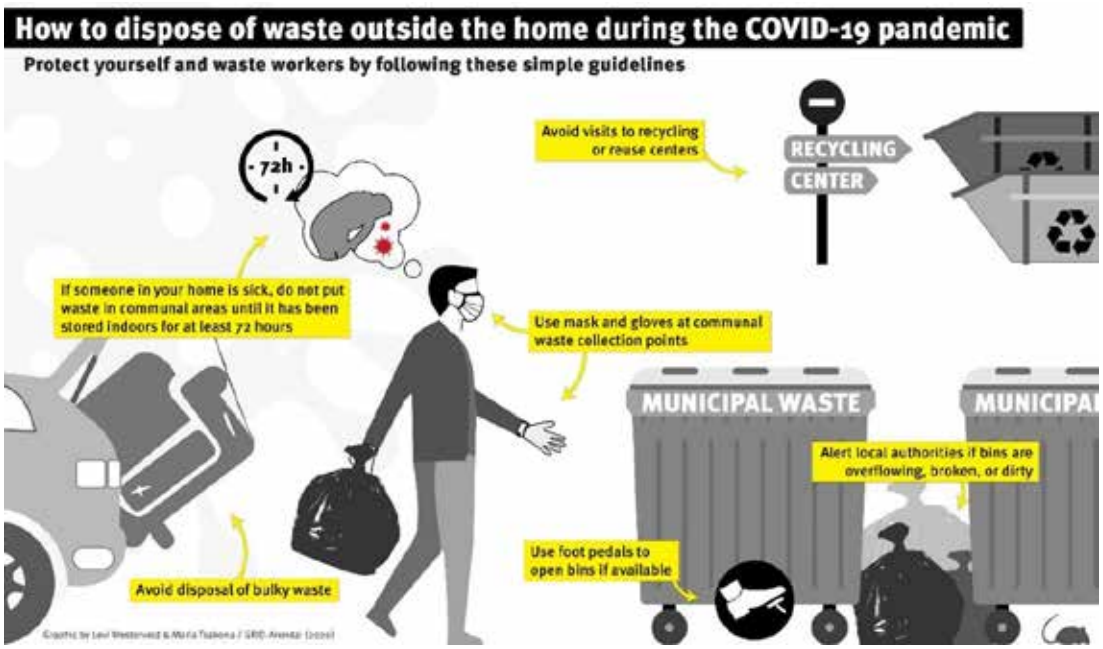

Fig. 1.3.2: Disposing waste during pandemic

Image Credit: Creator— Maria Tsakona and Levi Westerveld, Grida.no. 2020. Quick Tips For Safe Handling Of Waste During The COVID-19 Pandemic | GRID-Arendal. [online] Available at: <https://www.grida.no/resources/13574>

Procedure for safe disposal of non-healthcare waste:

1. Waste should be collected in a plastic rubbish bag and tied properly.
2. The plastic bag should then be placed in a second bin bag and tied properly.
3. Waste should be stored safely in a suitable and secure place until the individual's test results are known. This is applicable in case any individual at home or workplace is suspected to have caught the infection.
4. Waste should be kept away from children.
5. Waste should not be thrown in communal waste areas until negative test results are known, or the waste has been stored for at least 72 hours.
6. If storage for at least 72 hours is not appropriate, arrange for collection by the local waste collection authority.

Waste management entails the processes as shown in the following image:

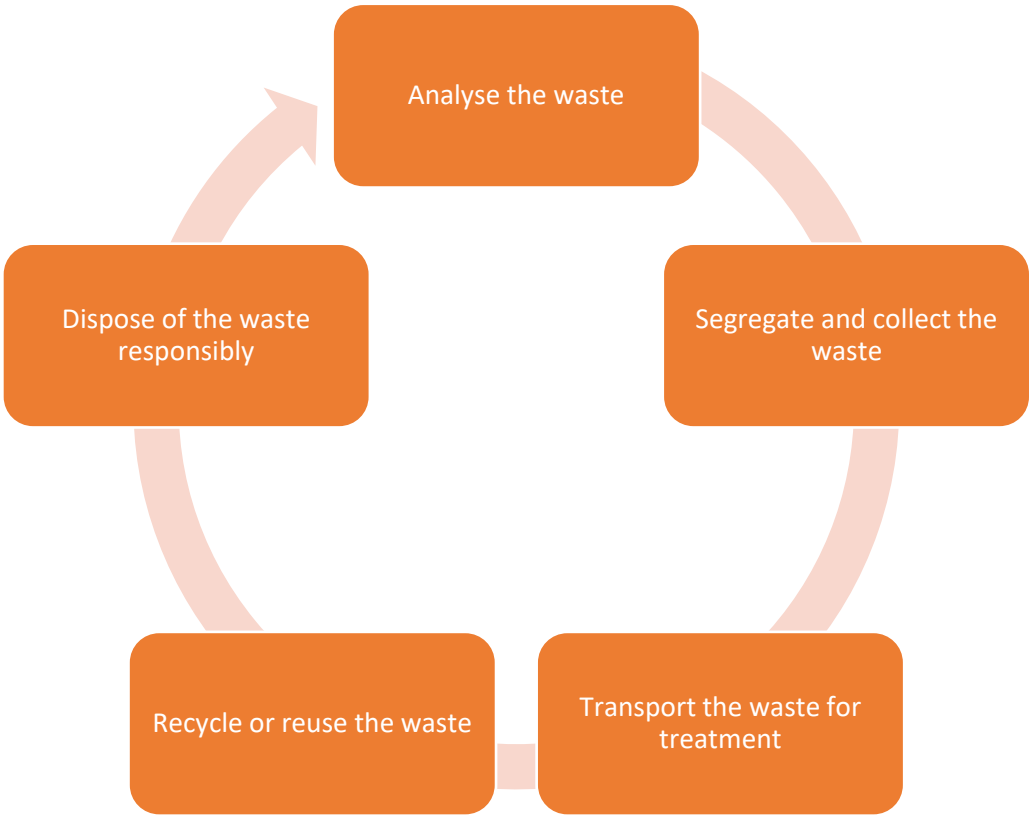

Fig. 1.3.3: Steps of waste management

Procedure for safe disposal of greywater or water from washing PPE, surfaces and floors:

1. WHO recommends that after each time utility gloves or heavy-duty, reusable plastic aprons are used, they should be cleaned with soap and water, and then decontaminated with 0.5% sodium hypochlorite solution.
2. Single-use gloves made of nitrile or latex, and gowns should be discarded after each use and not reused as they could have come in touch with infectious waste.
3. Hand hygiene should be performed after PPE is removed.
4. If greywater includes disinfectant used in prior cleaning, it does not need to be chlorinated or treated again.

Procedure for Safe Disposal of Healthcare Waste

The procedure for disposal of healthcare waste may vary according to the state guidelines on disposal of waste. The following figure shows general information for safe disposal of healthcare waste:

Fig. 1.3.4: Safe disposal of healthcare waste

During a disease outbreak, an epidemic or a pandemic, health of waste- collection workers is very much at risk, given the nature of their job wherein they are exposed to all types of waste. The following image shows how waste-collection workers can minimise risks during a pandemic, for example during Covid-19:

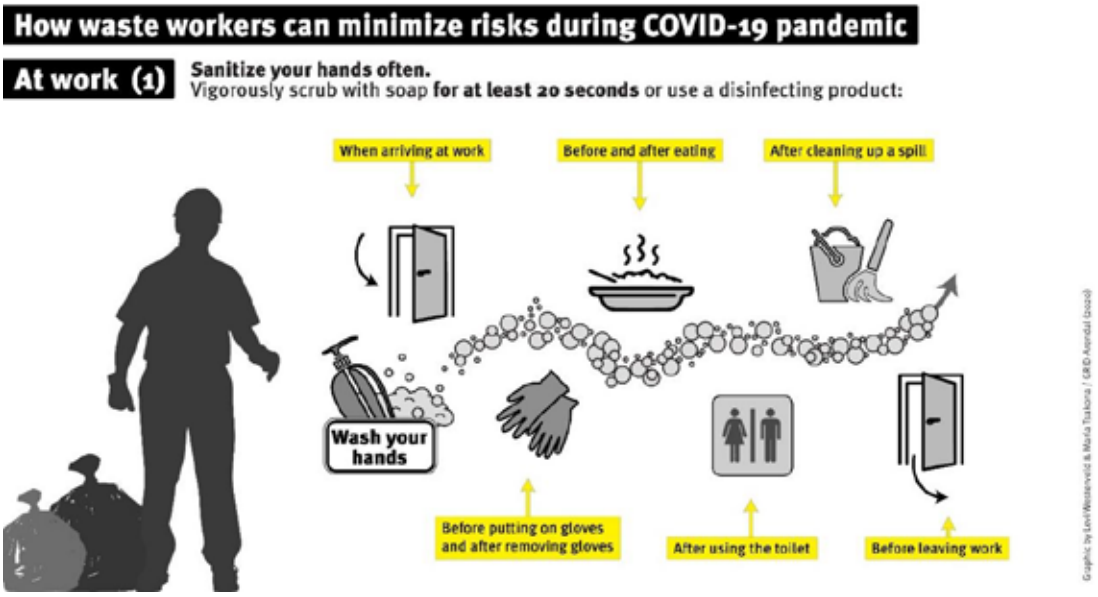

Fig. 1.3.5(a): Guidelines for waste- collection worker

Fig. 1.3.5 (b): Guidelines for waste- collection worker

The following image shows how waste-collection workers can minimise risks during a pandemic, for example during Covid-19:

Fig. 1.3.6: Guidelines for waste- collection worker

Image Credit: Creator— Maria Tsakona and Levi Westerveld, Grida.no. 2020. Quick Tips For Safe Handling Of Waste During The COVID-19 Pandemic | GRID-Arendal. [online] Available at: https://www.grida.no/resources/13574

1.3.3 Dealing with Stress and Anxiety during a Disease Outbreak

A disease outbreak, an epidemic or a pandemic brings about numerous challenges worldwide. On one hand, we need to deal with the virus and the illness, and on the other hand, we need to deal with the inherent fear, which is the springboard of stress and anxiety. In a way, we need to strengthen both our body and mind to be able to deal with such a challenging situation.

We need to understand the impact of stress and anxiety on our physical and mental health. It poses unnecessary pressure on our body and mind, which lowers our immunity and makes us more vulnerable to viruses and illnesses. To make matters worse, we do not even realise when it begins to build up and overpowers our thinking.

You need to ask yourself certain questions to identify stress and anxiety, such as – Are you fearful and worried about your own health and health of your loved ones? Do you have difficulty sleeping or concentrating? Is your physical and mental health getting worse? Do you constantly fear catching the infection?

If the answer to any of these questions is yes, then you need to change your mindset and take the following practical measures for your safety and security:

People diagnosed with a disease and their family/neighbours often feel sad, stressed, confused, scared or angry. Such people should:	• Talk to people you know will provide help and listen. • Share your feelings with close friends and family.
People in self-quarantine or self-isolation should:	• Maintain a healthy lifestyle. • Take proper diet. • Ensure a healthy routine, proper sleep, exercise and social contact with loved ones at home and by email and phone with other family and friends. • Do not smoke or consume alcohol/ other drugs to deal with your emotions. • Ask for professional counselling if extremely stressed.
People living in contamination zones/areas most affected should:	• Gather information to analyse the risk and necessary precautions. • Find a credible source you can trust such as Arogya Setu app, WHO website or a local health authority. • Restrict watching too much news or media coverage of the pandemic/epidemic to avoid worry and agitation. • Focus on personal and inter-personal skills that have helped you to recover from a tragic/difficult experience in the past.

Fig. 1.3.7: Guidelines for dealing with stress and anxiety

Tips

- Identifying and reporting symptoms is an effective control measure to contain the spread of infection and safeguard oneself as well as others.
- Safe disposal of waste from households and organisations is imperative to minimise the risks of an outbreak, an epidemic or a pandemic.
- Strengthen body and mind to be able to deal with stress and anxiety effectively

Activity

1. Identify which of the following statements are true or false.
   a. After undergoing the test, one must not continue with regular activities at home and workplace until the test results are known.
   b. Healthcare waste and non-healthcare waste are to be disposed of in the same manner.
2. Which of the following is not one of the processes of waste management discussed in this unit?
   a. Collection
   b. Transportation
   c. Treatment
   d. Disposal
3. List two effective ways of dealing with stress and anxiety.

_____

_____

_____

_____

Practical

1. Demonstrate the procedure to identify and report symptoms

Role Play

1. Supervise safe disposal of waste in different set-ups

Summary

- Disease outbreak refers to a sudden occurrence and exponential rise of a disease beyond anyone's expectation and across any community, geographical area, or a country.
- Epidemic refers to an infectious disease that spreads actively and substantially across a specific location affecting large number of people within a short span.
- When an epidemic spreads across various countries, it becomes pandemic. It affects larger number of people across the globe, causing greater number of deaths as compared to an epidemic.
- Key guidelines to be followed during an epidemic or a pandemic entail personal hygiene, respiratory hygiene, social distancing and workplace hygiene.
- Personal hygiene entails maintaining not only cleanliness but also healthy habits as preventive measures for safeguarding oneself from catching any infection.
- Respiratory hygiene mainly involves following cough/sneeze etiquette and wearing face masks to reduce the spread of viruses and pathogens, especially during epidemic or pandemic of an infectious disease
- Hands should either be washed with soap and water or sanitised properly before wearing mask and after removing the same.
- Social distancing means maintaining physical distance of at least 1 meter (3 feet).
- Workplace hygiene is as important as personal hygiene. It has various verticals spanning the work area, meeting etiquette and so on, and has a significant role in prevention of a disease outbreak.
- Self-quarantine entails isolating oneself at home or any other place for a period of minimum fourteen days or so. It is meant for people who have been exposed to someone infected with the virus.
- Self-isolation also entails isolating oneself at home or any other place for a period of seventeen days or so. It is meant for people who have already tested positive for the virus/infection that has led to the epidemic/pandemic.
- Fomites refer to all those objects or surfaces that can become contaminated with viruses when touched by an infected person.
- Cleaning and disinfection of potential fomites with recommended disinfectant solution is indispensable to ensure prevention of disease spread.
- PPE should be used in combination with other recommended preventive measures such as maintaining personal hygiene, respiratory hygiene and social distancing, for lack of doing so makes the person vulnerable to viruses and infections.
- Identifying and reporting the symptoms of a disease can help a great deal in seeking timely care and taking immediate actions to prevent further spread of the disease.
- Waste management has a significant role to play in controlling the spread of infection. It entails following prescribed procedures for proper collection, segregation, transportation and disposal of waste.

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Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

2. Introduction to the Program

Bridge Module

Key Learning Outcomes

At the end of the unit, you will be able to:

- Understand Healthcare Service Providers (primary, secondary & tertiary).
- Understand the services offered to patients in a hospital.
- Understanding of various departments in the hospital.
- Know about the different types of tools and equipment used in a hospital.

UNIT 2.1: Objectives of the Program

Unit Objectives

At the end of the unit, you will be able to:

- State the overview of the program.
- State the ground rules.

2.1.1 Overview of the Program

This program will facilitate an overview of:

- Healthcare Industry.
- Behavioural, professional and technical skills required for performing the job effectively.
- Methods to manage the work to meet requirements.
- Ways to maintain a safe, secure and healthy working environment.
- Roles and responsibilities of a Covid Frontline Worker (Basic Care Support).

2.1.2 Skills This Program Trains

Healthcare assistants require to have good ability to interact or communicate well with other people. This program will equip you with skills like:

- Being friendly and the ability to put patients at ease, whatever their physical or social needs.
- Being tactful and sensitive at all times.
- Acquiring a good sense of humour.
- Respecting the patients and their families.
- Being patient, as shifts can be long and often stressful.
- Understanding basic Healthcare and hygiene standards.
- Being able to communicate well.
- Ability to deal with aggressive or anxious patients and their families.
- Responsibility and flexible attitude towards patients and the job.
- Manual dexterity and a certain level of physical strength.
- Gaining a fair amount of stamina.
- Ability to stay calm under pressure.
- Sincerity and commitment to the job.
- Ability to think quickly and solve problems as they arrive.

2.1.3 Ground Rules

All the participants are expected to follow certain ground rules which will facilitate an efficient learning environment. These rules are:

- Arrive and start on time.
- Participate in all phases of the workshop.
- All mobile phones should be either switched off or in silent mode.
- Adhere to the timelines. If the break given is of 15 minutes, then be in the training room within those 15 minutes.
- Clear your doubts with the facilitator. Do not talk among yourselves.
- Listen to others when they talk. Do not interrupt.Be sure to ask questions if you don't understand something.

Tips

- Overview of the program
- Objectives of the program
- Skills needed for the role

Notes

UNIT 2.2: Introduction to the Healthcare Industry

Unit Objectives

At the end of the unit, you will be able to:

- State the overview of healthcare industry.
- Describe the job ladder in healthcare industry.

2.2.1 Overview of Healthcare Industry

The Healthcare industry is one among the world's biggest developing industries. Among many of the developed countries, healthcare consumes higher than 10 percent of their gross domestic product (GDP). Thus, it can make a major contribution towards a country's economy. It is a collection of various sectors which are a part of the economic system. These sectors are responsible for the cure, preventive care, rehabilitation and palliation of patients by providing them with the required goods and services. The healthcare industry is dependent on multidisciplinary teams of trained professionals and assistants to take care of the health needs of the people. The healthcare sector in India is progressing by leaps and bounds with its reach, services and expense expanding to both public and private sectors. This is generating a big market for information systems and IT solutions related to healthcare.

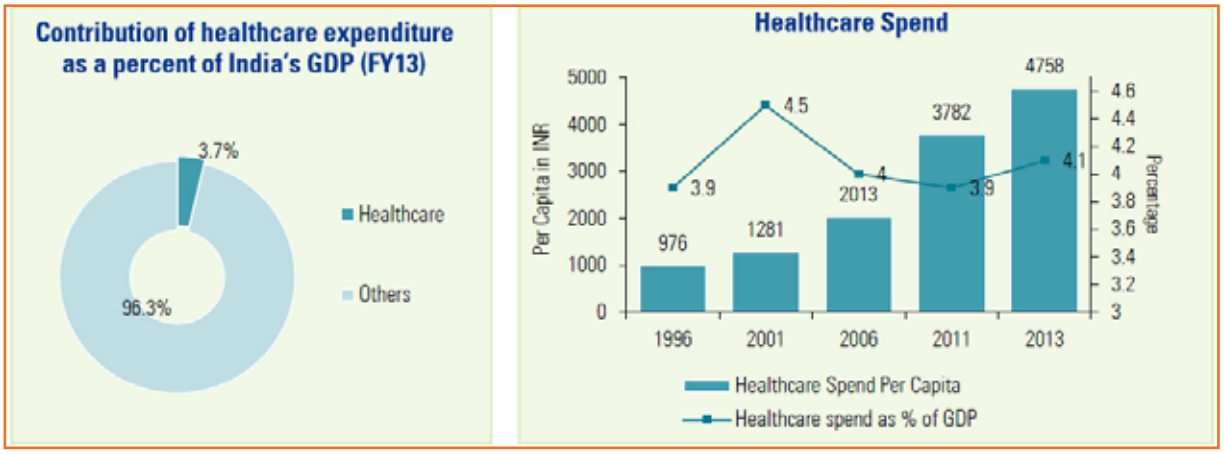

Fig.2.2.1: Contribution of Healthcare Expenditure as a percent of India's GDP (FY13)

Market size

As per the industry estimates the Indian healthcare sector had reached US$ 100 billion in the year 2015 and is likely to touch US$ 275.6 billion by the year 2020. According to the reports of the research firm, Venture Intelligence, in the year 2013, life sciences and healthcare had come up as one of the most favoured sector for venture capital, second only to technology. It procured 27 investments valued at US$ 181 million.

- As there is a diverse range of the required health services, there are more than 11 lakh related health professionals belonging to various categories, but they still fall short of the present demand. These include operators of medical equipment, sanitarians, nursing assistants, medical physiotherapists.

- In spite of the fact that health expenditure has increased, the per capita income in India is much less as compared to that of the rest of the developing countries.
- It is likely that in the near future the health expenditure will rise due to shift in trends like increased reach of insurance, altered demographics and greater consumer awareness.

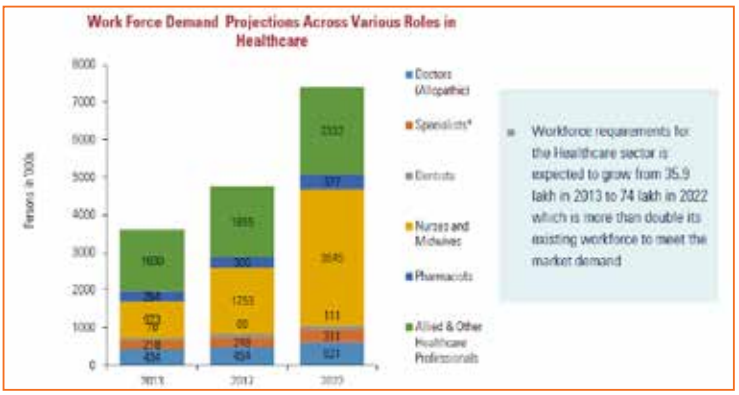

Fig.2.2.2.: Work Force Demands in Healthcare Sector

Organisational Structure of a Hospital

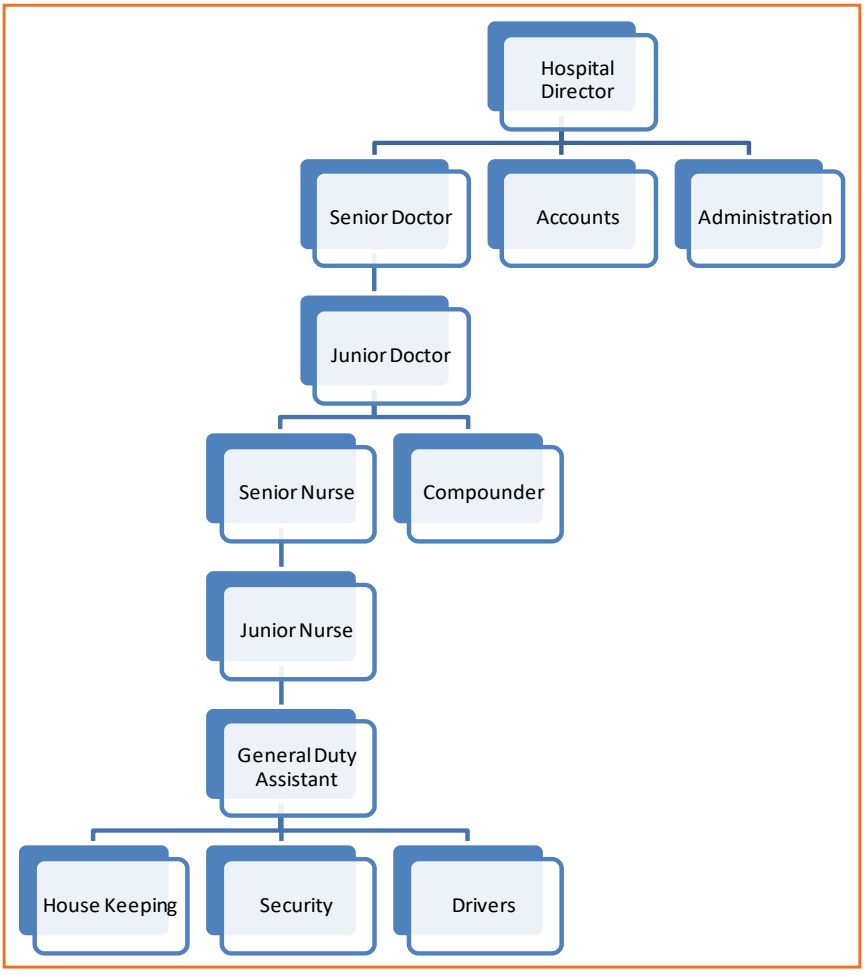

Fig.2.2.3: Organisational Structure of a Hospital

Tips

- In India Health is the responsibility of the central, state and local government.
- Components of healthcare delivery system are:
  - » Public Health Sector
  - » Private Sector
  - » Indigenous systems of medicine
  - » Voluntary Health Agencies
  - » National Health Programmes

Notes

UNIT 2.3: Different Departments in a Hospital

Unit Objectives

At the end of the unit, you will be able to:

- Explain the varied key concepts related to the job role of a COVID Frontline Worker (Basic Care Support).

2.3.1 Overview

Let us look at some of the key words that you should know as a COVID Frontline Worker (Basic Care Support). The common terms are as follows:

2.3.2 Hospital

Hospitals have a vital role to play within the healthcare system. They are healthcare institutions which include a well organised medical and professional team They have inpatient facilities and provide medical and linked services at all times of the day and night. A hospital is an institution that people go to when they are suffering from health problems. A hospital has specialized staff such as doctors, nurses, ward boys, COVID Frontline Worker (Basic Care Support)s who help in providing treatment to the ailing or sick person.

Fig.2.3.1: Hospital

As a COVID Frontline Worker (Basic Care Support) you should be aware of all these departments and the activities involved with it. You may not go to these departments daily. However, you may be needed in any of these departments as a part of your job role. Let's take a look at the different departments present in the hospital:

- **Anaesthetics department:** In this department, doctors give anaesthesia for operations.

Fig.2.3.2: Anesthetics department

Fig.2.3.3: Cardiology

- **Cardiology department:** This department gives medical care to people suffering from heart or circulatory problems. The treatment can be provided on an inpatient or outpatient basis. Outpatient means a brief visit that lasts only a day. Inpatient means a visit to a hospital which requires a minimum of a night's stay in a ward.

- **CSSD:** The central sterile services department (CSSD), also known as the sterile processing department (SPD), central supply department (CSD) or central supply, is an integral part of hospitals and other similar facilities that carry out sterilization and other procedures on medical appliances, equipment and items of consumption; for later use by health personnel in the operating theatre or for aseptic methods such as catheterization, stitching of wounds and bandaging.

  The procedure involves cleaning the used equipment such as tools of stainless steel with a sterilizer. The equipment is first dried on a stand, then wrapped in an aseptor bag which is a special paper bag, sealed with tape and then sterilized in a steam autoclave or by using a gas. The entire process is done following the regulations of the facility.

Fig.2.3.4: Central Sterile Services Department

Fig.2.3.5: Coronary Care Unit

- **CCU:** A coronary care unit (CCU) is also called as cardiac intensive care unit (CICU). It is a ward in the hospital which specializes in providing healthcare to people suffering from heart attacks, cardiac dysrhythmia, unsettled angina and other heart problems which need regular observation and treatment.

- **Emergency department:** This is also called as casualty ward and is the place in the hospital where patients are initially taken when they arrive in an ambulance in emergency situations. The department is functional throughout the day and night and is fully staffed and prepared to handle all kinds of emergencies. Patients are attended as per the severity of their condition. There is a separate area for minor injuries under the supervision of nurses and a Covid Frontline Worker (Basic Care Support).

Fig.2.3.6: Emergency

Fig.2.3.7: Elderly services department

- **Elderly services department:** This department deals with the various problems related to the elderly and includes issues such as diabetes, movement problem, bone disease, gastroenterology, and syncope and so on. It is managed by consultant physicians who have specialization in geriatric medicine. The services provided include home visits, outpatient clinics and daytime hospitals. This department works in close association with community services functioning especially for the elderly.

- **Geriatric intensive-care unit:** This unit is at times also known as intensive care and caters to the needs of the extremely ill patients. It has a few beds and is managed by specialist medical personnel along with consultant dieticians, anaesthetists and physiotherapists. The patients arrive here for treatment from some other hospitals as well as from other departments of the same hospital.

Fig.2.3.8: Geriatric intensive-care unit

Fig.2.3.9: General surgery department

- **General surgery department:** This department performs various kinds of surgeries such as those related to kidneys, breast, thyroid, colon, gall bladder and so on.

- **Gynaecology department: This department deals with issues related to the urinary tract and reproductive organs of females. The problems could range from infertility and incontinence to endometritis. The services include screening of cervical smear and checks for post-menopausal bleeding.**

Fig.2.3.10: Gynaecology department

Fig.2.3.11: Maternity departments

- **Maternity departments: This department gives antenatal support as well as care during childbirth and postnatal period.**

- **ICU:** The Intensive Care Unit (ICU) is a unit in the hospital where seriously ill patients are cared for by specially trained staff. An intensive care unit (ICU), also known as a critical care unit (CCU), intensive therapy unit or intensive treatment unit (ITU) is a special department of a hospital or Healthcare facility that provides intensive care medicine.

Fig.2.3.12: Intensive Care Unit

Intensive care units cater to patients with the most severe and life-threatening illnesses and injuries, which require constant, close monitoring and support from specialist equipment and medication in order to ensure normal bodily functions. They are staffed by highly trained doctors and critical care nurses who specialise in caring for seriously ill patients. Common conditions that are treated within ICUs include trauma, multiple organ failure and sepsis.

- **Medical record department:** Often a patients' medical records are needed by a Covid Frontline Worker (Basic Care Support) and therefore, you should be familiar with terms such as health record and medical chart These records provide the patients' health observations, which drugs have been administered and how, and other treatments, dosage, test reports, etc.

Fig.2.3.13: Medical record (Snapshot)

Fig.2.3.14: Neonatal intensive care unit

- **Neonatal intensive care unit:** This unit specializes in the intensive care of sick or prematurely born babies.

Fig.2.3.15: Operation Theatre

- **Operation Theatre: An operating theatre or OT, is a hospital area or room where surgeries and other procedures requiring sterile equipment and environment are done.**

Fig.2.3.16: Pathology labs

- **Pathology labs:** These are places in a hospital where tests or other investigative procedures are carried out.

Fig.2.3.17: Radiology department

- **Radiology department:** This department utilizes various imaging technologies for the diagnosis of diseases so that the required treatment can be given. The technologies used are:
  - » Radiography
  - » CT or Computed Tomography
  - » PET or Positron Emission Tomography
  - » MRI or Magnetic Resonance Imaging

Some Other Departments in a hosptal are as under:

- **Medicine:** Medicine is a drug or other preparation which doctors use to help cure or prevent a disease.
- **Physician:** A medical doctor who is trained in human medicines is called a physician.
- **Surgeon:** A doctor who performs the operative procedures is called a surgeon.
- **Human anatomy and physiology:** Study of human body and its functions.
- **Pathology and Pharmacology:** Study of diseases and the medicines for curing illness.
- **Histology:** Is the study of microscopic anatomy of plant or animal cells and tissues.
- **Microbiology:** Study of microscopic organisms including unicellular and multi cellular organisms. Microbiology has many sub-disciplines such as virology, mycology, parasitology, and bacteriology.
- **Immunology:** Immunology is a branch of biomedical science that encompasses the study of the immune system of all organisms.
- **Genetics:** A field of biology, explaining study of genes, variation and the concept of heredity associated with living organisms.
- **Cardiology:** Department of medicine associated with treatment of human heart conditions.
- **Critical care medicine:** Deals with diagnosis and administration of life threatening conditions with consistent monitoring.
- **Endocrinology:** It is a department of medicine that studies various hormonal problems like diabetes.
- **Gastroenterology:** Medicine vertical which studies the management of conditions related to the digestive system.
- **Nephrology:** Deals with kidney related conditions.
- **Oncology:** Department of specialized medicine that provides treatment to patients suffering from cancer.
- **Paediatrics:** Sub vertical of medicine which study health conditions and treatment of children.
- **Pulmonology:** It is a part of medicine for studying various lungs conditions.
- **Ophthalmology:** It deals with medical care for conditions associated with the eye.
- **Obstetrics and gynaecology:** It is division of medicine involving the study of pregnancy and the reproductive health of women.
- **Dermatology:** It is a division of medicine which studies medical care related to skin and the organs linked to it.
- **Diagnosis:** The physician practicing in any of the internal medicine specialties the medical condition that a patient is suffering from. This is called diagnosis.
- **Prescription:** Once the physician makes a diagnosis he suggests the medication needed to treat the condition. This is called a prescription.

2.3.3 Branches of General Surgery

- **Anaesthesia:** Surgeons perform the operative procedures by blocking the pain sensation of the patient. This is called anaesthesia.
- **Cardiovascular surgery:** Deals with surgery done to treat conditions related to the heart and blood supply.

- **Gastroenteric surgical procedures:** Deals with the digestive system conditions and also include specialties like endoscopy and colorectal surgery.
- **Neurosurgery:** Treats conditions related to the brain and the nervous system.
- **Transplant surgery:** Involves surgical procedures carried to transplant organs from one person to another.
- **Trauma surgery:** Deals with surgery for patients injured in accidents and need immediate medical attention.
- **Vascular surgery:** Deals with surgical procedures to treat abnormalities in blood vessels.

2.3.4 Supporting Branches of Medicine

- **Clinical pathology:** A branch of medicine that deals with the identification and study of diseases and their causes.
- **Radiology:** A branch of medicine that supports both medical and surgical care specialists by providing medical imaging services such as X-rays, CT scans, MRI.
- **Pharmacology:** Deals with the study of drugs and the medications that are used to treat medical conditions.
- **Community and preventive medicine:** Deals with prevention and cure of diseases like Malaria, TB, HIV that spread in the community.

On Job Training-1: Visit to Hospital

1. Observe the location of different departments in hospital like Reception Desk, OPD, Casualty, Inpatient Ward, Laboratory, Nurse Station, OT, ICU, Pharmacy and Cafeteria. Make a note of your observations and findings.

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Tips

- As a COVID Frontline Worker (Basic Care Support) you should be try and visit the various departments in the Hospital and understand the activities involved in them.

Exercise

1. Describe the term 'Hospital'.

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2. Describe the term 'surgery'.

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3. Name the different departments found in a hospital.

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Notes

UNIT 2.4: Tools and Equipment

Unit Objectives

At the end of the unit, you will be able to:

- Recognize the different types of medical instruments and equipment.

2.4.1 Tools and Equipment

Weighing machines: Weighing machines have an important role to play in patient care. If there are inconsistencies in recording the body weight of patients or if wrong weighing equipment are used, it could cause errors in the diagnosis, medication and treatment. Hence appropriate weighing machines should be used.

Fig.2.4.1: Weighing machines

Fig.2.4.2: Blood Pressure Gadgets

Blood Pressure Gadgets: It is a device used to measure blood pressure, composed of an inflatable cuff to collapse and then release the artery under the cuff in a controlled manner.

Gauge: It is a bandage utilized to give support to a dressing, a splint or a similar device. It can also be used to give support or curb the movement of a body part.

Fig.2.4.3: Gauge

Fig.2.4.4: Tourniquet

Tourniquet: A tourniquet is a restricting or a compressing equipment. It is utilized usually as a bandage to limit blood flow in the arteries and veins for some time.

Mannequin: Mannequins are used to provide patient care and to impart management skills. Interactive scenarios are created by using these mannequins for training purposes.

Fig.2.4.5: Mannequin

Fig.2.4.6: Wheel chair

Wheel chair: Wheelchairs are equipment utilized for people who are unable to walk because of some disability, sickness or injury.

Trolleys: Surgical instrument trolley used for carrying equipment and tools.

Fig.2.4.7: Trolleys

Fig.2.4.8: Personal protective equipment

PPE: Personal protective equipment (PPE) are specially designed equipment to protect workers from germs by creating a barrier.

First Aid kit: A first aid kit is a collection of supplies and equipment used to provide first aid, and can be put together for the purpose by an individual, organization or purchased complete.

Fig.2.4.9: First Aid kit

Fig.2.4.10: Betadine

Betadine: These microbicides have been used worldwide as a crucial initial line of defence in both homes and hospitals.

Cotton Bandage: These medical bandages are like rolled gauze bandages and are utilized for various kinds of wounds, cuts and injuries.

Fig.2.4.11: Cotton Bandage

Sanitizers: Use of cleaners to remove germs and achieve a standard in cleanliness

Fig.2.4.12: Sanitizers

Fig.2.4.13: Disinfectants

Disinfectants: These are antimicrobial agents which are used on objects to eradicate microorganisms which might be present on them.

Insulin pen: Insulin pen is used by diabetic patients. It gives them confidence and the advantage of precision and convenience.

Fig.2.4.14: Insulin pen

Fig.2.4.15: Little Anne

Little Anne: This a CPR training mannequin designed to give CPR training of high quality to students.

Ambu Mask (Adult): These are face masks which are designed to be used with manual and automatic resuscitators and ventilators.

Fig.2.4.16: Ambu Mask

Fig.2.4.17: AED Trainer

AED Trainer: AED Training System has all the requisite features needed for learning about adult CPR, defibrillation and defibrillator pad placement.

Fig.2.4.18: Pocket Mask

Pocket Mask: A pocket mask is an equipment utilized to safely provide rescue breaths in case of cardiac arrest or respiratory arrest.

Oxygen Cylinder: A container filled with oxygen in the form of gas or as a cryogenic storage tank with liquid oxygen.

Fig.2.4.19 Oxygen Cylinder

Fig.2.4.20: Oxygen Key

Oxygen Key: The key used for opening the valve on oxygen/ medical air cylinders

Oxygen Cylinder Trolley: It is used in hospital for carrying oxygen cylinders.

Fig.2.4.21: Oxygen Cylinder Trolley

Fig.2.4.22: Hospital Bed

Hospital Bed: This is a special bed designed to be used by patients requiring hospitalization or any other kind of health treatment. There are special features incorporated in these beds for the comfort of the patients and convenience of the healthcare workers.

Bedside Locker: This is a small sized cabinet or table which is kept beside the hospital bed.

Fig.2.4.23: Bedside Locker

Cardiac Table: This special table is used for making it easy for the patients to eat meals while staying in their beds.

Fig.2.4.24: Cardiac Table

Fig.2.4.25: Walker

Walker: It gives support to patient while walking who has difficulty in waking after a surgery or fracture.

Crutch: It's a long stick with a padded piece at the top that fits snugly under a person's arm. It can be used for help or support while walking.

Fig.2.4.26: Crutch

Stretcher: It is utilized for shifting patients who require medical care.

Fig.2.4.27: Stretcher

Fig.2.4.28: Cane

Cane: It is used for help or support while walking.

Bed pan: It is used to provide toilet facilities to a bedridden patient in a Healthcare facility, generally comprising of a metal, glass, or plastic receptacle.

Fig.2.4.29: Bed pan

Fig.2.4.30: Urinal (Male & Female)

Urinal (Male & Female): A urinal is a bottle for urination. It is most frequently used in Healthcare for patients who find it impossible or difficult to get out of bed.

Artery Forceps: It is a surgical tool used in many surgical procedures to control bleeding.

Fig.2.4.31: Artery Forceps

Dissecting Forceps: Dissecting forceps are used to handle tissues and other materials and also to manipulate needles and other instruments whilst operating.

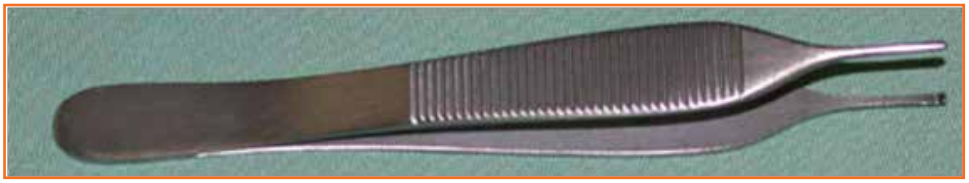

Fig.2.4.32: Dissecting Forceps

Splint: A splint is a medical device which is used to restrict the movement of an injured part of the body and to prevent any more damage to it. It is generally utilized to give temporary stability to a broken bone while the injured person is being transported to a hospital for proper treatment.

Fig.2.4.33: Splint

Fig.2.4.34: Cervical Collar

Cervical Collar: A cervical collar is formed from thick foam rubber which is covered in cotton for softness. It is utilized to support the neck and to control pain and discomfort after an injury such as whiplash.

Spine Board: It is an equipment usually used to handle patients as a part of trauma care prior to hospitalization to provide rigid support during shifting. Patients with probable spinal or limb injuries are moved on these boards.

Fig.2.4.35:Spine Board

Kidney Tray: It is a bean shaped shallow basin utilized as a receptacle to collect soiled dressings and medical waste in the hospital wards.

Fig.2.4.36:Kidney Tray

Fig.2.4.37 IV Stand

IV Stand: It is used for administering intravenous drugs such as drips.

Measuring Glass: Measuring glass for measuring any and all liquid ingredients.

Fig.2.4.38: Measuring Glass

Fig.2.4.39 Uro bag

Uro bag: A urine collection device.

Sample Collection Bottle: Are used for collecting blood, urine, sputum sample.

Fig.2.4.40: Sample Collection Bottle

Fig.2.4.41: Normal Saline Bottle

Normal Saline Bottle: It contains saline which is a sterile solution of sodium chloride (NaCl), generally called table salt, in water.

Micropore: This is a surgical tape utilized for general taping purposes. It is a hypoallergenic adhesive which is gentle on sensitive and delicate skin.

Fig.2.4.42: Micropore

Fig.2.4.43: Hydrogen Peroxide

Hydrogen Peroxide: Hydrogen peroxide is one of the rare germicidal agents combined with hydrogen and oxygen, hence making it the safest natural sanitizer.

Syringe destroyer: It is a compact equipment with a steel alloy cutter used for secure and fast removal of needles and syringes.

Fig.2.4.44: Syringe destroyer

Fig.2.4.45: Syringe Sterilizer

Syringe Sterilizer: Used for sterilising syringe.

Thermometer: A device that measures temperature.

Fig.2.4.46: Thermometer

Fig.2.4.47: B.P. Monitoring Machine

B.P. Monitoring Machine: Used for measuring blood pressure.

Hot Water Bottle: This is a container with a stopper to provide heat to the body, usually when in bed or to provide warmness to a particular body part It is filled with hot water and closed with the stopper.

Fig.2.4.48: Hot Water Bottle

Fig.2.4.49: Transfer forceps

Transfer forceps: This is an instrument similar to a pair of pincers or tongs, made for grasping, handling, or extracting tissues.

Suction Apparatus: A suction machine is an equipment which removes liquids, gases or substances such as mucus or serum from a body cavity by creating a partial vacuum.

Fig.2.4.50: Suction Apparatus

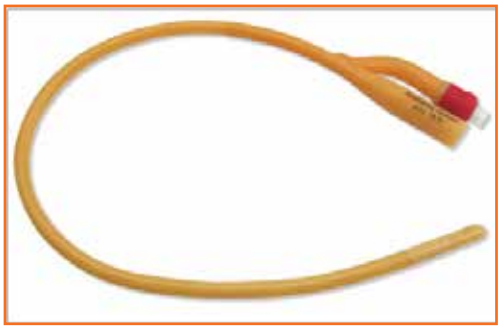

Fig.2.4.51: Folley catheter

Folley catheter: A slim tube which is sterilized and inserted inside the bladder to drain urine. It is also known an indwelling catheter which can be left behind in the bladder for long time.

Suction Catheter: These are flexible, elongated tubes utilized to eliminate respiratory secretions from the airway by suction to ensure clear passage.

Fig.2.4.52: Suction Catheter

Fig.2.4.53: Ryle's tube

Ryle's Tube: Tube that goes from the nose and down the nasopharynx and oesophagus into the stomach.

Vacutainer: This is a sterile tube that collects blood and is made of plastic or glass. It has a closure that evacuates and forms vacuum within the tube. This facilitates a predefined volume of liquid.

Fig.2.4.54: Vacutainer

Fig.2.4.55: Examination table

Examination table: The exam table is where the practice of medicine takes place - the interaction between the physician and patient.

Fig.2.4.56: Draw Sheet

Draw Sheet: A sheet that is placed in such a way that it can be taken from under a patient or invalid without disturbing the bedclothes.

1.4.2 Common Medical Equipments

The medical equipment used commonly in the hospital includes:

- Diagnostic equipment such as stethoscope, blood pressure apparatus, thermometer.
- Imaging equipment such as x-ray, ultrasound, CT scan, MRI.
- Specialized equipment such as ECG, ventilator, oxygen, pulsometer, dialysis machine.
- Other patient management equipment in hospitals are beds, wheelchairs and stretchers etc.

You need to identify and understand the form and function of some hospital equipment in order to assist the doctor or the nurse efficiently. Let us now look at the common medical equipment used in the hospitals.

Patient Monitor

The patient monitor is a big equipment used for recording and interpreting a patient's vital signs during medical care or treatment. The heart rate, breathing rate and the ECG of the patient are displayed on the LCD monitor. The patient monitor will be attached by the nurses. The recordings of the patient monitor are noted and reported to the doctor in regular intervals.

Fig.2.4.57 Patient Monitor

Fig.2.4.58: X-ray Machine

X-ray Machine

Doctors get X-rays from X-ray machines which help them in diagnosis of the ailment and detection of fractured bones, foreign substances inside the body as well as harmful cavities.

ECG (Electro Cardio Gram) Machine

- An ECG machine detects any abnormalities in heart functions.
- It is found in the heart disease section in the hospital.

Fig.2.4.59: ECG Machine

Fig.2.4.60: Ultrasound Machine

Ultrasound Machine

Ultrasound machine maps the body's interior and produces its visual picture. One of the uses of the ultrasound is to check pregnant mothers and report the growth of the foetus.

Medical Ventilator

A medical ventilator is a machine which pumps air in and out of lungs.

Fig.2.4.61: Medical Ventilator

Dialysis

Medical Ventilator Role of a dialysis machine is to remove harmful/toxic substances and purify the blood stream in absence of kidney not functioning properly. It is used for taking out waste material and undesired water. There are specialized equipment such as saline bottles, catheters and apparatus used for feeding and medication of the patient.

2.4.3 Some Other Equipment for Personal Care

Feeding Tools

- Steel Plate
- Steel Glass
- Steel Bowl
- Spoon

Bathing Equipment

- Steel Jug
- Bath Tub
- Screen
- Towel
- Gown
- Gloves
- Liquid Soap Bottle
- Mask – packet, Shoe
- Cover – packet
- Hair Cap
- Mackintosh
- Sponge Cloth
- Comb
- Tooth Brush
- Toothpaste
- Hair Oil
- Shampoo Bottle
- Bath Soap
- Talcum powder

Nail care equipments

- Nail cutter
- Hand towel
- Disposable bath mat
- Disposable goves

Skills Practical: General Medical Tools

1. Divide the class into 5 groups. Name each group as team A, B, C, D and E.
2. Once the teams are formed, open your participant handbooks.
3. Each team has to make questions on any of the medical tools that have been discussed in the chapter.
4. Each team will get 15 minutes to read and prepare questions.

Tips

- Common medical instruments used in the hospital.
- Helping the healthcare professional in the use of the common medical equipments.

Exercise

1. List few common medical equipments and their usage.

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   .....

2. List few common surgical instruments and their usage.

   .....

   .....

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Healthcare
Sector
Skill Council

3. Introduction to Human Body- Structure & Function

Unit 3.1 - Basics of Anatomy and Physiology

Bridge Module

Key Learning Outcomes

At the end of the unit, you will be able to:

- Recognise the different parts of the body.
- Elaborate different systems of the body.
- State the different positions of the body.

UNIT 3.1: Basics of Anatomy and Physiology

Unit Objectives

At the end of the unit, you will be able to:

- Explain the functions of the human body in discharging your role as a COVID Frontline Worker (Basic Care Support).

3.1.1 Overview

The most important role of a COVID Frontline Worker (Basic Care Support) is taking care of the needs of the patients. It is very important to know how the different parts of the body and how they function. It helps to have a good understanding of the different parts of the body and the functions they perform. This knowledge will create awareness in you and will help you serve your patients better. In this course, you will be introduced to the different parts of the human body, the different life processes and lastly, an insight into the various branches of medicine, the terms and terminologies used.

3.1.2 Understanding the Human Body

The human body is broadly divided into three areas:

- Head and Neck
- Thorax and Abdomen
- Upper and Lower Limbs

Head and neck region of the human body is the top most part of our body. Human body consists of brain, eyes, ears, mouth with the food pipe (or the oesophagus) and nose with trachea (or the wind pipe). The thorax region is the middle part of our body. It comprises heart and lungs. The abdomen region consists of the stomach, liver, pancreas, intestines, kidneys and the reproductive organs. The arms and legs form the upper limbs and lower limbs of the human body respectively.

The arms and legs form the upper limbs and lower limbs of the human body respectively. The shape and structure of the human body is built on a framework of specialized tissues called the bones and muscles. The bones and muscles hold the organs in place. The internal organs of the human body are very delicate. They are covered with a bony structure to guard them from external shocks and injuries.

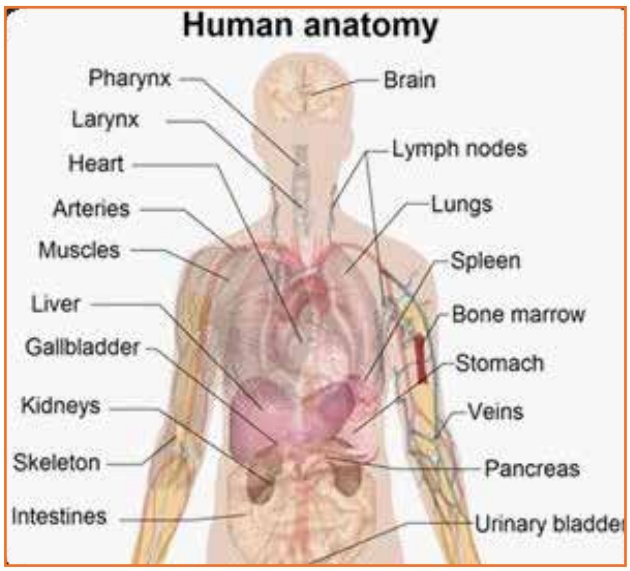


Fig.3.1.1: Human Anatomy

Head and Neck

The brain, eyes, ear, nose and mouth are part of the head. Each of these organs has specific functions of its own.

The head has a hard outer covering. This is a bone called cranium or skull. All the organs in the head region are held by muscles which are attached to the skull. The skull protects the brain from external shocks and injuries.

All the functions of the body are controlled by the human brain for example breathing, digestion, heartbeat, blood circulation. These functions are broadly classified as sensory, motor and special senses.

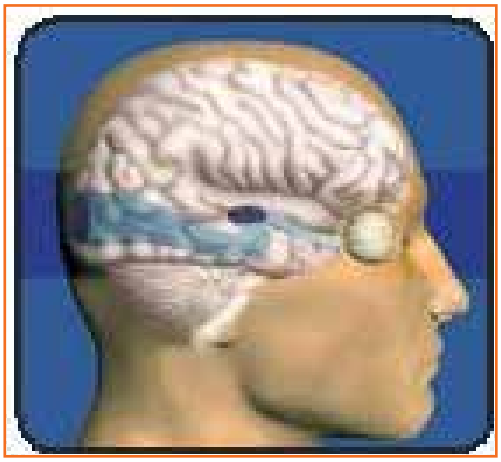


Fig.3.1.2: Head and Neck

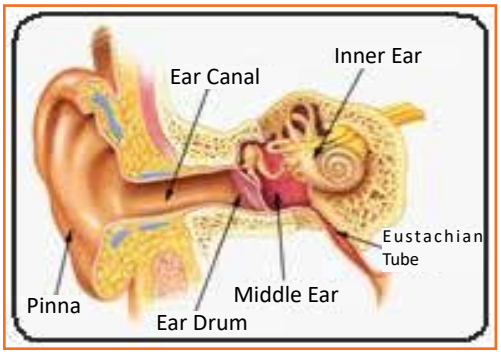


Fig.3.1.3: Ear and its Structure

The sensory functions include touch and pain sensations. The motor functions include movement of organs such as limbs or muscles and special senses include sight, sound, taste and smell. The brain extends as the spinal cord at the back of the body. The brain is connected to the various organs by nerves which transmit signals to the organs.

The face contains the organs – eyes, ears, nose and mouth. The eyes allow us to see. The eyes are attached to the brain which controls the sensation of vision and movement of the eye balls through nerves. The ears allow us to hear. They comprise of the outer, center and internal ear, made of the hearing apparatus. The hearing apparatus are set of bones and membranes which allow us to hear.

The nose supports in the sensory function of smell. It also serves in the function of breathing. It has two nostrils on the external side and internally opens into the wind pipe which is connected to the lungs. The mouth is located below the nose and extends towards the beginning of the digestive system. It opens into the food pipe or the oesophagus extending into the neck and thorax. The mouth comprises teeth that help in chewing the food. The neck portion of our body contains the food pipe and the trachea. The neck also comprises the larynx or the voice box. It is prominent in the male human body.

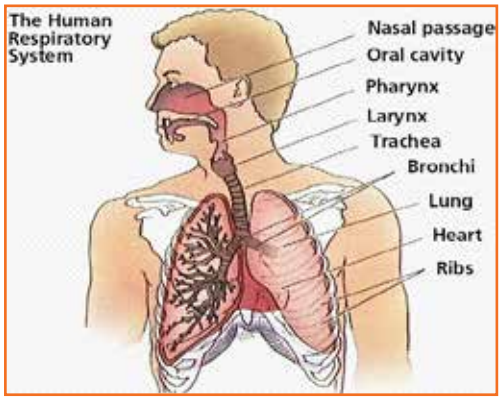


Fig.3.1.4: Respiratory System

Thorax

The neck region extends into the thorax region which is made up of shoulders and the chest. The chest is made up of a bone framework called the ribs. The rib encloses a pair of lungs which help in breathing. The heart is present at the centre of the two lungs towards the left. It is made up of muscles and pumps blood to the whole

body. The heart supplies blood to the body through the network of arteries. The veins carry deoxygenated blood from various body parts to the heart.

Arteries and veins are vessels or pipes which form the arterial and venous system respectively. These vessels are connected to all the organs. Blood from the heart is carried by arteries to the various organs and after purification the blood from the various organs is carried to the heart by veins.

Fig.3.1.5: Thorax (Male)

The thorax also has a large muscle called the diaphragm that aids in breathing and supports the lungs. The thorax in the female human body also comprises of the mammary glands also known as breasts. The breasts function is to provide nutrition to the new-born child.

Abdomen

The thorax extends into the abdomen. The abdomen comprises of the stomach which helps to digest the food that we eat. The stomach is supported by other vital organs such as the liver which releases substances called enzymes that help in digestion of the food. The stomach extends into long tube-like structures called intestines. These structures help in digesting and absorption of the nutrients from the food. At last, the undigested food is excreted (thrown out) through an opening called the anus. A pair of kidneys is present in the lower side of the abdomen and is a vital organ that helps in excreting the waste materials produced in the body.

The lower region of the abdomen is made up of a bony framework called the pelvis or the hip. This region also comprises of the reproductive organs or the genitalia which are distinct in males and females. The male reproductive organs are the testicles and the penis and the female reproductive organs comprise of the ovaries, uterus and the vagina.

The upper abdomen part comprising of stomach, liver, etc. is not covered by any bone structure to protect it from external shocks and injuries. Therefore, as a COVID Frontline Worker (Basic Care Support), you must take special care while handling the patient to avoid injuries to the upper abdomen.

Upper and Lower Limbs

The upper limbs and lower limbs enable humans to move from one place to another. They also help in eating and carrying out important functions. The arms are connected to the thorax in the shoulder region. The arms are

jointed organs comprising of the upper arm and the lower arm and the palm. The lower limbs are jointed organs that are connected to the abdomen at the pelvis region. The upper leg region is made of thighs and the lower leg region comprises of heels and toes that aid in movement.

Back of Human Body

The back region of the human body is made up of the vertebral column that extends from the back of the head to the back of the hip. The spinal cord is the extension of the brain. It is located in the vertebral column. It performs the function of movement.

3.1.3 Human Physiological Systems

The human body performs various activities like breathing, eating, running. Each part of the body has specific functions which help the body perform these various activities. Let us learn the functions of the different parts of the human body.

Human Physiological Systems

The basic physiological systems in the human body are:

- The nervous system – It consists of the brain, the spinal cord and the network of nerves.
- The muscular and skeletal system - It consists of the bones, muscles and the connective tissues.
- The circulatory system - It's composed of heart, the network of arteries and veins.
- The respiratory system - It consists of the upper and the lower respiratory tracts. The upper respiratory tract is nose and the sinuses, and the lower respiratory tract includes trachea, bronchi and the alveoli.
- The digestive system - It includes mouth, the oesophagus (food tube), the stomach, the liver and the gall bladder, the pancreas, the large and the small intestine extending into the rectum and the anal canal.
- The urinary system - It includes of the kidneys, ureters and the bladder.
- The reproductive system - It includes of the sex organs.

The basic physiological systems are supported by the endocrine system that secrete the hormones and the immune system that helps in protecting the body from infections.

Nervous System

The nervous system is the network for sending and receiving information in both the interior and exterior parts of the body. The central nervous system comprises the brain and the spinal cord. The brain serves as the leader in your body, it controls the working of the other parts of the body. It is responsible for all sensory processing done by the body. Sensory functions such as sight, hearing, taste and smell are termed as special senses. And the organs which help us to see, hear, taste, smell are eyes, ears, mouth and nose respectively. These organs are called sensory organs as they connect us to the outer world. These senses are controlled by the brain. There is another sensory organ which helps us to connect with the outside environment, i.e. the skin. The skin helps us feel. The nerves, spinal cord and brain together control all parts of the human body.

Any feeling that a person experiences generates signals carried by the nerves to the spinal cord and eventually to the brain. The nerves are the units of the nervous system that connect the various organs to the spinal cord and brain. The brain then responds with a reaction which is carried back to the organ. The organ then acts as per the instructions received from the brain.

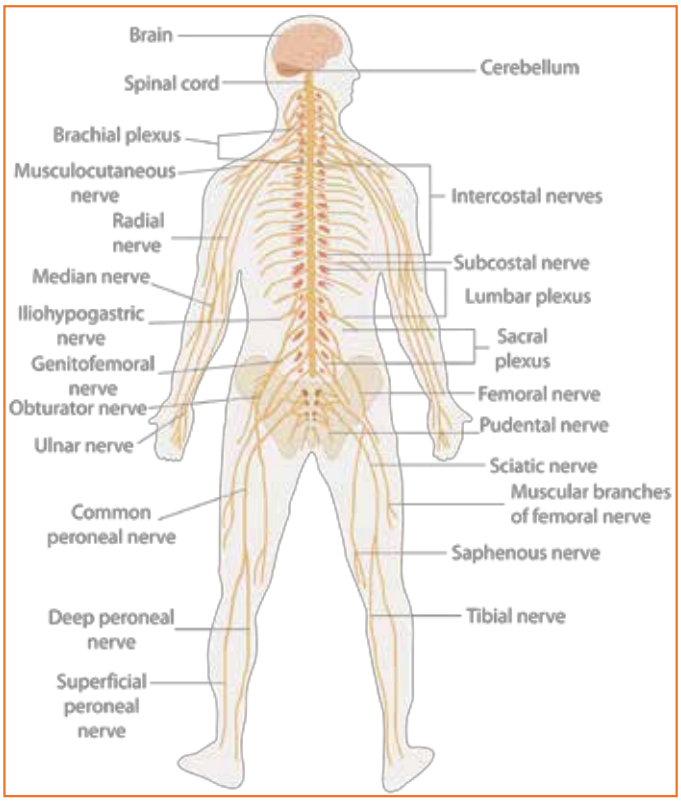


Fig.3.1.6 Nervous System

Muscular and Skeletal System

There are more than 600 muscles in our body. The muscular and skeletal structure of our body comprise of the skeleton, and the attached muscles. The human skeleton gives the body a basic shape and structure and is comprised of bones. The bones are the hard structures of the body and form the framework of the body. Our bones are strong enough to hold our body weight. They give support to our body and assist in giving it a proper shape. The skull provides protection to the brain and gives shape to our face. The backbone protects the spinal cord which is a passage for the transmission of messages between the different parts of the body and the brain. Th e rib cage covers and protects different organs of the body such as the heart, the lungs and the liver. The pelvis protects the bladder, the intestines and in females, the reproductive organs.

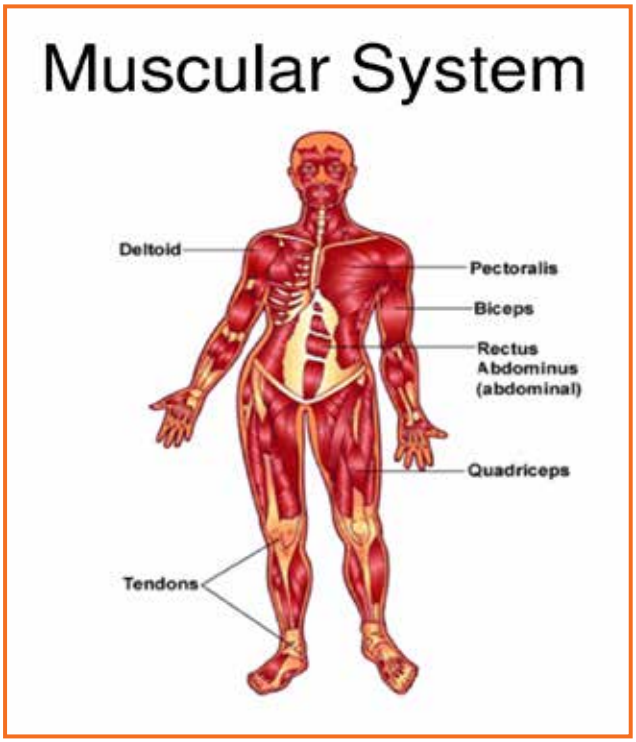


Fig.3.1.7(a): Muscular System

Along with their structural role, the larger bones within the body have bone marrow which produces blood cells. Bones are rigid and inflexible. So just with the bones, it's not possible to walk or move your hands and legs. You need muscles for flexibility and they also support the bones in activities like walking and running. The muscles form the bulk of the body organs. The bones and muscles together are responsible for body movement. Muscles are also connecting structures that hold the various organs in place. The bones are attached to the muscles by tissues called Tendons. The muscle and skeleton hold the body in place.

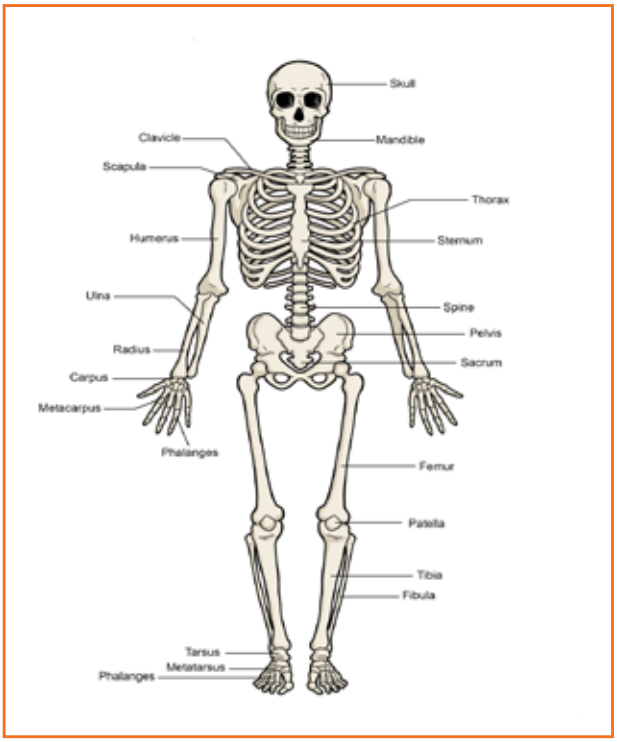


Fig.3.1.7(b): Skeletal System

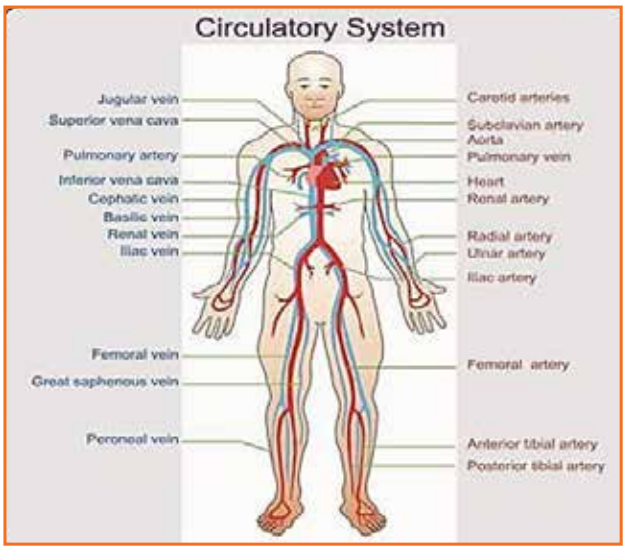


Fig.3.1.8: Circulatory System

Circulatory System

The circulatory system is also known as the cardiovascular system or the vascular system and it circulates blood to the every tissue of the body. With each heartbeat, heart pumps blood throughout our body. It carries oxygen and other vital nutrients to all the cells. The circulatory system comprises of the heart and the blood vessels, which include arteries, veins and capillaries. The blood, pumped by the heart, acts as a transportation system. It transports oxygen and nutrients to the various organs. It does this through blood vessels known as arteries and capillaries. Once the body absorbs oxygen and all nutrients, waste products are released.

The circulatory system and the respiratory system work together to transport oxygen to various organs of the body and remove carbon dioxide. It does this through a different set of blood vessels known as veins. The circulatory system is, therefore vital in the maintenance of the regular body functions.

Respiratory System

The respiratory system comprises the trachea and lungs as the central units. While breathing, the air is inhaled into the lungs, mostly through the nose, and enters the wind pipe, also known as the trachea. The trachea allows passage of air into the lungs and the oxygen is then absorbed in the lungs. The blood transports the oxygen to the different organs of the body. Each body organ uses the oxygen to release energy. This energy released is used for performing various body functions. While performing various activities, the body organs produce carbon dioxide.

The carbon dioxide is transported to the lungs by the blood and from the lungs the air carrying carbon dioxide is breathed out. This process of breathing is — using oxygen to release energy — and breathing out of air is collectively called respiration. The organs involved in respiration are grouped together as the respiratory system. Thus, the respiratory system plays a crucial role as it provides oxygen that is critical for body functioning.

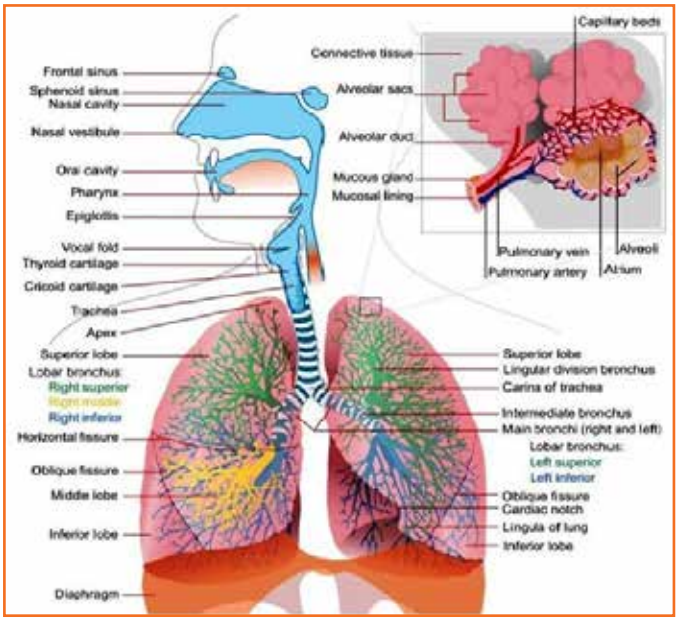


Fig.3.1.9: Respiratory System

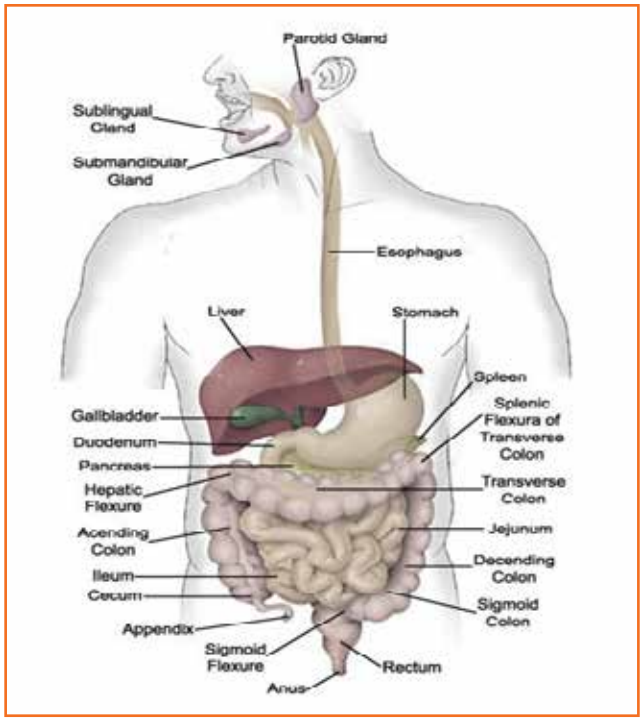


Fig.3.1.10: Digestive System

Digestive System

- The digestive system breaks down the food and absorbs all nutrients from the food. This whole process is known as digestion.
- The food goes into the body via mouth and is chewed into smaller bits and swallowed. The food pipe, also known as the oesophagus, takes the food into the stomach and then the intestines.
- Here the food is broken into small units with help of substances called enzymes.
- The enzymes that are needed for the digestion of the food are produced by the salivary glands, liver, pancreas and gall bladder. The blood absorbs all nutrients from the chewed food and carries them to various organs for producing energy.

Urinary System

- The urinary system consists of the kidneys, the urethra, the ureters and the urinary bladder. When the body organs utilize the nutrients and oxygen for the production of energy, they produce waste products such as ammonia and urea. These waste products are carried by the blood to the kidney. In the kidneys, the waste products are filtered from the blood and excreted out of the body as urine.
- Urine is a liquid with excess water. Urine passes through the ureters and fills the urinary bladder. The urinary bladder when full with urine, releases the urine out of our body. If the kidneys fail to function normally, the waste products in the blood can cause harm to the body organs. So it is very necessary to throw out the waste materials.
- The excretory system is hence critical to good health as the harmful wastes are thrown out from the body by this system.

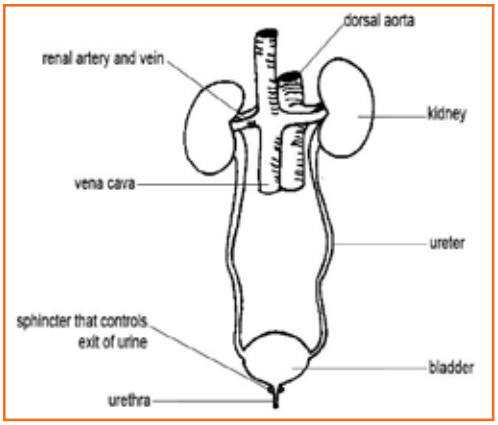


Fig.3.1.11: Urinary System

Reproductive System

- The reproductive system is of two kinds that is the male reproductive system and the female reproductive system. It comprises of the sex organs. The male reproductive system includes the testicles and the male sex organ called the penis. The testicles produce seminal fluid which contains fertilization units called sperms. The seminal fluid is passed through the penis.
- The female reproductive system includes the ovaries, the uterus and the female sex organ called the vagina. When the sperms come in contact with the ovum, fertilization takes place that lead to the development of a foetus. The foetus develops into the uterus of the female human body and is delivered as a human baby.
- The reproductive system functions in the development of a new generation of the human body.

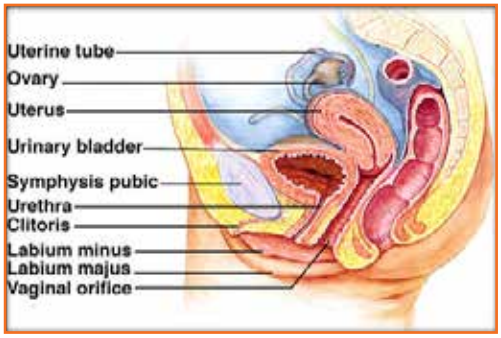


Fig.3.1.12: Reproductive System (Female)

The female reproductive system consists of those parts of the body which take part in reproduction.

- The female body has from birth multitude of eggs that could grow into a baby.
- The female body possesses a perfect place for these eggs to get fertilized with sperms and grow a human.

Male Reproductive System

- The penis includes:
  - » the root which is connected to the lower abdominal organs as well as the pelvic bones,
  - » the shaft
  - » the cone shaped end called glans penis

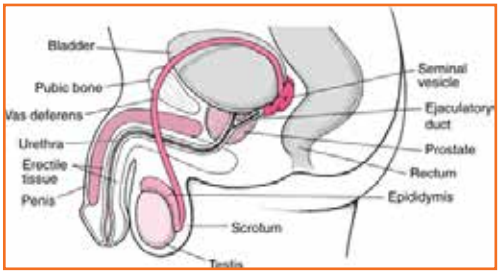


Fig.3.1.13: Male Reproductive System

» The opening of the urethra at the apex of the glans penis which carries semen and urine

- The scrotum is a thick-skinned sac that encircles and shields the testes.
- The testes are oval bodies that average about 1.5 to 3 inches (4 to 7 centimeters) in length and 2 to 3 teaspoons (20 to 25 milliliters) in volume. The testes have two primary functions:
  - » Producing sperm (which carry the man's genes)
  - » Producing testosterone (the primary male sex hormone)
- The epididymis is a collection of coiled microscopic tubes that together are almost 20 feet (6 meters) long. The epididymis collects sperm from the testis and provides the environment for sperm to mature and acquire the ability to move through the female reproductive system and fertilize an ovum.

Supporting Physiological Systems

The basic physiological systems are supported by other physiologic systems such as the endocrine system and the immune system. The endocrine system is made up of organs called endocrines glands. Some examples of endocrine glands are the thyroid, pituitary, thymus. The endocrine system produces chemical substances called hormones. Hormones help in the body processes such as growth, reproduction and digestion. The immune system comprises the lymph nodes and the lymphocytes.

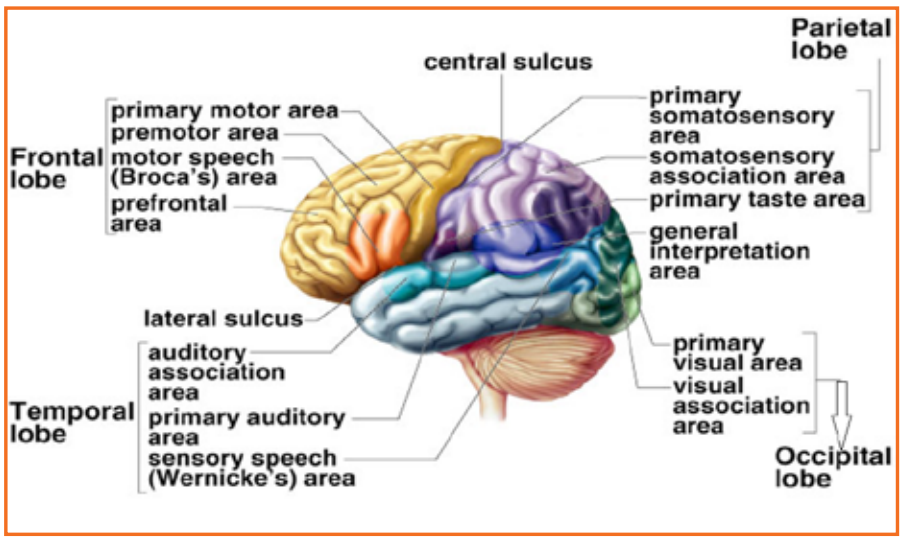


Fig.3.1.14: Physiological Systems

It protects the body from harmful germs and keeps the body healthy. The immune system is critical in preventing the infections and protects the body from diseases.

3.1.4 Routes of Drug Administration

A route of drug administration in pharmacology and toxicology is the path by which a drug, fluid, poison, or other substance is taken into the body. Routes of administration are generally classified by the location at which the substance is applied. Drugs are introduced into the body by several routes. They may be:

- Swallowed, orally
- Given by injection into a vein (intravenously), into a muscle (intramuscularly), into the space around the spinal cord (intrathecally), or beneath the skin (subcutaneously)

- Under the tongue or sublingually
- Placed between the gums and cheek or buccally
- Inserted in the rectum or rectally, or inserted in the vagina (vaginally)
- Added to the eye (by the ocular route) or to the ear (by the otic route)
- Sprayed into nose (nasally)
- Inhaled through the mouth (by inhalation) or nose (by nebulization)
- Locally applied onto the skin (cutaneously)
- Applied by a patch on the skin (transdermally)

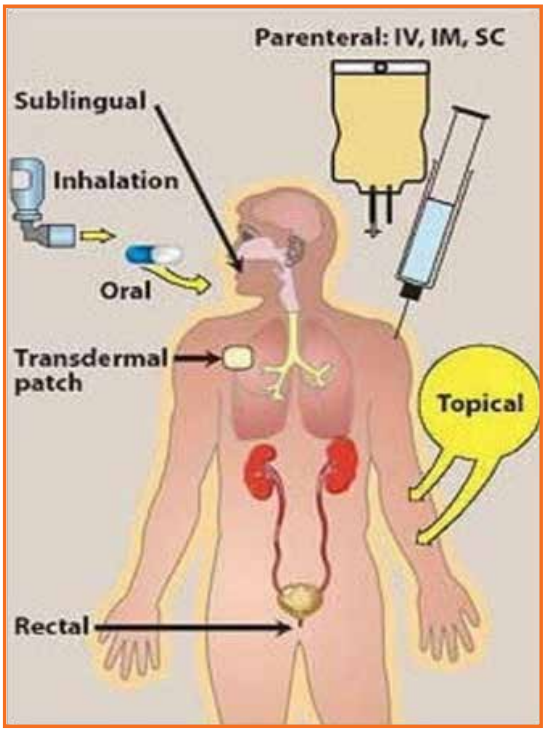


Fig.3.1.15: Routes of Drug Administration

3.1.4.1 Oral Route

Drugs can be given to the patients orally in the form of liquids, tablets or capsules. It is the safest and an economical as well as a convenient way of administering drugs. Some patients, however, might not like its movement through the digestive tract. The digestion for these drugs starts in the mouth and the stomach. The oral drugs are taken along with tea, coffee or water.

Alternative routes are required for giving drugs if the oral route cannot be used, for example:

- When a patient is incapable of ingesting by mouth.
- When a quick administration of drugs is needed or the drug requires to be given as a precise dose or in high quantity.
- When a drug is not effectively absorbed.

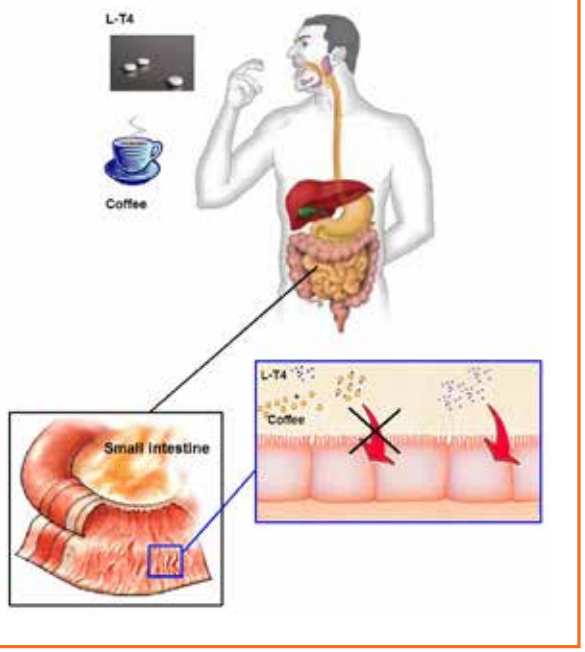


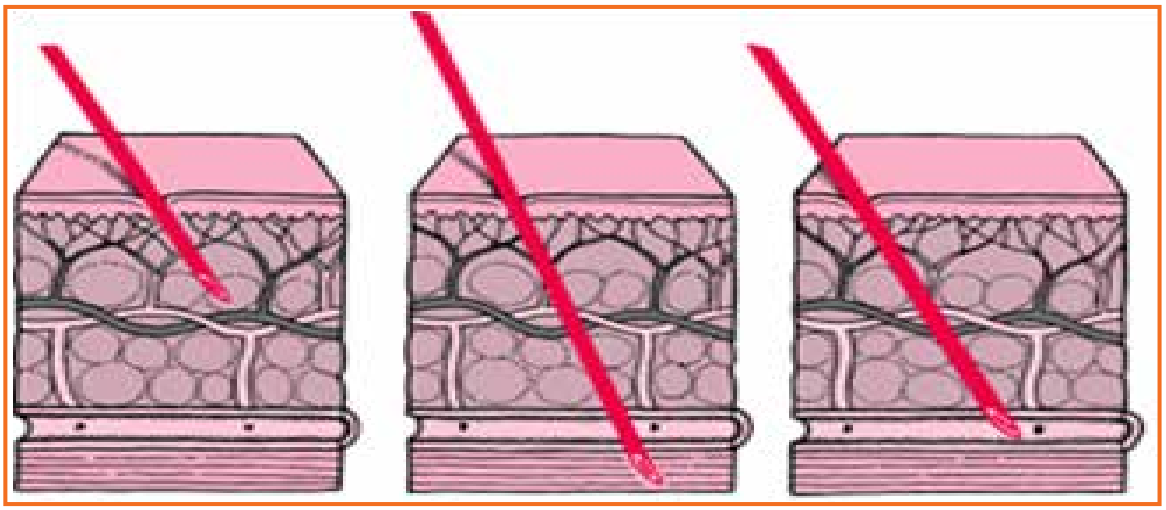
Fig.3.1.16: Oral Route

3.1.4.2 Injection Routes

The injection routes also called parenteral administration and can be categorised into:

1. Intramuscular
2. Intravenous
3. Intrathecal
4. Subcutaneous

A drug can be specially made so that its absorption from the site of injection can be delayed for a couple of hours or even days. These drugs, hence, do not require to be given to the patients as regularly as the ones which are rapidly absorbed.



Subcutaneous *Intramuscular* *Intravenous*

Fig.3.1.17: Various Injection Routes

Sometimes a drug is administered using a needle through the skin in ways such as subcutaneous, intramuscular, or intravenous route, or using a patch on the skin, transdermal route or using an implant.

5. **Subcutaneous Routes:** The needle with the drug is injected into the layer of fatty tissue which lies just below the outer skin. The injected drug then goes to the small blood vessels called the capillaries, and then enters the bloodstream. A drug might also enter the bloodstream via the lymphatic vessels.
6. **Intramuscular route:** The needle carrying the drug is injected into the muscles, which lie under the skin and the fatty tissue. Hence, to reach to that area a longer needle is needed. This route is taken when more volumes of a drug are required by the patient. The muscles in the upper arm region, thigh region, or buttocks are used for this purpose.0020
7. **Intravenous route:** The needle is inserted directly into a vein. Intravenous route is the best way to administer an exact dose in a fast and controlled manner. However, it can be complicated to administer than a subcutaneous or an intramuscular injection since inserting a needle or a catheter inside a vein may be difficult for specific patients such as an overweight person.
8. **Intrathecal route:** The needle is inserted between vertebrae of the lower spine region, in the area around the spinal cord. This makes the drug being administered into the spinal canal. The site where the drug is to be injected is made numb using a local or surface anaesthetic. This route is used mainly when a drug is required to give a quick or local effect on the brain, the spinal cord, or the tissues around them (meninges).

3.1.4.3 Sublingual and Buccal Routes

A few drugs are placed under the tongue (taken sublingually) or between the gums and teeth (bucally) so that they can dissolve and be absorbed directly into the small blood vessels that lie beneath the tongue. These drugs are not swallowed.


Fig.3.1.18: Sublingual and Buccal Routes

3.1.4.4 Rectal and Vaginal Route

Rectal route

Many drugs that are administered orally can also be administered rectally as a suppository. In this form, a drug is mixed with a waxy substance that dissolves or liquefies after it is inserted into the rectum. Because the rectum's wall is thin and its blood supply rich, the drug is readily absorbed.

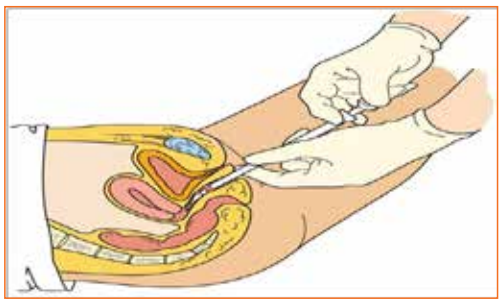


Fig.3.1.19: Rectal route

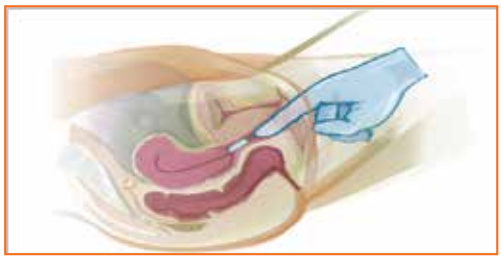


Fig.3.1.20: Vaginal route

Vaginal route

Some drugs may be administered vaginally to women as a solution, tablet, cream, gel, suppository, or ring. The drug is slowly absorbed through the vaginal wall. This route is often used to give estrogen to women during menopause to relieve vaginal symptoms such as dryness, soreness, and redness.

3.1.4.5 Ocular Route

Drugs used to treat eye disorders (such as glaucoma, conjunctivitis, Drugs used to treat eye disorders (such as glaucoma, conjunctivitis, and injuries) can be mixed with inactive substances to make a liquid, gel, or ointment so that they can be applied to the eye. Liquid eye drops are relatively easy to use but may run off the eye too quickly to be absorbed well. Gel and ointment formulations keep the drug in contact with the eye surface longer, but they may blur vision.

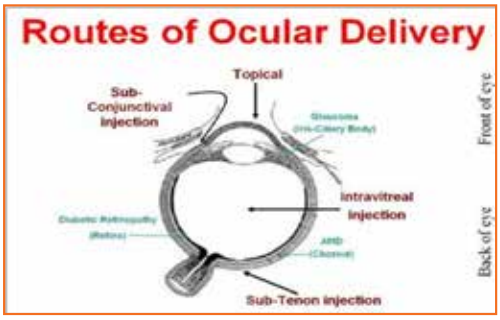


Fig.3.1.21: Ocular Route

3.1.4.6 Otic Route

Drugs used to treat ear infection can be applied directly to the ears. Ear drops containing solutions or suspensions are applied only to the outer ear canal. Before applying ear drops, people should thoroughly clean the ear.

Drugs that can be given by the optic route include hydrocortisone for relieving inflammation, ciprofloxacin for treating infection, and benzocaine for numbing the ear.

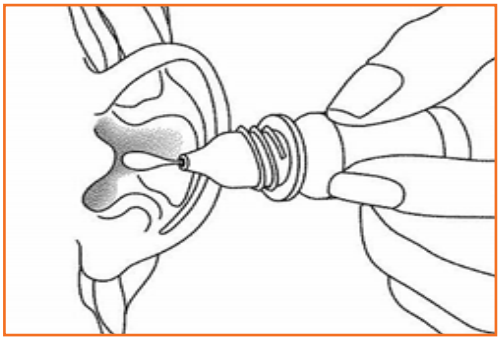


Fig.3.1.22: Otic Route

3.1.4.7 Nasal Route

If a drug is breathed in and absorbed through the nasal passages, it must be transformed into tiny droplets in air termed as being atomized. After the drug has been absorbed, it enters the bloodstream. Drugs administered by this route work quickly, however some may irritate the nasal passages.

Fig.3.1.23: Nasal Route

3.1.4.8 Nebulization Route

Just like the inhalation route, drugs given by nebulization must be aerosolized into small particles to reach the lungs. Nebulization needs special devices, such as ultrasonic or jet nebulizer systems.

Using the devices properly helps maximize the amount of drug delivered to the lungs.

Fig.3.1.24: Nebulization Route

3.1.4.9 Cutaneous Route

Drugs applied to the skin are usually used for their local effects and thus are most commonly used to treat superficial skin disorders, such as psoriasis, eczema, skin infections (viral, bacterial, and fungal), itching, and dry skin. The drug is mixed with inactive substances. Depending on the consistency of the substances, the formulation that can be used may be an ointment, cream, lotion, solution, powder, or gel.

Fig.3.1.25: Cutaneous Route

3.1.4.10 Transdermal Route

Some drugs are delivered bodywide through a patch on the skin. These drugs are sometimes mixed with a chemical (such as alcohol) that enhances penetration through the skin into the bloodstream without any injection. Through a patch, the drug can be delivered slowly and continuously for many hours or days or even longer. As a result, levels of a drug in the blood can be kept relatively constant.

Fig.3.1.26: Transdermal Route

3.1.5 Drug Dosage

Getting the right dose(s) is important in any drug or combination of drugs, this is because taking under or over a preferred dose is not good thing.

Evaluation of Taking Too Low a Dose

If someone takes too low a dose they will end up feeling disappointed as the probability is that the person who took the drug/combination of drugs was hoping for the drug/combination of drugs to have interesting effects but because they took too low a dose they get minor effects and they hope the effects will get more intense but they never do and the experience ends and most of the time they consider their experience to be a waste of drugs.

Fig.3.1.27: Drug Dosage

Evaluation of Taking Too High a Dose

Dosage instructions are clearly written on the prescription or hospital chart/record, and on the pharmacy label. Dosage instructions need to be followed and are available on the hospital chart, the pharmacy label of the suggested medicine or the doctor's prescription. They are also written on the packaging label and the inserts of medicines available over the counter.

3.1.6 Self Vaccination Tips for Covid Frontline Worker (Basic Care Support)

COVID Frontline Worker (Basic Care Support) is at risk for exposure to serious, and sometimes deadly, diseases as they work directly with patients or handle material that could spread infection. They should get appropriate vaccines to reduce the chance that you will get or spread vaccine-preventable diseases. The recommended vaccines are:

Vaccines	Recommendation
Hepatitis B	• Get the 3-dose series • Get anti-HBs serologic tested 1–2 months after dose #3
Flu (Influenza)	• Get 1 dose of influenza vaccine annually.
MMR (Measles, Mumps, & Rubella	• If you were born in 1957 or later and have not had the MMR vaccine, or if you don't have an up-to-date blood test that shows you are immune to rubella, only 1 dose of MMR is recommended. However, you may end up receiving 2 doses, because the rubella component is in the combination vaccine with measles and mumps.

Varicella (Chickenpox)	• If you have not had chickenpox (varicella), if you haven't had varicella vaccine, or if you don't have an up-to-date blood test that shows you are immune to varicella (i.e., no serologic evidence of immunity or prior vaccination) get 2 doses of varicella vaccine, 4 weeks apart.
Tdap (Tetanus, Diphtheria, Pertussis)	• Get a one-time dose of Tdap as soon as possible if you have not received Tdap previously (regardless of when previous dose of Td was received). • Get Td boosters every 10 years thereafter. • Pregnant HCWs need to get a dose of Tdap during each pregnancy.
Meningococcal	• Those who are routinely exposed to isolates of N. meningitidis should get one dose.

Fig.3.1.28: Self Vaccination TIPS for Covid Frontline Worker (Basic Care Support)

3.1.7 Drug Dosage Abbreviation

Abbreviation	From the Latin	Meaning
Aa	Ana	of each
Ad	Ad	up to
a.c.	ante cibum	before meals
a.d.	aurio dextra	right ear
ad lib.	ad libitum	use as much as one desires; freely
admov.	Admove	apply
Agit	Agita	stir/shake
alt. h.	alternis horis	every other hour
a.m.	ante meridiem	morning, before noon
Amp		ampule
Amt		amount
Aq	Aqua	water
a.l., a.s.	aurio laeva, aurio sinister	left ear
A.T.C.		around the clock
a.u.	auris utrae	both ears
Bis	Bis	twice
b.i.d.	bis in die	twice daily
B.M.		bowel movement
bol.	Bolus	as a large single dose (usually intravenously)

B.S.		blood sugar
B.S.A		body surface areas
cap., caps.	Capsula	capsule
C	Cum	with (usually written with a bar on top of the “c”)
comp.		compound
cr., crm		cream
D5W		dextrose 5% solution (sometimes written as D5W)
D5NS		dextrose 5% in normal saline (0.9%)
D.A.W.		dispense as written
dc, D/C, disc		discontinue
dieb. alt.	diebus alternis	every other day
dil.		Dilute
disp.		dispense
div.		divide
d.t.d.	dentur tales doses	give of such doses
D.W.		distilled water
elix.		elixir
e.m.p.	ex modo prescripto	as directed
emuls.	Emulsum	emulsion
ex aq	ex aqua	in water
fl., fld.		fluid
G		gram
h.s.	hora somni	at bedtime
inj.	Injection	Injection
Nebul	Nebula	a spray
Syr	Syrupus	syrup
Susp		suspension
Tab	Tabella	Tablet
Tbsp		tablespoon
ung.	Unguentum	ointment
W		With
w/o		without

Fig.3.1.29: Drug Dosage Abbreviation

Tips

- Main organs of Circulatory system
  - » Heart
  - » Artery
  - » Vein
  - » Capillary
- Main organs of Digestive system
  - » Mouth
  - » Oesophagus
  - » Stomach
  - » The small intestine
  - » Colon (large intestine)
  - » Rectum
- Main organs of Endocrine system
  - » Pancreas
  - » Adrenal Gland
  - » Thyroid Gland
  - » Pituitary Gland
  - » Pineal Gland
  - » Ovaries
  - » Testes
- Immune system/ Lymphatic Systems
  - » Bone marrow
  - » Thymus
  - » Spleen
  - » Lymph nodes
- Muscular system: Types of muscles includes:
  - » Skeletal muscle
  - » Smooth muscle
  - » Cardiac muscle
- Major organs of nervous system :
  - » Brain
  - » Spine
  - » Nerves
  - » The Eyes

- Reproductive system

  The female reproductive composed of:

  » Ovaries

  » Fallopian tubes

  » Uterus

  » Cervix

  » Vagina

  The male reproductive organs are:

  » Scrotum

  » Testis

  » Spermatic ducts

  » Sex glands

  » Penis

- Main Organs of Respiratory system:

  » Mouth and nose

  » Trachea (windpipe)

  » Lungs

  » Diaphragm

- Skeletal system:

  Main function of skeletal system includes:

  » Providing support for muscles, tendons and our internal organs.

  » Allowing the body to move.

  » Protecting organs, including the brain, heart and lungs.

  » Producing blood cells.

  » Storing minerals, such as calcium.

- The main organs of Urinary system:

  » Kidneys

  » Ureters

  » Bladder

  » Urethra

Exercise

1. Describe the basic human body shape and structures.

   .....

   .....

2. Describe the working of the nervous system.

   .....

   .....

3. List the different organs that form the circulatory system

   .....

   .....

4. How does the digestive system work? Explain with the help of a diagram.

   .....

   .....

Notes

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4. Body Mechanics

Unit 4.1 - Body Mechanics

HSS/N5134

Key Learning Outcomes

At the end of the unit, you will be able to:

- Learn the kinetics of joints and movements.
- Learn mechanisms that affect movements in human body.
- Understand general principles of movements.
- Understand the process and precaution to be taken care of while transferring the patient.

UNIT 4.1: Body Mechanics

Unit Objectives

At the end of the unit, you will be able to:

- Understand the rules and importance of body mechanics.
- Move patient safely.

4.1.1 Body Mechanics

Patient Care requires the Covid Frontline Worker (Basic Care Support)'s to bend their backs, flex their arms and legs and strain their body while handling the patients. Covid Frontline Worker (Basic Care Support)'s are, hence, at a risk of straining themselves physically and developing spinal injuries. They can prevent these problems from occurring by practicing body movements known as body mechanics. This is a term used for the efforts made by our body in coordination with the muscles, bones and nervous system.

Rules

The rules that should be followed when transferring/moving patients:

- The base of your back should always be kept in its normal position.
- Move as near to the patient's bed as possible.
- Do not twist your body.
- Set the feet to provide a comfortable and firm wide support when lifting.
- The abdominal muscles should be contracted.
- Keep your head upright and shoulders straight.
- Push up from the knees.

Importance

Body mechanics are important as they protect the Covid Frontline Worker (Basic Care Support)s from the following:

- Musculoskeletal strain
- Injuries to self
- Injury to patients
- Tiredness

The various principles for body mechanics are:

Stable Center of Gravity

- Keep a steady centre of gravity to ensure even distribution of weight
- The centre of gravity should be low.
- Greater balance is met with a low centre of gravity.
- Flex your knees and keep your body straight rather than bending.

Wide Base of Support

- Maintain a wide base of support
- Having a wide base of support gives your body more stability.
- Spread your feet apart to a reasonable distance.
- Flex your knees to position the centre of gravity closer to the base.

Proper Body Alignment

- Body alignment refers to the way the joints, tendons, ligaments and muscles are arranged when initiating a position.
- A line of gravity passing through your base of support maintains your balance.
- Balance in upper and lower body parts would reduce risks of having back injury.
- When you're stronger muscle (groups) are involved, greater amount of work can be safely done.
- Keep the back upright.

4.1.2 Moving Patient

To properly move patients using proper body mechanics, perform the following:

Pushing

- Be close to the patient.
- Position one foot in front of the other.
- Position the hands on the patient, bend your elbows and lean to the patient.
- Position the weight from your flexor to the extensor portions of your legs.
- Apply pressure with the use of your leg muscles.
- To prevent fatigue, keep using alternate rest

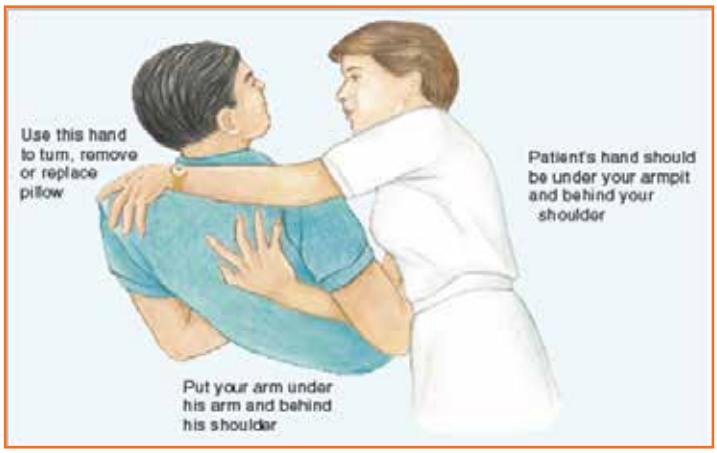

Fig.4.1.1: Moving Patient

Pulling

- Stay close to the patient being pulled.
- Place one foot in front of the other.
- Hold the patient, flex elbows and lean your body away from the patient.
- Shift your weight away from the patient.
- Avoid any unnecessary movements.
- To prevent fatigue, provide alternate rest periods.

Lifting and Carrying

- Be on a squat position facing the subject.
- Hold the subject and tighten your centre of gravity.
- Use your dominant leg muscles when lifting.
- Hold the subject at waist height and close to the centre of gravity.
- Keep your back erect.

Fig.4.1.2: Lifting Objects

Tips

- Never lift more than you can comfortably handle.
- Create a base of support by standing with your feet 8–12" (shoulder width) apart with one foot a half-step ahead of the other.
- DO NOT let your back do the heavy work—USE YOUR LEGS. (The back muscles are not your strongest muscles.)
- If the bed is low, put one foot on a footstool. This relieves pressure on your lower back.
- Consider using a support belt for your back.

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5. Positioning/ Transferring/Mobility of Patients

Unit 5.1 - Positioning/ Transferring/ Mobility of Patients

HSS/N5134

Key Learning Outcomes

At the end of the unit, you will be able to:

- Describe importance of positioning for a patient in treatment and recovery.
- Introduction to various types of position.
- Learn various kinds of means available for transferring patients.
- Describe care to be taken while transferring patient.
- Understand usage of Wheel chair, stretcher, shifting of patient from bed to stretcher, stretcher to Operation Theatre table Etc., and in special situations.
- Understand the importance of physical moments for well being.
- Describe usage of modes used for mobility and their maintenance.
- Describe care while patient is walking or using assisted devices.

UNIT 5.1: Positioning/Transferring/Mobility of Patients

Unit Objectives

At the end of the unit, you will be able to:

- Describe importance of positioning for a patient in treatment and recovery
- Introduction to various types of position
- Learn various kinds of means available for transferring patients
- Describe care to be taken while transferring patient
- Understand usage of Wheel chair, stretcher, shifting of patient from bed to stretcher, stretcher to Operation Theatre table Etc., and in special situations
- Understand importance of physical moments for well being.
- Describe usage of modes used for mobility and their maintenance

5.1.1 Overview

All patients who arrive at the hospital may not be in a position to walk. Such patients need to be transported, right from the ambulance to the hospital ward, from the stretcher to the bed, from wheel chair to bed and vice versa in each case. While transporting patients, you must exercise extreme care. Remember the patient is unwell. You must keep the comfort of the patient foremost in your mind and adopt the correct procedure while transportation.

Transporting patients from ambulance to hospital ward

When a patient is admitted into the hospital, you need to assist the patient while moving from one point to another right from the time of entry.

5.1.2 Arrangements for Patient Transfer from the Ambulance

You must follow the following steps for easy and convenient transfer of the patient to the hospital wards.

- Learn from the nurse in charge, the method of transfer before the ambulance arrives. Get the necessary vehicle - wheel chair, stretcher or bed - ready.
- Confirm which unit or ward the patient has to be transferred to. Check if it is ready.
- Check if any equipment such as medication, oxygen supply has to be transferred with the patient.
- Ensure that at least two other COVID Frontline Worker (Basic Care Support)s are ready to assist you, if the transfer needs to be done on a stretcher.
- Once the ambulance arrives, coordinate with the ambulance team and gather all the equipment needed for the transfer.
- Arrange for a stretcher or a wheelchair based on the condition of the patient.
- Carry all the medical charts and reports along with the patient into the ward and hand them over to the nurse.

5.1.2.1 Transferring Patient Using a Stretcher

The stretcher is used for patients who are often too sick to transfer themselves in and out of the ambulance to the ward bed.

The patient in the ambulance is transferred in a lying down position on the ambulance stretcher bed. The steps involved in the transfer of a patient using a stretcher are as follows:

Fig.5.1.1: Transferring Patient Using a Stretcher

- **Step 1:** Adjust the height of the stretcher to your waist level, so that you are not bending while transferring the patient.
- **Step 2:** Align the stretcher with the ambulance bed. With the help of the ambulance team and COVID Frontline Worker (Basic Care Support)s, move the patient to the side of the bed by rolling him or her towards you.
- **Step 3:** Support the patient at the shoulders and buttocks area, to transfer from the ambulance bed to a stretcher.
- **Step 4:** Transfer the patient on the stretcher that has wheels and carefully guide the stretcher towards the appointed ward.
- **Step 5:** Ensure that the attachments to the ambulance bed are also smoothly transferred along with the patient.
- **Step 6:** Hand over the belongings and the patient medical charts, if any, to the nurse once you enter the ward.

Stretcher and its parts

The stretcher is a critical component of the hospital system. It is a medical equipment used to carry patients who have difficulty in movement from one place to another. It also serves as a hospital bed that can be moved from one ward to another. A stretcher is generally handled by two persons, one at the head end and the other at the feet end. The patient is transferred to the stretcher and then is lifted or wheeled away. Stretchers have to be utilized if a person is incapable of walking or if wheelchairs or similar devices cannot be used. Most modern stretchers have straps for the safety of the patients.

Fig.5.1.2: Stretcher and its parts

The different parts of a stretcher are:

1. **Stretcher bed:** The stretcher bed is a flat area with a thin mattress on which the patient is placed.
2. **Handle bars:** The handle bar is located on one side of the stretcher and is used by the assistant to hold and push the stretcher.
3. **Side rails:** The side rails of the stretcher prevent the patient from falling off the side and ensure the safety of the patient.
4. **Wheels:** The stretchers are provided with wheels with rubber covering for smooth movement.
5. **Wheel locks:** Wheel locks prevent the movement of the stretcher while the patient is transferred.

6. **Attachments:** The stretcher also has provisions for attachment of medication drips and carrying the support systems needed by the patient.

The components of the stretcher vary from place to place. As a Covid Frontline Worker (Basic Care Support) you should be aware of the form and function of the stretcher that you will be using in your hospital.

5.1.2.2 Transferring Patient Using a Wheelchair

If the patient is able to move on his or her own, then you can use a wheelchair for transferring the patient into the ward. Before the ambulance arrives, keep the wheelchair ready for use. The steps involved in the transfer of a patient using a wheelchair are as follows

- **Step 1:** With the help of the ambulance team, align the wheelchair with the ambulance bed.
- **Step 2:** Assist the patient in stepping out of the ambulance.
- **Step 3:** Carefully transfer the patient to the wheelchair. Ensure that the patient is comfortably seated in the wheelchair.
- **Step 4:** Collect the belongings of the patient and place them on the patient.
- **Step 5:** In case the patient has been attached with a medication drip, ensure that the drip is also moved with the patient during the transfer.
- **Step 6:** While transferring the patient on the wheelchair, lock the wheels of the chair.
- **Step 7:** Transfer the patient smoothly without any jerks while moving the wheelchair. Do not rush the patient into the ward.

Transferring a patient from the ambulance to the ward is a team effort. You should be ready with a plan of transfer for each patient. You should be prepared to plan and coordinate for the smooth transfer of the patient from the ambulance to the ward.

Parts of a Wheelchair

Patients who are too weak to walk on their own, use a wheelchair. The different components of the wheelchair are designed to facilitate easy and comfortable movement of the patients. The components of the wheelchair are:

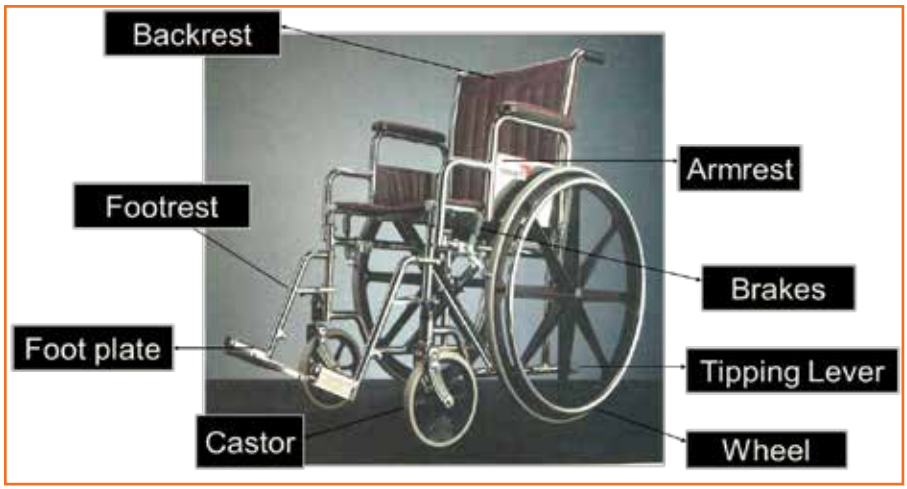


Fig.5.1.3: Wheelchair and its parts

Seat: It is made of metal or vinyl plastic. It is the basic component on which the patient rests during movement from one point to another. Foot rest - The patient can rest his legs on the foot rest. It is a small platform-like component which is attached to the seat of the wheelchair.

Arm rests: The seat is attached with two arm rests which the patient can hold for support. Sometimes the arm rest is covered with padding so that the patient can rest his/her arms on it.

Wheels: The wheels enable the wheelchair to move. There are two pairs of wheels. The front wheels are small in size and are located under the foot rest. The rear wheels are large wheels that are attached to the seat at the back.

Metal skirts: The metal skirts are present on the rear wheels and are used by the patient for changing the direction of movement. In addition to these core components, there are other components such as:

- Wheel locks to prevent movement of the wheelchair, especially while transferring the patient into the wheelchair.
- Brakes to control and bring the motion to a stop.
- Push bars are present on the back rest of the seat, used to move the wheel chair. An assistant must hold the push bars and push the wheelchair forward to make it move. An assistant can also pull the push bars backward in order to make the wheelchair go backwards.

If the patient cannot use at least one leg, you will need to use a lift to transfer the patient.

- **Step 1:** Keep the bed at the minimum level.
- **Step 2:** Place the wheelchair adjacent to the bed so that the patient's healthy side is facing towards the bed.
- **Step 3:** Lock the brakes of the wheelchair and take out the feet from the foot rests.
- **Step 4:** Swivel the foot rests or take them away from the wheelchair.
- **Step 5:** Explain the procedure which was used to lift and swivel the patient into the wheelchair. For example, at the count of 3, I am going to assist you to get up, turn to your strong side and get in the wheelchair. In the above image the patient can be seen using the right side to get into a wheelchair.

Fig.5.1.4: Moving patient to wheelchair

- **Step 6:** Move the patient's such that the feet come in firm contact with the floor.
- **Step 7:** If required, help can be provided to block the person's knees for added support to bear the weight
- **Step 8:** Balance the patient's feet with your feet to avoid slipping.
- **Step 9:** With the help of your leg muscles, get up and lift the patient upwards in a gradual steady motion.
- **Step 10:** Place the patient on the bed
- **Step 11:** Help in lifting the person's legs onto the bed.
- **Step 12:** Ensure that the patient is comfortable.

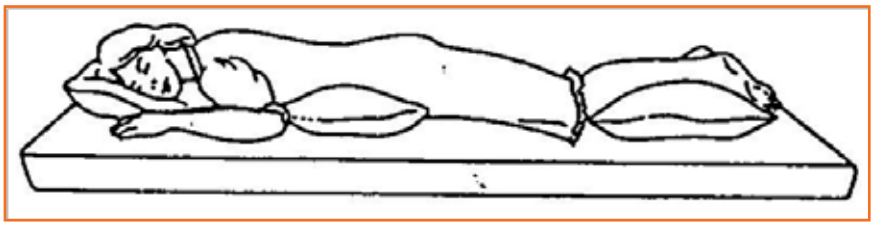
5.1.3 Patient Position

Bed rest, ordered by the medical officer, is also a very essential part of the patient's treatment.

In case the patient is incapable of moving, he must be shifted and repositioned after every two hours at the minimum. This should be done both day and night. If the patient is capable of moving himself, he or she must be encouraged to do so with precautions. A Covid Frontline Worker (Basic Care Support) then requires to check if the patient's posture is good.

Several postures should be taken by the patient for relief, support, and proper posture. If a patient hesitates to change a body position due to a sore condition he or she should be warned that not changing the position might cause deformation of a body part.

Prone position: The constant resting position of the head and knees help in limited movement of hip and knee joint. In the prone position, place the patient flat on the abdomen with legs outstretched. The feet should be over the side of the mattress with the toes pointing.



Supine Position: In the supine position, place the patient face up, with the hands at the back of the head/neck.

Fig.5.1.6: Supine Position

Lateral recumbent: In the lateral recumbent position, place the patient on their left side and put their right thigh and knee pulled up.

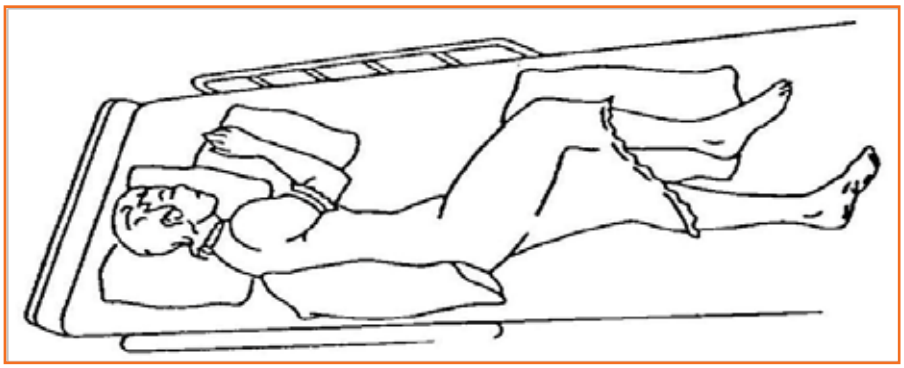


Fig.5.1.7: Lateral recumbent

Fowler's position: In half-Fowler's position the patient is in bed, supine position, and the head of the bed is drawn up to about 30 to 45 degrees. In full-Fowler's position the patient is in the same position but the head side of the bed is drawn up to 90 degrees.

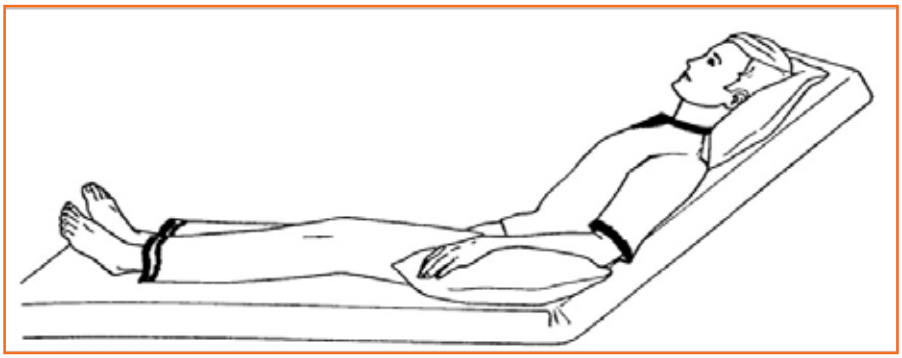


Fig.5.1.8: Fowler's position

Dorsal Recumbent: Patient laying on back with knees bent and feet flat on the examination table.

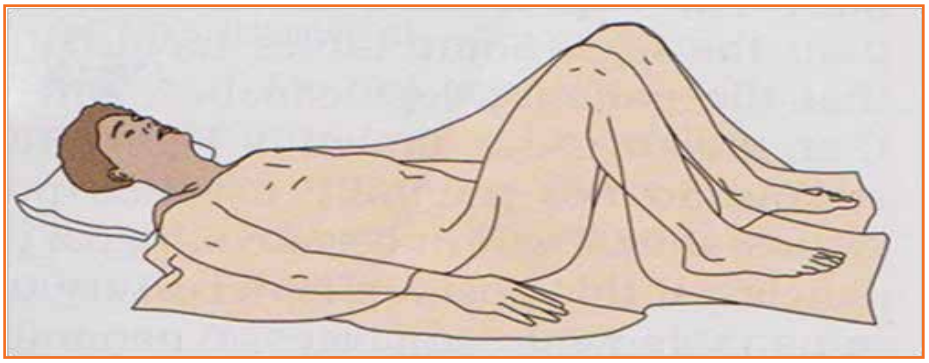


Fig.5.1.9: Dorsal Recumbent

Lithotomy: Patient laying on back with knees bent, thighs apart, and feet in stirrups

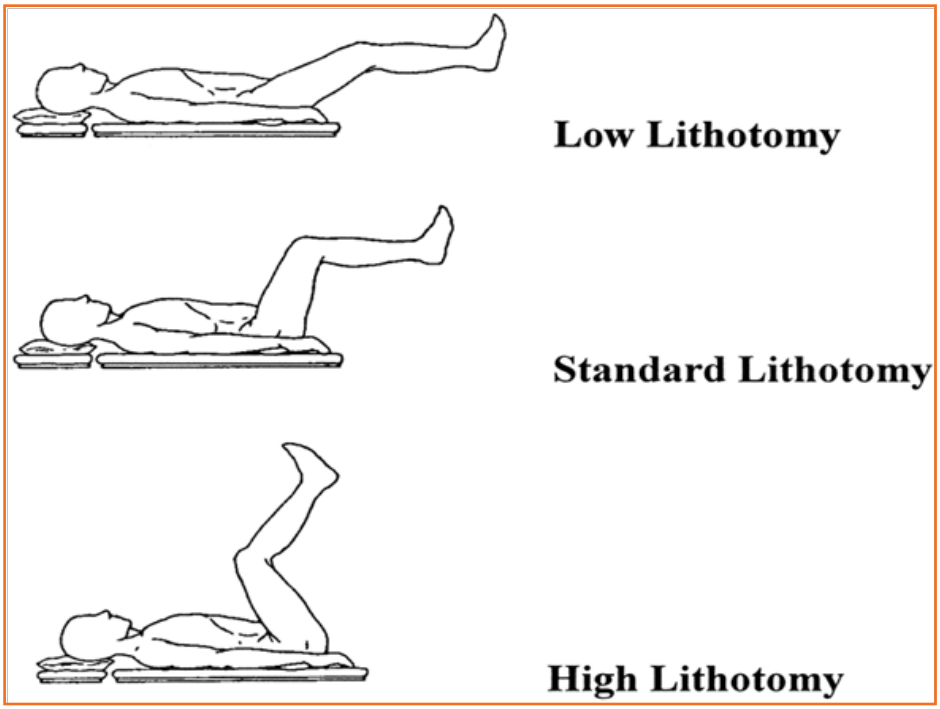


Fig.5.1.10: Lithotomy

Sims' (aka Left Lateral Position): Patient lying on left side with left arm behind back, right hip and knee flexed.

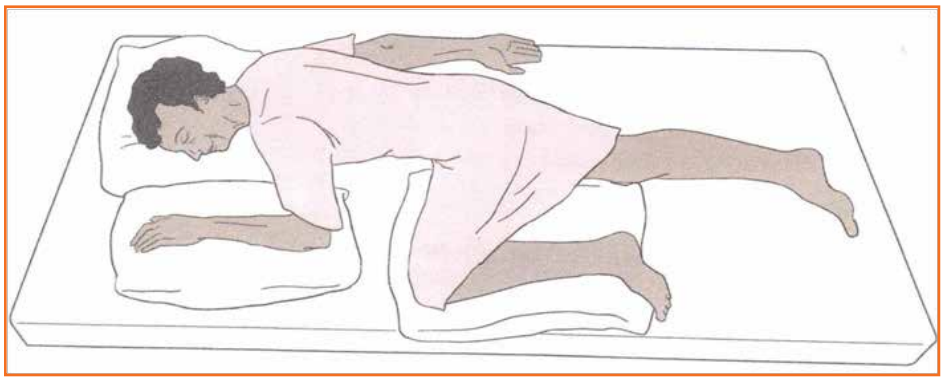


Fig.5.1.11: Sims'

Trendelenburg: Patient lies supine at angle with head lower than trunk, knees bent

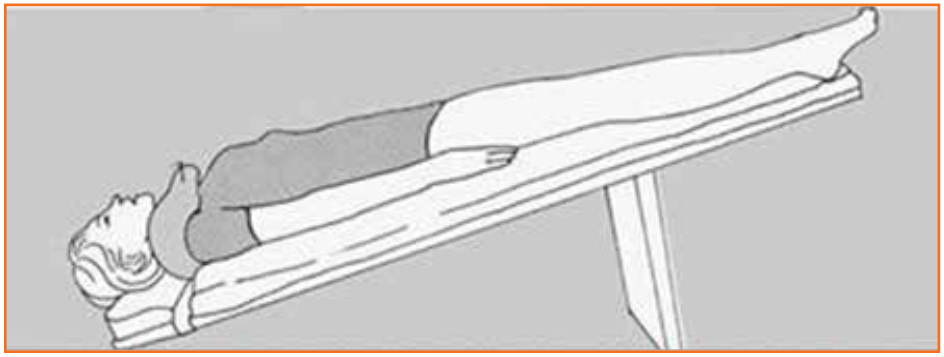


Fig.5.1.12: Trendelenburg

5.1.4 Transferring Patient from Stretcher to the Bed

A patient is often carried into the ward on a stretcher. The patient needs to be carefully and safely transferred from the stretcher onto the bed. This process is very important because while transferring, the patient should not suffer any injury or pain. Also, the medical condition of the patient must also be kept in mind while doing it. There are certain steps you must follow to safely transfer the patient from the stretcher to the bed:

- **Step 1:** Before transferring a patient from the stretcher to the bed, report to the nurse about the transfer of the patient into the ward.
- **Step 2:** Ensure that there are at least two other COVID Frontline Worker (Basic Care Support)s to help you when the patient is transferred to the bed.
- **Step 3:** Place the stretcher close to the side of the bed. Ensure that both the bed and the stretcher are stabilized or locked before moving the patient. You can use the lock of the stretcher and the hospital bed in order to prevent the stretcher or bed from moving.
- **Step 4:** Lower any side rails present.
- **Step 5:** Roll the patient gently to a side and place a sheet on the stretcher. Roll back the patient onto the sheet.

- **Step 6:** Ask the other assistants to hold the sheet from the remaining sides.
- **Step 7:** Gently lift the patient with the sheet and shift the patient onto the bed.
- **Step 8:** Place the patient comfortably on the bed. Raise the side rails to prevent the patient from falling off the bed.

5.1.5 Transferring the Patient from a Bed to the Stretcher

During the stay in the hospital a patient may have to be moved from one ward to the other for various procedures. For example, before you transfer the patient, you must plan the procedure by collecting information about the patient's medical history and condition from the nurse. The steps involved are:

Fig.5.1.13: Transferring Patient Bed to Stretcher

- **Step 1:** Ensure that there are at least two other COVID Frontline Worker (Basic Care Support)s to help you when the patient is transferred from the bed to the stretcher.
- **Step 2:** Place the stretcher close to the side of the bed. As the assistant in charge, ensure that both the bed and the stretchers are stabilized or locked before moving the patient.
- **Step 3:** Lower side rails, if present.
- **Step 4:** Roll the patient gently to a side and place a sheet on the bed. Roll back the patient on the sheet.
- **Step 5:** Get on to the patient's bed and hold the sheet from one side. Ask the other assistants to hold the sheet from the sides.
- **Step 6:** Gently lift the patient with the sheet and shift the patient onto the stretcher. Get down from the bed.
- **Step 7:** Place the patient comfortably on the stretcher.
- **Step 8:** Move the equipment attached to the patient along with the patient.
- **Step 9:** Remove the wheel locks of the stretcher and move the stretcher gently.
- **Step 10:** Place the medical records along with the patient while moving the stretcher.

8.1.6 Ambulation/Movement

- Before assisting patients out of bed and helping them walk, it is important to determine the level of assistance each patient requires. This varies with each patient's health status and the length of time the patient has been inactive.
- For patients who are ill or recovering from surgery, provide a simple "assist." It can involve just walking alongside the patient or using a gait belt for additional stability. Patients who need more than that, offer an assistive device such as a cane, a walker, or crutches, etc.
- Patients who have been immobile or on bed rest often experience vertigo and orthostatic hypotension the first few times they sit up in bed or try to stand. Therefore, it is often beneficial to break the ambulatory process into stages to ensure safety.

- Begin the process by making the patient sit up in bed for a few minutes and if they feel fine then ask them to hang their legs at the side of the bed. If they are still feeling fine then ask them to stand while giving support and then the next step is ambulation.
- If a patient becomes weak or dizzy during ambulation and begins to fall, it is important to protect both yourself and them from injury. Instead of trying to hold the patient up or catch them, help ease her gently to the floor.

Fig.5.1.14: Moving a patients

5.1.6.1 Equipment Used for Ambulation

Gait Belt: With a gait belt used for transferring a patient, grasp the belt with both hands. Ensure you walk slowly and make the patient to set the pace of the walk. Ideally, one of your hands should hold the back of the belt and the other hand should be placed below the front side of the belt. It is best to be on the patient's weaker side and keep asking the patient to use the strong arm and take support from a handrail, if possible.

Fig.5.1.15: Using Gail Belt

Fig.5.1.16: Walker

Walkers: Used for patients who have difficulty in walking and need support. The ideal height of the walker should be such that the patient is standing straight, elbows slightly bent. If using a walker without wheels, then ensure that the patient's feet are not moving.

Canes: These are used by patients who have weakness and need slight support for walking. Canes should always be used on the patient's stronger side to ensure correct balance of the weight between the cane and the patient's weaker side. The ideal height of the cane should be such that the patient's elbow is slightly flexed when walking. Three-point and four-point canes provide more support than single tip.

Fig.5.1.17: Canes

Fig.5.1.18: Brace

Brace: This is used for the patient who needs specific support for a weakened muscle or joint. Before the patient uses a brace, check for loose screws or bolts and report to the supervisor/nurse.

5.1.7 Role of a COVID Frontline Worker (Basic Care Support) While Transporting Patient

- When you use a stretcher, you must understand the condition of the patient before planning the process of transfer.
- Ask the nurse of the patient about the need for transfer of the patient. Learn about the condition of the patient to plan a safe technique of transfer.
- In many cases, some parts of the patient's body may be broken, hurt or very weak. You should know about those areas and ensure that those areas are not affected when the transfer is carried out.
- The patient might be provided with medication and support for breathing. In such cases the support equipment must also be carefully moved along with the patient.
- Experienced staff should accompany the patient during the transfer and appropriate documentation and equipment should be available.
- The receiving ward should also be prepared for the patient. Ensure that you organize the facilities that are required for the transfer.

5.1.8 Transferring Patient from Bed to Wheelchair

There are many ways of transferring the patient to the wheelchair from the bed. But you have to use the safe and most comfortable way for the patient. Before you start the procedure, collect information about the patient's condition from the nurse.

- **Step 1:** Ensure that patient is comfortably seated on the bed. Roll the patient to one side and place a belt around the patient.
- **Step 2:** Hold the patient from the waist and move the patient close to your body.
- **Step 3:** Now get into a standing position with the patient and gently move the patient close to you
- **Step 4:** Place the patient on the edge of the seat on the wheelchair and rock the patient into the chair. Ensure that wheels are locked to prevent movement of the wheelchair.
- **Step 5:** Instruct the patient to use the arm rests for support.
- **Step 6:** Place the feet of the patient on the footrest of the wheelchair.
- **Step 7:** Remove the wheel locks of the wheelchair and move the wheelchair gently to the ward that the patient has to be moved into.
- **Step 8:** Place the medical records on the patient while moving the wheelchair.

General Precautions to be Taken While Transferring a Patient

Some patients walk into the hospital by themselves, while others are brought in an ambulance. This depends on the medical condition of the patients. As a COVID Frontline Worker (Basic Care Support), you must be prepared for facilitating these movements of the patient by consistently coordinating with the workforce in the hospital. There are few steps you must keep in mind while transporting the patient:

- While shifting a patient from the ambulance to the ward, you must understand the condition of the patient and coordinate the process of transfer with other COVID Frontline Worker (Basic Care Support)s.
- You should collect all details of the patient from the nurse before planning the transfer.
- The transport procedures involve the use of varied equipment such as wheelchairs and stretchers.
- You should be aware of the usage of these equipment and take necessary precautions while handling them.
- You should take certain precautions with respect to the physical condition of the patient and also take some protective measures to prevent any undue physical strain on yourself.

5.1.9 Safety Measures in Handling Equipment

The basic equipments used in the transport of the patient are the stretcher and the wheelchair. While using these equipments, you must keep a few points in mind:

- While using a stretcher or a wheelchair ensure that the wheels of the equipment are locked. This will prevent any inappropriate movement while the patient is being transferred.
- If the stretcher is provided with side rails, ensure that side rails are lowered before the transfer and raised back into the place once the transfer is done.
- Ensure that the stretcher bed is rigid enough to support the patients, especially in case of patients with a weak back.

- While moving the stretcher or the wheelchair take care while you move the patient on uneven ground. Do not rush the movement.
- Do not stop or start moving the wheelchair or the stretcher with a jerk. Initiate or stop the movement smoothly.
- The medication equipment such as the drip or the breathing support system attached to the patient should be stabilized with the stretcher or the wheelchair.

Safety Measures While Handling the Patient

- The most important precaution that you need to take while handling the patient is getting all the information about the condition of the patient.
- You must understand the painful areas of the patient and be sensitive to the movements of those areas while transferring the patient.
- When you use a blanket for lifting the patient, lift the patient gently with the help of other assistants, holding the blanket gently.
- Do not hold and lift the patients by their armpits whereas lift them from a wheelchair. Always use a belt that can be used to hold the patient in position.
- You should also avoid undue strain on yourself when you lift the patient. Do not take the burden of the patient's weight onto you're back.
- Always use the powerful muscle of your legs, thighs and the arms in lifting and moving the patients.
- In order to avoid undue strain on your back while using the transfer equipment, adjust the height of the equipment to the level of your waist.
- Hold the patient as closely as possible to your body. Do not let the patient slip or roll away. Always slide the patient gently into the wheelchair or the stretcher.

5.1.10 Fall Prevention

Patient falls are serious problems in hospitals and are used as a standard measure of quality. Unfamiliar environment, severe illness, surgery, bed rest, medicines, treatments and the placement of various tubes/ catheters may result in falls in hospitals.

Falls are shocking for patients, family members, and care givers. A fall may result in a fear of falling again that can lead to a downward spiral of reduced mobility, loss of function and further risk for falls.

The linkage from nursing assessment of fall risk, to risk communication of care team members, to tailored interventions to prevent falls is yet to be established. The goal of the Fall TIPS research study is to establish this link.

Preliminary findings from patient interviews completed for the Fall TIPS research study suggest that many patient falls in hospitals can be prevented if patients wait for help to get out of bed.

Skills Practical: Role Play

Transporting Patient

1. In groups of four prepare a role play around transporting the patient using a wheelchair and stretcher.

Tips

- Mobility of patient is done through:
  - » Ambulance
  - » Stretcher
  - » Wheelchair
  - » Stretcher to the Bed
  - » Bed to Stretchers
- Aquire all the important information regarding the patients condition before transferring them.
- Be sensitive to the movements of the painful areas of patient while transferring.
- Do not hold and lift patients by their armpits while lifting them from a wheelchair.
- Avoid undue restrain on your back while using the transfer equipment.
- Hold the patient closely to your body and do not let the patient slip or roll away.

Exercise

1. List the arrangements that you should make before transferring the patient.

   .....

   .....

2. What is a stretcher? List its parts.

   .....

   .....

3. List the parts of a wheelchair.

   .....

   .....

4. Write the steps to transfer patient between wheelchair and bed.

   .....

   .....

5. List the precautions you must take while transporting patients.

   .....

   .....

Notes

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6. Consent, Documentation & Records

Unit 6.1 - Consent and Reporting

HSS/N5134

Key Learning Outcomes

At the end of the unit, you will be able to:

1. Understand guidelines for documentation.
2. Learn various types of records of importance for Patient Care Assistant.
3. Understand the use and importance of records and consent taking.
4. Understand abbreviations and symbols.
5. Enter, transcribe, record, store, or maintain information in written or electronic/magnetic form.

UNIT 6.1: Consent and Reporting

Unit Objectives

At the end of the unit, you will be able to:

- Explain importance of observing and reporting the conditions of the patient as well as taking consent while assisting the patient
- Explain the importance of verbal information to the doctor in charge
- Explain the importance and guidelines for documentation of different observations and informed consent of the patient.
- Understand uses and importance of various records in healthcare set up & how to obtain information from them at the time of follow up or during research activities

6.1.1 Consent

It is a principle that an individual must give permission before receiving any kind of medical care or check-up. This should done as per an initial explanation by a clinician. Consent is needed from a patient's side irrespective of the type of treatment required. Medical ethics and the international human rights law include the principle of consent as its vital component.

The consent can be provided in two ways. They are:

1. **In a verbal manner:** for example, by telling that they are fine with having an X-ray done.
2. **In a written form:** for example, by filling and signing a consent form for a surgical procedure.

A consent can be considered to be credible if it is voluntary and informed, and the person who is consenting should have decision making capacity. These can be further explained as follows:

- **Voluntary:** The person who requires treatment should give the consent on his own free will without any pressure or influence by the medical personnel, friends or family.
- **Informed:** The medical staff should provide all essential information to the person which includes the advantages and risks involved, alternative treatments and the outcome of avoiding the prescribed treatment.
- **Capacity:** The person should have the capacity to assimilate all the provided information and analyse it to take a well informed decision.

The healthcare personnel who are treating the patient directly should get the required consent. For example, the nurse organizing a blood test for diabetes or a surgeon preparing for an operation.

If a patient has been advised to get a major surgery done, then his or her consent should be taken well in advance. This will give the patient sufficient time to think about all the provided information related to the surgery, put queries and take back the consent, if desired.

Adults can give consent on their own but in the case of a child, parents need to do the needful.

When consent is not necessary

There are a few exceptions when treatment can be carried out without consent. For example, it consent can be avoided if:

Treatment is needed in an emergency, and the person is unable to give consent because they lack the capacity to do so.

A person with a severe mental health condition such as schizophrenia, bipolar disorder , multi-personality disorder or dementia lacks the capacity to consent to the treatment of their mental. However, in these cases, treatment for unrelated physical conditions still requires consent, which the patient may be able to provide, despite their mental illness.

Fig.6.1.1: Consent

6.1.2 Reporting and Documentation

Clear and accurate documentation is important as it provides a summary of the assessment, on-going care and education of the person with diabetes. It provides a method of communicating details about the care with other professionals as well as being a potential form of evidence if there is a legal case.

Documentation refers to all forms of documentation that has been recorded in a professional capacity. Precise documentation and record keeping are a basic part of clinical practice as they show a clinician's accountability as well as provide a record of their professional practice.

Effective documentation should be:

- Clear, concise and accurate.
- Contemporaneous with the events recorded in chronological order.
- Complete
- Comprehensive
- Collaborative and person-centred.
- Confidential

Documentation can be made up of:

- Written and electronic health records including email and faxes.
- Audio and video tapes.
- Images such as photographs and diagrams.
- Observation charts and checklists.
- Incident reports.
- Clinical anecdotal notes or personal reflections.

Documentation should be able to demonstrate:

- A full report of the clinical assessment, the care provided and future care planning information related to the person's condition and any interventions/actions taken to achieve health outcomes.
- Proof that the clinicians have done their duty of giving care and have taken appropriate actions to render the topmost standard of care.
- A record of all communications with relevant health professionals.

INDIAN JOURNAL OF MEDICAL RESEARCH

PATIENT CONSENT FORM

(For Clinical Images)

Manuscript Ref. No.:

Patient's Registration number:

Title of manuscript:

Name of authors (Only two):

Corresponding author:
(With E mail)

To be signed by the patient

I hereby give my consent for image(s) and clinical information related to me to be reported in the *Indian Journal of Medical Research* (both in print and electric edition).

I understand that my name and identity will be concealed.

Once signed, I cannot revoke my consent.

Name of patient:

Date of Birth (DD/MM/YY):

Signature of patient (or signature of the person giving consent on behalf of the patient):

Relationship to the patient in case of other person signing the consent:

Address:

Date:

Fig.6.1.2: Sample patient Consent Form

6.1.3 Medical Record Documentation

Medical records are to be accurate, well documented and kept safely as these are also used as legal documentation for the patient.

Medical records:

- Tells the Healthcare team about a patient; the care and treatment rendered to him.
- Gives details about the patient.
- Helps staff in making good decisions related to the patient.
- Helps in analysing whether the care being provided is benefitting the patient or not.

Method of doing the documentation

Documentation of records must be, complete, accurate, regular and timed, and legal.

All the details of everything done and observed by you should be recorded. This includes the care and treatment given to the patient and all observations related to the patient, especially if they are abnormal. If the care is not documented, it was not given. So, if you have performed all the allocated duties, take out the time to document them. If you are proving a bath to your patient and the patient complained of a headache during the bath, you must record both the bath given and the patient's complaint. The nurse should be told about the headache as early as possible. All abnormal observations should be immediately reported to the supervisor/nurse. In addition, it should be put down in the patient's medical record by the nurse.

Nurses generally document the following:

- Baths provided
- Oral care given
- Foot care given
- Hair/nail care given
- Urinary catheter care
- Turning and positioning done
- Food intake
- Fluid intake
- Level of awareness

Tips

- All the observations which are not considered normal are to be documented and reported to the nurse right away.
- Observations must be recorded in a timely manner.
- Do not use pencil or ink that can be erased.
- Keep all medical records in a safe and secure place.
- Medical records are confidential. Do not tell anyone unless they are taking care of the patient.
- Do not use any abbreviation unless they are accepted for use by hospital or nursing home.

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7. Observing and Reporting

Unit 7.1 - Observing and Reporting

HSS/N5134

Key Learning Outcomes

At the end of the unit, you will be able to:

- Understand the importance of observing and reporting to authority for said or unsaid findings, if any.
- Understanding the importance of verbally informing the person in authority.

UNIT 7.1: Observing and Reporting

Unit Objectives

At the end of the unit, you will be able to:

- Understand the importance of observing and reporting to authority for said or unsaid findings, if any.
- Understanding the importance of verbally informing the person in authority.

7.1.1 Observing and Reporting

As a minimum the following information should be documented at an initial appointment:

- Date and time of occurrence of service.
- Relevant history of the illness.
- Relevant physical examination, assessment findings and diagnosis.
- Treatment options and treatment given e.g. clinical observations results of treatment, and
- Medication prescribed
- Diagnostic and therapeutic orders/plan.
- Signature, surname and initials, and designation of the clinician.

Some aspects of the initial assessment can be documented using case notes (see the examples below).

Note: *If an assessment form is used it is still a requirement to make an entry in the case notes. The education delivered and the plan should be documented in the case notes.*

Initial consult – case note entry

Diabetes education assessment note

- Referral source and reason.
- Preferred name and age.
- Type of diabetes.
- Date of diagnosis.
- Current signs and symptoms/issues.

Concerns

- Persons understanding of purpose of the appointment.
- How are they feeling about their diagnosis? Do they have concerns, questions?

Diabetes management

- Management – prior and current (including diabetes medication)
- Previous education.

Psychosocial

- Mental health
- Social: Marital status, employment
- Living arrangements
- Independence level with ADLs
- Cultural considerations
- Social supports/significant others
- Barriers to learning e.g. language, memory deficits, religion.

Relevant medical and surgical history

- Include relevant history including mental health, family history of cardiovascular and / or early death (<60 years).
- Allergies/alerts
- Hearing or visual deficits.

Diabetes complications/cycle of care

- Micro – retinopathy, nephropathy, neuropathy
- Macro – CHD, CVA, PAD
- Oral health and sexual health.

Medications

- Include over the counter and complementary medications.

Anthropometry

- Weight, height, BMI
- Pathology tests e.g. HbA1c/ lipids/eGFR/AER/Liver function
- BP

Foot assessment

- Circulation and sensation
- Self care and footwear

Lifestyle

- Smoking
- Alcohol
- Nutrition
- Physical activity/exercise
- Stress
- Driving

Self-care assessment and education planning (based on risk factors and current need)

- Pathophysiology of type 1/type 2/steroid induced

- Management requirements
- Oral hypoglycaemic agents profile
- Insulin profile
- Healthy eating principles/carbohydrate intake
- Importance of regular activity
- Commencement /update of blood glucose monitoring
- Commencement/update of insulin/check technique
- Complications of diabetes (micro and macro)
- Health checks (cycle of care)
- Coping skills
- Rights and responsibilities
- Decision making/behaviour change

Referrals

- What referrals did you provide (to allied health) or recommend at this appointment?

Resources provided

- What written or other resources did you provide at this appointment?

SMART Goals

S = Specific

M = Measurable

A = Achievable

R = Realistic

T = Time framed

Education plan- Should be used to record what is planned for subsequent appointments.

Subsequent visit

The method used to document education will vary depending on the preferences of the practitioner. However, it is useful to use headings and try to avoid writing in narrative sentences.

Narrative charting can result in a lot of writing, can be time consuming and repetitive. This method of writing case notes is still commonly used but more nurses are now turning to problem oriented approaches, clinical pathways or focus charting.

Guiding principles;

- Document any amendments to education plan
- Document education given
- Document plan for next appointment including Patient goals
- Complete any outstanding assessment areas.

It is important to communicate with the referring doctor after your initial appointment to communicate the education plan and potential education completion date. Consider additional communication if circumstances change or there are concerns. Always communicate when the person discharged from your care.

The Documentation and record keeping cycle of a patient by a healthcare provider is demonstrated in the Fig below (illustrative).

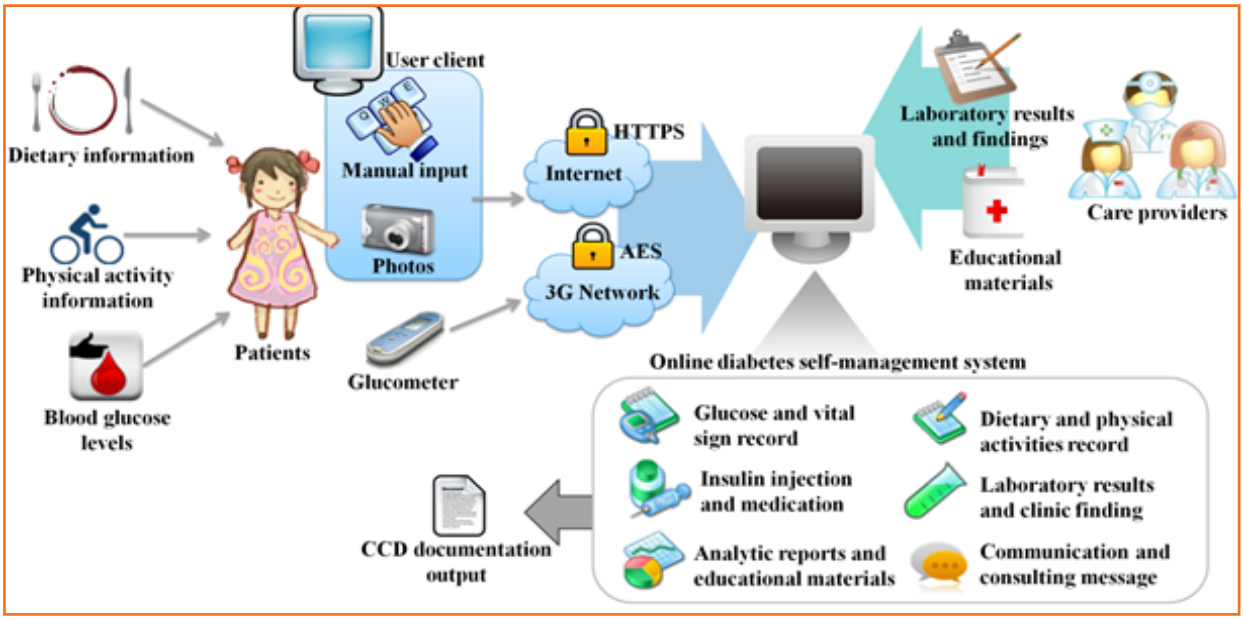

Fig. 7.1.1: Documentation and record keeping cycle of a patient

Tips

- Consent to treatment is the principle that a person must give their permission before they receive any type of medical treatment or examination. It can be given:
  - » Verbally
  - » In writing
- For consent to be valid, it must be voluntary and informed, and the person consenting must have the capacity to make the decision.
- Effective documentation should be:
  - » Clear, concise and accurate
  - » Contemporaneous with the events recorded in chronological order
  - » Complete
  - » Comprehensive
  - » Collaborative and person-centred
  - » Confidential

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8. End of Life Management

Unit 8.1 - End of Life Management

HSS/N5115

Key Learning Outcomes

At the end of the unit, you will be able to:

- Learn Managing last offices.
- Packaging dead bodies in case of non communicable and communicable diseases.

UNIT 8.1: End of Life Management

Unit Objectives

At the end of the unit, you will be able to:

- Carry out last office work in the hospital

8.1.1 Definition of Death

Death affects a person physically, psychologically, emotionally, spiritually, and financially. If the death is abrupt and unexpected, or ongoing and hoped for, there are information and help accessible to address the impact of dying and death.

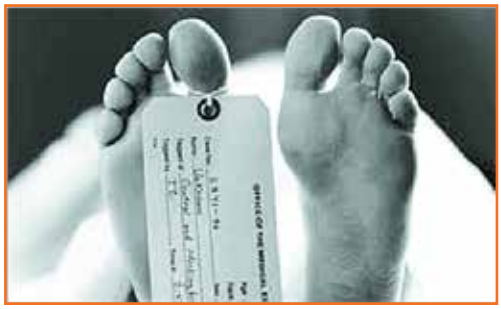

Fig.8.1.1: A Dead Body

Death is defined as:

1. "Cessation of heart-lung function, or of whole brain function, or of higher brain functions."
2. "Either permanent cessation of circulatory and respiratory functions or permanent cessation of all functions of the whole brain, including the brain stem."

8.1.2 Purpose of the Procedure

The purpose of the procedure is to:

- Assist the sufferer in having a comfortable and peaceful death.
- Prevent injury to the body tissues after death.
- Prevent contamination from drainages while the body is being transferred.
- Prevent physical deformities of the body.
- Relieve mental tension of relatives.
- Console distressed relatives.
- Prevent the other patients in the ward from having traumatic experiences.

8.1.3 Signs of Approaching Death

Dying patients exhibit signs of approaching death. These signs can be seen in the form of changes in:

1. **Facial appearance:** Facial muscle relaxes, cheeks become flaccid, facial structure may change, loss of muscle tone and anaemia.
2. **Sight, speech and hearing:** Sight gradually fails; the pupils fail to react to light. Eyes are sunken and half closed and a film appears over the eyes. Speech becomes difficult, confused, unintelligent and finally impossible. Hearing is thought to be retained longer.
3. **The respiratory system:** Respiration becomes irregular, shallow or very slow, and Sertorius due to the presence of secretions.
4. **The circulatory system:** Circulatory changes cause alterations in the temperature, pulse and respiration. Radial pulse gradually fails.
5. **The gastro-intestinal system:** Hiccoughs, nausea, vomiting, abdominal distension are seen. The gag reflex disappears; the patient feels the inability to swallow.
6. **The genitor-urinary system:** Retention of urine, dissention of the bladder, incontinence of urine and stool due to loss of sphincter control.
7. **The skin and muscular-skeletal system:** The skin may become pale, cool and sweat profusely.
8. **The central nervous system:** Reflexes and pain are gradually lost. Patient may be restless due to lack of oxygen and due to raised body temperature, although the body surface is cool.

8.1.4 Care of a Patient Approaching Death Psychological support

There are 5 psychological stages that dying persons pass through. These are:

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

A person approaching death has the following psychological needs: Provide relief from loneliness, fear and depression.

- Maintain security, self confidence and dignity.
- Maintain hope.
- Meet the spiritual needs according to his religious customs.
- Provide a quiet environment.
- Screen the patient's unit to provide privacy.
- If workable, shift the patient to a individual room.
- Position the patient on his side or turn his head to the side to obstruct ambition.
- Remove the blanket to reduce the weight on their body.

- Never leave the patient alone.
- Never say anything near the patient which might hurt them because no one knows how long the power of hearing remains.
- Keep the airways clean by clearing the mucous secretions ratting in the oropharynx with the help of suction.
- Lips and tongue should be moistened with a wet cotton swab. Water should not be poured into the mouth. Perspiration should be wiped away etc.
- Be sympathetic to the patient's relatives and support them at the time of their emotional outbursts and reassure them.

8.1.5 Signs of Clinical Death

The signs of clinical death are as follows:

- Absence of pulse, heart beat and respirations
- Pupils of the eye becoming fixed and non-reactive to light
- Absence of all reflexes.
- Rigor mortis, a stiffening of the body after death, is due to fixation of the muscles. Rigor mortis generally appears in a few hours. Once a person has been annonced dead, his body should be taken care properly.

8.1.6 Procedure for Care of Body After Death

The steps for caring for a body after death are as follows:

- **Step 1:** Ascertain that the death is declared and certified by the doctor on duty. Ensure that the necessary forms are filled and signed by the person concerned.
- **Step 2:** Close the eyes immediately, straighten the arms laid at the sides. Straighten the legs. Any dentures that have been removed are to be replaced and the mouth is to be closed. Support the chin with a jaw bandage. The head should be elevated on a pillow.
- **Step 3:** Keep the body in a normal position. The body should be cared for immediately after death and before rigor mortis develops.
- **Step 4:** The body should be cared for with reverence.
- **Step 5:** Remove all the appliances used for the patient i.e. Ryle's tubes, urinary catheter, oxygen catheters, all comfort devices, blankets, drainage tubes and soiled dressings. Adhesive marks are to be removed.
- **Step 6:** Remove ornaments of any type from the dead body: List and entrust it to a close relative and obtain a receipt for delivery of the same. Any other belongings of the patient that was entrusted at the time of admission should also be checked and entrusted to the relatives.
- **Step 7:** The body is bathed, hair combed and dressed in clean clothes. Pack vagina, rectum and nose with gauze or cotton. A perineal pad and diaper is applied to prevent the escape of urine and stool.
- **Step 8:** Place three identification labels - first on the left wrist, on the chest and over the packed body with details of the name, age, sex, ward, bed no., diagnosis, cause of death, complete address, date and time of death.

- **Step 9:** Place hands over the chest and tie the thumbs and wrists together.
- **Step 10:** Tie the toe and ankles together.
- **Step 11:** Place a clean bed sheet under the body. Fold the top of the sheet over the face and shoulders.
- **Step 12:** Hold the bottom end of the sheet over the feet and then cover the body by folding the sheet from the sides and fixing it with tapes and bandages.
- **Step 13:** Place the 3rd identification tag over the sheet. Cover with another clean sheet.
- **Step 14:** In medico-legal cases the concerned authorities (CM0) should be notified and one extra death certificate is prepared by the doctor and sent to the End of Life / police inspector on duty.
- **Step 15:** If the patient was suffering from an infectious disease, the body should be handled with special care to prevent the spread of infection.
- **Step 16:** Ensure that the due payment is updated and paid. Send one copy of the death certificate to the End of Life, one to the admission office and one with a case sheet.
- **Step 17:** The dead body must be dispatched to the End of Life within half an hour after death through the bed-lift. Enter it in the dispatch book, report book and treatment book.
- **Step 18:** After the body is removed from the ward, the unit should be treated as in case of discharge of the patient i.e. fumigation, carbonisation, disinfection, etc.
- **Step 19:** Make a detailed written record of all the activities undertaken in the nurse's record of the patient and also in the nurse's report book. Record time of respiration stopped and death declared with red ink. Complete the case sheets and make an entry in the dispatch book. Special points to remember.
- **Step 20:** If the relatives want to care for the body, allow them to do so. Be kind, courteous and helpful.
- **Step 21:** The body must be transferred from the ward to the End of Life with great care, within an hour after death.
- **Step 22:** No dead body should be handed over to the relatives from the wards.
- **Step 23:** Inform the relatives that:
  - » The body can stay in the End of Life for 48 hours, after which it will be disposed off.
  - » Arrangements for bathing the body are provided in the End of Life.
  - » Arrangements for a funeral van can be made through the enquiry office on payment.
  - » Death certificate can be obtained from the medical record section on written request.

Tips

- Ascertain that the death is declared and certified by the doctor on duty.
- Ensure that the necessary forms are filled and signed by the person concerned.
- Prevent the contamination from drainages while the body is transferred.
- Relieve the mental tension of the relatives and console them.
- Prevent other patient's in the ward from having traumatic experiences.

Exercise

1. Define death. What is the main purpose of care of dying?

   .....

   .....

2. List articles needed for packing the dead body.

   .....

   .....

3. List 5 psychological stages a dying person passes through.

   .....

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Notes

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9. Patient Basic Care and Needs

Unit 9.1 - Aid in Personal Hygiene

Unit 9.2 - Aid in Daily Activities

Unit 9.3 - Assist in Performing Care Plan

Unit 9.4 - Measuring Parameters

HSS/N5135

Key Learning Outcomes

At the end of the unit, you will be able to:

- Understand the difference of care provided to ill patients, terminally ill, physically challenged and handicapped personnel.
- Develop knowledge for measuring height & weight of patient using instruments.
- Develop an understanding to keep a record of Intake & output of patient.
- Understand the importance of bathing and it's types.
- Enlist points to observe during bathing which need to be reported.
- Understand need for care to private body parts of patient.
- Understand the need of "after bath care" to the patient.
- Develop understanding for Identifying rashes, abrasions, Dryness, changes in colour, pressure areas, temperature, bruise and swelling of skin.
- Identify pressure sores/ bed sores, understand causes for pressure sores (Bed sores).
- Understand the importance of maintaining oral care, skin and nail care.
- Understand the importance of oral care in case of dentures and unconscious patients.

UNIT 9.1: Aid in Personal Hygiene

Unit Objectives

At the end of the unit, you will be able to:

- Help in bathing patients.
- Help in grooming patients.

9.1.1 Help in Bathing Patients

Introduction

Bathing is a common daily task that is necessary for our personal hygiene. Bathing is done to make a patient clean, remove any dust/dirt or any other external agent from the skin, increase blood circulation, promote confidence, reduce body odour and encourage movement.

Fig.9.1.1: Bathing Patients

Importance of Bathing

Bathing is washing and cleaning the body using water and soap. Bathing regularly helps prevent infection. Bathing also, as an activity, relaxes the patient and keeps the patient fresh. It promotes the circulation of blood within the body.

In many cases, however, patients are unable to perform this activity by themselves. It is your duty as a Covid Frontline Worker (Basic Care Support) to facilitate a bath or bathe the patient and help maintain appropriate personal hygiene. You must follow the bathing methods that the nurse or the doctor suggests depending on the condition of the patient.

Common Bathing Techniques

Patients are given a bath according to their needs and medical conditions. Patients, who are able to get up and walk, get a shower or a tub bath; whereas patients who are ill or weak will have a bed bath.

There are three different kinds of bath that are given in a hospital, namely:

- Shower or tub bath
- Full bed bath
- Limited bed bath

A bed bath is given to a patient when a patient cannot move out of bed. A bed bath is given completely on bed.

A partial bed bath is a technique wherein you help the patient in taking a bath close to the bed. It is given to patients who cannot move to use the shower.

A shower or tub bath is a bathing technique that is followed by patients who can maintain personal hygiene by themselves. The patient might use the tub or the shower for taking a bath.

Role of a Covid Frontline Worker (Basic Care Support) in bathing a patient

As a Covid Frontline Worker (Basic Care Support), you have to prepare the patient for the bathing procedure as per instructions given by the doctor. The following arrangements have to be made before starting the procedure:

Procedure for a complete bed bath:

- Set the temperature in the room temperature to keep the patient warm during bathing.
- Draw the curtains or blinds for privacy.
- Get two big bowls of warm water, one for washing and other for rinsing.
- Put a wash cloth in each basin.
- Move the patient gently while washing and rinsing the body.

Procedure for a partial bath:

- Keep two trays of warm water ready to be used by the patients for washing and rinsing.
- Assist the patient with washing the areas that the patient cannot reach, such as the back.
- Give the patient towels and sheets for drying immediately after the bath.
- Move the patient gently while washing and rinsing the body.

Procedure for a self-bath:

- Make sure that the tub or shower appliance is clean.
- Place a non-skid mat on the tub or the shower floor.
- Check the water temperature.
- Assist the patient to the tub or the shower.
- Make sure the patient wears the robe and slippers.
- Help the patient sit on the edge of the tub. Ask the patient to hold a bar for support with one hand.
- Give the patient towels and sheets for cleaning immediately after the bath.

Precautions to be followed while bathing:

- Consult the nurse or the doctor and discuss the method of bathing that must be followed with each patient.
- Consider patients preference and conditions when deciding the type, frequency and time of bath.
- Give importance to patient's privacy needs (e.g. Draw the curtains properly) and encourage the patient to do as much as possible to promote independence.
- Arrange for the bath of the patient by keeping the necessary items in place such as the soap, water and towels for cleaning.
- Make sure that the water that is used is warm. Have the patient test the water. Adjust the temperature, if needed.
- Instruct the patient on the use of taps and bathroom accessories.
- Assist your patient in undressing and put dirty clothing in the plastic bag of the laundry hamper.
- Make sure you don't hurt or injure the patient in anyway while bathing the patient.
- Make sure that water does not enter the wounds of the patient while bathing.
- Stand beside the patient and encourage the patient to perform the activity by themselves. Help the patient to dress up after drying.

- Remove all the wet bed sheets and towels after the bathing procedure is complete.
- Ensure that the area is dry, as wet areas can lead to infection.

Types of bed bath

Cleansing Baths is part of routine patient care for personal hygiene. The kinds of baths are:

1. **Shower:** Ambulatory patients are usually able to take a shower. Patients who are physically hampered can use an easy drying chair inside the shower. The care giver can help the patient with the shower.
2. **Self Help:** If a patient is restricted to the bed, then this bath provides them the required hygiene. The Covid Frontline Worker (Basic Care Support) arranges the bathing equipment and helps in cleaning difficult to reach areas, like back, legs, feet, and external genitalia.
3. **Complete Bed Bath:** The Covid Frontline Worker (Basic Care Support) helps the patients, who are bedridden, with a complete body wash.
4. **Partial Bath:** The Covid Frontline Worker (Basic Care Support) helps in cleaning only those body parts that could cause inconvenience or odour, such as face, hands, and genital areas.

Purpose of the bed bath

The purpose of the bed bath is to:

- Keep the skin clean.
- Make the patient comfortable and fresh.
- Stimulate circulation and thereby increase elimination through the skin.
- Observe the skin for redness, sores, swelling, rashes or other infections and bony prominences for bed sores.
- Improve the patient's self-image and emotional and mental well-being.
- Prevent pressure sores.

Articles needed for giving a bed bath

- Jug of hot and cold water - 2
- Bath towels -2
- Large basin -1
- Linens for bed making
- Screen
- Patient's clothes
- Bowl with clean cotton balls for eye care
- A clean tray containing:
  - » Articles for mouth care
  - » Sponge clothes - 2
  - » Soap and soap dish
  - » Spirit
  - » Talcum powder
  - » Oil

- » Comb
- » Cotton dressing pads – 2
- » Nail cutter
- » Mackintosh with cover
- » Kidney tray and paper bag
- » Gloves (optional)

Perineal Care

Cleansing the external genitalia and the surrounding region is called perineal hygiene. Being warm and moist and lacking ventilation, the perineal region is favourable to the proliferation of pathogenic organisms. The pathogenic organisms are able to enter into the body through the various orifices in this region such as the vaginal orifice, the anus and the urinary meatus. Meticulous cleanliness is mandatory to avoid bad odour and to enhance comfort.

What is Perineal Care

Perineal care involves bathing the genitalia and the surrounding region. Proper inspection and care of the perineal region requires professional clinical assessment. The proper procedure for perineal care is to wash the perineum from the cleanest region to the less clean region. The urethral orifice is supposed to be the cleanest region and the anal orifice is the unclean part.

Importance of perineal care

Perineal care is carried out to:

- Keep cleanliness and prevent infections in the perineal area
- Relieve inflammation and congestion
- Relieve pain
- Stimulate circulation
- Prevent infection and promote healing
- Prevent the spread of infection
- Make the patient comfortable

Indications for Perineal care

Perineal care should be carried out for the following types of patients:

- Patients who are incapable of carrying out self-care
- Patients who are suffering with genitor-urinary tract infections
- Patients who have incontinence of urine and stool
- Patients who are experiencing excessive vaginal discharge
- Patients having indwelling catheters
- Post-partum patients
- Patients who after surgery are on the genitor-urinary system
- Patients having wound, ulcers or surgery in the perineal area

Preliminary Assessment before performing perineal care

Before performing perineal care, a preliminary assessment must be made. You must:

- Analyse the condition of the skin in the perineal region— inspect the area for any itching, drainage, irritation, ulcers and so on.
- Analyse the need and the frequency required for the perineal care
- Analyse whether the perineal care requires an 'aseptic' procedure or a 'clean' procedure.
- If there is a wound, the perineal care should be done according to the aseptic procedure or the 'clean' procedure.
- Check the orders of the physician and any particular instructions.
- Analyse if the patient is capable of self-care.
- Analyse if the patient is mentally fit to follow instructions.
- Check the items available in the unit.

Equipment needed for perineal care

- The equipment needed for perineal care are:
- Gloves (non-sterile)
- Sponge cloth
- Basin with warm water
- Waterproof pad or gauze
- Towel
- Mackintosh
- Soap dish with soap
- Toilet paper
- Bed pan

Procedure for perineal care

Take a look at the steps for carrying out perineal care: 

- **Step 1:** Arrange all the equipment.
- **Step 2:** Explain the procedure to the patient.
- **Step 3:** Perform hand hygiene and wear gloves.
- **Step 4:** Provide privacy to the patient by closing the door or by putting the screen.
- **Step 5:** Position the patient. Uncover the patient's perineal area.
- **Step 6:** Place a mackintosh and towel (or waterproof pad) under the patient's hips.
- **Step 7:** Cleanse the thigh and groin by:
  - » Making a mitt with the sponge cloth.
  - » Cleansing the patient's upper thighs and groin area with soap and water.
  - » Rinsing and drying.

» Washing the genital area.

Proper disposal of urinary wastes

The urinary system of the human body functions as the body's filtering system, wherein it removes all the toxic waste materials along with excess water in the body. The accumulation of wastes, if not removed, may lead to medical complications. You must help the patient in the process of urination. In this chapter, you will learn the importance of waste elimination by urination and the procedure to use the urinal.

Elimination of wastes by urination

The kidneys are the central units of the excretory system. The blood carrying the waste materials enters the kidneys where they are filtered out and removed from the body with excess water in the form of urine. Urine is filled up in the urinary bladder which opens into the genital area through the urethra. When the bladder is full, the patient develops an urge to empty the bladder. If the bladder is not emptied then it can lead to extreme discomfort for the patient. When the patients express the need to empty the bladder, you must immediately facilitate for the same. You must help the patient to the toilet if the patient can walk. If the patient cannot walk, then you must arrange for the equipment for the passage of urine by the bed. The urine output of a patient in a day is critical to understand the functioning of the kidneys. If the kidneys are infected or are not functioning properly then the urine output is low. If the waste materials are not removed by production of urine then they can accumulate within the body leading to severe complications.

Precautions to be taken while assisting in urination

- Once the urine is passed from the body, it should be drained out immediately.
- Urine should not accumulate anywhere in the surroundings of the bed or the room. It can lead to infections with severe complications. You must take proper hygiene measures to prevent infections arising out of urine that is accumulated.
- In case of patients who are able to move, help the patients by keeping the toilet ready to use when they express the need to use. Instruct the patient not to latch the door from inside of the toilet, as you cannot enter the toilet if the patient needs help.
- Maintain the privacy and dignity of the patient.
- In case the patient has passed urine on the bed, gently clean the bed and change the clothes of the patient. Ensure that the patient is not embarrassed.
- Always wear gloves while assisting the patient in urination or while collecting the urine to measure the output.
- Dispose off any urine that is collected into the toilet and ensure that all the equipment is thoroughly cleaned and sanitized.

9.1.1.1 Perform a Body Bath

- **STEP 1:** Wash hands. Assemble all the articles and take them to the bedside after testing the temperature of the water.
- **STEP 2:** Explain the procedure to the patient.
- **STEP 3:** Place a stool at the foot of the bed. Place the articles near the patient, within reach.
- **STEP 4:** Arrange clean linen on the stool in order of use.

- **STEP 5:** Screen the patient.
- **STEP 6:** Check if there is any drought.
- **STEP 7:** Ask the patient if he or she wants a bedpan.
- **STEP 8:** Remove all the top linen and patient's clothes except the sheet or blanket and place one pillow under the head if the patient is uncomfortable.
- **STEP 9:** Position the bath towel below the patient's chin.
- **STEP 10:** Give oral hygiene.
- **STEP 11:** Give eye care to the patient using wet cotton balls from inner to outer canthus.
- **STEP 12:** After checking the temperature of the water, fold a sponge towel around your hand. Wash the patient's face properly with water and then proceed to dry the face with a bath towel.
- **STEP 13:** Take the sponge towel and fold it around your hand. Apply soap. Clean the patient's neck and ears.
- **STEP 14:** Keep the sponge towel in a soap dish. Take a second sponge towel and rinse it in water and wipe off the soap from the neck and ears. Then dry it with the second bath towel.
- **STEP 15:** Spread the mackintosh with cover under the opposite arm. Clean the arm from the distal to the proximal end including the axilla. Use a circular movement, while applying soap.
- **STEP 16:** Wash and dry the arm with the bath towel. Place the basin of water under the patient's hand and allow the patient to rinse their hand in the water and then dry it.
- **STEP 17:** Spread the mackintosh with cover under the other arm and repeat steps no. 14 & 15.
- **STEP 18:** Change the water.
- **STEP 19:** Spread a bath towel over the patient's chest. Fold the top linen at the level of the umbilical area and repeat step no. 14. Use circular movements while applying soap.
- **STEP 20:** Spread the mackintosh with cover under the opposite leg and precede in the same way as in step no 14 & 15.
- **STEP 21:** Spread the mackintosh with cover under the other leg, and proceed in the same as in step no. 14 & 15.
- **STEP 22:** Place the mackintosh and the towel over the bed, then place the basin of water over it, and bend the patient's knees, place one foot in the basin of water, and wash it. Dry the foot with a towel and repeat the procedure for the other foot.
- **STEP 23:** Change the water.

Fig.9.1.2: Removing gown and linen

Fig.9.1.3: Applying soap

Fig.9.1.4: Cover the patient's chest

Fig.9.1.5: Applying soap on back

- **STEP 24:** Turn the patient onto the opposite side. Spread the mackintosh with cover on the patient and tuck it under the patient. Wet the back with water, and apply soap. Then wash and dry the back and buttocks, with special care to the bony prominences. Apply spirit, powder, and remove the bath towel. Then change the water.
- **STEP 25:** Give a wet cotton pad to the patient, and ask them to clean the genitalia. If the patient is unconscious, clean and dry the genitalia with two different cotton pads.
- **STEP 26:** Apply powder to the body.
- **STEP 27:** Put a clean dress on the patient, then comb and set the hair.
- **STEP 28:** Remove and replace the articles.
- **STEP 29:** Be sure to leave the patient feeling comfortable and tidy.
- **STEP 30:** Wash your hands.
- **STEP 31:** Record and report to the ward sister if there is any redness, cracks on the skin, or any abnormality is observed.

Fig.9.1.6: Wearing gloves

Fig.9.1.7: Applying powder to the body

9.1.1.2 Skin Abnormalities

During bathing observe and report any of the following:

- Temperature - hot skin could mean fever; cold skin could mean poor circulation. Sensitivity - pain, tenderness, itching, or burning. Odour - may be caused by sweat secreted by the sweat glands; by abnormal conditions, such as infection or kidney disease; or by bodily discharges (urine, faeces) that need to be cleaned.
- Texture - could be smooth and elastic or dry and rough; nutritional deficiencies can influence skin texture.
- Colour - reddened areas that could indicate pressure, cyanosis (bluish tinge) or jaundice (yellowish tinge).
- Swelling (oedema) - stretched or tight appearing; usually begins in the ankles or legs or any other pendent part; may be associated with injury.
- Skin lesions - rashes, growths, or breaks in the skin.

Fig.9.1.8: Skin Abnormalities

How to take care of the abnormalities

- Inspect the patient's skin carefully for pressure areas at the time of providing a bath or a back massage.
- Wash any areas that are red with soap water, rub with lotion.
- Keep the sheets which are under the patient clean, unrumpled and tight to assist in eliminating skin irritation.
- Ensure proper nutrition and fluid intake for the patient as advised by the physician.
- Ensure that when the patient is incapacitated, urine and faeces are kept off the patient's skin, the skin is washed with soap and water and the buttocks and the genital region are kept dry. A body lotion or powder may be used in the region, depending upon the skin type of the patient.

- Assist obese patients who need help while washing and drying areas under skin folds (groin, buttocks, under breasts, and so forth).
- For patients with very dry skin, various bath oils may be added to the bath water.
  - » Omit the use of soaps because of its drying effect.
  - » Use lotions and oils after the bath.

9.1.1.3 Sitz Bath

A sitz bath is used to wash the perineum region that is the area between the vulva or the scrotum and the rectum. It is a warm, shallow bath which can be used as a part of daily personal hygiene. It can even alleviate pain or itching in the genital region.

Sitz Bath is recommended by a doctor in case a patient:

- Has got surgery done on the vulva or vagina.
- Has lately given birth.
- Has got haemorrhoids removed by a surgical procedure.
- Has pain or irritation due to haemorrhoids.
- Has issues with bowel movements.

Giving patient sitz bath

- Clean the bathtub.
- Set water temperature. Make sure water should be warm not hot.
- Fill the bathtub with 3-4 inches of water
- Mix soothing additives to the water if you wish.
- Soak in the sitz bath. Make sure that the affected area is covered in the warm bath.
- Pat patient dry when finished.

Fig.9.1.9: Giving patient sitz bath

9.1.2 Help Patient in Grooming

Maintaining a patient's hygiene is one of the most important duties of a Covid Frontline Worker (Basic Care Support). Grooming helps meet patients' basic cleanliness needs as well as helps the patient's fell emotionally well.

Oral Care

In order to keep our mouth clean, we must practice good oral hygiene every day. Our mouth is an important organ as it plays a vital role in the digestion of food. Since the mouth is exposed directly to the external atmosphere, a lot of bacteria is found in the mouth.

During the stay in the hospital, a patient might be unable to take care of oral hygiene. So you, as a General

COVID Frontline Worker (Basic Care Support), must help the patient in maintaining oral hygiene. In this chapter, you will learn how to maintain oral hygiene of a patient.

Fig.9.1.10: Oral Care

Maintenance of oral hygiene

A daily part of our routine is brushing the teeth and rinsing the mouth. These are the most common activities carried out to maintain oral hygiene as a daily habit. Maintaining oral hygiene will depend on the condition and type of food the patient eats. If the patient is eating normal solid food then encourage the patient to brush their teeth every day. Ensure that the required material such as toothbrush, toothpaste and other such material are kept ready for the patient to use. Also, remember to replace these materials in case they get over.

Role of a Covid Frontline Worker (Basic Care Support) in maintaining oral hygiene

To maintain oral hygiene we use a toothbrush, toothpaste, mouthwash and dental floss. In addition to it, the Covid Frontline Worker (Basic Care Support) should take care of following points:

- Speak in a gentle, soft and soothing voice when helping patients brush and floss.
- Avoid brushing the tongue as this can cause irritation in elderly patients. Instead, use a tongue scraper to clean the tongue.
- Wrap the toothbrush handle with a tape as it makes the toothbrush handle easy to hold.
- Teach patients to brush the eating surfaces using soft, circular motions.
- Instruct patients and care givers to replace toothbrushes every three months.
- If the patient is using a denture, remove the dentures. Clean them gently under running water or by brushing with a soft brush.
- The various abnormalities that can be observed in the oral cavity include redness of the skin, bleeding of the gums or bad breath. Report these abnormalities to the nurse or a doctor immediately.

Oral care of an unconscious patient

Oral hygiene assists in maintaining the healthy condition of the mouth, the gums, teeth and the lips. It also provides a massage to the gums and alleviates discomfort due to bad odours and tastes. Some patients require special oral hygiene methods because of their level of dependence.

Effects of a neglected mouth

The mouth presents all requirements for bacterial growth such as warmth, moisture, and food supply from residual foods. It causes some local infections like:

- Gingivitis: Inflammation of the gums
- Glossitis: Inflammation of the tongue
- Root Abscess: Pus formation of the root of the teeth
- Stomatitis: Inflammation of the mucus membrane of the mouth
- Dental Carries
- Bleeding Gums

Importance of Oral Care

Oral care is important to:

- Keep the mouth clean and moist.
- Keep the teeth and gums in good condition.
- Keep the oral cavity free from bad odours.
- Stimulate appetite.
- Prevent infection and tooth decay.

Articles required for giving oral care

To perform oral care, a tray containing the following articles is required:

- Gauze pieces in a small bowl
- Container with artery forceps, swab sticks, tongue depressor and mouth gag
- Container with 1:8 hydrogen peroxide, Condy's lotion 1/6000(KMn04) Listerine/Betadine, Chlorhexidine Gluconate, Boroglycerine, Vaseline, and Olive Oil.
- Feeding cup with water
- Kidney tray and paper bag
- Small mackintosh with towel

Fig.9.1.11: Articles required for giving oral care

Procedure for performing oral care

Take a look at the steps to perform oral care:

- Explain the procedure to the patient / relative.
- Provide privacy.
- Position the patient so he or she is comfortable (Fowler's position with cardiac table in front or lateral with face at the edge of the pillow).
- Place the mackintosh and face towel across the patient's chest.
- Place the kidney tray close to the patient's cheek.
- Arrange the articles.
- Always remember to wear gloves.
- Prepare the mouthwash or use the commercially available mouth wash solution.
- Take a gauze piece and wrap it around the artery forceps, covering the tips completely.
- Open the unconscious patient's mouth gently by pressing the lower jaw forward.
- Moisten the gauze. Dip it is in the cleansing agent and clean the inside of the cheeks and the tongue.
- Let the fluid flow through the corner of the mouth or clean with wet gauze sponges. Clean the patient's lips with the towel.
- Observe for tooth decay, coated tongue, cracked lips or any other abnormalities and report the same to the senior.

- Apply glycerine or any other emollients to the tongue, gums and lips.
- Remove the kidney tray, mackintosh and towel.
- Place the patient in a comfortable position.
- Clean and replace the articles.
- Wash your hands.
- Record the procedure mentioning the observations made during the procedure.

Hair Care

Taking care of the hair is one of the aspects in maintaining personal hygiene. Excessive hair needs to be trimmed and maintained properly and hair that has fallen off the patient should be cleaned. There are various methods that need to be followed for hair care of a patient. In this chapter, you will learn the steps to maintain cleanliness and hygiene of the patient's hair.

Importance of Hair Care

The head and the face are the predominantly hairy regions of the body. In addition to these areas, hair is present under the armpits, chest, and genital areas of both male and female patients. The outer most layer of skin on the head is called the scalp. Hair cells are embedded in the scalp and each strand of hair keeps growing during the life time of an individual. Different types of bacteria are present on the scalp and the hair. If the hair is not kept clean, it tends to become matte, greasy and can smell bad. These conditions aid the growth of germs in the hair and lead to infections. You must ensure that the hair is kept clean and excess hair is periodically removed to avoid any discomfort to the patient. Let us look at the different methods of maintaining the hygiene of the hair of a patient.

Role of a Covid Frontline Worker (Basic Care Support) in hair care

- Patients who can take a shower by themselves should be encouraged to wash their hair regularly.
- Shampoo is a special agent that can be used to clean the hair. You must motivate patients to shampoo their hair regularly.
- In case of patients' confined to the bed, you must shampoo the hair of the patient and keep the hair of the patient clean.
- Hair should be properly combed from time to time. You should assist the patient in combing the hair and keeping it clean.
- In the case of male patients, facial hair in the form of a beard or a moustache has to be shaved and trimmed according to the patient's choice.
- Excess hair in other regions of the body such as the armpits or the chest has to be removed according to the directions of the doctor.
- Hair is cut and shaved by barbers. Barbers can provide hair cutting services in the hospital as and when requested.

Arrange for all the required equipment by the side of the bed, before you start cleaning the hair of the patient.

The things needed include:

- A large pitcher of warm water
- Shampoo
- Bed Shampoo pan
- Towels and wash cloth
- Clean comb and brush

9.1.2.1 Steps for Assisting a Patient with Hair Care

The steps for hair care of a patient is as follows:

- **Step 1:** Cover the pillow with a towel or any protective cover, to keep it dry.
- **Step 2:** Untie the gown or loosen the bed clothing.
- **Step 3:** Put a towel under the person's neck and arms.
- **Step 4:** Put the bed shampoo pan under the person's head.
- **Step 5:** Place a washcloth over the person's eyes so the shampoo does not burn them.
- **Step 6:** Wet the hair of the patient first and then apply the shampoo.
- **Step 7:** Wash the hair of the patient until it is clean and shiny. It takes more rinsing for a female patient. Hair should be shampooed two to three times a week as it becomes dirty or greasy soon. However, before washing the hair of the patient, check with the doctor if it is fine to use a shampoo.
- **Step 8:** Gently dry the hair of the patient using a clean dry towel.
- **Step 9:** Now, help the patient comb the hair with a comb or a brush. Provide the patient with towels and sheets for cleaning immediately after the procedure.

9.1.2.2 Shaving

- **Step 1:** In the beginning, the patient may just need to be reminded to shave. If an electric razor is being used, he may continue to shave for a longer period as it requires less skill and is safer.
- **Step 2:** If the patient begins to cut himself while shaving with the razor, it is time to take over the shaving.
- **Step 3:** Moisten the man's beard region with a cloth and apply the shaving cream.
- **Step 4:** Shave with small strokes in the direction of the hair growth. Be gentle across sensitive surface.
- **Step 5:** Rinse the area using a fresh wet cloth and after that, dry the skin. Use of after-shave lotion is a matter of choice.
- **Step 6:** Special pre-shave lotion meant for electric razors may be used if the patient is using an electric razor. Shave with firm circular motions.

Shaving Tools and Accessories

- Razor
- Shaving Cream
- Brush
- Trimmer
- Wax
- Lather Bowl
- Disinfecting Liquid or Spray
- Disposable gloves

9.1.2.3 Steps to maintain Nail Care

Nail Care

Nails should be kept short and clean as they tend to collect dirt and germs. Dirty fingernails spread infection.

Also, broken nails can lead to injuries, therefore shaping the rough edges of the nail is also important. A patient may be too weak to take proper nail care. As a COVID Frontline Worker (Basic Care Support), you must ensure that nail hygiene of the patient is maintained. In this chapter, you will learn how to take proper nail care.

Common Methods of Nail Care

Cutting and shaping of the nail is very important for proper nail care. The fingernails are cut using a nail cutter or sharp scissors, straight across and then a nail file is used, if available, to round off the nail. During the morning bath, the nail care of hands and feet is administered as nails are softer and easier to trim after a bath. Provide the patient with towels and sheets to cleaning immediately after the procedure.

The things needed include washbasin, washcloth, hand towel, nail cutters.

- Disposable bath mat and gloves
- **Step 1:** Wash hands, and arrange supplies within easy reach.
- **Step 2:** Position patient in chair, place disposable mat under patient's feet if possible, and provide patient with privacy.
- **Step 3:** Fill the basin with warm water. Place the basin on a disposable mat and help patient place his feet into the basin.
- **Step 4:** Soak the feet for 5 to 10 minutes. Re-warm the water if necessary.
- **Step 5:** Trim nails straight across using a nail cutter and even with clippers.
- **Step 6:** Round the fingernails to be smooth, without any jagged edges using a filer.
- **Step 7:** Trim and clean toenails in the same way as for fingernails.
- **Step 8:** Remove gloves and dispose them properly.

Fig.9.1.12: Nail Care

Finger, toe nails and other foot care

- People suffering with dementia may lose their ability to maintain their nails, particularly their toe nails.
- The elderly people may have troublesome feet problems like bunions or calluses. However, if the person has dementia, communicating such issues might be difficult for him or her.

Clothing

Patients might be unable to manage their own clothing needs during the stay in the hospital. In some cases the patient is too weak to dress up. Also, a patient undergoing different medical procedures needs to wear clothes designed specifically for that procedure. Therefore, correct clothing of a patient is very essential. As a COVID Frontline Worker (Basic Care Support), it is your duty to assist the patient in dressing. In case, the patient is very weak you must dress him/her yourself. But for this you must first know the different types of hospital garments, the procedure to dress a patient, precautions to be taken and the steps to maintain clothing hygiene. This chapter lists all this for you.

Types of Hospital Clothing

The type of clothing a patient must wear depends on the needs of the patient. In many cases the clothes worn by a patient are designed based on the body area that needs to be examined. The most common type of hospital clothing that is used is a hospital gown. Based on the need of the patient, hospital gowns are classified as:

- Basic hospital gown
- Isolation gown
- Toddler gown
- Nursing gown

Basic Hospital Gown

This is the most common type of hospital gown and is used for patients whose upper body has to be examined. These gowns can be worn on the patient's regular clothes and are very roomy and comfortable.

Isolation Gown

Isolation gowns are used by patients who need extra protection. In patients where there is secretion of body fluids or if the patient's body is insensitive to infections, isolation gowns are the best choice.

Toddler Gown

Toddler gowns are designed for children and typically printed with cartoons and images. They are meant to make the child comfortable and cheerful.

Nursing Gown

Nursing gown is a special type of gown that is designed to facilitate the feeding of the child by a nursing mother.

Role of a Covid Frontline Worker (Basic Care Support) while clothing the patient

- Check with the doctor or the nurse with respect to the type of clothing that needs to be worn by a patient.
- One of the most important principles of clothing is to prevent any injury or discomfort to the patient while clothing him or her.
- Always instruct the patient before you actually dress him or her up. Before you start to change the clothes of a patient, describe the process that would be followed and explain what needs to be done while changing their clothes.
- For patients who have suffered a stroke, one side of the body may be weak. Instruct such patients to undress the weak part first. While putting on a dress, it should be put on from the strong side first.
- You will need to put a sweater on the patient too to keep warm as poor blood circulation could make the patient cold.
- Put the patient's shoes or slippers on. Make sure the sole of the footwear is non-slippery.
- Try and make the patients wear their clothes themselves. This will help them manage their activities on their own.

Maintaining the privacy and dignity of the patient

While dressing the patient the most important point to be kept in mind is maintaining their privacy. Some patients may not be able to dress by themselves. You, as a COVID Frontline Worker (Basic Care Support), must take care of the following points while dressing the patient:

- Collect and arrange the patient's clothes. Make sure you get all the under garments such as underwear, vests, briefs and socks.
- Let the patient choose what they would like to wear. If they cannot choose for themselves then, you need to pick clothes that are free of holes, and those with proper buttons and zippers. You may dress the patient in the restroom.
- When you do so make sure you close the door for privacy.
- Even if the patient has its own private room, close the bathroom door when the patient are inside the bathroom.
- Make sure you draw the curtains to maintain privacy while you dress the patient in bed.
- If the patient wears an adult brief, make sure you put this on first. This is another aspect of dignity.
- Put on the socks or stockings on the patient, then the vests and then put on the top layer of clothes.
- Make sure you dress the patient the same way you would dress yourself. Remember, to maintain the patient's dignity at all times.

Maintaining clothing hygiene

- To avoid any form of infection, it is necessary to maintain the patient's personal hygiene including the clothing. As clothes worn by the patient come on direct contact with the body, they may impure with germs. To prevent any infection, it is very important to change the clothing of the patient and dress him/her with a clean piece of clothing. To do so, you must follow the given points:
- Change the patient's clothes every day. Items such as underwear, personal towels, facecloths, nappies are often contaminated as they come into direct contact with the body. So change them every day.
- Change the clothing if it is stained due to the treatment procedure.
- Every patient's clothes must be washed separately.
- Ensure clothes are not shared between patients. During laundering, micro-organisms may spread from one set of clothing or linen to the other. So laundry hygiene must be maintained.
- Patients must always be provided with clothing and gowns that are washed and that smell fresh and good.

Tips

- Use mild soap and gentle strokes with a soft cloth when giving a bath to the patient.
- Rinse the skin well and then dry it with a soft towel.
- Use bland lotion to moisturise the skin do not use alcohol base lotion on skin. Alcohol dries the skin.
- Keep a time track sheet to monitor the position of the patient.
- Change the patient's clothes every day.
- Every patient's clothes must be washed separately.
- While brushing patient's teeth various abnormalities can be observed in the oral cavity. Report these to nurse or doctor immediately.

Exercise

1. Name the type of skin abnormalities that you will observe while bathing a patient?

   .....

   .....

2. What are the different clothing principles?

   .....

   .....

3. Why is it important to maintain oral hygiene?

   .....

   .....

4. List the tips for hair care.

   .....

   .....

UNIT 9.2: Aid in Daily Activities

Unit Objectives

At the end of the unit, you will be able to:

- Assist a patient to eat and drink.

9.2.1 Patient Care Planning

The COVID Frontline Worker (Basic Care Support) has to perform certain simple procedures like enema or preparing the patient for an operation . These different procedures are a part of patient care management and assisting nurses in performing procedures as instructed in the care plan.

Patient care plan means planning your services according to the needs of the patient. As a COVID Frontline Worker (Basic Care Support), you must plan your services according to the patient's needs. You must make a patient care plan by:

- Knowing the patient's needs to facilitate their fast recovery.
- Consulting with the attending doctor and nurse about the patient's condition.
- Maintaining the patient activity schedule during his/her stay in the hospital.
- Motivating the patient to maintain a steady emotional state.
- Understanding and respecting the patient's rights and maintaining privacy.

9.2.2 Importance of Patient Care Planning

Patient care plan basically concentrates on the patient's care and concern . Patient care planning involves standard procedures and policies to be followed to prevent spread of infection, avoid discomfort to the patient and ensure continued treatment. As a COVID Frontline Worker (Basic Care Support) it is your responsibility that you ensure and perform the correct procedure as instructed by the nurse. You have to ensure that the patient is comfortable and not inconvenienced due to the procedure or during the procedure. The procedure is performed in a timely manner as part of the treatment plan.

9.2.3 Feeding the Patient

One of the most important roles for you as a COVID Frontline Worker (Basic Care Support) is feeding a. Different patients with different medical conditions must be fed in different ways. In this chapter we will study in detail about the different feeding techniques and the role of a Covid Frontline Worker (Basic Care Support) in feeding.

Supplies routine patient feeding

- Stainless Steel Plate
- Stainless steel Glass

Fig.9.2.1: Feeding the Patient

- Stainless Steel spoon
- Steel bowl
- Steel Jug
- Disposable Gloves

Types of Feeding

Feeding is the process of ingesting food. It is a critical activity as food ingested into our body is converted into energy by the process of digestion. Doctors decide the methods of feeding that needs to be followed depending on the physical condition and the type of nutrition needed by the patient. The different types or methods of feeding are classified as:

1. Oral feeding
2. Tube feeding
3. Fluids or intravenous route

Oral Feeding

Oral feeding is providing food or fluids through the mouth. Oral feeding is done using spoons and other normal cutlery. This is suggested for a patient who can perform the daily activities normally and is able to respond to the instructions given by you.

Fig.9.2.2: Tube Feeding

Tube Feeding

A feeding tube is a medical equipment used to give nutrition to patients who are unable to feed themselves by mouth, are incapable of swallowing safely, or require to be given nutritional supplements. In tube feeding, a type of external nutrition is delivered into the digestive system in a liquid form. A tube is inserted into a part of the digestive system, often through the throat or nose. The tube carries the food directly into the digestive system. Sometimes, it is used in addition to the oral feeding method. The most common type of tube used for feeding is called the Ryle's tube. Ryle's tube is also called a nasal tube or NG tube.

Intravenous fluids (IV fluids)

An intravenous or an IV line is used in case of patients who are unable to feed even with your assistance. It is a short-term device used to give fluids containing essential nutrients directly into the bloodstream through a vein. The process of inserting an IV line is specialized and is carried out by the nurse. The IV line is usually inserted by the nurse on the instruction of the doctor. You must monitor the level of the IV fluid from time to time and report the same to the nurse.

Fig.9.2.3: Intravenous fluids (IV fluids)

Role of a Covid Frontline Worker (Basic Care Support) while feeding a patient

- Encourage the patients to eat independently.
- Check the patient records for any instructions on the diet to be followed or any food to be avoided.
- If the person has not eaten well, you must report this immediately to the nurse in charge.
- Sit on a chair close to the person so he or she can see or hear you. Talk to him or her about the food you are feeding.

- Put the spoon on the side of the mouth where there is feeling. Be sure food is being swallowed and not collected on the numb side of the patient's mouth.
- Stop feeding a patient if they tell or show that they have had enough. Stop feeding a person if they fall asleep during the meal.
- If the patient can walk, encourage him or her to walk before a meal. Walking may help in gaining appetite and helps the body digest the food.
- Wear gloves while carrying, serving or feeding the patient. If the patient express discomfort while feeding you can remove the gloves, wash your hands thoroughly and continue feeding the patient

9.2.4 Precautions While Feeding a Patient with a Medical Condition

A COVID Frontline Worker (Basic Care Support) is needed while giving oral feeding. In intravenous and tube feeding, the role of a COVID Frontline Worker (Basic Care Support) is restricted to just assisting the nurse in monitoring the condition of the patient and changing the packet of fluid in case it is over. No matter which feeding technique he/she is using, he/ she must follow these precautions Steps while feeding a patient 

- **Step 1:** Check the diet of the patient with the dietician or the nurse before feeding the patient.
- **Step 2:** Only feed the patient at a pace he or she is comfortable with.
- **Step 3:** Make sure the patient is completely awake and alert before feeding.
- **Step 4:** Make sure the patient's food or liquids are of the correct consistency before feeding them to the patient.
- **Step 5:** Check the temperature of the food or liquids to ensure each item is suitable for the patient to consume.
- **Step 6:** If the patient begins coughing excessively or choking, stop feeding immediately. Provide appropriate care and notify the Healthcare provider.
- **Step 7:** Never rush the patient while eating.
- **Step 8:** Never feed a patient who is not properly positioned.
- **Step 9:** Provide the patient with towels and sheets for cleaning immediately after eating.

Guidelines for serving food

The importance of serving food is to facilitate the feeding process for the patient. In order to make sure that you serve the patient effectively, you must follow the following guidelines 

- **Step 1:** Ask the nurse about the diet plan of the patient.
- **Step 2:** Help the patient to the washroom in washing their hands before dining.
- **Step 3:** Check the temperature of the food that is being served. It should be comfortable for the patient.
- **Step 4:** Keep noise levels low.
- **Step 5:** Do not shout or raise your voice.

- **Step 6:** Do not bang plates or cups.
- **Step 7:** Arrange the food to be consumed by the patient in a manner where all the items are kept open for the patient to choose from.
- **Step 8:** Always tell the patient what is being served and encourage the patient to eat the items that are being served.
- **Step 9:** Tell the patient about the benefits of the food items being served.
- **Step 10:** Encourage the use of dentures, if the patient uses a denture. This will help the patient in chewing better and therefore in better digestion of the food consumed.

9.2.5 Food Nutrition and Dietetics

Let us study about the food which is given to the patients and its importance. The type of food that the patients eat has a considerable effect on their health. Alterations in their diet can assist in preventing or controlling a number of health problems such as obesity, diabetes and some of the risk factors related to cancer and heart diseases. Dietetics is the health area that deals with the interaction between nutrition and health. You as a COVID Frontline Worker (Basic Care Support) should have sufficient knowledge about the nutrition need of the patient according to his/ her condition or disease type. Let us see some of the common diet of patient in health and disease, which a Covid Frontline Worker (Basic Care Support) should know.

Diet in Gastroenteritis: Gastroenteritis or common stomach flu is a condition where the stomach and the intestines are inflamed, generally due to a viral infection. Common symptoms of this ailment include:

- Upset stomach
- Nausea
- Diarrhoea
- Cramping
- Vomiting

The aim of a diet that has been planned to deal with gastroenteritis is to prevent dehydration from occurring. An appropriate balance of electrolytes also needs to be maintained. Minerals like sodium and potassium are the electrolytes that a body requires to work properly.

Vomiting and diarrhoea, which are the common symptoms of gastroenteritis, can flush out the electrolytes from the body. In this case, such food should be provided which can rehydrate the body and reinstate the balance of the electrolytes. Oral dehydration salts help a lot in this case. Oral rehydration salts (ORS) is a specially prepared drink that has a combination of dry salts. When mixed in the right proportion with safe water, the ORS drink can help in rehydrating the body after plenty of fluid has been lost as a result of diarrhoea. There are two ways to make oral dehydration salts.

Take the ORS powder present in the market and mix it with water as prescribed. Second way is to simply add one teaspoonful of sugar and one teaspoonful of salt in one glass of water and the solution is ready.

- **Diet in Diabetics:** A simple, nutritious and healthy diet that is full of nutrients, has less fat, and moderate calories is required for patients suffering from diabetes. The content of carbohydrates in what the patient eats should be increased carbohydrates affect the blood sugar levels.
- **Diet in heart disease:** Patients suffering from heart diseases must be given healthy fats, nutrients, fibre, omega 3 and protein rich food items. Eating more fruits and vegetables will help a lot.

Tips

- One of the most important roles for you as a COVID Frontline Worker (Basic Care Support) is in feeding and/or assisting a patient in feeding
- The different types or methods of feeding are classified as:
  - » Oral feeding
  - » Tube feeding
  - » Fluids or intravenous route
- Encourage the patients to eat independently.
- Check the diet of the patient with the dietician or the nurse before feeding the patient.
- Encourage the use of dentures, if the patient uses a denture. It will help patient in chewing better and therefore better in digestion of the food consumed.
- Cleaning the external genitalia and surrounding area is called perineal hygiene.
- Before performing perineal care, a preliminary assessment must be made.

Exercise

1. What is the importance of feeding?

   .....

   .....

2. List the precautions while feeding a patient.

   .....

   .....

3. What is the importance of managing elimination needs?

   .....

   .....

UNIT 9.3: Measuring Parameters

Unit Objectives

At the end of the unit, you will be able to:

- Help in measuring patient's parameters accurately

9.3.1 Measuring Vital Signs/Parameters

The heart rate, blood flow, body temperature and the oxygen supply are described as the "Vital Signs".

The general health condition of a patient is measured using these parameters These vital signs are measured from time to time to understand the status of the patient's health. Increase or decrease in these measurements can lead to medical emergencies. Vital signs are the first thing to be checked by a doctor to understand the status of the health condition. As a Covid Frontline Worker (Basic Care Support), you are expected to know about these parameters and ways to measure it as these are the health indicator of patient's condition. Although your job as a Covid Frontline Worker (Basic Care Support) will be to assist the nurse in taking these measurements.

9.3.2 Body Temperature

Body temperature is a measure of the body's ability to regulate heat. The human body functions normally in a specific range of temperature. If the body temperature is steady, the body functions normally. If it is either high or low, it means you are not normal and that you need medical attention. Body temperature is measured in degrees Fahrenheit (F) and degrees Celsius (C). The normal body temperature for a healthy person is 98.6 degrees Fahrenheit or 37 degrees Celsius. It may also be 1 °F (0.6 °C) above or below 98.6°F (37 °C). The body temperature is normally measured using a thermometer.

Fig.9.3.1: Measuring Body Temperature

The most common places for measuring body temperature are:

- Mouth
- Ear
- Forehead
- Armpit (also called axillary method)
- Rectum

Equipment used for measuring body temperature

In the hospital, body temperature is measured using a clinical thermometer. Clinical thermometers are of two types: Liquid Filled and Electronic.

The traditional measuring instrument may be a glass tube. it's a bulb at one finish. The bulb contains a liquid that is commonly mercury. The liquid expands with an increase within the temperature. The glass wall of the measuring instrument is label to point the temperature levels. The bulb of the thermometer is inserted into a piece to live the temperature.

Let us currently learn the procedure to live and report the body temperature victimization the oral technique. The temperature may be measured by putting the bulb of the thermometer within the mouth. This technique is understood because the oral technique. The oral technique is that the most typical technique of mensuration body temperature. As a Covid Frontline Worker (Basic Care Support) you need to apprehend the steps to live the body temperature victimization the oral technique.

Fig.12.3.2: Thermometer

9.3.2.1 Measuring Body Temperature Using the Oral Method

Step 1: Wash the thermometer in water under normal room temperature.

Step 2: Ensure that the reading of the mercury level is below the 95 ° F mark.

Step 3: Reset the mercury level below the 95° F level by shaking it vigorously.

Step 4: Place the bulb thermometer under the tongue. Ask the patient to close the lips tightly around it. The person must be able to breathe through their nose. Keep the thermometer in the mouth just for a minute. Use a watch to check the time. Use a watch to measure the time. Remember, in order to get an accurate reading, you must ensure that the patient breathes through the nose while you take the temperature.

Step 5: Remove the thermometer from the mouth and note the reading. Step 6: Clean the thermometer in water under normal room temperature.

9.3.3 Blood Pressure

During the heartbeat, the heart pumps blood to the different parts of our body. Blood flows to different parts of our body within blood vessels and exerts certain pressure on the wall of the vessels. This pressure is known as blood pressure. An increase in the blood pressure can damage the body organs and a decrease in the blood pressure results in insufficient supply of blood to the body organs. The vessels may break leading to haemorrhage (blood clots), further leading to death of a person. Also, low blood pressure indicates that blood flow to the organs is not adequate. Therefore, blood pressure is a good indicator of the person's health as it indicates the flow of blood to the various organs.

Equipment used for measuring blood pressure

The BP apparatus or sphygmomanometers is used to measure the blood pressure is measured using or. The BP apparatus comprises a pressure cuff which is wrapped around the arm of the patient. The pressure cuff is attached to the hand bulb. The hand bulb pumps air into the pressure cuff. A release value on the hand bulb controls the air pumped into the cuff. The pressure cuff is attached to the mercury gauge through rubber tubing

The mercury level keeps rising as the hand bulb pumps air into the pressure cuff. The BP apparatus is used along with a stethoscope which is used to hear sounds generated in blood vessels.

Fig.9.3.3: B P Monitor

Measurement of blood pressure

As a Covid Frontline Worker (Basic Care Support) you must know the steps to measure the blood pressure of the patient although it is the duty of the nurse, you only need to assist him/her in doing that.

- **Step 1:** First, see that the patient is relaxed and is comfortably positioned on the bed.
- **Step 2:** The patient extends the arm. The cuff of the BP apparatus is wrapped around the patient's upper arm.
- **Step 3:** The drum of the stethoscope is placed under the pressure cuff. The sound of the blood flow is heard when the drum is placed.
- **Step 4:** The hand bulb is used to inflate the cuff to create maximum pressure. This is indicated in the mercury gauge by the rise in the level of mercury.
- **Step 5:** The doctor inflates the pressure cuff until the sound of blood flow stops. Now the pressure cuff is deflated by using the release valve of the hand bulb and the pressure drop is indicated by the mercury level.
- **Step 6:** The reading of the mercury level is noted when the first sound is heard on the stethoscope.
- **Step 7:** The pressure cuff is deflated until the normal blood flow sounds are heard again. The reading of the mercury level is noted when the blood flow sounds are heard normally.
- **Step 8:** The pressure cuff is removed from the arm of the patient and the patient is asked to relax.

9.3.4 Breathing Rate

Breathing is a process of taking in breath which we call inspiration and letting out breath which we call expiration. When we breathe in air, the lungs get filled with air. The lungs absorb the oxygen in the air inhaled. The blood then carries this oxygen and supplies it to all parts of the body. Breathing rate is the number of breaths a person takes in a minute. Measuring breathing rate is a good way to check on the supply of oxygen within the body. Normal breathing rate for adults is 12 to 20 breaths per minute.

9.3.4.1 Measurement of Breathing Rate

The most common method of measuring breathing rate is by physical examination of the patient for a minute. The steps involved are:

Step 1: Seat the patient comfortably on the examination stool.

Step 2: Ask the patient to breath normally. Observe the number of chest expansions.

Step 3: Measure the breathing rate by counting the number of chest expansions in one minute.

The normal breathing rate of a healthy person is 12 to 20 breaths per minute. If the breathing rate is higher than 20 breaths per minute it indicates that the oxygen supplied to the body parts is inadequate. Lower breathing rate indicates the abnormality of the functions of the lungs. Both high and low breathing rates need medical attention. You must report them to the doctor immediately.

9.3.5 Height and Weight of a Patient

Body measurements have been used as nutritional indices for many years. Height is the measurement taken from crown to heel after ensuring that the neck, hip joint and knees of the Patient are extended and weight is the heaviness of the person.

Fig.9.3.4: Measuring height

To measure height and weight of a patient, the following equipment is needed:

- Scales with a height rod / height measuring apparatus
- Tape measures or measuring rod
- Weighing machine / Weight balance / Weighing scale
- Pen / Pencils / Chalk to mark
- Weighing machine / Weight balance / Weighing scale
- Pen / Pencils / Chalk to mark
- Height and weight record sheet

Fig.9.3.5: Weighing a patient

Procedure for measuring height and weight

To weigh a patient:

- Explain the procedure to the patient being weighed.
- When weighing children, explain the procedure to the mother. To weigh an infant:
- A clean paper is kept when weighing of an infant takes place by keeping the baby on the platform and noting the weight.
- Place the child on the platform.
- Read the weight after balancing and record it on the infant's chart.
- Tell the mother the recorded weight and show / tell how much weight the child has gained or lost.

To weigh children and adults:

- Balance the scale / weighing machine.
- Instruct the person to stand on the middle of the platform of the weighing machine.
- In case of a scale, move the bar to the right or left until the scale balances.
- Read the scale or the reading on the weighing machine.
- Record the weight on the chart immediately. Tell the person his weight.

Fig.9.3.6: Weighing Machine

To measure the height of a newborn / infant:

- Place the tape measure or measuring rod on a table or firm surface and place the infant alongside the measure. Hold the head and heel firmly and note the reading or,
- Place the infant on a white cloth or paper, hold the head and feet in a straight line; have someone mark the position of the head and heel; place the tape measure on the marked area and read the length.

To measure the height of school children and adults:

- Instruct the person to stand against the height rod, with his feet together, with his back towards the height rod, arms and hands straight and head erect.
- Place a flat board or ruler on top of his head and read the figure appearing at the point where the ruler touches the head.
- Read out the height to the person and record it.

Skills Practical: Role Play

1. In groups of four prepare a role play on measuring vital body parameters as:
   - Body temperature
   - Blood pressure
   - Height and weight
2. You have 10 minutes to prepare your role plays.

Tips

- The heart rate, blood flow, body temperature and the oxygen supply are described as the “Vital Signs”.
- The body temperature is normally measured using a thermometer.
- The BP apparatus or sphygmomanometers is used to measure the blood pressure.

Exercise

1. How will you measure body temprature? What is the importance of monitoring body temperature?

   .....

   .....

2. Define documentation. Write the purpose of documentation.

   .....

   .....

3. List down some of the care that nursing assistants must document.

   .....

   .....

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10. Elimination

Unit 10.1 - Elimination

HSS/N5135

Key Learning Outcomes

At the end of the unit, you will be able to:

- Understand the importance for excreta disposal in human body.
- Understand care to be provided in case of urine and bowel Incontinence or patient with urinary catheter.
- Observation of urine and stools for routine as well as special reporting.

UNIT 10.1: Elimination

Unit Objectives

At the end of the unit, you will be able to:

- Explain the meaning for excreta disposal in human body.
- Understand care to be provided in case of urine and bowel Incontinence or patient with urinary catheter.
- Observation of urine and stools for routine as well as special reporting.

10.1.1 Managing Elimination Needs

Removal of body waste is called elimination. Some patients may not be in a state to move in order to eliminate their body wastes. Some may not even be aware of the need for elimination of their body wastes. How must you help such patients? Is there any special equipment that you must use to help such patients? Which are these equipment and how to use them?

10.1.2 Equipment Used for Managing Elimination Needs

Most patients who are in a good medical condition can express the need to use the toilet and manage their needs themselves. However, many of them need some help to move to the toilet. For patients who are bedridden, v can manage their elimination needs by using various equipment.

Some of the equipment used are:

Bed Pan

A bed pan is used for patients who are bed ridden but are able to say their need to pass urine or defecate.

Urinal

A urinal is much like a bed pan but is meant only for a male. The urinal is shaped in a way that only a male patient may use it while still in bed and remain comfortable.

Diapers

Diapers are used for Patients connected to the bed are provided with different types of elimination needs.

Foley Catheters

These are tube like equipment that are inserted directly into the urinary bladder and are used to empty the urine directly from the bladder.

On the basis of the patient's condition, the doctor would advise the use of the appropriate equipment. You must know the equipment to be used depending on the medical condition of the patient.

Fig.10.1.1: Bed Pan

Fig.10.1.2: Diapers

Fig.10.1.3: Foley Catheters

10.1.3 Placing the Bed Pan for Use

In order to help a person with the bedpan, you must put the following items within easy reach of the patient.

- A basin with warm water
- Disposable gloves
- Toilet paper
- Towels
- Wash clothes

Steps are as follows:

- **Step 1:.** Tell the patient that you are helping him/her in using the bed pan which will further help him/her to overcome any fear or uncertainty.
- **Step 2:** Try to lower the head part of the bed to a lowest position that a patient can bear. Also try to level the bed so that the patient can easily roll on his/her side.
- **Step 3:** Enquire the patient, on which side he/she is more comfortable.
- **Step 4:** Put on the disposable gloves.
- **Step 5:** Enquire the patient to hold the rails of the bed so that they can stay to the rolled side.
- **Step 6:** Bring the patient a warm bed pan which is rinsed in hot water and then dried. Bring it inserted in paper cover.
- **Step 7:** Place the bed pan across the buttocks, to ensure the buttocks are under the curved edge of the bed pan.
- **Step 8:** Ask the patient to sit back to ensure that the bed pan does not move from its place. Hold the bed pan till the time patient sit back to its place.
- **Step 9:** Lift the head of the patient somewhat from the bed, so that patient can come in a sitting position, which will relax him/her.
- **Step 10:** Provide some privacy to the patient. In addition, ensure that he/she has a call button nearby for contacting you.
- **Step 11:** When the patient is done, answer his call accordingly. Carry the warm water basin.
- **Step 12:** Take out the bed pan after its use.

10.1.3.1 Removal of Bed Pan After Use

- **Step 1:** Lower the head of the bed to a flat position, if possible.
- **Step 2:** Ask the person to turn over so that you can take away the bed pan.
- **Step 3:** Grab the bed pan with one hand and carefully take off from the person's buttocks.
- **Step 4:** If the person has had a bowel movement, use a washcloth and towel to clean the area using the appropriate cleansing methods as per your hospital's protocol.
- **Step 5:** Place the bed pan on a chair and place a towel over the contents of the bed pan. Never place the bed pan on a side table or a bed table.
- **Step 6:** Cleanse the person's buttocks or genital area first with toilet paper or wet wipes. If necessary, wash the anal area with soap and warm water. Dry thoroughly.
- **Step 7:** Adjust the position and dressing of the patient. Keep the bedding in order. Step 8: Open the windows to keep the air fresh and clean.

Elimination of wastes such as faeces and urine can lead to different types of infections. You must maintain hygiene while helping the patient in managing their elimination needs.

10.1.3.2 Precautions to be taken While Using Bed Pan

- Respond to the call of the patient quickly.
- Explain the process politely before placing the bed pan.
- Always wear gloves while helping the patient use the bed pan.
- If the patient complains of pain while urinating or if you observe any abnormality such as bleeding while passing urine or blood in the faecal matter, report it to the nurse or the doctor immediately.
- If you find any areas of redness or soreness on the skin of the patient near the buttocks or the genitals, report to the doctor immediately.
- Once the bed pan is removed and cleaned, fill it with warm soap water. Use a toilet brush to clean the pan thoroughly. You can also use a bleach to clean the bed pan. After cleaning the bed pan, sanitize it immediately.
- Maintain proper hygiene while managing the elimination needs of the patient. It is very critical in the prevention of many infections.

10.1.4 Using Urinals

Patients who are recovering from surgery or illness and cannot reach to a bathroom quickly are forced to ask for help when they feel the need to urinate.

Step to use Urinals

- **STEP 1:** Collect equipment required for the procedure
- **STEP 2:** Put on safe hand gloves

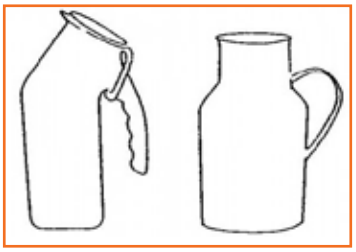

Fig.10.1.4: Urinals

- **STEP 3:** Share the procedure with the patient
- **STEP 4:** Choose a position that is comfortable for patient. If patient is not comfortable to stand on his/her feet, ask him/her to sit when using the urinal.
- **STEP 5:** Tilt the patient ward slightly, aims into the urinal.
- **STEP 6:** Empty and clean the urinal after use.

10.1.5 Using Diaper

A person whose body is bigger than that of small babies wears an adult diaper. There are various situations when an adult needs to wear diapers such as severe diarrhea or dementia, mobility impairment, incontinence and so on.

Some people have medical conditions due to which they have urinary or fecal incontinence, require diapers or comparative items since they are unable to control their bladders or bowel movement. Bedridden patients, including those with good bowel and bladder control, may wear diapers since they are unable to go to the toilet frequently or independently.

Fig.10.1.5: Diaper

Changing Diapers

- **Step 1:** If the patient is soiled, you also want to have either wipes or washcloths to perform perineal care. Make sure at least one of the washcloths is dampened with warm water and another is completely dry. You need multiple washcloths if they had a bowel movement.

Fig.10.1.6(a): Changing Diapers

Fig.10.1.6(b): Changing Diapers

- **Step 2:** Wipe the patient's genitals thoroughly with the dampened washcloth and then pat them dry with the dry one. You don't want to leave moisture on the patient's skin or else it defeats the purpose. If they have a foley catheter, make sure you wipe around it as well as four inches up the tubing coming out of the urethra.
- **Step 3:** With patients on bedrest, the best way to put an adult diaper on is to have them roll onto their side. An incontinence pad helps immensely if the patient can't roll on their own.

- **Step 4:** If they are able, ask the patient to grab the rail on the side of the bed that you are turning them, which will be the face you are on. If the bed doesn't have a rail, be very cautious. You don't want the patient rolling off the bed.
- **Step 5:** Then grab the pad on the opposite side of you and slowly pull it upwards and towards you, assisting the patient to their side. Once they are in place, support the patient's back and bottom and put the pad back on the bed.

Fig.10.1.7(a): Cleaning Body

Fig.10.1.7(b): Cleaning Body

- **Step 6:** If they are soiled wipe their bottom and in the creases around their bottom thoroughly with the wipes or dampened washcloth and pat dry with the dry one. Then place barrier cream on their bottom if necessary.
- **Step 7:** Make sure the plastic side of the adult diaper goes on the outside of the patient. Most briefs have four sticky flaps, two on each end. Place that half underneath the patient's bottom in such a way that it will be directly in the center once they roll back. Tuck the end closest to them underneath their hip as much as you can. The rest of the brief should be down by their legs.
- **Step 8:** Once it is in place, ask or assist them back flat onto their back. Then roll them the other way exactly how you did it the first time and pull out the rest of the brief.
- **Step 9:** The other end of the brief down at their legs should then be pulled up between their legs towards the stomach. Lay it flat and wrap the sticky flaps over the end on the stomach securing the brief. Make sure it is wrapped very snug so it doesn't slip off.

Tips

- Respond to the patient call quickly
- Always wear gloves while helping the patient use the bed pan.
- If the patient complains of pain while urinating report it to nurse or doctor immediately.
- If you find any redness or soreness in the patient’s skin inform it to nurse or doctor immediately.
- Maintain proper hygiene while managing the elimination needs of the patient.

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11. Bed Making

Unit 11.1 - Bed Making

HSS/N5135

Key Learning Outcomes

At the end of the unit, you will be able to:

- Understand various types of linen used in hospitals.
- Develop an understanding for the need of periodic changing of linen.
- Understand preparation of an empty bed, occupied bed and room after discharge etc.
- Describe how to prepare room for admission.

UNIT 11.1: Bed Making

Unit Objectives

At the end of the unit, you will be able to:

- Know about the various types of hospital beds.
- Make up the bed for patient.

11.1.1 Hospital Bed

A hospital bed is specially designed for hospitalized patients or others in need of some form of Healthcare.

Common features are adaptable height for the entire bed, the head, and the feet, modifiable side rails, and electronic buttons to operate both the bed and other nearby electronic devices.

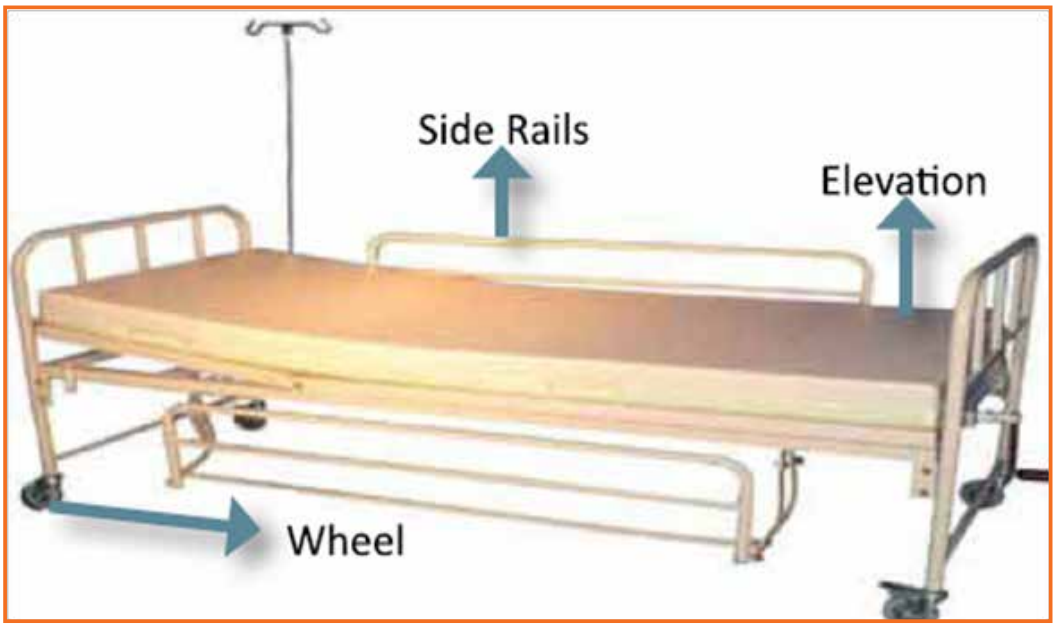

Fig.11.1.1: Hospital Bed

Wheels: Enable easy movement of the bed, either within parts of the facility or within the room. Wheels are lockable. For safety, wheels can be locked during shifting the patient in or out of the bed.

Elevation: Beds can be raised and lowered. While cranks are used in old beds, on modern beds this is an electronic feature.

Side rails: These can be raised or lowered, as they provide protection for the patient and make the patient, feel more secure.

11.1.1.1 Types of Hospital Beds

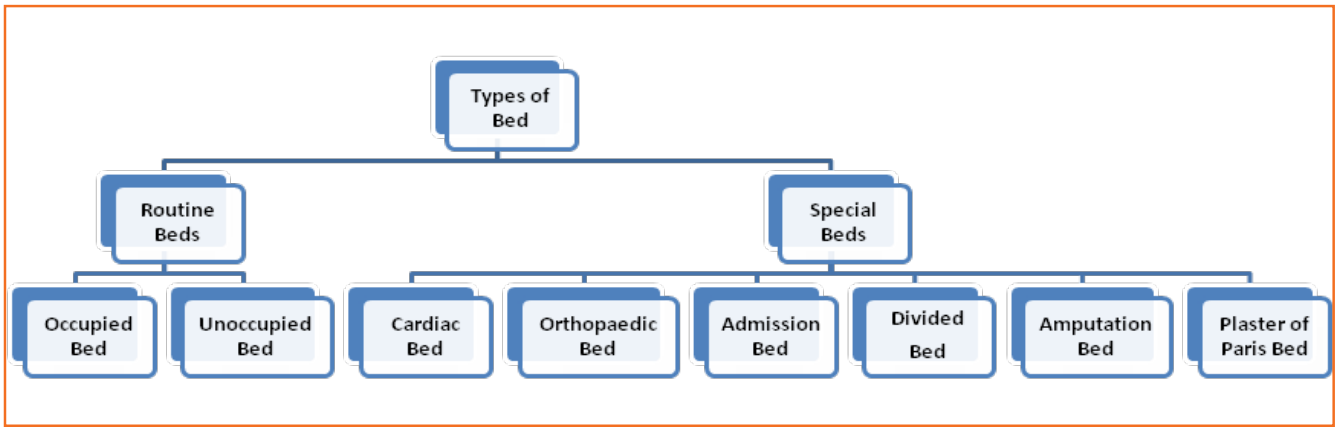

Fig.11.1.2: Types of Hospital Beds

Routine beds

Fig.11.1.3: Simple unoccupied bed.

Fig.11.1.4: An occupied bed.

Special beds

Fig.11.1.5: Cardiac bed

Fig.11.1.6: Orthopaedic bed

Fig.11.1.7: Operation bed

Fig.11.1.8: Admission bed

Fig.11.1.9: Plaster of Paris bed

Fig.11.1.10: Amputation bed

11.1.2 Bed Making

The reason for bed making is to enable Patients to feel good and to diminish pathogens in the Patient's condition. Spotless, dry, and sans wrinkle cloths additionally help to diminish the potential for skin breakdown and they are essential to help control smell.

Important supplies for bed making incorporate clean materials, a tight base sheet to avoid wrinkles that may cause skin irritation, and clothing of the upper bed that does not weigh on the Patient's body or confine their movement, yet at the same time covers his or her shoulders. Changes in fundamental bed making might be essential for comfort and to suit a Patient's conditions.

Purpose of Bed Making

- To minimize source of skin irritation.
- To provide a clean environment for the Patient.
- To promote the Patient's necessities.
- Patient has clean, safe surroundings throughout hospitalisation.
- Patient verbalizes a sense of comfort while in bed.
- To reduce source of illness.
- To provides a good look.
- To provide a clean environment.
- Patient's skin remains free of irritation throughout hospitalization.
- Prepare the bed for the Patient's return.

Fig.11.1.11: Bed Making

Supplies

- Bed side
- Linen Hamper or bag
- Bed sheet
- Blanket
- Top sheet
- Pillow Cover
- A plastic draw sheet
- Cotton draw sheet
- Bottom Sheet
- Mattress Pad
- Gloves

Fig.11.1.12: Blanket

Kinds of Linens

There are five types of linens generally:

1. **Blanket:** A large piece of fabric which is delicate, woollen and used to keep warm or as a bed cover.

Fig.11.1.13: Top sheet

2. **Top sheet:** Used to cover the patient in order to provide warmth, made of thick cotton, thermal material.

Fig.11.1.14: Cotton draw sheet

3. **Cotton draw sheet:** A piece of fabric that the rubber sheet and is used to absorb and moisture.

Fig.11.1.15: Bottom sheet

4. **Bottom sheet:** It is a mattress cover.
5. **Rubber sheet:** Used to prevent the bottom sheet from soiling due to patient secretions. It's usually placed over the centre of the bottom sheet.

11.1.2.1 Steps of Bed Making

- **Step 1:** Wash your hands, wear gloves and carry a clean sheet to the patient's room.
- **Step 2:** Greet the patient and inform them that you will be making their bed now. Start by explaining how they can help in the process, or modify the process as per their comforts and needs. Give them privacy, if needed.
- **Step 3:** Shift any chairs/stools away from the bed if there are any.
- **Step 4:** Pull up the support bed rail to ensure that the patient does not fall out of the bed. Adjust the height of the bed to a comfortable level so that you don not strain your back.
- **Step 5:** If the patient is feeling fine then lower the head/top portion of the bed to ensure a wrinkle-free spread.
- **Step 6:** Cover the patient with a cover to prevent them from exposing them to cold air. Fanfold the top layer of the bed sheet and then spread it underneath the cover. Loosen the bed sheet kept at the foot of the bed and remove it
- **Step 7:** If the mattress slides down when raising the head of the bed, then pull it up back. If the patient is capable ask them to hold the head of the bed.

Fig.14.1.16: Cover the patient with a bath blanket

- **Step 8:** Ask the patient to hold the bed rails and, gently, roll the patient to the other side of the bed. To make the patient comfortable, place the pillow under their head.
- **Step 9:** Similarly, remove the lower layer of the bedsheet, one side at a time.
- **Step 10:** Put the clean bed sheet on the bed, keeping the center fold in the center of the bed.
- **Step 11:** Fanfold the clean bed sheet towards the patient, and place the sheet, around 38 cm from the top portion of the bed, with its center fold in the middle of the bed. Then, tuck in the whole edge of the sheet on your nearest side. Fanfold the rest of the sheet towards the patient.

Fig.11.1.17: Fanfold the bottom sheet

Fig.11.1.18: Place the sheet behind the patient

- **Step 12:** Roll the patient gently over the dirty and fan folded sheet to the side with the clean bed sheet.
- **Step 13:** Similarity, do the other side of the bed.
- **Step 14:** If the patient is comfortable, help them into a supine position.

Fig.11.1.19: Place the sheet to other side of bed

- **Step 15:** Remove the old pillow cover and put the removed bedsheet and the pillow cover it in the laundry bag. Put a clean cover over the pillow. Place the patient's head on the pillow.
- **Step 16:** Place the clean top sheet over the patient.
- **Step 17:** Now, tuck the top sheet and spread under the mattress at the foot of the bed.
- **Step 21:** Raise the head of the bed to a comfortable position as told by the patient. Ensure the bed rails are raised and the wheels are locked. Observe and assess the patient's body alignment, mental and emotional status.
- **Step 22:** Return the chairs and stools earlier kept away to their original positions. Remove the laundry bag from the room and discard the gloves.

Tips

- Make sure the bed is firm, smooth and unwrinkled. Wrinkled bed-sheet can lead to undue pressure points on the patients leading to bed sores.
- Inspect the mattress and pillows daily of vermin. Destroy them if found in bed.
- Make adaptations according to climatic differences, individual needs, customs and habits related to the patient.
- Turn the mattress, air it and make it free from lumps and creases.

Notes

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12. Fall Prevention

Unit 12.1 - Fall Prevention

HSS/N5135

Key Learning Outcomes

At the end of the unit, you will be able to:

- Describe standards for prevention of patient's fall.
- Describe care to be taken to avoid fall in high risk patients.
- Describe measures to be taken to prevent falls.
- Describe action in event of a fall incident.

UNIT 12.1: Fall Prevention

Unit Objectives

At the end of the unit, you will be able to:

- Describe standards for prevention of patient's fall.
- Describe care to be taken to avoid fall in high risk patients.
- Describe measures to be taken to prevent falls.
- Describe action in event of a fall incident.

12.1.1 Fall Prevention

Due to various reasons, patient's falling is a serious problem in the hospital and. and is used as a quality measure. Some common challenges a due to which the patients are vulnerable to falls in the hospitals are:

Fig.12.1.1: Patient falls

- New environment
- Illness
- Surgery
- Bed ridden
- Medications
- Treatments
- Duty of various tubes and catheters

Falls are destructive to the patients and their family members. Further a fall can result in fear of falling in future, downward spiral of reduced mobility, and function loss.

The connection from fall risk nursing evaluation to risk conversation of care team members, to custom-made interruption to avoid risk is yet to be rooted. The aim of the Fall TIPS research study is to root this link. Fundamental findings from the interviews of the patients concluded the Fall TIPS research study suggests that most of the patient fall in the hospitals can be avoided if the patient waits for help. Fall prevention measures requires certain measures such as checking the patient on regular interval of time, ensuring that patient's personal possessions are easily accessible. During the rounds, the flowing 5P check is required:

1. **Pain:** Determine the pain level of the patient. Give the pain killer, if required.
2. **Personal Basic Needs:** Offer help in using the toilet, food and other basic needs.
3. **Position:** Ask and assist the patient in attaining a relaxed position or immobile patient in maintaining skin honour.
4. **Placement:** Ensure that things such as phone, bell and reading material are easily assessable to the patient.
5. **Prevent Falls:** Ask the patient or their family member to turn on the call light whenever the patient needs to move out of bed.

Importance of Fall Prevention

It supports in clinical decision making. Utilization of a regulated assessment guarantees that key risk factors are determined and executed.

Fall prevention encourages care planning. A good care plan works much better is the specific details about the possible risks that a patient may be at, are clearly defined and mentioned. A Covid Frontline Worker (Basic Care Support) needs to be use a special language using which they depict potential risks for the patient.

Assessment of risk factors

Assessing key risk factors include:

- **History of falls:** Patients who have a history of falls are prone to more falls in future.
- **Mobility problems and use of assistive devices:** Those patients who have problem in walking or require a supplementary equipment for mobility are more likely to fall.
- **Medications:** Patients who are on an expansive number of physician endorsed medicines, or patients who have been prescribed medicines which may cause sedation, misperception or orthostatic pulse changes are at a greater risk for falls.

Fig.12.1.2: Fall Risks

- **Mental status:** Patients who are suffering, or have a history of, from delirium, dementia, or psychosis may be moody or temperamental, which puts them at a risk for falls.
- **Continence:** Patients who have urinary recurrence are always at a greater risk for falls.

Other risks for falls include restricted mobility due to being fastened to gear, such as an IV pole, vision impairment and orthostatic hypotension.

12.1.2 Role of Covid Frontline Worker (Basic Care Support) in Fall Prevention

In order to mitigate the risk of patient fall a Covid Frontline Worker (Basic Care Support) should :

- Identify the patient at risk for falls
- Relocate patient's room closer to nurse's station, if possible.
- Check patient at least every hour.
- Ensure that patient beds are in the lowest position and the upper side rails are upright.
- Offer bathroom visits every 2 hours.
- Reinforce activity limits and safety precautions with patients and family.
- Notify family member to obtain footwear and ambulation equipment from home (i.e. walker, cane) when applicable.
- Assess the need for a physical therapy consultation
- Ensure that the patient is using the proper assistive device to ambulate
- Collaborate with staff members regarding a fall prevention plan.

Tips

- In healthcare units following fall prevention guideline need to be adopted:
  - » Familiarize the patient with the environment.
  - » Demonstrate the use of call light to the patient.
  - » Keep the call light within the easy each of the patient.
  - » Keep all the patient's personal belongings within the ease reach of the patient.
  - » Ensure the handrail in the bathrooms, rooms and halfway are strong enough.
  - » Keep the bed in a low position when the patient is resting and when patient has to move from the bed, raise the bed to a desirable height.
  - » Lock the breaks of the beds.
  - » Lock the wheels of the wheelchair when not in use.
  - » Ensure the patient's footwear should be non-slippery, comfortable and should be well fitted.
  - » Utilize night lights or additional lighting.
  - » Ensure the floor surfaces are dry and clean. In case of spills, clean the floor immediately.
  - » Ensure the care areas of the patients are uncluttered.
  - » Follow safe patient handling practices.

Notes

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