BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA MODULE 8 & 9 EXAMINATION
JUNE 04, 2018

TIME: 01 hours **Max. Marks: 20**

Instructions:

1.There are three sections A, B & C.
2.Section-A comprises 4 questions. Each question carries 1 mark.
3. Section-B comprises 2 questions. Each question carries 3 marks.
4.Section-C comprises 2 questions. Each question carries 5 marks

SECTION-A

All Questions are compulsory. **[4x1=4 Marks]**

1.What is the meaning of palliative care?
i) The last phase of life
ii) Care people with incurable or chronically diseases
iii) The four phases of dying
iv) To have cancer

2.What is the meaning of total pain?
i) To have a lot of physical pain
ii) Physical, psychological, social and spiritual
iii) To have depression
iv) To not accept the situation

3.Which emergency code use in cardiac arrest patient?
i) Code Red
ii) Code Yellow
iii) Code Pink
iv) Code Blue

4.Oxygenated blood first enter into which chamber of heart:
i) Right Atrium
ii) Right ventricle
iii) Left Atrium
iv) Pulmonary aorta

SECTION-B

All Questions are compulsory. **[3x2=6 Marks]**

1. How to clean crash cart trolley?
2. What you do before changing the position by a palliative patient and how you made?

SECTION-C

All Questions are compulsory. **[5x2=10 Marks]**

1. Define the emergency situations and write the name of emergency codes. Explain the code red?

2. Write at least five typical symptoms in palliative care and what can a MNA do against it?

.....

BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA MODULE 8 & 9 EXAMINATION
ANSWER KEY
JUNE 04, 2018

Section-A

1. ii) Care people with incurable or chronically diseases

2. ii) Physical, psychological, social and spiritual

3. iv) Code Blue

4. iii) Left Atrium

Section-B

1. Cleaning of crash cart trolley:

a) Remove dirty linen from cart and put into nearest soiled laundry bin.
b) Wipe cart using a minimum of five AF wipes: three for mattress, two for side rails and cart handles. Allow to dry for minimum of three minutes.
c) Dispose of trash in proper receptacles.
d) Wipe down counter top with AF wipes. Allow to dry for a minimum of three minutes.
e) Wipe down dash monitor cables, not including cardiac leads, with AF wipes. Allow to dry for a minimum of three minutes.
f) Wipe down dash monitor cardiac cables with bleach wipes. Allow to dry for a minimum of four minutes then replace cables on holder.
g) Chairs used by patients or family members should be wiped down with AF wipes and placed in chair holder.
h) Wipe down computer keyboard.
i) Shut cabinet doors.

2. before changing the position by a palliative patient:

- To assess if the patient has pain
- To assess if the patient has a dry mouth (Mouth care)
- Small movements.
- Control the skin (perhaps body lotion or crème on the skin)
- Mouth care before or after the movement.

Section-C

1.

Definition: An emergency is a sudden, life-threatening situation in which the vital functions are disturbed. The serious disturbances can be caused by internal influences such as a complication of an existing disease and from outside such as by an accident.

OR

An emergency is a situation that poses an immediate risk to health, life, property, or environment.

Different Codes of Emergency:

Code red

Code blue

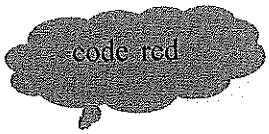
Code black

Code pink

Code yellow

Code purple

Code Red:



- It is alarm for fire inside the hospital

Purpose of fire safety plan: -

- To protect patients, visitors, contractors and employees.
- To minimize property damage.

Fire emergency response: - **"RACE"**

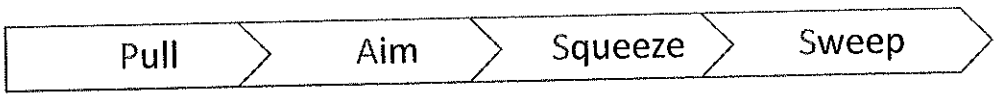
R: Rescue

A: Alarm

C: contain

E: extinguish

How to use of extinguish: -



Prevention and protections: -

- Training all of the hospital staff.
- Preparing and distributing the plan in the hospital.
- Applying fire drill in each department.
- Applying hospital wide fire drill.
-

2. Typical Symptoms in palliative care:

- Acute pain and Chronic pain: *Care:* Pain Assessment by nurse and MNA (ones a shift), medicaments, physically support, massage
- Dyspnea: *Care:* By Grad III-IV Stay by the patient, because most of the time is it connected with fear. Medicaments. Open the windows. Ventilator on the face (this gives the brain the information that oxygen is coming in the blood).
- Terminal rattle: Care: 135-degree storage (show picture). Put a cloth under the month, Vacuum only if there is a lot of secretion. Explain the family what is going on.
- Dehydration: Care. Give to drink. Oral care with foam-sticks (every half hour). Patient can live during weeks without drinking, only with a good oral care.
- Dry mouth: Care: Mouth care with mouth sticks or spray.
- Fear: Care: Staying by the patient. Medicaments. Massage.
- Nausea: Care: Medicaments.
- Constipation: Care: Prophylaxis constipation or enema every 3 days.
- Diarrhoea: Care: Drink one large of the boiled water after lose motion.
- Restlessness: Care: Medicaments, to stay be the patient. There is the danger that he can fallen and injure himself.
- Pruritus: Care: Cut nails short and clean, loos clothing (preferably cotton), cool environment, avoid shower with hot water. Medicaments and special lotions.
- Fatigue: Care: Patient needs a lot of quiet and silence. Sponge bath only what is needed. Changing position every two hours (micro-position).
- Fever: Care: Remove blankets.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA MODULE 10 & 11 EXAMINATION
JUNE 14, 2018

TIME: 01 hours **Max. Marks: 20**

Instructions:

1. There are three sections A, B & C.
2. Section-A comprises 4 questions. Each question carries 1 mark.
3. Section-B comprises 2 questions. Each question carries 3 marks.
4. Section-C comprises 2 questions. Each question carries 5 marks.

SECTION-A

All Questions are compulsory. **[4x1=4 Marks]**

1.Which medicine is used to control the vomiting.
i) Analgesic ii) Antiseptic
iii) Antiemetic iv) Antidepressive

2. A patient of 48-year-old with increase systolic blood pressure 160mmHg and diastolic pressure is 90mmHg is known as.....
i) Hypertension ii) Hypotension
iii) Global insufficiencies iv) Normal blood pressure

3. Dyspnoea is often connected with.....
i) Suffocation ii) Anxiety
iii) Unconsciousness iv) Fatigue

4. According to priorities which position use in pneumonia prophylaxis.
i) VATI Position ii) Prone Position
iii) Side lying Position iv) Sitting Position

SECTION-B

All Questions are compulsory. **[3x2=6 Marks]**

1. a) Define liquid balance. What is the purpose of intake and output calculation?
b) Write down the "Daily **Physiological** Fluid Balance"?
2. What can be the complication of suctioning write any **six (6)**?

SECTION-C

All Questions are compulsory. **[5x2=10 Marks]**

1. Define Dyspnoea with the categories. What is the work of an MNA (atleast 6) by **Dyspnoea Grade-3?**

2. Explain nicotine dependency. Describe how to prevent it.?

.....

BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA MODULE 10 & 11 EXAMINATION
ANSWER KEY
JUNE 14, 2018

Section-A

1. iii) Antiemetic
2. i) Hypertension
3. i) Suffocation
4. i) VATI Position

Section-B

1.Definition

Liquid balance = Liquid quantity calculated from the difference between input and output.

The purposes of intake and output calculation:

Ensure accurate record keeping.
Prevent circulatory overload.
Prevent dehydration.
Aids in analysing trends in fluid status.

Daily physiological fluid balance

INTAKE		OUTPUT	
Ingested liquid:	1500 ml	Kidney:	1500 ml
Ingested food:	800 ml	Skin loss:	600 ml
Metabolism:	200 ml	GI:	100 ml
		Lung	300 ml
Total	2500 ml/day	Total	2500 ml

Daily fluid balance of an adult

2. Complication of suctioning:

a) Hypoxia
b) Tracheal or bronchial mucosal trauma
c) Cardiac or respiratory arrest
d) Pulmonary bleeding
e) Cardiac dysrhythmias
f) Pulmonary atelectasis
g) Bronchospasm
h) Hypotension/ hypertension
i) Elevated ICP

Section-C

1.

Ans. In many diseases of the respiratory system, dyspnoea appears as a companion symptom. Dyspnoea is always a cause of anxiety. The patient has the feeling of suffocating. Typically, the patient with a shortness of breath has a superficial, accelerated breathing and is short-winded. A whistling, gushing or buzzing breathing sound can be heard. Usually the patient is cyanotic and tachycardia.

In the case of a light dyspnoea, it is usually sufficient to interrupt the current activity or to slow down the tempo. In this case, adequate body postures and the lip brake are recommended. Depending on the situation, oxygen is administered in low concentrations. Particularly important is the documentation of the shortness of breath, when it occurred, and what measures have helped to mitigate it. A consistent documentation helps to prevent dyspnoea.

Fear or anxiety is a feeling that often occurs in crisis situations. The feeling of fear is linked to uncertainty, constraint, and despair. It can be weak and temporary, but also very pronounced and persistent. Anxiety can be so strong that the control of the will and mind of a person turns off. It is called panic. The causes of this feeling can be unspecific and unknown to the patient. Emotions such as guilt, shame, rage or helplessness can also cover an existing fear.

Anxiety is divided into four categories: ***1.*** *mild anxiety,* ***2.*** *moderate anxiety,* ***3.*** *severe anxiety and* ***4.*** *panic.*

If the dyspnoea is so severe grade 3, emergency measures must be taken:

- Trigger the alarm
- Keep yourself calm and calm the patient as well
- Open clothing, open windows, if necessary, to subjectively convey the feeling of more air
- To support breathing, put the patient in a sitting position
- Do the lip brake
- Check vital signs, including breathing frequency and skin colour
- Give oxygen if there is a prescription

2 Ans.

Nicotine is a substance found in the leaves of the tobacco plant. It is a powerful poison and causes headache and nausea when consumed for the first time. In the case of small children who take nicotine preparations (chewing gum, pavement or more than three cigarette stubs) in case of an incident, life-threatening poisoning is to be expected. The smokers experience a relaxing and stimulating effect in the brain. There is a dependency. During withdrawal, nervousness, sleep disturbances and increased appetite occur. Those who are affected lack the affectionate habits: make a conversation with the cigarette in the hand, make a cigarette break, etc. The nicotine and the other substances in tobacco smoke lead to physical illnesses such as bronchitis, COPD or myocardial infarction.

The therapy of nicotine dependency is difficult and relapses often occur. A medical consultation, temporary nicotine-containing substitute products (chewing gum, patches) and therapy programs in groups are effective support for people with disabilities who smoke.

Prevention

The most important prevention strategies are:

- As early as possible to educate children and young people in kindergartens and schools, as well as clubs, youth clubs, etc.
- Practice strategies for conflict resolution
- Exemplary function of adults
- Clear educational patterns, developing self-esteem
- Avoid overstraining claims (by parents / environment)

BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA MODULE 12 & 13 EXAMINATION
JULY 02, 2018

TIME: 01 hours **Max. Marks: 20**

Instructions:

1. There are three sections A, B & C.
2. Section-A comprises 4 questions. Each question carries 1 mark.
3. Section-B comprises 2 questions. Each question carries 3 marks.
4. Section-C comprises 2 questions. Each question carries 5 marks.

SECTION-A

All Questions are compulsory. **[4x1=4 Marks]**

1.Most common symptom of Parkinson's diseases.
i) Tremors ii) Constipation
iii) Urge of urinate iv) Sweating

2. Heparin is related to which category of drugs?
i) Antihypertensive ii) Antiemetic
iii) Antidiabetic iv) Anticoagulant

3. What is the symptoms of anaphylactic shock?
i) Itching, feeling hot, dizziness ii) Falling blood pressure, tachycardia, bronchospasm
iii) Both i) and ii) iv) None of the above

4. The collection of blood usually clotted, outside of a blood vessel is known as....
i) Wound Infection ii) Wound Dehiscence
iii) Hematoma iv) Wound Drainage

SECTION-B

All Questions are compulsory. **[3x2=6 Marks]**

1. Define Enema and its types?
2.a) What do you mean by bedsore.
b) Describe its prophylaxis?

SECTION-C

All Questions are compulsory. **[5x2=10 Marks]**

1.a) Define diabetes mellitus & its causes.
b) Describe about the complication of diabetic mellitus.
2.a) Explain how to prepare the instrument for the sterilization.
b) Explain the difference between the cleaning and disinfection.

.....

BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA MODULE 12 & 13 EXAMINATION
ANSWER KEY
JUNE 14, 2018

Section-A

1. i) Tremors
2. iv) Anticoagulant
3. iii) Itching, feeling hot, dizziness & Falling blood pressure, tachycardia, bronchospasm
4. iii) Hematoma

Section-B

1. Enema

Definition: - introduction of solution in to the large intestine for removing feces and cleansing the bowel.

Types of enema: -

1. **Evacuate enema: -**
   - A. Simple enema
   - B. Medicated evacuate enema: - it is five type of medicated enema
     - i. Oil enema
     - ii. Purgative enema
     - iii. Astringent enema
     - iv. Anthelmintic enema
     - v. Carminative enema
   - C. Cold enema
2. **Retained enema: -**
   - A. Stimulant enema
   - B. Nutrient enema
   - C. Emollient enema
   - D. Sedative enema
   - E. Anaesthetic enema

2.

2a) Bedsore:

Definition: A bedsore is a pressure ulcer caused by a reduced blood flow through the skin due to prolonged pressure.

2b) Bedsore prophylaxis:

The most important measure for decubitus prophylaxis is pressure relief. It is achieved by:

- Mobilization
- Regular transfer (every 1-2 hours)
- Micro positions, including positional changes by small pads or cushions
- Anti-decubitus mattresses (various systems)
- Skin care with ph-neutral cleansing agents.
- Clean, wrinkle-free laundry (no crumbs) and absorbent pads
- Avoid moisture (incontinence care, change sweating during heavy sweating).
- Light massage (lotion: wassa-mossa) to increase the blood circulation as well as to prevent bed sore.
- Nutrition such as protein.

		Possibly. Orange juice when the blood glucose level is not too low Blood glucose control As soon as possible, eat a piece of whole grain or fruit If unconscious, call a qualified nurse or doctor

2. Late damage

The late complications include

A. Microangiopathy

- Nephropathy
- Retinopathy

B. Macroangiopathy.

- Neuropathy
- Angiopathy

Late effects of diabetes mellitus			
Microangiopathy		Macroangiopathy	
Nephropathy	Retinopathy	Neuropathy	Angiopathy
Can cause the patient to be dialyzed	Causes haemorrhage, retinal detachment, and can lead to blindness	For example, leads to sensory disturbances, painful feelings, numbness	For example, leads to atherosclerosis, myocardial infarction, PAVK

2. Preparation of Instrument for sterilization:

Instruments to be sterilized must be free from all residual matter, such as blood or organic tissue. Instruments must be also being dry and free from mineral deposits. Such substances may cause damage to the instruments or sterilizer. Clean instruments immediately after use:

Firstly, catch all the equipment's who are used.

- Wash with clean water.
- After wash put all equipment's in the cidex solution for germs disinfection.
- After 30 minutes put on the sheet all equipment's for dry.
- After dry rub the all equipment's with help of liquid paraffin and cotton pad.
- Rubbing is used to be shining of equipment's and long life.
- After rubbing put all equipment's in a tray to sterilization.

Difference Between The Cleaning And Disinfection			
S. No.		**Cleaning**	**Disinfecting**
1.	**Use**	• Table, chair and surfaces.	• Bathroom and diaper changing areas.
2.	**Process**	• Wash or scrub and rinse	• Cover area with solution and air dry before wiping as instructed by label.
3.	**Product**	• Mild soap and water	• Spirit and water
4.	**Purpose**	• Remove visible dirt, debris and food.	• Removes 100 % of germs

BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA END-SEM EXAMINATION
JULY 12, 2018

Max. Marks: 100

TIME: 03 hours
Instructions:
1.There are three sections A, B & C.
2.Section-A comprises 20 questions. Each question carries 1 mark.
3 Section-B comprises 06 questions. Each question carries 5 marks.
4.Section-C comprises 05 questions. Each question carries 10 marks.

SECTION-A

[20x1=20 Marks]

All Questions are compulsory.

1. "V" position in VATI technique is help to improve....
i) Compression of lower lung
ii) stretching of middle lung
iii) Stretching of upper lung
iv) Stretching of lower lung

2. What is meant by Hemiplegia?
i) Half-sided body paralysis
ii) Half-facial paralysis
iii) Half-limb paralysis
iv) Whole body paralysis

3. Medication is used to increase the urine output.
i) Anticoagulant
ii) Analgesic
iii) Diuretics
iv) Antiemetic

4. Morphine is used to relieve....
i) Vomiting
ii) Pain
iii) Fever
iv) Dehydration

5. Tachycardia means....
i) Increased heart rate
ii) Decreased heart rate
iii) Increased respiration rate
iv) Decreased respiration rate

6. What is the full form of VVM
i) Vaccine vial monitor
ii) Vaccine visualized monitor
iii) Both i and ii
iv) Vaccine venous monitor

7. All the members of palliative care. Except
i) Nurse
ii) Doctor
iii) Laboratory Assistant
iv) Psychologist

8. Oxygen necrosis is a complication of which procedure
i) Inhalation
ii) Catheterization
iii) Oxygen administration
iv) Oxygen aspiration

9. What is the normal level of fasting blood glucose level in human being?
i) 60 to 90 mg/dl
ii) 70 to 110 mg/dl
iii) 60 to 150 mg/dl
iv) 110 to 200 mg/dl

10. Which emergency code is used in physical assault.
i) Code Red
ii) Code Blue
iii) Code Purple
iv) Code Yellow

11. Analgesic drugs is used for which problem.
i) Anxiety
ii) Pain
iii) Dehydration
iv) Vomiting

12. What is meant by last phase of life?
i) Terminally phase
ii) Chronically phase
iii) Acute phase
iv) None of the above

13. All are complication of suctioning. Except
i) Hypoxia
ii) Bronchospasm
iii) Decreased urine output
iv) cardiac and respiratory arrest

14. Wong Baker scale is used to measure?
i) Anxiety
ii) Pain
iii) Dehydration
iv) Vomiting

15. What you meant by CPR?
i) Cardiopulmonary suctioning
ii) Cardiopulmonary resuscitation
iii) Cardiopulmonary catheterization
iv) All of the above

16. The sensation of vomiting is known as...
i) Vomiting
ii) Regurgitation
iii) Nausea
iv) Dehydration

17. Absence of breathing.
i) Apnoea
ii)Dyspnoea
iii) Hypoxia
iv) Tachypnea

18. How much amount of fluid is used in enema in adult.
i) 500-1200ml
ii) 700-110ml
iii) 750-1000ml
iv) 600-1200ml

19. A cart stocked with emergency medical equipment, supplies and drugs.
i) Patient trolley
ii) Crash cart trolley
iii) Sterile wound care trolley
iv) Suctioning trolley

20. What is the temperature of autoclave machine during sterilization?
i) 50° c
ii) 120° c
iii) 110° c
iv) 121° c

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SECTION-B

Attempt all questions. **[5x6=30 Marks]**

1) Describe oxygen administration.

2) What do you know about Elisabeth Kuebler Ross Model?

3) What do you mean by sterilization? Explain the method of sterilization.

4) Describe the six Rights of drug administration.

5) Explain pneumonia prophylaxis.

6) Explain in brief Red Emergency Code.

SECTION-C

Attempt all questions. **[10x5=50 Marks]**

1) Define Emergency situation. List of Various type of emergency situations. Describe dyspnea in detail.

2) What do you mean by vital sign. Name pulse monitor sites? Explain the meaning of blood pressure.

3) Explain Palliative care. Describe at least 8 symptoms which can be possible. Write down the work of MNA on every symptom.

4) Define diabetic mellitus and its causes. Describe the therapy used for diabetic patient.

5) Define wound and its causes. Explain wound healing in detail.

.....

BSDU

BHARTIYA SKILL DEVELOPMENT UNIVERSITY
MNA END-SEM EXAMINATION
ANSWER KEY
JULY 12, 2018

SECTION-A

1) stretching of lower lung
2) Half side body paralysis
3) Diuretics
4) Pain
5) Increase heart rate
6) Vaccine vial monitor
7) Laboratory assistant
8) Oxygen administration
9) 70-110mg/dl
10) Code purple
11) Pain
12) Terminal phase
13) Decrease urine output
14) Pain
15) Cardiopulmonary resuscitation
16) Nausea
17) Apnea
18) 750-1000ml
19) Crash cart trolley
20) 121°C

SECTION-B

(Answers 1)

Oxygen Administration:

Introduction: Oxygen can be life-saving in emergency situations. But also in many diseases with reduced oxygen content of the blood, it is necessary to enrich the O2 concentration of the inhaled air.

Safety instruction to handling oxygen:

- bottles are not allowed to fall, so fix the bottles or lay them down. (oxygen – trolley)
- Always transport the oxygen bottles only with the valve closed, do not change the bottles in the patient's room.
- Oxygen supports combustion, therefore make sure there is no fire source nearby; There is an absolute ban on smoking.
- Do not apply force when opening the bottle.
- Check the bottles before each use.
- Notify the technical service department in case of damage, do not self-repair!

Ways of Administration:

Oxygen can be administered in various ways are as following.

1. Nasal O2 tube: It is the most common form of administration and is inserted into the nasal opening with a foam rubber pad. It is inserted approximately 1 cm and fixed by the foam rubber pad. Via nose are max. 1-4 litres of O2.

2. Oxygen goggles: The approximately 1 cm long inflow glands are inserted into both nostrils, the loops lie like eyeglasses behind the ears and are reunited under the chin. Via oxygen spectacles, max. 1-6 l / min. Is administered.

3. Oxygen mask: Loosely placed on the nose and mouth and attached with a rubber band at the back. The exhaled air escapes through lateral holes in the mask. The mask allows a high O2 dose of 5-10 l / min. The mask prevents speech and makes it impossible to eat.

3.6 Complication of oxygen administration

- Oxygen induced hypoventilation
- Oxygen toxicity / O_2 narcosis
- Absorption atelectasis
- Retinopathy
- Drying of mucus membranes
- Infection
- Fire hazards

(Answer 2)

Elisabeth Kuebler Ross Model

Introduction: The Swiss doctor Elisabeth Kuebler Ross (1926-2004) has conducted numerous studies on the dying and published several books on the subject.

Phases: He introduce us with the five phases of death.

1. Do not want to believe it
2. Anger
3. Negotiation
4. Depression
5. Approval

1. Do not want to believe it: The person concerned can't accept the news of their serious or incurable illness. She reacts with not wanting to want and calls for new investigations, believes in confusion or accuses the treating physicians and nurses of disability. Other suppress the message and behave as if it has not been told. Denial mitigates the shock.
2. Anger: If the person concerned has recognized the incurable disease as such, anger and jealousy grow on the others who are allowed to live. There is a flood of negative emotions that the dying man can carry with him. This often manifests itself in "trifles" such as dissatisfaction with the food, the room, the cohabitant, in special wishes, but also in violent disputes with the family and aggressive accusations also against the nursing staff.
3. Negotiation: In the phases imminent death is seen as unavoidable. Further denial or evasion is no longer possible. The body says the truth. The dying man tries to reach a deferment by negotiating, that is more life time. She haggles with nursing staff, promising, for example, to adapt and participate in therapies. Because of her willingness to make a commitment, she sometimes becomes a "well groomed" person. But also fate or god become partners in the struggle of the dying for a "bit more lives".
4. Depression: The dying man overwhelms the feeling of a terrible loss. He regrets past failures and mourns all that he will lose.: partners, children, and friends. Problems which he can no longer solve bring grief. Mistakes made causes guilt feeling. In this times, the dying person is able to deal fully with reality. For examples, he draws up a will or complete business. It May be that his personal attitude to life changes. He becomes quieter and retreats. This withdrawal can be painful for the family, but it is a sign that he is able to break away from his ties and leave the world behind him.
5. Approval: The final phase is characterized by approval and calm expectation of end. The Dying has found its peace with the world and accepts the approaching death, even if a week hope is often maintained, but not dying. The dying person is tired and week, sleeps a lot, and usually does not want to be disturbed. It often only communicates with gestures or a few words. The five phase model is only a "guideline". This process can take years or even happens within a few minutes. It is also possible to phase out or to pass through several times. The basic feeling in all phases is fear (perception of the unstoppable end). In all phases, however, there is also the hope that a miracle might happens.

(Answer-3)

Sterilization

Sterilization definition: -The procedure of destroying all microorganism in or a given environment, such as a surgical instrument in order to prevent the spread of infection. This is usually done by using heat, radiation or chemical agents.

Method of sterilization: -

1. Heat methods.
2. Chemical sterilization.
Filtration method
Heat method of sterilization:
This is the most common method of sterilization. The heat used kills the microbes in the substance. The temperature of the heat and duration of heating are the factors that affect the extent of sterilization.
Moist heat method of sterilization: Here heat is applied in the form of steam or just boiling. This method includes techniques like

- Boiling.
- Pasteurization.
- By use of steam (Autoclave).

Boiling is preferred for metallic devices like surgical scissors, scalpels, needles, etc. Here substances are boiled to sterilize them.

Using Steam (autoclaving): Here the substances are subjected to sterilization in an autoclave a steam sterilization equipment. The process is carried out at a temperature of 115 degrees for 60 min or 121 degrees for 20 min at 15psi pressure.

Dry heat methods: Here the substances are subjected to dry heat like:

- Flaming
- Incineration
- Hot air oven.
- Radiation sterilization

Flaming is the process of exposing metallic device like the needle, scalpels, scissors to flame for few minutes. The fire burns the microbes and other dust on the instrument directly.

Incineration is done especially for inoculating loops used in microbe cultures. The metallic end of the loop is heated to red hot on the flame. This exposure kills all the germs.

Hot air oven is suitable for dry material like powders, metal devices, glassware, etc.
Here thermostable materials on the racks inside the hot air oven.
Then in the closed oven, hot air is circulated at particular temperature and time.

Radiation method involves exposing the packed materials to radiation for sterilization. There are two types of radiations available for sterilization i.e. non-ionic and ionic radiation.

- **Non-ionic radiations** are safe to the operator of sterilization, and they are like Ultra Violet radiations, they can be used even at the door entrances to prevent entry of live microbes through the air.
- **Ionizing radiation sterilization**. They are powerful radiation and very useful for sterilization. The operator needs to protect himself from exposure from these radiations by use of special clothing. Ex: X-rays, γ-rays, etc.

Chemical method of sterilization: Here the articles are subjected to sterilization by using toxic gasses. The gas penetrates quickly into the material like steam so, the sterilization is effective. But the chances of explosion and cost factors are to be considered.

Filtration: Here the liquids are filtered through bacterial filters to remove any microbes present. This method is very effective for sterilization of heat sensitive liquids. The chances of clogging and long-time duration for the process to happen are drawbacks.

For sterilization three types of filters are used viz.

A) Membrane filters: These are thin filters which are made of cellulose. They can be employed for online sterilization during injection by placing the membrane between the syringe and needle.

B) Seitz filters: These are made of asbestos or other material. They are pad like and thicker than membrane filters. They do not rupture during filtration. But the solution might get absorbed by the filter pad itself.

c) Candle filters: These are made of clay like diatoms mud. This special mud has minute pores made by algae. The filters have many minute lengthy pores. The microbes get stuck during their travel through the pore in the candle.

So of the available methods,

1. Methods of sterilization of surgical instruments are Boiling, Incineration, Autoclave.
2. Methods of sterilization of glass ware are autoclave, boiling and also the hot-air oven.
3. Methods of sterilization of water we use filtration and for other moist liquid material autoclave.
4. For powders and other dry forms, it is hot air oven if thermostable or gaseous methods and radiation.
5. Methods of Sterilization in hospitals are for surgical metallic instruments boiling, autoclave, incineration can be done. To

(Answer-4)

Six Right of drugs Administration

Right patient: check the name on the documentation with the name on the dispenser
Right drug: comparison of the drug name in the documentation with the drug name on the package.
Right dosage: comparison of the dosage on the medication pack with the prescribed dosage
Right method or type of application: comparison of the prescribed form of application with the application form recorded on the drug pack.
Right time: comparison of the prescribed time with the appropriate indentation in the dispenser (morning, noon, evening, night)
Right documentation

(Answer-5)

Pneumonia Prophylaxis

Introduction: Pneumonia prophylaxis involves preventative measures to prevent the onset of pneumonia. Pneumonia prophylaxis must be performed early and continuously. It is included in the individual care and is integrated into the daily routine. With appropriate information and education, the affected persons are motivated to help. All prophylactic measures are documented in the care documentation and are thus demonstrable.

Steps of Pneumonia Prophylaxis:

The taking of prophylactic measures involves the following steps:

- Realizing Risks
- Assess the hazard
- Plan measures
- Perform measures
- Evaluate the result of the measures

Realizing Risks

- with insufficient lung ventilation (e.g., pain-induced breathing, reduced general condition, bed rest),
- with increased accumulation of secretion in the respiratory tract (e.g. bronchitis, severe smokers or smokers),
- with descending infections (e.g. oral thrush, deficient oral hygiene),
- that aspirate (e.g., humans after apoplexy)

Assessment of Hazards

Pneumatic scales are used to assess the risk of pneumonia. The assessment is carried out by a qualified staff member.

Planning Measures

The measures are planned individually according to the risk of pneumonia and the resources of the patient. These measures include:

- For people with insufficient lung ventilation: early mobilization, respiratory stimulation, breathing support, respiratory training / respiratory gymnastics.
- Patients with increased secretion collection: retraction, wrapping, inhalation, high fluid intake (mucolytic teas), cough assistance, drainage.
- For people with descending infections: oral and nasal care, mucosal examination.
- Patients with aspiration hazard: Aspiration prophylaxis.

Execute Measures

The implementation of the individual measures has already been described. As always, precise documentation is part of the process.

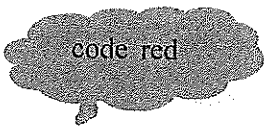
Evaluation of the Results

In order to evaluate the success or failure of the selected measures, it is important to assess the risk once again by means of a breathing scale and to plan further measures accordingly. This step is usually carried out by a qualified nurse.

(Answer-6)

Emergency Code Red

Code Red:



- It is alarm for fire inside the hospital

Purpose of fire safety plan: -

- To protect patients, visitors, contractors and employees.
- To minimize property damage.

Fire emergency response: - **"RACE"**

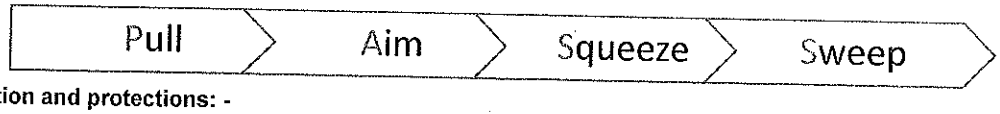
R: Rescue

A: Alarm

C: contain

E: extinguish

How to use of extinguish: -



Prevention and protections: -

- Training all of the hospital staff.
- Preparing and distributing the plan in the hospital.
- Applying fire drill in each department.
- Applying hospital wide fire drill.

SECTION-C
(Answer-1)

Definition of Emergency Situation: An emergency is a sudden, life-threatening situation in which the vital functions are disturbed. The serious disturbances can be caused by internal influences such as a complication of an existing disease and from outside such as by an accident.

OR

An emergency is a situation that poses an immediate risk to health, life, property, or environment.

List: List of emergency situations are following.

1. Unconsciousness
2. Dyspnea
3. Burn
4. Cardiac arrest
5. Epilepsy

Dyspnea

Dyspnoea

Difficulty in breathing; shortness of breath.

Causes

- heart failure
- low blood pressure
- pneumonia
- pulmonary embolism (a blood clot in the lungs)
- carbon monoxide poisoning
- stress or anxiety

Symptom

- laboured breathing
- productive cough
- trouble breathing while sitting still
- increase temperature
- fatigue
- sweating

Grade of Dyspnea

- Dyspnoea is divided into four different severity levels:
- *Grade I*: The shortness of breath arises with a greater physical exertion, e.g. when climbing the stairs.
- *Grade II*: The shortness of breath arises already with moderate physical strain, e.g. go straight.
- *Grad III*: This is where the breathing is already at the smallest physical load, e.g. during trouser pulling and pulling out.
- *Grade IV*: Dyspnoea at rest: dyspnoea also in rest, without physical activity.

MNA work:

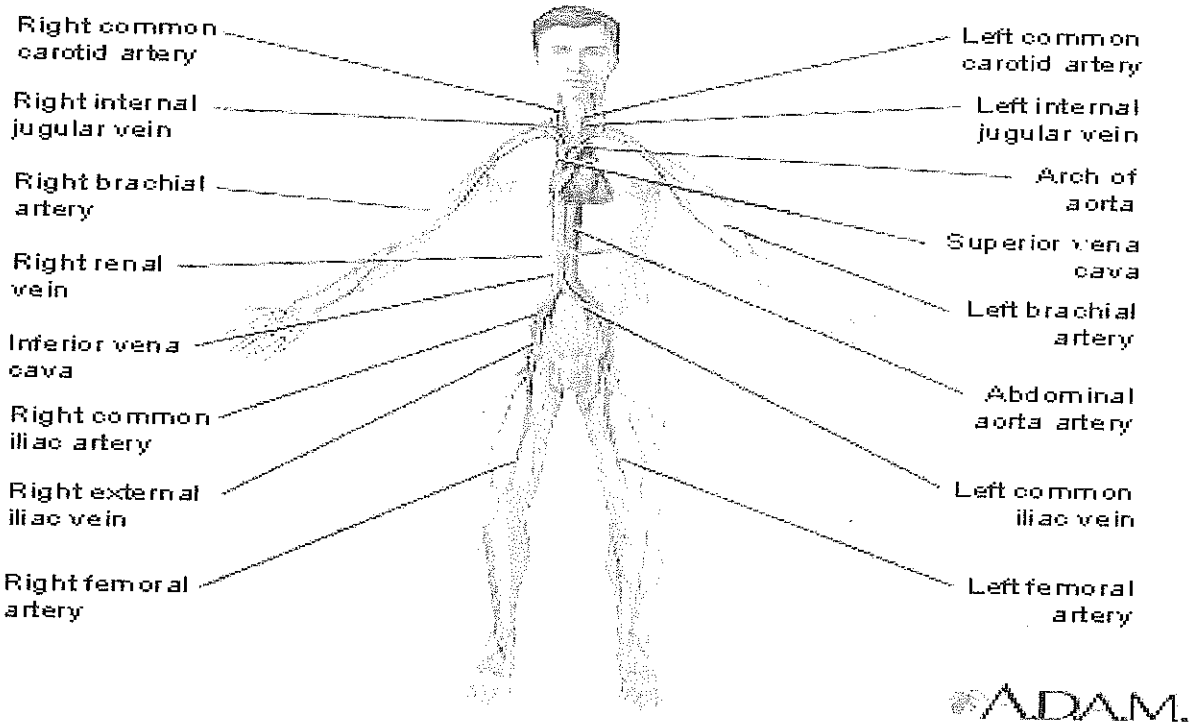
If the dyspnoea is so severe that a breathing space is imminent, emergency measures must be taken:

- Trigger The Alarm
- Keep Yourself Calm and Give the Person Concerned Rest
- Open Clothes and Windows, If Necessary
- To Provide Breathing Support
- Close-up Vital Sign, Including Breathing Frequency and Skin Color
- Oxygen If the Regulation Already Exists
- In The Case of Grade 1&2 Usually Interrupt the Activities

(Answer-2)

Vital Sign: Vital sign is defined as basic component of assessment of physiological and psychological health of a client. e.g. Temperature, pulse, blood pressure and breathing.

Sites of pulse: Pulse rate is the number of heart beats per minute. The resting pulse rate for an average adult is between 60 and 80 beats per minute.



Meaning of Blood pressure: The pressure of blood against blood-vessel walls, especially the walls of arteries.

Systolic blood pressure: It is specifically the maximum **arterial pressure** during contraction of the left ventricle of the heart. The time at which ventricular contraction occurs is called systole.

Diastolic blood pressure: The diastolic blood pressure number or the bottom number indicates the pressure in the arteries when the heart rests between beats.

The blood pressure is dependent on the blood supply, blood volume and vascular resistance in the arteries.

Measurement of Blood Pressure

Two values are determined in the measurement of the blood pressure. The systolic and diastolic blood pressure. The pressure is measured in millimetres of mercury column and the two values are given as follows:

120/80 mmHg: the systolic pressure is 120 mmHg, the diastolic pressure is 80 mmHg.

Blood pressure is measured using an inflatable cuff (manual device) on the upper arm or with an electronic device on the wrist.

Please note the cuff size; It substantially affects the measured value. This means that people with thick upper arms need a wider and longer cuff.

The blood pressure measurement with a digital device is suitable both for self-measurement at home and for continuous measurement in the hospital. The devices differ in their design. For the devices for self-measurement, the patient must only apply the cuff and switch on the device, the measuring process is taken over by the device. This type of measurement, however, contains error sources if it is not carried out according to regulations.

The most common place of measurement is the brachial artery. Blood pressure measurement is also possible on the radial artery.

Influencing factor: The level of the blood pressure values depends on different influencing factors:

- Age, due to decreasing elasticity of the vessels
- Mental condition: stress or relaxation
- Constitution: Overweight or very well train

(Answer-3)

Palliative Care: In connection with seriously ill people, you have already met the concepts of palliative medicine, palliative care, death support or hospice. All these terms are part of the «Palliative Care». These are all measures that alleviate the suffering of a terminally ill person and thus provide him with the best possible quality of life to the end.

Symptoms of palliative care:

1. Pain

Acute pain

Acute pain is an abrupt pain. Acute pain must be taken seriously as a symptom. The patient shows a strong tendency to save. He moves as little as possible to avoid hurting himself. Acute pain lasts for less than three months when not it becomes a chronic pain.

Care:

Pain Assessment by nurse and MNA (ones a shift), medicaments, physically support, massage

Chronic pain

If pain is more or less always present for a period of approximately three months or more, they are referred to as chronic. Chronic pain is often connected with other problems. For example, muscle breakdown about relieving posture, depressive moods, sleep disorders. Often the sufferers are desperately looking for alternative therapies to relieve the pain. The pain can be so intense that the social environment is affected.

Care:

Pain Assessment by nurse and MNA (one time a shift), medicaments, physically support, massage.

Total pain

Total pain is a clinical idea and approach developed by Cicely Saunders, the founder of the modern hospice movement. Total pain recognizes pain as being physical, psychological, social and spiritual. Cathy Sieboldin has described how in the idea of total pain, "Pain is not just a physical sensation: it might be a consequence of loneliness, spiritual distress, inappropriate diet, or tumor growth"

Care:

Pain Assessment by nurse and MNA (ones a shift), medicaments, physically support, massage.

Discussion with the psychologist, patient and family.

Careful listening was the important skill in determining the best way to reduce patient discomfort.

2. Dyspnoea (Dyspnoea)

Dyspnoea: Difficulty in breathing.

Dyspnoea is divided into four different severity levels:

Grade I: The shortness of breath arises with a greater physical exertion, e.g. when climbing the stairs.

Grade II: The shortness of breath arises already with moderate physical strain, e.g. go straight.

Grad III: This is where the breathing is already at the smallest physical load, e.g. during trouser pulling and pulling out.

Grade IV: Dyspnoea at rest: dyspnoea also in rest, without physical activity.

Care: By Grad III-IV Stay by the patient, because most of the time is it connected with fear. Medicaments. Open the windows. Ventilator on the face (this gives the brain the information that oxygen is coming in the blood).

3. Terminal rattle (Death rattle)

The term "punctual rattling" is a rattling sound that arises during the inhalation and exhalation phase. The reason for the rattling is secretion, which has accumulated in the throat area, in the trachea and in the lungs. The dying can no longer cough or swallow the secretion due to increasing weakness of the musculature or even a lack of awareness. It thickens and narrows the airways.

Care: 135-degree storage (show picture). Put a cloth under the month, Vacuum only if there is a lot of secretion. Explain the family what is going on.

4. Dehydration

The dehydration is the decrease of body water. For each patient to perform an individual assessment of the state of hydration.

Care. Give to drink. Oral care with foam-sticks (every half hour). Patient can live during weeks without drinking, only with a good oral care.

5. Dry mouth and dry lips

Mouth: Mouth care with mouth sticks.

Lips: Use Vaseline.

6. Fear

The fear is an emotional state that is perceived as unpleasant, threatening or dangerous. The fear of the dying person can be subjective or objective in nature and also take on relatives or the care team. These fears should be addressed in a helpful and supportive approach.

Care: Staying by the patient. Medicaments. Massage.

7. Nausea
Feeling of sickness and vomiting are with patients with advanced tumour illness frequent symptoms which as are feared by many patients as the symptom pain.
Care: Medicaments.
8. Obstipation/Constipation
About less movement, medicaments (opioids), little drinking.
Care: Prophylaxis constipation.
9. Diarrhoea
Care: Drink one large of the boiled water after lose motion.
10. Restlessness
Arrives often days' bevor dying.
Care: Medicaments, to stay be the patient. There is the danger that he can fallen and injure himself.
11.Pruritus
Itching is an unpleasant, irritating sensation at the skin, which leads to scratching.
Care: Cut nails short and clean, loos clothing (preferably cotton), cool environment, avoid shower with hot wather. Medicaments and special lotions.
12. Fatigue:
Fatigue is one of the most frequent symptoms in palliative care patients, reported in .80% of cancer patients. Fatigue was defined as a subjective feeling of tiredness, weakness or lack of energy.
Care: Patient needs a lot of quiet and silence. Sponge bath only what is needed. Changing position every two hours (micro-position).
13.Fever: Care: Remove blankets.

(Answer-4)

Diabetes Mellitus: It is disorder of carbohydrate metabolism characterized by inability of the body to produce or respond to insulin and thereby maintain proper levels of sugar (glucose) in the blood.

Causes of Diabetes Mellitus:
Diabetes Type 1
Type 1 diabetes is also referred to as "insulin Dependent diabetes". It can occur at any age and mostly it affected persons usually under the age of 20 years.
- Auto-immune disorder
- Hereditary
- Virus Infection
- Environment factors

Diabetes Type 2
The type 2 diabetes is mostly diagnosed in people in the middle and older age who are usually overweight.
- Unhealthy diet
- Lack of exercise
- In starting insulin still produce but slowly and at wrong time.

Therapy for Diabetes Mellitus:
The therapy of diabetes mellitus consists of three main areas:
1. Diet/Nutrition
2. Exercises
3. Drug treatment

1. Nutrition
In case healthy and balanced diet, it is important for patient and family member to be informed by a nutritionist. Nutrition for people with diabetes also depends on the **dietary pyramid**.
The diabetic has a normal and above all healthy diet. The basic rule is: You can eat what cover with insulin and do not increase the blood sugar level.
Today, the **glycaemic index** of the food plays an important role in the diet of diabetics. It shows how different carbohydrate foods influence the blood glucose level differently.
Fast sugars are simple sugars, such as glucose, fruit sugar and refined sugar. They are contained in fruits, chocolate, sweets etc. Some of them are already in the blood through the oral mucosa and lead to a rapid and high increase in the blood glucose level. Because diabetes mellitus does not rapidly reach the cells, it remains in the blood and can cause damage to the walls of the blood vessels.

Slow sugars are contained in whole grain chappti, whole grain, full rice, vegetables, etc. and must be split up in the intestine before they can be absorbed into the blood. This increases the blood glucose level slowly. They are more suitable for diabetics, because glucose enters the cells with a delay.

Also ideal for people with diabetes are high-fibre foods. They have a beneficial effect on the blood glucose level, since they slow down the intake of sugar from the intestine into the blood.
The following table shows a comparison of foods with fast or slow sugars.

Slow blood glucose rise	Rapid increase in blood glucose
	
Whole grain bread	White bread
Oatmeal	Cornflakes, sweetened flakes
Potatoes in the shell, whole grain rice, parboiled rice, pasta.	Mashed potatoes, polished rice
Almost all vegetables, orange, apple, pear	orange juice, banana

2. Physical Exercise
In addition to diet, physical exercise is very important. The sensitivity of the cells to insulin is increased. This lowers the blood glucose level.
Especially for overweight people with Type 2 diabetes, exercise is urgently needed. Intensive exercise means more energy is consumed, which reduces the weight faster. Endurance sports such as cycling, jogging, and walking are beneficial.
In order to avoid **hypoglycaemia**, drug-treated diabetics must include their sporting activities in the diet and reduce the amount of medication.
For dangerous sports, such as diving or kite flying, they should prevent from hypoglycaemia.

3. Medical therapy
Oral antidiabetic drugs:
Attempts are being made to discontinue type 2 diabetes mellitus with oral antidiabetic drugs. As a rule, one selects the first metformin (Glucophage® 500/850/1000, Metformin-Mepha® 500/850/1000 etc.). In case of insufficient success or intolerance, other preparations or combinations are used.
Insulin:
Insulin lowers the blood glucose level. People with diabetes mellitus type 1 and some type 2 are always treated with insulin. Because insulin becomes ineffective by digestion, it cannot be administered orally.
Caution: Insulin therapy is always associated with the risk of hypoglycaemia.
Insulin dosage: It is carried out in international units (IU). The number of insulin units that humans need with diabetes is prescribed. 100 IU insulin corresponds to 1 ml.

(Answer-5)

Definition of Wound:

A wound is the severing or damage of the skin or mucous membrane.

Causes of wounds

The cause of a wound is essential for treatment as well as for the healing process.

- **Mechanically induced wounds:** They are caused by external forces such as pressure such as, sore wounds, gunshot wound.
- **Thermally induced wounds:** They are caused by exposure to extreme temperatures (burns, scalding).
- **Chemically induced wounds:** The tissue damage is caused by chemicals, especially burns by acids or alkalis.
- **Disease-related wounds:** They develop as a result of the long-term effects of damaging factors (decubitus, diabetic foot).

Wound healing

The course of healing of a wound depends on two factors.

1. Primary wound healing

A clean wound heals fast and without signs of infection. The margins of the wound grow together to form a narrow scar directly. To achieve this, the skin must be closed primarily.

Prerequisites for primary wound healing:

- Smooth
- wound less than six hours' old
- wound not infected
- Aseptic surgical wound

2. Secondary wound healing

In the secondary wound healing, the wound heals from depth through contraction and granulation. A broad scar is usually formed. Wound healing occurs more slowly than in primary wound healing. If an originally germ-free wound is not immediately closed by a suture, it is populated by bacteria within a few hours.

Wound healing

The healing process of an uninfected wound can be divided into three phases:

Phases Haemostasis: (blood clotting)	Within the first few minutes of injury, platelets in the blood begin to stick to the injured site.
Phases Inflammation:	During this phase, damaged and dead cells are cleared out, along with bacteria and other pathogens or debris
Phase Proliferation (growth of new tissue):	In this phase, angiogenesis, collagen deposition, granulation tissue formation, epithelialization, and wound contraction occur.
Phase Maturation (remodelling):	During maturation and remodelling, collagen is realigned along tension lines, and cells that are no longer needed are removed by programmed cell death, or apoptosis.

Influencing factors on wound healing

They can be divided into local and general factors.

1. Local factors:

- Germination: Here it is a question of whether the wound is aseptic (only surgical wound) or colonized with germs.
    - **Contaminated wound** is referred to when the wound is colonized with microorganisms, but not inflamed.
    - An **infected wound** is a wound that has been colonized with germs that multiply. It shows signs of infection.
- Skin condition / blood flow: A previously intact skin and good circulation lead to wound healing. Pressure on the wound area or wound oedema can interfere with the blood flow.
- Resting position: Under certain circumstances a wound must be immobilized by dressing or manipulation so that wound healing is not hindered by too early a load.

2. General factors:

- Nutrition: Carbohydrates serve as energy suppliers; Protein, vitamins promote wound healing.
- Age: In the case of children and young people, wound healing occurs faster than in the elderly due to the overall metabolic situation.
- Basic disease: Diseases such as diabetes, anaemia or PAVK (peripheral arterial occlusive disease) inhibit wound healing.

Scarring: The scar is the end result of wound healing. It consists of connective tissue and differs from the originally injured tissue.

The skin colour is initially well-perfused, so a fresh scar looks reddish. After few weeks the proportion of connective tissue increases and the scar gradually fades.

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