COURSE INTRODUCTION

Duration 02 Periods (Lecture-02)

Materials:

- Name tags and name tents
- Participant Workbook and handouts
- Participant Course Evaluation Form (handout)
- Computer and multimedia projector
- Powerpoint presentation
- Projection screen

LESSON OBJECTIVES

Upon completion of this lesson, you will become familiar with:

1. Other participants and the respective organizations they represent, the course coordinator, the instructors and the support staff.
2. The following aspects of the course: Purpose, objectives, evaluation and methodology, materials to be used, course schedule, facilities and ground rules.

	Visual Aids and Other Materials	Time Elapsed

1. INTRODUCTION

1) Introduce instructors and assistants.
2) Present the lesson.
3) Present lesson objectives. Ask participants to read from their workbooks.

▶ *PPT 1-1 1-2*

2. DEVELOPMENT

1

Personal Introduction

<Thank the participants for their presence and the host organization for their help.

Invite the instructors, assistants, support personnel and the coordinator, to introduce themselves by stating their name, rank, profession or occupation, institution to which they belong and any other information that they consider of interest.>

▶ *NOTE*

Introduction of participants:

Option A: Each participant introduces him/herself.
Allow each person one and a half minutes to state his/her name, rank, profession, work, position and motivation for participating in this course.

1 Personal Introduction (Cont.)

Visual Aids and Other Materials

Time Elapsed

Option B: Mutual introductions.
Instruct participants to form pairs with the person seated next to them and exchange information with one another; they then introduce each other to the rest of the class.
Ask them to provide the same information as in Option A.

<ALLOW 5 MINUTES.>

Option C: Random reciprocal introductions.
Requires a container for the name tags. Half the group places their name tags in the container. Those who kept their tags pick one from the container and place it next to their own.
The participants pair up according to the names. They then introduce each other as in Option B.

2 Course Materials

2.1 Participant Workbook (WB)

<Request participants to open workbooks.>

<Inform the participants that the workbook is their property and will be useful only if it is completed. Ask the participants to write their names on their workbooks.>

<Review workbook lesson by lesson, checking page numbers and verifying that everyone's workbook is complete.>

2.2 Reference Material (RM)

Reference material includes additional in-depth material as recommended reading. Also includes a Glossary.

<COLLECT THE PRE-WORK. The other instructors should correct the pre-work and return it to the participants at the end of the lesson.>

2 Course Materials

Visual Aids and Other Materials	Time Elapsed

2.3 Participant Workbook (WB)

<Request participants to open workbooks.>

▶ *NOTE*

<Inform the participants that the workbook is their property and will be useful only if it is completed. Ask the participants to write their names on their workbooks.>

<Review workbook lesson by lesson, checking page numbers and verifying that everyone's workbook is complete.>

2.4 Reference Material (RM)

Reference material includes additional in-depth material as recommended reading. Also includes a Glossary.

<COLLECT THE PRE-WORK. The other instructors should correct the pre-work and return it to the participants at the end of the lesson.>

▶ *NOTE*

3 Course Purpose and Objective

Visual Aids and Other Materials	Time Elapsed
▶ *PPT 1-3*	

3.1 Purpose

To provide the participant the knowledge and skills needed to render aid on-site to sick or injured persons, to stabilise their condition and prepare them for transport to a medical facility.

3.2 Performance Objectives

▶ *NOTE*

<Ask participants to assist in reading aloud.>

In the final practical evaluation, you will be given three scenarios — a trauma case, a medical emergency, and a childbirth — you will respond to them one at a time using the procedures you will learn in this course.
You will be able to:

1) Receive and register the request for assistance.
2) Respond to the scene, evaluate it and report the situation.
3) Request the resources needed and secure the scene.
4) Gain access to the victim and evaluate his/her condition.
5) Select all the necessary equipment.
6) Stabilise the patient at the scene.
7) Package and prepare the patient for transport.
8) Report the condition of the patient and the treatment given.
9) Prepare the equipment for the next emergency.

You will be provided all the basic equipment of a Medical First Responder, the forms and the personal protective equipment. You will have 15 minutes to complete all the steps established in the protocol for each incident.

3 Course Purpose and Objective (Cont.)

Visual Aids and Other Materials

Time Elapsed

3.3 Training Objectives

<Ask participants to assist in reading aloud.>

▶ *NOTE*

Upon completion of the course, you will be able to:

1) List the steps for preparing the medical first responder's equipment.
2) Describe the method for receiving and documenting a request for assistance, reporting on the situation and requesting resources.
3) List the steps for securing the scene and gaining access to the victim.
4) Describe patient assessment and select the correct equipment to provide care.
5) Describe the procedures for stabilizing, preparing and transporting a patient.
6) Complete a report on a patient's condition and the treatment given.

<Remind participants that each lesson will introduce its own specific training objectives.>

▶ *NOTE*

<QUESTIONS or COMMENTS?>

4 Course Methodology

The course methodology is highly participatory and allows constant interaction between the instructor and participants. Participants will be required to gain some background knowledge as well as acquire manual skills. Instructional and performance objectives are clearly stated at the beginning of each lesson.

<Inform participants that they will have ongoing opportunities to provide feedback and ask questions.>

▶ *NOTE*

5 Participant Testing and Course Schedule

Visual Aids and Other Materials

Time Elapsed

<See Course Evaluation System table, page IG 18 and PWB 16>

There is a total of **23 lessons** which includes a General Review (Lesson 22), and a Final Practical Evaluation (Lesson 23).

Each lesson is followed by an open-book Post-Test (self-test), to reinforce the material covered. Post-Tests will **not** be collected by the instructors.

- Lessons are grouped into six units. There are written **Unit Tests** at the end of Lessons 5, 7, 11, 14, 17 and 21, with a value of 100 points each.

- There are **Practical Exercises** at the end of Lessons 6, 7, 8, 10, 11, 12, 18, 19, and 21. Your performance on all exercises must be satisfactory within four attempts. The instructor's evaluation form (Skill Checklist) can be found at the end of each lesson in your workbook.

- There are two **Group Presentations:** One after Lesson 13 and another after Lesson 21. These involve a medical/trauma scenario and you will be evaluated on skills learned up to that point. You will be evaluated as a group. Your group must score a minimum of 80 points.

- There is a **Group Exercise** after Lesson 19. Each group will be given the same surprise scenario. You will be required to use all your MFR skills and complete the scenario as learned in the course. This is **not** a scored exercise.

- The **Final Practical Evaluation** at the end of the course will include three stations with simulated situations typical of the region.

  Station 1: Trauma Case 100 points (80 points to pass)

  Station 2: Medical Emergency 50 points (40 points to pass)

  Station 3: Childbirth 50 points (40 points to pass)

  In the Final Practical Evaluation, you must complete all steps identified for each of the three stations in the respective evaluation form and established protocol.

  <Review MFR Course Evaluation System, next page.>

▶ *FC 1-1*

▶ *NOTE*

▶ *NOTE*

MFR COURSE EVALUATION SCHEDULE

Lesson	Lesson Post Test Not Scored	Practical Exercises Successful Performance Required	Written Unit Tests Passing Score Required
1	Course Introduction		**Pre-Test**
2	EMS and the MFR		
3	Infectious Disease and Precautions		
4	The Incident		
5	Anatomical References		**Unit Test 1**
6	Patient Assessment	Patient assessment and taking vital signs	
7	BLS and CPR	CPR and FBAO	**Unit Test 2**
8	Oxygen Therapy	Administering oxygen, mask, BVM, and airways	
9	Hemorrhage and Shock		
10	Soft-Tissue Injuries	Controlling hemorrhage, tourniquet, treating and bandaging	
11	Musculoskeletal Injuries	Immobilisation and splinting	**Unit Test 3**
12	Skull, Spinal and Chest Injuries	Treating injuries, using cervical collar	
13	Burns and Environmental Emergencies		**Unit Test 4**
14	Poisoning		
	First Group Presentation *(Passing score required)*		
15	Cardiovascular Emergencies and Abdominal Distress		
16	Respiratory Emergencies		
17	Seizures, Diabetic Emergencies and CVA		**Unit Test 5**
18	Childbirth Emergencies	Infant delivery and complications, mother and infant assessments	
19	Lifting and Moving Patients	Securing and moving patients on spine boards	
	Group Exercise		
20	Report Writing and Preparation for the Next Call		**Unit Test 6**
21	MCI and Triage	Triaging patients using S.T.A.R.T.	
	Second Group Presentation *(Passing score required)*		
22	Course Review		**Post-Test**
23	**Final Practical Evaluation – Three Stations** *Passing Score Required* **Trauma** **Medical** **Childbirth**		

5

Participant Testing and Course Schedule (Cont.)

Visual Aids and Other Materials

Time Elapsed

Daily Lesson Evaluations: At the end of each lesson, you will be asked to rate the instructor and lesson content, and provide comments. At the end of each day, you will identify what has worked well and what needs improvement.

<Encourage feedback on any subject, such as food, facilities, materials, content, etc.>

▶ *NOTE*

Overall Course Evaluation: You will be asked to critique the MFR Course as a whole, and identify its strengths and weaknesses.

<Advise participants that this information will be used to improve future courses.>

▶ *NOTE*

Conditions for Passing the Course

- **Punctual attendance at all activities is mandatory. This includes all lessons, practices, and evaluations.**

  <Define absence policy.>

  ▶ *NOTE*

- **Minimum score on Unit Tests is 70 points.** Your overall average must be a minimum of **70 points** in order to participate in the Final Practical Evaluation.

- **Make-up tests:** If you do not receive a passing score on one of the Unit Tests, you will receive **one make-up opportunity per test.** The make-up Unit Tests will be in the same format and in the presence of at least two instructors. **The highest score possible on a make-up Unit Test is 70 points, regardless of your actual score.**
- **Practical Exercises:** Your performance on all practical exercises must be satisfactory.

- **Group Presentation:** Your group must achieve a passing score.

5 Participant Testing and Course Schedule (Cont.)

Time Elapsed

- **Final Practical Evaluation:** Only **one make-up opportunity** will be given for each Final Practical Evaluation station. You must pass each make-up station before proceeding to the next station. You must pass all three stations to successfully complete the course. If you are unable to pass any one make-up Practical Evaluation, you will receive failed certificate.
- After successfully completing all Unit Tests and the Final Practical Evaluation, you will receive a Certificate of Completion.

▶ *NOTE*

<All participants are coming from the organizing institution, course coordinator must secure data from the files.>

6 Facilities and Ground Rules

<This section will need to be prepared together with the local course coordinator.>

Classroom Etiquette

- Smoking is prohibited inside any building; participants will be able to smoke outside during breaks.
- No eating or drinking in the classroom (this may be modified by the course coordinator to allow drinking tea or coffee, etc.).
- Interruptions will only be permitted for emergencies. The administrative staff will post messages for the participants, which you can retrieve during breaks. Mobile (cellular) phones and beepers must be off or set to silent/vibrate mode.

7 File

<Post a flipchart labelled "File" and explain that its purpose is to record questions and issues that will be clarified in subsequent lessons or in the general review.>

Visual Aids and Other Materials

Time Elapsed

3. CLOSING

- In this course there are no surprises; each activity is based on objectives that are presented to you.
- All the instructors are available to help you.
- Answer questions, explanations or comments.

<Thank the participants for their participation and introduce the next lesson.>

▶ *NOTE*

EXERCISES AND PRACTICAL'S

Keep in mind that this course may be the first time participants are meeting each other. Promote a pleasant and cordial atmosphere. Manage time carefully.

Selecting Work Groups:

Select groups in order to increase the variety in professional and educational backgrounds as much as possible.

It is also important to establish a balance within each group with regard to:

- Gender
- Having members with leadership or experience in fields relevant to the course
- Persons with passive or outgoing dispositions

Ideally, the groups set up in this manner (five or six) should remain fixed for all exercises throughout the course, except in cases where a balance needs to be re-established due to a particular circumstance or a withdrawal from the course.

Stress the value of cooperation, integration and maintaining a group vision to reinforce team spirit.

Alert Group

One **'ALERT GROUP'** will be assigned each day (after discussion of Lesson 6) to assess the level of learning of participants. The group is expected to apply the appropriate skills/ patient care based on the scneario. The scenario should be designed to be in line with the completed lesson(s).

The scenario will be developed and planned by the instructor handling the focus lesson for the scenario. Suggested time for group performance/skills application is 5 minutes.

Debriefing can be done at the classroom to gather observations from participants and the instructor will also give his/her comments. Minimize detailed discussion as this activity serves as a review. This activity is not graded.

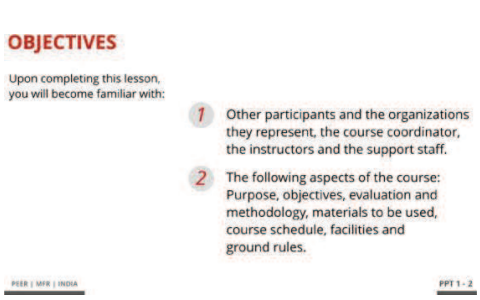
Visual Aids and Other Materials

Time Elapsed

LESSON 1
— PPT's

1-1

1-2



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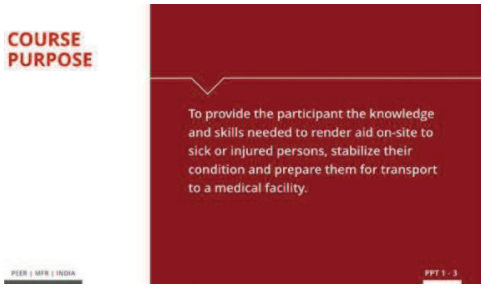


1-4

LESSON 1
— FLIP CHARTS

FC1-1

MFR COURSE EVALUATION SCHEDULE

Lesson	**Lesson Post Test** Not Scored	**Practical Exercises** Successful Performance Required	**Written Unit Tests** Passing Score Required
1	Course Introduction		**Pre-Test**
2	EMS and the MFR		
3	Infectious Disease and Precautions		
4	The Incident		
5	Anatomical References		**Unit Test 1**
6	Patient Assessment	Patient assessment and taking vital signs	
7	BLS and CPR	CPR and FBAO	**Unit Test 2**
8	Oxygen Therapy	Administering oxygen, mask, BVM, and airways	
9	Hemorrhage and Shock		
10	Soft-Tissue Injuries	Controlling hemorrhage, tourniquet, treating and bandaging	
11	Musculoskeletal Injuries	Immobilisation and splinting	**Unit Test 3**
12	Skull, Spinal and Chest Injuries	Treating injuries, using cervical collar	
13	Burns and Environmental Emergencies		**Unit Test 4**
14	Poisoning		
	First Group Presentation *(Passing score required)*		
15	Cardiovascular Emergencies and Abdominal Distress		
16	Respiratory Emergencies		
17	Seizures, Diabetic Emergencies and CVA		**Unit Test 5**
18	Childbirth Emergencies	Infant delivery and complications, mother and infant assessments	
19	Lifting and Moving Patients	Securing and moving patients on spine boards	
	Group Exercise		
20	Report Writing and Preparation for the Next Call		**Unit Test 6**
21	MCI and Triage	Triaging patients using S.T.A.R.T.	
	Second Group Presentation *(Passing score required)*		
22	Course Review		**Post-Test**
23	**Final Practical Evaluation – Three Stations** *Passing Score Required* **Trauma** **Medical** **Childbirth**		

LESSON PLAN

02

EMERGENCY MEDICAL SYSTEMS (EMS) AND THE MEDICAL FIRST RESPONDER (MFR)

Duration 02 Periods (Lecture-02)

Preparation	Obtain background information regarding applicable local laws and customs.
Equipment / Materials:	• Computer • Power point presentation • Multimedia projector and projection screen • Flip chart • Blank Flip charts • Extension cord • Marker Pens • Handouts if applicable • Complete set of personal protective equipment (as listed in the lesson)

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. Describe the emergency medical services (EMS) system in the area you reside.
2. List at least six duties and/or responsibilities of the medical first responder (MFR).
3. Define negligence and give an example as it relates to EMS.
4. Define abandonment and give an example as it relates to EMS.
5. Define implied consent and expressed consent.

	Visual Aids and Other Materials	Time Elapsed

1. INTRODUCTION

1) Introduce instructors and assistants.
2) Introduce the lesson.
3) Present lesson objectives – ask a participant to read them aloud.

▶ *PPT 2-1 to 2-3*

2. DEVELOPMENT

1 Introduction to Pre-hospital Care

Explain the concept of Pre-hospital Care using:

- Preserve Life
- Prevent Worsening
- Premate Recovery

▶ *NOTE*

<RM for this is the course material used by FSTI in their trainings.>
<Additional RM can be found in Brady Book>

▶ *NOTE*

2 The Emergency Medical Services (EMS) System

Visual Aids and Other Materials | **Time Elapsed**

<Ask the participants for their own definition of an EMS system (fill in WB), write them on a flipchart, and compare them with the definition in the TR.>

▶ *NOTE*

> **Definition:** The Emergency Medical Services (EMS) System is a network of resources linked together for the purpose of providing emergency care and transport to victims of sudden illness or injury.

▶ *PPT 2-4*

3 Components of an Emergency Medical Services (EMS) System

<Use TR to explain the components of an EMS system. Instruct participants to copy diagram into their WB.>

▶ *PPT 2-5*

<Ask participants to draw an organisational chart of their local EMS system in the blank space in their workbooks.

▶ *PPT 2-6*

Review various drawings, pointing out differences and similarities.

Stress importance of having a central coordinated system (universal emergency number).For India 108 & 112 are the emergency numbers.

Focus should be on efficiency and time savings, which translate into more lives saved.>

4 Medical First Responder (MFR)

> **Definition:** The first person on the scene of an incident with emergency medical care skills, typically trained to the most basic EMS level.

▶ *PPT 2-7*

If the Medical First Responder is at the incident as a member of EMS, it is not necessary to alert EMS.

<Differentiate with "first person on the scene.">

▶ *NOTE*

5 Qualities of the MFR

Visual Aids and Other Materials | **Time Elapsed**

<Request the participants to provide two or three ideas of what they perceive the qualities of an MFR should be. Note them on the flipchart and compare with the FC.>

▶ *NOTE*

<EMPHASIZE that a COMMITMENT to the qualities listed below is essential to excellent MFR work.>

Qualities of the MFR

▶ *FC 2-1*

The MFR must possess, among others, these qualities:

- Responsible
- Sociable
- Honest
- Pride (hygiene, uniform, personal appearance
- Emotionally stable

▶ *FC 2-2*

- Professional demeanour
- Good physical condition
- Demonstrated ability
  (many may want to be an MFR, but not all can be)
- Resourceful

6 Duties of the MFR

<Write on flipchart five or six of the participants' ideas of the duties of an MFR. Compare them with the prepared FC.>

▶ *NOTE*

1) Ensure your safety and the safety of your crew, the patient, and bystanders.

▶ *PPT 2-8*

2) Gain access to the patient.
3) Assess the patient to identify life-threatening problems.
4) Alert additional EMS resources.
5) Provide care based on assessment.
6) Assist other EMS personnel.

▶ *PPT 2-9*

7) Participate in record-keeping and data collection as received.
8) Act as liaison with other public safety workers.
9) Perform patient preparation for movement and transportation.

7 Legal Aspects

	Visual Aids and Other Materials	Time Elapse
<Document the local laws regulating pre-hospital treatment with assistance from the participants. Legal aspects vary country by country.>		
7.1 Legislation and Local Protocols	▶ *NOTE*	
<Explain and comment on the legal aspects of a medical first responder rendering care in the local country, e.g., who has the authority to officially declare a person dead?>	▶ *NOTE*	
1) Local Legislation (Indian Panel Code sec 92) 2) Protocols		
7.2 Responsibilities of the MFR		
Professional responsibility, refers to the legal and ethical obligation that all persons who practice an art or profession must be accountable before the law for any acts that cause harm as a result of carrying out that activity.		
Scope of Care: Actions that are legally allowed by the MFR when providing patient care.	▶ *PPT 2-10*	
The scope of care in Indian situation is the skills and knowledge learned in this course as it has been approved by MHA.		
Duty to Act: The contractual or legal obligation of the MFR to provide care.	▶ *PPT 2-11*	
Breaches of Responsibility		
Abandonment: Discontinuing emergency medical care without making sure that another health care professional with equal or better training has taken over.	▶ *PPT 2-12*	
<Give example of abandonment.>	▶ *NOTE*	
Negligence: Failure to provide the expected standard of care, causing injury or death of the patient.	▶ *PPT 2-13*	
Usually, negligence is determined through a legal process. (See Brady Book)		
<Give example of negligence.>		
(Negligence is a term often used to indicate either that a care provider did not do what was expected or did something carelessly)		
		<Give example of negligence.>

7

Legal Aspects (Cont.)

Visual Aids and Other Materials

Time Elapsed

7.3 Rights of the Patient

<List some of the rights that the patient has when receiving care from an MFR.>

▶ *NOTE*

Rights of the patient when receiving emergency care:

▶ *PPT 2-14*

- To solicit and receive pre-hospital care.
- Confidentiality regarding personal information and condition.
- To pursue legal recourse for acts of negligence, abandonment, and/or violations of confidentiality.
- In some situations, the patient has the right to refuse care. The patient may be required to sign a refusal form in the presence of a witness.

▶ *PPT 2-15*

<Cite examples.>

▶ *NOTE*

CONSENT

Implied Consent: Consent assumed on the part of an unconscious, confused or seriously injured patient or, in a minor patient (according to local legislation) that cannot make decisions.

▶ *PPT 2-16*

It is assumed that if the person were conscious, he/she would authorise care. Likewise, one assumes that if a relative or the minor's guardian were present, he/she would authorise care.

Expressed Consent: Permission that must be obtained from every responsive, competent adult patient before providing emergency care.

▶ *PPT 2-17*

A relative or legal guardian may give expressed consent to care for an unconscious, confused or seriously injured patient; or to a minor or mentally handicapped person.

8 Basic Equipment of the MFR

Visual Aids and Other Materials

Time Elapsed

The MFR should know all the equipment and materials that he or she may need for personal protection as well as for providing care to the patient.

8.1 Basic Personal Protective Equipment (PPE)

▶ *NOTE*

<Emphasize use of PPE at all times, this will be covered more in Lesson 3>

▶ *FC 2-3*

- Latex gloves
- Personal mask
- Eye protection (safety goggles)
- Gown
- CPR mask

8.2 Basic Equipment for Pre-hospital Care

- Kit
- Dressings
- Bandages
- Tape
- Paper Cups
- Tourniquet
- Blankets
- Sheets
- Pillow
- Splints
- Oxygen and accessories (optional)
- Backboard
- Quick reading pulse oximeter
- Hand sanitizer and face shield
- Cervical collars
- Torch light
- Blood pressure cuff
- Stethoscope
- Disinfectant (Betadine)
- Sterile water or normal saline
- Activated charcoal
- Aluminum foil
- Tongue depressor
- Childbirth kit
- Oropharyngeal airways (all sizes)
- Occlusive dressing

Visual Aids and Other Materials	Time Elapsed

REVIEW

Review lesson objectives on page 1.

EVALUATION

1) Verify that the objectives has been achieved.
2) Give the participants 2 minutes to answer the lesson evaluation form.

CLOSE

<Comments or suggestions?>

<Thank the participants and introduce the next lesson.>

— INSTRUCTOR'S COPY

POST-TEST | LESSON 2

Emergency Medical Systems and the Medical First Responder

1. Describe the local emergency medical services (EMS) system.

If there is no local EMS system, the participant will describe the EMS system given in the course.

2. List six duties and/or responsibilities of the medical first responder (MFR).

- *Protect your safety and the safety of your crew, the patient, and bystanders.*
- *Gain access to the patient.*
- *Assess the patient to identify life-threatening problems.*
- *Alert additional EMS resources.*
- *Provide care based on assessment findings.*
- *Assist other EMS personnel.*
- *Participate in record keeping and data collection as received.*
- *Act as liaison with other public safety workers.*
- *Perform patient packaging and preparation for movement and transportation.*

3. Define negligence and give an example as it relates to EMS.

When a person has a duty to act, and fails to act or acts outside of the standard of care, and that failure or action outside of the standard of care caused harm, negligence has occurred.

Example: The MFR fails to monitor the vital signs of a trauma patient while transporting him/her to the hospital.

4. **Define abandonment and give an example as it relates to EMS:**

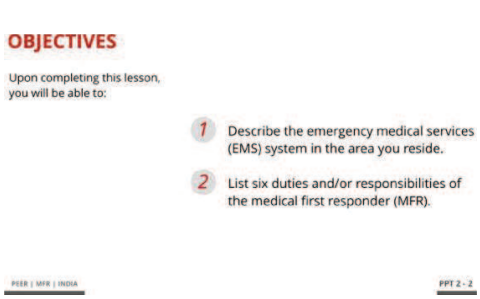
Discontinuing emergency medical care without making sure that another health care professional with equal or better training has taken over.

Example: When the MFR releases an unconscious patient to a nurse's aide upon arrival at the hospital.

LESSON 2
— PPT's

2-1

2-2



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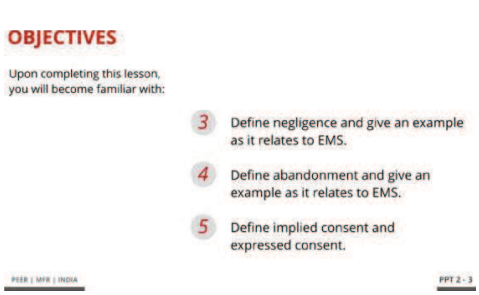

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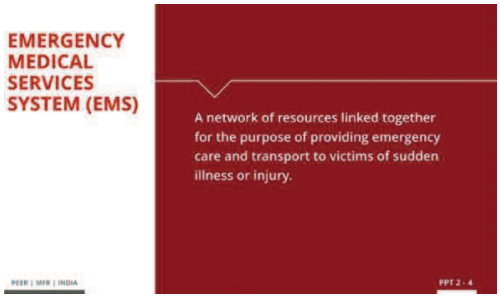

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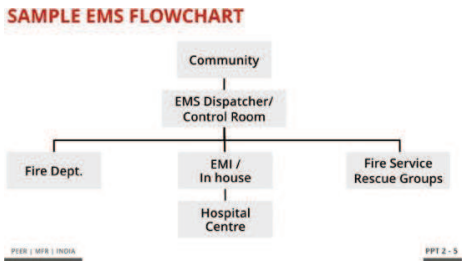

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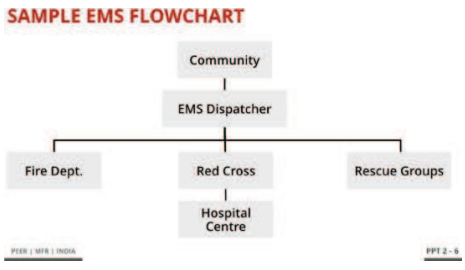
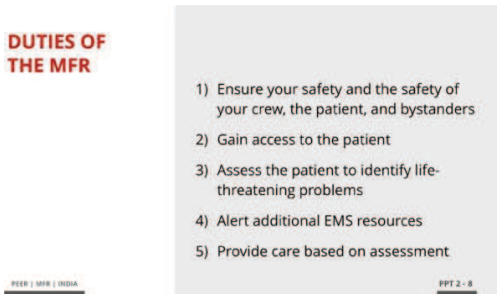


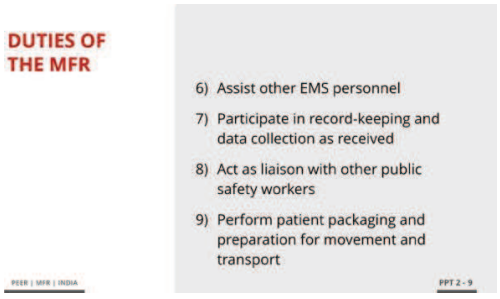
LESSON 2
— PPT's

2-7

2-8



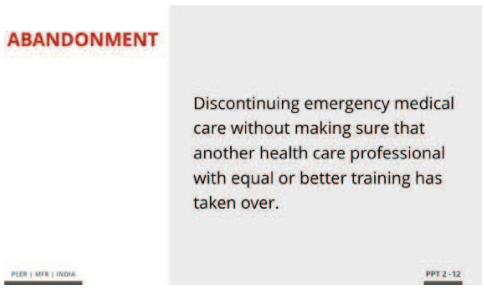
2-9



2-10

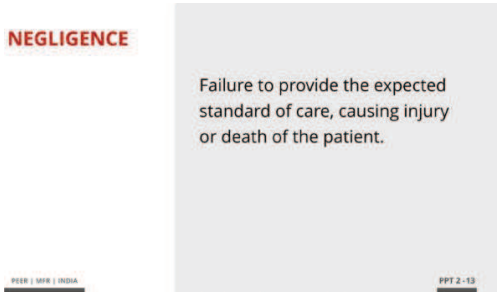
2-11

2-12



LESSON 2
— PPT's

2-13



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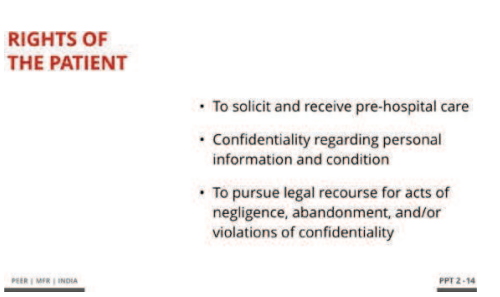

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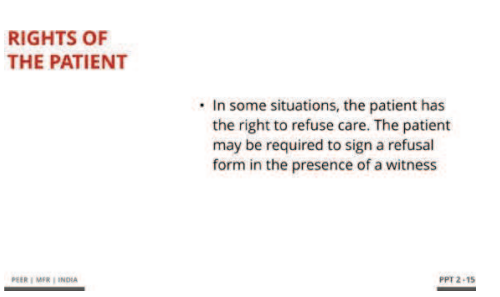
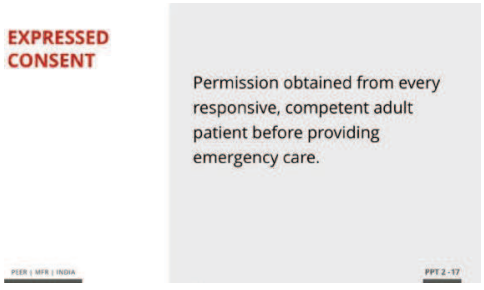


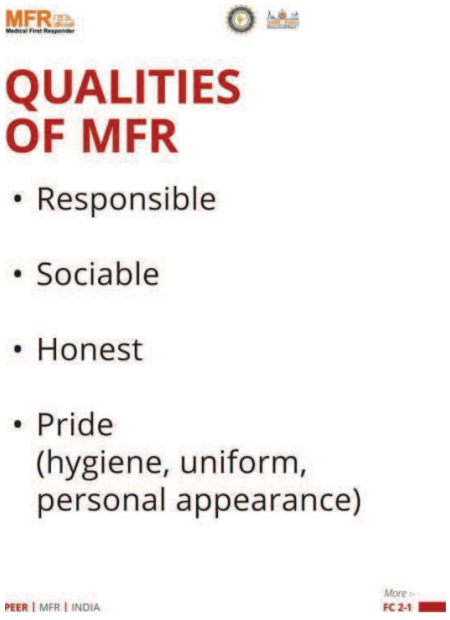
2-16

2-17

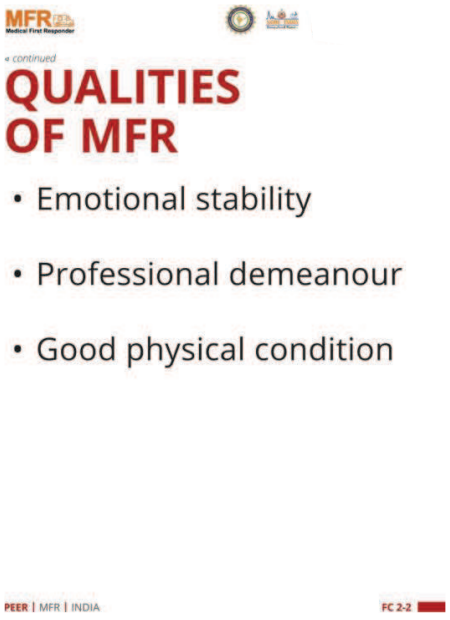


LESSON 2
— FLIP CHARTS

FC2-1



FC2-2



FC2-3

LESSON PLAN

03

INFECTIOUS DISEASE AND PRECAUTIONS

Duration 02 Periods (Lecture- 02 Periods)

Equipment / Materials:	• Computer • Multimedia projector • Powerpoint presentation • Flipcharts • Marker Pens • Handout 03-1 (TR- 9) • Full personal protective equipment • Extension cord • Projection screen

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. Define infectious disease.
2. Describe the two means of transmission of infectious diseases.
3. List eight signs and symptoms of infectious disease.
4. List three categories of body substance isolation precautions.
5. List five components of the personal protective equipment (PPE) used during patient assessment and pre-hospital treatment.

	Visual Aids and Other Materials	Time Elapsed

1. INTRODUCTION

1) Introduction of instructor and assistant instructors.
2) Presentation of the lesson.
3) Presentation of lesson objectives
(have the participants read aloud course objectives from Workbook/ PPT).

▶ *PPT 3-1 3-2 to 3-3*

2. DEVELOPMENT

1

Infectious Diseases

Illnesses caused by pathogens, microorganisms such as bacteria or viruses that can be transmitted.

▶ *PPT 3-4*

2.1 METHODS OF TRANSMISSION

- **Direct contact** occurs through contact with bodily fluids, contact through open wounds or exposed tissues, or contact with mucous membranes of the mouth, eyes or nose.

▶ *PPT 3-5*

- **Indirect contact**, through airborne pathogens spread by tiny droplets sprayed during breathing, coughing or sneezing, or by way of contaminated objects, such as needles.

▶ *PPT 3-6*

1

Infectious Diseases (Cont.)

Visual Aids and Other Materials

Time Elapsed

2.2 Diseases of Concern

As a medical first responder, you can be exposed to infectious diseases whenever you treat a patient. Although there are many infectious diseases, some of greatest concern because they are life-threatening are:

- **Hepatitis (B, C and D):** Causes inflammation of the liver; contracted through blood or bodily fluids; no cure, can be deadly; can live in dried blood for days. Effective vaccine available for A and B. Hepatitis A and E are water-borne.

▶ *FC 3-1*

- **Tuberculosis (TB):** Infection found in the lungs and other tissues; highly contagious – can be spread through the air; take respiratory precautions.

- **Covid-19:** Causes severe respiratory infection and may lead to death due hypoxia and other organ failure. Highly contagious by means body fluids, droplets and contact.

- **Human Immuno Deficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS):** AIDS is the name for a set of conditions that result when the immune system has been attacked by the HIV virus, and rendered unable to combat infections adequately. Poses less risk than hepatitis or TB, as the virus does not survive well outside the human body. Transmission requires contact with the bodily fluids of infected persons.

1 Infectious Diseases (Cont.)

Visual Aids and Other Materials

Time Elapsed

There are several other infectious diseases that you may be exposed to, including:

- Influenza
- Cholera
- Sexually transmitted diseases (STDs)
- Common cold
- Dengue
- Typhoid
- Meningitis
- Polio
- Kalazar
- Leprosy
- Plague
- Chikun gunya
- Malaria
- Japanese Encephalitis
- Measles
- Mumps
- Rubella

▶ *FC 3-2 to 3-4*

<Ask participants to write down other infectious diseases that are common in their locality.>

▶ *NOTE*

2 Signs and Symptoms

> Patients contaminated with an infectious disease may not present with signs or symptoms. A major source of infectious transmission is the **"chronic carrier"**. Such a person can carry an infection for years without signs or symptoms.

When signs and symptoms of infectious disease do appear, they may include:

- Fever
- Nausea
- Yellowish coloration of the skin and whites of the eyes
- Headache, chest or abdominal pain
- Coughing or shortness of breath
- Diarrhea
- Fatigue
- Weight loss
- Profuse Sweating
- Loss of taste and smell

▶ *PPT 3-7*

▶ *PPT 3-8*

3 Body Substance Isolation (BSI)

Visual Aids and Other Materials

Time Elapsed

Definition: A strict form of infection control based on the premise that blood and other bodily fluids are infectious.

▶ *PPT 3-9*

Body substance isolation (BSI) consists of a combination of equipment and procedures that protect you from the bodily fluids of the patient. With BSI precautions, it is possible to take care of patients safely, including those with infectious diseases. BSI precautions fall under three categories:

1) **Hand-washing:** The single most important thing you can do to prevent the spread of infection (even if wearing gloves).

▶ *FC 3-5*

2) **Cleaning equipment:** Cleaning, disinfecting, and sterilizing are related terms. Cleaning is simply washing an object with soap and water. Disinfecting is cleaning plus using a chemical like alcohol or bleach to kill most of the pathogens. Sterilizing is a process in which a chemical or other process (such as superheated steam) is used to kill all microorganisms on the object.

3) **Using personal protective equipment (PPE):** You must always use PPE to protect against infection. This will keep you from coming into contact with blood and other bodily fluids. PPE includes eye protection, gloves, gown and mask.

<Demonstrate the use of all personal protective equipment.>

▶ *NOTE*

3 Body Substance Isolation (BSI) – Cont.

Visual Aids and Other Materials

Time Elapsed

3.1 Personal Protective Equipment

You must always use PPE to protect against infection. This will keep you from coming into contact with bodily fluids. PPE includes eye protection, gloves, gown, personal mask and CPR mask.

The five most common components of PPE are:

- Latex gloves
- Personal mask
- Eye protection
- Gown
- CPR mask

IMPORTANT:

- **Always discard contaminated items properly.**
- **Your safety and the safety of others is a risk from cross-contamination.**

▶ *PPT 3-10*

All body fluids are considered infectious and appropriate precautions must be taken for all patients at all times!!

▶ *PPT 3-11*

4 Immunization

The following immunizations are recommended for active duty MFR's:

- Tetanus prophylaxis (every 10 years)
- Hepatitis-A Vaccine
- Hepatitis-B Vaccine
- Influenza vaccine (every year)
- Polio
- Rubella (German measles)
- Measles
- Mumps
- Doses of COVID 19 Vaccine.

<Discuss the types of immunisation your institution is providing to all emergency responders.>

▶ *NOTE*

Visual Aids and Other Materials

Time Elapsed

5 Reporting Exposures

Report any suspected exposure to blood or bodily fluids to your supervisor as soon as possible. Include in your report the date and time of exposure, type of bodily fluids involved, the amount, and details of the incident. All agencies should have a written policy in place to handle exposures to infectious body substances.

REVIEW

<Review objectives from page 1 to ensure participants have understood them clearly.>

EVALUATION

1) Respond to evaluation forms.
2) Verify that participants have achieved the stated objectives.

CLOSE

1) Comments, suggestions.
2) Thank everyone for their participation and announce next lesson.

— INSTRUCTOR'S COPY

POST-TEST | LESSON 3

Infectious Disease and Precautions

1. Define infectious disease.

Infectious diseases are illnesses caused by pathogens, microorganisms such as bacteria or viruses that can be transmitted.

2. Describe the two methods of transmission of infectious diseases.

- *Direct contact*
- *Indirect contact*

3. List eight possible signs and symptoms of infectious disease.

- *Fever*
- *Nausea*
- *Yellowish coloration of the skin and whites of the eyes*
- *Headache, chest or abdominal pain*
- *Coughing or shortness of breath*
- *Diarrhoea*
- *Fatigue*
- *Weight loss*
- *Profuse sweating*

4. List three categories of body substance isolation precautions.

- *Hand washing*
- *Cleaning/disinfecting/sterilizing*
- *Using PPE*

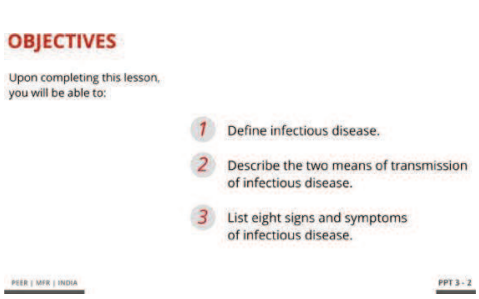
5. List five components of the personal protective equipment (PPE) used for patient assessment and during pre-hospital treatment.

- *Latex gloves*
- *Personal mask*
- *Eye Protection*
- *Gown*
- *CPR mask*

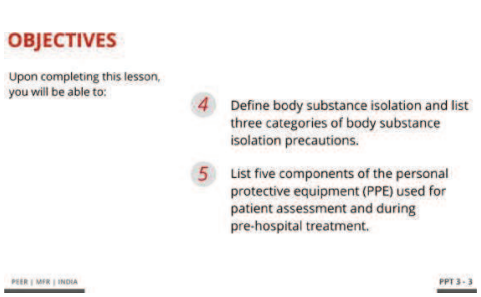
LESSON 3
— PPT's

3-1

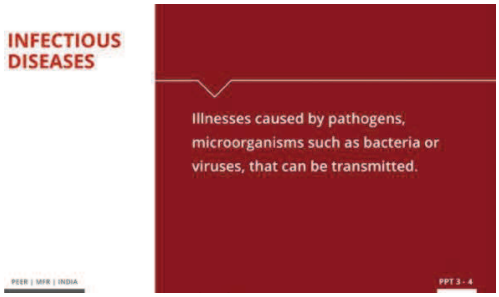
3-2



3-3



3-4



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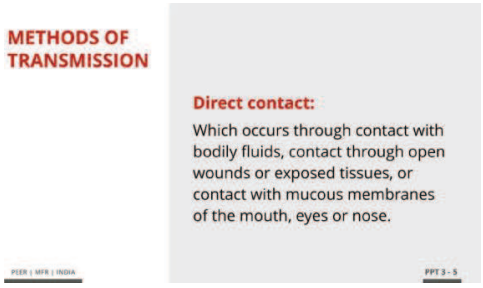

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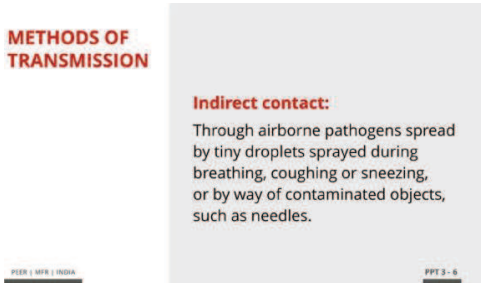
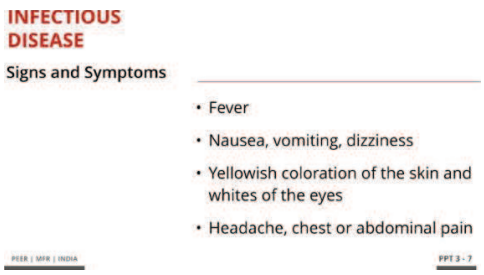
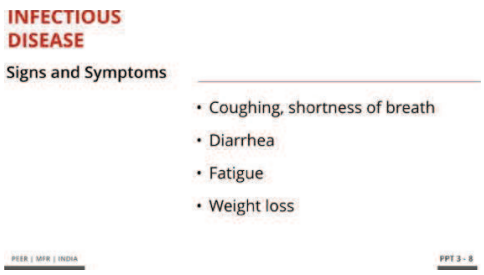


LESSON 3
— PPT's

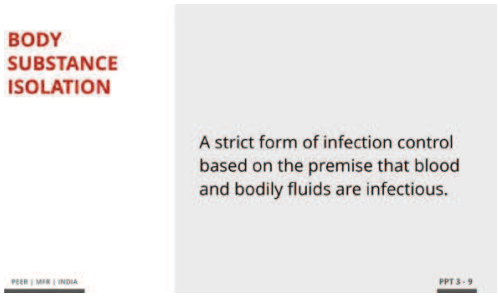
3-7



3-8



3-9

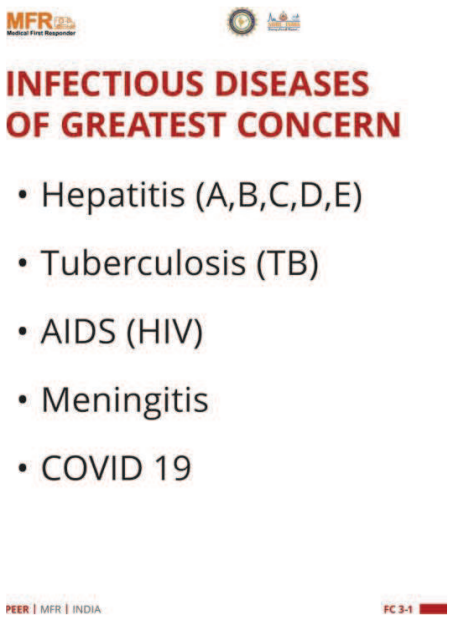


3-10

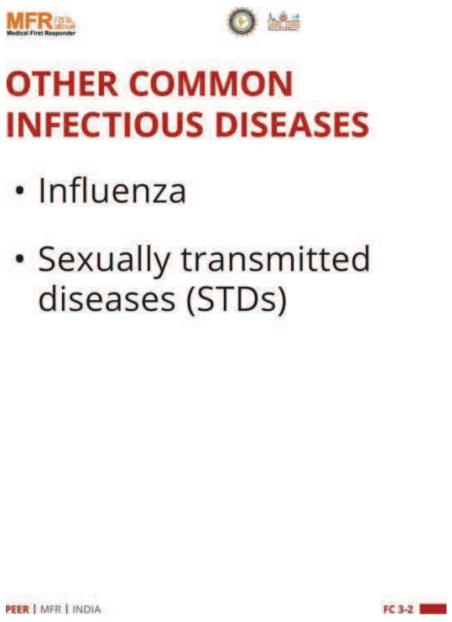
3-11

LESSON 3
— FLIP CHARTS

FC3-1



FC3-2



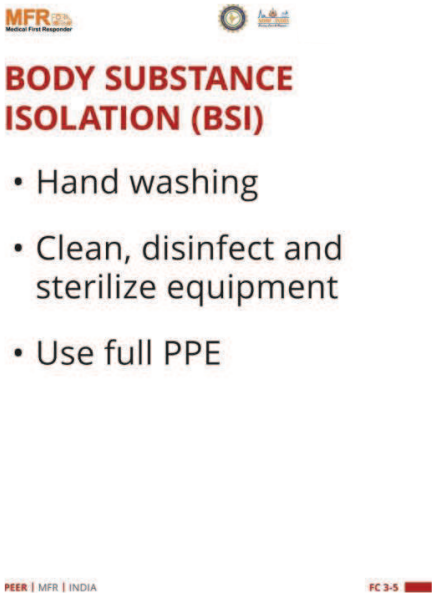
FC3-3

FC3-4

LESSON 3

— FLIP CHARTS

FC3-2



LESSON PLAN

04

THE INCIDENT

Duration

- 02 Periods (Lecture- 02 Periods)

Preparation	Select 3 slides from SL4-1 to SL4-8 for use in Exercise 4-2.
Equipment / Materials:	• Multimedia projector • PowerPoint presentation (including slides) • Computer • Projection screen • Chalkboard or flipchart • Handouts • Basic hand tools

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. List the five items of information to obtain when receiving a call for assistance.
2. List five factors to consider when responding to a call.
3. List the three steps for scene size-up, in proper order.
4. List the six items of information that should be included in the initial report when arriving at the scene.
5. List the three priorities when securing the scene.
6. List five basic tools used to gain access to a patient trapped in a vehicle.
7. List two ways to gain access to a patient trapped in a vehicle.

	Visual Aids and Other Materials	Time Elapsed

1. INTRODUCTION

1) Introduce instructors and assistants.
2) Present the lesson.
3) Present lesson objectives.

▶ *PPT 4-1 to 4-4*

2. DEVELOPMENT

1 The Incident

This concept will be mentioned frequently so it is important that we define it clearly.

Definition: An event caused by a natural phenomenon or human activity that requires the intervention of emergency service personnel to prevent or mitigate loss of life and damage to property and the environment.

▶ *PPT 4-5*

2 Call for Assistance

Visual Aids and Other Materials | **Time Elapsed**

<Ask two participants to write on the flipcharts. Ask the group to provide examples of information they think are important to be obtained when a call for assistance is received.>

▶ *NOTE*

Information to obtain:

Obtain the following five items of information when receiving a call for assistance:

1) Address/location of the incident.
2) Identify the origin of the call (telephone, radio, in-person, etc.)
3) Incident type (what is happening)
4) Victims (quantity and condition)
5) Actions taken.

▶ *FC 4-1*

EXERCISE 4-1

Documenting a Request for Assistance.

<NOTE: Remain strict with the time allotted (10 minutes) for the exercise. WB has forms on page 47-48. LP forms are on page 62-64>

3 Response

<Give examples of each factor and explain how it affects the handling of the incident.>

▶ *NOTE*

When responding to a call, you should consider, among others, the following factors:

- Day of the week (traffic, etc.)
- Time of the day (school, business hours, people at home, etc.)
- Weather (rain, wind, storms, etc.)
- Social disturbances, riots etc
- Topography (winding roads, etc.)
- Hazardous materials (fuel leaks, radiation, etc.)
- Access routes (freeways, crossings, bridges, height, width, road maintenance, land mines etc.)
- Power lines
- Proper vehicle placement

<Ask participants: "Any additional factors not covered?">

▶ *NOTE*

4 Types of Incidents

Visual Aids and Other Materials

Time Elapsed

▶ *NOTE*

<Give examples of each factor and explain how it affects the handling of the incident.>

- Motor vehicle collision ▶ *FC 4-2*
- Structural fire
- Natural phenomena
- Water emergencies (Drowning flood)
- Medical emergency
- Incidents involving hazardous materials ▶ *FC 4-3*
- Structural collapse
- Electrical accidents
- Aircraft accidents
- Train accidents
- Ship accidents

5 Scene Size-up

> **Definition:** The evaluation of factors that are used in the decision-making process to establish the strategy and tactics to be used in a particular incident.

Ongoing evaluation of the incident begins when the call is received and continues until the incident is successfully mitigated.

5.1 Scene Size-Up Criteria

Using the following criteria for scene size-up, in this order:

<Allow time for participants to copy.>

1) What is the current situation? (Determine actual state.) ▶ *PPT 4-6*
2) Where is it going? (Determine potential situation.)
3) How do I control it? (Determine operations and resources needed.)

5

Scene Size-up (Cont.)

5.2 Reporting

Visual Aids and Other Materials

Time Elapsed

<Discuss local protocol>

▶ *NOTE*

The following information should be included in the initial report:

1) Address/location
2) Type of incident
3) Environmental condition
4) Current situation
5) Number of victims
6) Resources needed

▶ *PPT 4-7*

EXERCISE 4-2

Scene Assessment

From the photos available, select three different images of incidents that commonly occur in their region.

<Remain strict with the time allotted (20 minutes) for the exercise.
WB forms are on page 52-54. LP forms are on page 65-68>

6 Securing the Scene

Visual Aids and Other Materials

Time Elapsed

There are three priorities when securing the scene:

1) **Place your vehicle properly**
   On arrival, if no hazards are present, and other units are on the scene, park 20 meters past the scene. If your unit is first, block the scene with your vehicle 20 meters before, until other units arrive.

▶ *PPT 4-8*

2) **Isolate and mark the scene**
   Use flares, tape, or other warning devices.

3) **Mitigate risks**
   Disconnect the car battery (negative terminal), shut off the gas, extinguish fire, manage traffic hazards, secure electrical, stabilize vehicle, disinfect the site etc.

<Use FC 4-4 to illustrate different incident scenarios and discuss securing the scene.>

▶ *NOTE*
FC 4-4

7 Gaining Access

<This section does not try to qualify the MFR to make forced entry with specialized equipment; it simply shows how to gain access through the natural entrances of a structure/ vehicle using basic tools.>

▶ *NOTE*

The MFR should always analyse the need for personal protection, such as helmet, eye protection, mask, self-contained breathing apparatus, gloves, etc. **before** attempting to gain access to a patient.

7 Gaining Access (Cont.)

Visual Aids and Other Materials	Time Elapsed

7.1 Basic Tools

<Show the tools and ask participants to write the names they use locally in their workbooks. Proper use of each tool is beyond the scope of this course.>

▶ *NOTE*

▶ *PPT 4-9 to 4-11*

- Pliers
- Screwdriver
- Tincutter
- Hammer
- Knife
- Rope
- Kelly tool
- Padlock Remover
- Pry bar
- Vise grip
- Axe
- Hacksaw
- Rubber mallet
- Automatic center punch
- Personal protective equipment

7.2 Gaining access to buildings

<Remind participants that personal safety is paramount.>

▶ *NOTE*

Always look for alternate means of entry. Consider the easiest route for entry and exit based on the situation and the patient's needs.

DOORS

- **With padlock:** Insert the tip of the Kelly tool in the eye of the padlock bolt and use it as a lever to open the padlock.
- **Solid door:** Before using force, notice whether the door opens in or out. If it opens out, it may be possible to remove the hinges.

WINDOWS

- A glass window should only be forced as a last resort.
- If you need to break a window, protect yourself properly and use a pointed tool.

Visual Aids and Other Materials

Time Elapsed

7.3 Gaining access to vehicles using basic tools

▶ *NOTE*

<Vehicle extrication is a very technical subject, requiring training which is beyond the scope of this course.>

<Use photos as a guide.>

Generally and if possible, medical treatment should begin before the patient is extricated. The patient should be removed in such a way as to minimize further injury. Access may be simple (not requiring tools) or complex (requiring tools and special training). Take only those steps you are trained to take. Call for additional resources.

You may find a vehicle in several positions:

- Upright
- On its side
- On its roof

DOORS

- "Try before you pry."
- Ask the patient to assist in opening the door, either by unlocking or rolling down the window.
- Do the doors require forced entry? If so, use a pry bar or hydraulic tools.

WINDOWS

- Make sure patient is protected from glass particles.
- Use a screwdriver or other pointed tool. Strike tool against lower corner of window and continue to strike in the same spot until the window shatters. If you must break a window, choose the one that is farthest from the patient.
- Rear and side window are made of tempered glass, which shatters into small granules. The windscreen is laminated and can be removed in one piece.

	Visual Aids and Other Materials	Time Elapsed

REVIEW

<Review objectives from page 1 and ensure everyone has understood them clearly.>

EVALUATION

1) Verify that the objectives have been achieved.
2) Give the participants 2 minutes to complete the lesson evaluation form.

CLOSE

1) Ask if there are any comments or suggestions.
2) Thank the participants and introduce the next lesson.

EXERCISE 4-1
Documenting a Request for Assistance

Instructions

Exercise Objective:
To fill out the call reception form completely and accurately in less than two minutes.

Total time of exercise:
10 minutes

Method:
Divide the class into pairs. One participant from each pair will be the person requesting assistance and the other will be the call-taker.

Participant pairs will face each other across a table so that the receiver can complete the form.

The participant calling for assistance will create an incident that involves one to five victims and will communicate with the call-taker, simulating talking on the phone.

The call-taker will have a maximum of two minutes to request the necessary information and to complete the form. After two minutes, the participants will switch roles.

Once completed, the instructor will randomly select four or five participants to read their forms and comment on them.

EXERCISE 4-1
Documenting a Call for Assistance

The instructor will provide guidance on using the forms on the next two pages for this exercise.

EXERCISE 4-1
Documenting a Request for Assistance Sample Form

Incident number:

Time of the call: **Date:**

Incident location:

Origin of the call: ☐ **Telephone** ☐ **Radio** ☐ **Personal** **Other:** _____

Name and location of person making the call:

Incident type:

☐ Traffic	☐ Structural fire	☐ Natural disaster
☐ Marine	☐ Medical	☐ Haz-Mat
☐ Structural Collapse	☐ Other _____	

Brief explanation of situation:

EXERCISE 4-1

Documenting a Request for Assistance

Sample Form (Cont.)

VICTIM(S): Number:
Actions underway at the scene:
Other pertinent information:
Name or identification of person receiving the call:
Other information if any given:

EXERCISE 4-2
Scene Assessment

Instructions

Exercise Objective:
Given three (3) still images of three (3) different incidents, you will have two (2) minutes per image to assess each scene using the steps learned in this lesson, and report that information in a proper sequence. Use your WB as a reference guide.

Once completed, the instructor will randomly select several participants to share their assessments.

Total time of exercise:
20 minutes

EXERCISE 4-2

Scene Assessment

For this exercise, the instructor will be showing you three slides, which you will analyses. You will then be instructed to fill out the forms on the following three pages with the relevant information.

EXERCISE 4-2

Scene Assessment Image 1

Scene Size-up

What is the current situation?

What is the potential situation?

How do I control it? (operations and resources needed)

Guide to Reporting Scene Information (to Dispatch Office)

Address/location

Type of incident

Environmental conditions

Problems present

Number of victims

Resources needed

EXERCISE 4-2

Scene Assessment Image 2

Scene Size-up

What is the current situation?

What is the potential situation?

How do I control it? (operations and resources needed)

Guide to Reporting Scene Information (to Dispatch Office)

Address/location

Type of incident

Environmental conditions

Problems present

Number of victims

Resources needed

EXERCISE 4-2

Scene Assessment Image 3

Scene Size-up

What is the current situation?

What is the potential situation?

How do I control it? (operations and resources needed)

Guide to Reporting Scene Information (to Dispatch Office)

Address/location

Type of incident

Environmental conditions

Problems present

Number of victims

Resources needed

— INSTRUCTOR'S COPY

POST-TEST | LESSON 4

The Incident

1. List the five items of information to obtain when receiving a call for assistance.

- *Address/location of the incident*
- *Identify the origin of the call (telephone, radio, in-person, etc.)*
- *Incident type (what is happening)*
- *Victims (number,condition).*
- *Actions taken*

2. List five factors to consider when responding to a call.

- *Day of the week (traffic, etc.)*
- *Time of day (school, business hours, people at home, etc.)*
- *Weather (rain, wind, storms, etc.)*
- *Social disturbances, riots*
- *Topography (winding roads, etc.)*
- *Hazardous materials (fuel leaks, radiation, etc.)*
- *Access routes (freeways, crossings, bridges, height, width, road maintenance, land mines, etc.)*
- *Power lines*
- *Proper vehicle placement*

3. List the three steps to scene size-up, in proper order.

1) What is the current situation? (Determine actual state.)

2) Where is it going? (Determine potential situation.)

3) How do I control it? (Determine operations and resources needed)

4. **List the six items of information that should be included in the initial report to the dispatch office when arriving at the scene.**

- *Address/Location*
- *Type of incident*
- *Environmental conditions*
- *Current situation*
- *Number of victims*
- *Resources needed*

POST-TEST | LESSON 4

The Incident (Cont.)

5. **List the three steps to secure the scene.**

   1) *Place your vehicle properly. On arrival, if no hazards are present, and other units are on the scene, park 20 meters past the scene. If your unit is first, block the scene with your vehicle 20 meters before, until other units arrive.*
   2) *Isolate and mark the scene. Use flares, tape, or other warning devices.*
   3) *Mitigate risks. Disconnect car battery (negative terminal), shut off the gas, extinguish fire, manage traffic hazards, secure electrical, stabilize vehicle, etc.*

6. **List five basic tools used to gain access to a patient trapped in a vehicle.**

   - *Pliers*
   - *Screwdriver*
   - *Tin snips*
   - *Hammer*
   - *Knife*
   - *Rope*
   - *Kelly tool*
   - *Padlock remover*
   - *Pry bar*
   - *Vise grip*
   - *Axe*
   - *Hacksaw*
   - *Rubber mallet*
   - *Automatic centre punch*
   - *Personal protective equipment*

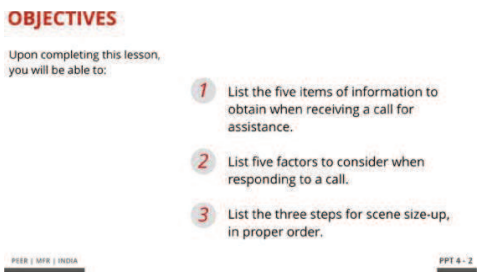
7. **List two ways to gain access to a patient trapped in a vehicle.**

   - *Opening or prying open a door*
   - *Breaking a window*

LESSON 4
— PPT's

4-1

4-2



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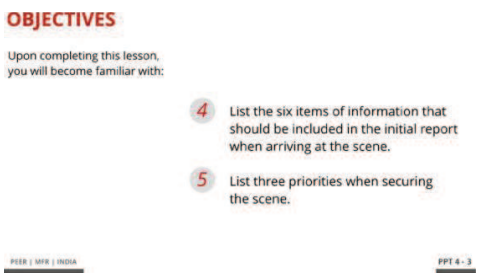

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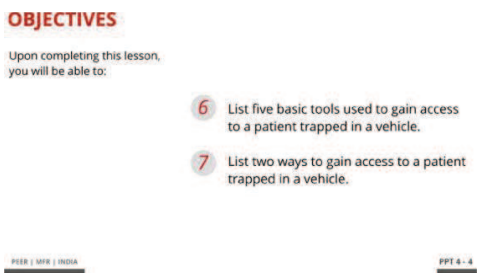

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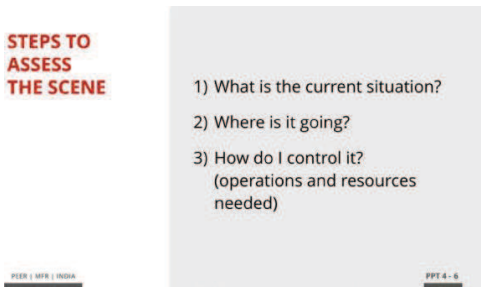


LESSON 4
— PPT's

4-7

REPORTING

- Address/Location
- Incident type
- Environmental conditions
- Current situation
- Number of victims
- Resources needed

4-8

SECURING THE SCENE

1) Place vehicle properly
2) Isolate and mark the scene
3) Mitigate risks

4-9

BASIC TOOLS

- Pliers
- Screwdriver
- Tin snips
- Hammer
- Knife
- Rope
- Kelly tool
- Padlock remover
- Pry bar
- Vise grip
- Axe
- Hacksaw
- Rubber mallet
- Automatic center punch
- Personal protective equipment

4-10

4-11

LESSON 4
— FLIP CHARTS

FC4-1

MFR

INFORMATION TO OBTAIN

- Address/Location of the incident
- Identify the origin of the call
- Incident type
- Victims
- Actions taken

PEER | MFR | INDIA FC 4-1

FC4-2

MFR

TYPES OF INCIDENTS

- Structural fire
- Natural phenomenon
- Water-related emergencies

PEER | MFR | INDIA More > FC 4-2

FC4-3

MFR

« continued

TYPES OF INCIDENTS

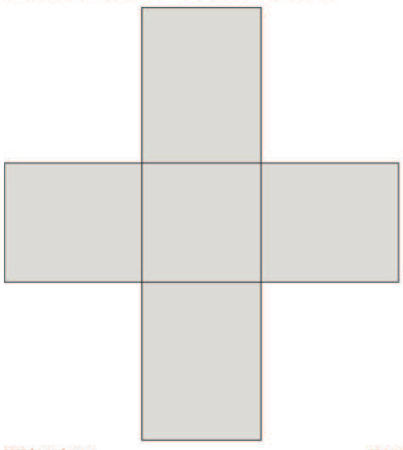
- Incident involving Hazardous materials
- Structural collapse
- Electrical accidents
- Aircraft accidents
- Train accidents
- Ship accidents

PEER | MFR | INDIA FC 4-3

FC4-4

MFR

LOCATION OF EMERGENCY VEHICLE AT THE SCENE



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LESSON PLAN

05 ANATOMICAL REFERENCES

Duration • 03 Periods (Lecture-03 Periods)

Equipment / Materials:	• Multimedia projector and projection screen • Computer • Powerpoint presentation • Spare bulb • 5-metre extension cord • Flipcharts • Marker pens • Handouts • Full-size skeletal model (if available)

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. Define anatomical position.
2. Identify and describe the three anatomical planes.
3. List the five regions of the human body.
4. List the five body cavities and the organs they contain.
5. Describe the location of a wound on a patient using anatomical references.
6. Name the four abdominal quadrants.
7. Identify and label the main internal organs located in each abdominal quadrant.

	Visual Aids and Other Materials	Time Elapsed

1. INTRODUCTION

1) Presentation of the instructors and assistants.
2) Present the lesson.
3) Present of the lesson objectives .

▶ *PPT 5-1 to 5-4*

2. DEVELOPMENT

1 Anatomical Position

Definition: Patient standing erect with arms down at the sides, palms facing forward. “Right” and “Left” refers to the patient’s right and left.

▶ *PPT 5-5*

2 Conventional References

Communication among MFR's and other medical personnel is easier and more precise when using common terminology.

Visual Aids and Other Materials

Time Elapsed

2.1 Anatomical Planes

The anatomical planes refer to imaginary planes that divide the body in two halves, in different orientations.

Medial plane: Imaginary plane that divides the body in two halves — Left half and right half.

▶ *PPT 5-6*

Frontal plane: Imaginary plane that divides the body in two halves — anterior half and posterior half.

Transverse plane: Imaginary plane that passes through the navel and divides to the body in two halves — the superior half and inferior half.

2.2 Extremities and Subdivisions

The point of reference for extremities is usually the torso.

Proximal: Means close, or closer to the point of reference given.

Distal: Means distant, or farther away from the point of reference given. Used mainly for extremities. The reference may be a joint or the torso. Example: a wound on the forearm could be distal to the elbow or proximal to the wrist.

2.3 Positional Terms

▶ *PPT 5-7*

Prone: Lying face down, on the stomach.

Supine: Lying face up, on the back.

Lateral recumbent or "recovery": lying on one side of the body.

▶ *NOTE*

<Ensure participants complete WB with anatomical terms. Give examples of each.>

<Identify fingers as thumb, second, third, fourth and fifth.>

<Practice with the participants by pointing out different areas so that the participants learn to identify and locate.>

3 Body Regions

Visual Aids and Other Materials

Time Elapsed

<Use a participant to indicate body regions.
Ask participants to label diagrams in WB.>

▶ *PPT 5-8*

▶ *NOTE*

For the purposes of this course we recognize five regions:

- **Head:** Skull, face, jaw (mandible) ▶ *PPT 5-9*
- **Neck**
- **Trunk:** Thorax, abdomen, pelvis ▶ *PPT 5-10*
- **Upper extremities:** Shoulder joint (scapula, clavicle and humerus), arm, elbow, forearm, wrist, hand ▶ *PPT 5-11*
- **Lower extremities:** Hip joint (pelvis and femur), thigh, knee, leg, ankle, foot.

4 Body Cavities

For purposes of this course we recognize five body cavities:

<Ask participants to label diagrams in WB.> ▶ *NOTE*

- **Cranial** – houses and protects the brain. Made of immovable joints. ▶ *PPT 5-12*
- **Abdominal** – least protected cavity. ▶ *PPT 5-13*
- **Thoracic** – contains the heart, lungs and the great vessels. Separated from the abdomen by the diaphragm.
- **Pelvic** – contains the bladder and reproductive organs. Consists of the ilium, pubis and ischium. Iliac crests form the wings of the pelvis.
- **Spinal** – houses and protects the spinal cord. ▶ *PPT 5-14*

5 Abdominal Quadrants and Organs

Visual Aids and Other Materials

Time Elapsed

Since the abdomen has few reference points, it is divided into quadrants for locating internal organs, or describing the location of an injury or pain.

A **vertical plane** and **horizontal plane** whose intersection point is the navel divide the abdomen into **four quadrants**.

<Ask participants to fill in blanks in WB.>

▶ *NOTE*

- The **right upper quadrant** contains the liver, colon, pancreas and gallbladder.

▶ *PPT 5-15*

- The **left upper quadrant** contains the liver, spleen, stomach, colon and pancreas.
- The **right lower quadrant** contains the colon, small intestines, major artery and vein to the right leg, the ureter, and appendix.
- The **left lower quadrant** contains the colon, small intestines, major artery and vein to the left leg, and the ureter.

In the **midline area** are located the aorta, pancreas, small intestines, bladder, and spine.

Hollow abdominal organs: stomach, gallbladder, the large and small intestines, and the urinary bladder, and the uterus.

Solid abdominal organs: liver, spleen and pancreas.

<Discuss how the organs are affected by illness or injury.>

▶ *NOTE*

It is important to know the anatomy of the abdomen because damaged organs, such as the liver or spleen, can threaten the patient's life.

Kidneys:
These solid organs are located in the ***retroperitoneal cavity*** (behind the peritoneum, or abdominal wall). They are **not** in the abdominal cavity.

6 Body Systems <Review Only>

Visual Aids and Other Materials

Time Elapsed

6.1 Respiratory System

▶ *PPT 5-16*

The function of the respiratory system is to **deliver oxygen** to the body and to **remove carbon dioxide** from the body. Air passing into and out of the lungs is known as respiration. Breathing in is called inspiration or inhaling and breathing out is called expiration or exhaling. While breathing or or during the process of inspiration, the muscles of the thorax contract, moving the ribs outward and up. The diaphragm contracts and lowers. This process expands the chest cavity and causes air to flow into the lungs. During exhalation the opposite occurs. The muscles of the chest relax and cause the ribs to move inward. At this time, the diaphragm relaxes and moves up.

The respiratory system is made up of the organs that allow us to breathe. Air enters in through the nose and the mouth. The area behind the mouth and nose is called the **pharynx** which is divided into the **oropharynx** and the **nasopharynx** (windpipe). The **trachea** is the air passageway to the lungs. The **epiglottis** is a leaf-shaped structure that keeps foreign objects from entering the trachea during the swallowing process. The trachea splits into two **bronchi**. These air passages become smaller and smaller until they reach the **alveoli**, where carbon dioxide and oxygen are exchanged with blood.

6.2 Digestive System

▶ *PPT 5-17*

The digestive system consists of the alimentary tract (food passageway) and additional organs. The main function of the digestive system is to ingest food and get rid of waste. Digestion consists of two processes: mechanical and chemical.

The mechanical process includes chewing, swallowing, the rhythmic movement of matter through the tract, and defecation (the elimination of waste). The chemical process consists of breaking down food into simple components that can be absorbed and used by the body.

Excluding the mouth and the esophagus, the organs of the digestive system are in the abdomen. These organs include the stomach, pancreas, liver, gallbladder, small intestine, and large intestine.

6 Body Systems (Cont.)

Visual Aids and Other Materials

Time Elapsed

6.3 Urinary System

▶ *PPT 5-18*

The urinary system filters and excretes waste from the body. It consists of two kidneys and two ureters, one urinary bladder and one urethra. The ureters take urine from the kidneys to the next part of the system- the bladder. The bladder stores urine until it is passed through the urethra and is excreted from the body.

6.4.1 Female Reproductive System

▶ *PPT 5-19*

The reproductive system of the female consists of two **ovaries**, two **fallopian tubes**, the **uterus**, the **vagina** and **external genitals**. The female reproductive system provides the egg (ovum) which is fertilized by the male's sperm.

6.4.2 Male Reproductive System

▶ *PPT 5-20*

The reproductive system of the male consists of two **testes**, the **seminal duct**, **accessory glands**, and the **penis**. The male reproductive system provides the sperm which fertilizes the female's ovum.

6.5 Nervous System

▶ *PPT 5-21*

The nervous system is composed of the **brain**, the **spinal cord** and **nerves**. The nervous system has two major functions: communication and control. This system lets a person be aware of and react to the environment. It coordinates the body's responses to stimuli and keeps body systems working together.

The nervous system has three main parts: the **central nervous system**, the **peripheral nervous sytem** and the **autonomic nervous system**. The central nervous system consists of the **brain** and the **spinal cord**. The peripheral nervous system consists of the **nerves**. The autonomic nervous system **regulates functions** throughout the body.

Visual Aids and Other Materials

Time Elapsed

6.6 Endocrine System

▶ *PPT 5-22*

The endocrine glands regulate the body by secreting hormones directly into the bloodstream. These glands affect physical strength, mental ability, stature, reproduction, hair growth, voice pitch, and behavior. The secretions from these tiny glands can affect how people think, act and feel. Each gland produces one or more hormones. Some of the glands in the endocrine system are **the thyroid, parathyroid, adrenals, ovaries, testes**, and the **pituitary**.

6.7 Musculoskeletal System

The musculoskeletal system is made up of the skeleton and muscles. This system helps to give the body shape and to protect internal organs. Muscles also provide for movement.

The skeleton shapes the human body with its bony framework. The bone consists of living cells and nonliving matter. The nonliving matter contains calcium compounds that help make the bone hard and rigid. Without bones, the body would collapse. The skeleton is held together mainly by **ligaments, tendons** and layers of **muscle**.

The three kinds of joints are immovable like the skull, slightly movable like the spine, and freely movable like the elbow or the knee.

6 Body Systems (Cont.)

Visual Aids and Other Materials

Time Elapsed

Major Areas of the Skeleton

▶ *PPT 5-23*

The **skull** has several broad, flat bones that form a hollow shell. The top, including the forehead, back, and sides of this shell make up the **cranium**.

The **spinal column** houses and protects the **spinal cord**. The spinal column is the main supportive bony structure of the body and consists of 33 bones called **vertebrae**. The spine is divided into five major sections: the **cervical spine**, the **thoracic spine**, the **lumbar spine**, the **sacrum** and the **coccyx**.

The **thorax**, or rib cage, protects the heart and lungs – vital organs of the body. They are enclosed by 12 pairs of ribs and are attached at the back to the spine. The top 10 pairs are also attached in the front to the sternum, or breastbone. The lowest portion of the **sternum** is called the **xiphoid process**.

The **pelvis**, or hip bones, consists of the **ilium, pubis**, and **ischium**. Iliac crests from the "wings" of the pelvis. The pubis is the anterior portion of the pelvis. The ischium is the posterior portion.

The **shoulder girdle** consists of the **clavicle** (collar bone) and the **scapulae** (shoulder blades).

The **upper extremities** extend from the shoulders to the fingertips. The arm (shoulder to elbow) has one bone known as the **humerus**. The bones in the forearm (elbow to wrist) are the **radius** and the **ulna**.

The **lower extremities** extend from the hips to the toes. The bone in the thigh, or upper leg, is known as the **femur**. The bones in the lower leg (knee to ankle) are the **tibia** and **fibula**. The kneecap is called the **patella**.

Major Types of Muscles

▶ *PPT 5-24*

Skeletal muscle, or **voluntary muscle**, makes possible all deliberate acts like walking and chewing.

Smooth muscle, or **involuntary muscle**, is made of longer fibers and is located in the walls of tubelike organs, ducts and blood vessels and forms much of the intestinal wall. A person has little or no control over this type of muscle.

Cardiac muscle makes up the walls of the heart. This muscle can stimulate itself into contraction, even when disconnected from the brain.

Visual Aids and Other Materials

Time Elapsed

6.8 The Skin

The skin protects the body from the outside world. It also protects the deep tissues from injury, drying out, and invasion by bacteria and other foreign bodies. The skin also helps to regulate the body temperature, aids in getting rid of water and various salts, and helps to prevent dehydration. The skin also acts as the receptor organ for touch, pain, heat, and cold.

▶ *PPT 5-25*

The epidermis is the outermost layer of the skin. and contains cells that give it color. The dermis, or second layer, contains a vast network of blood vessels. The deepest layers of the skin contain hair follicles, sweat and oil glands, and sensory nerves. Just under the skin is a layer of subcutaneous fatty tissue.

Visual Aids and Other Materials

Time Elapsed

REVIEW

<Review lesson objectives on page 1. See instructions below.>

<Request a participant to demonstrate the terms: anterior, posterior, superior, inferior, right, and left, proximal, distal.>

<Request a participant to point out in his or her own body the main body cavities and divisions of the abdomen, listing the organs located in each one.>

EVALUATION

1) Verify that the objectives have been achieved.

2) Give the participants 2 minutes to complete the lesson evaluation form.

CLOSE

1) Ask if there are any comments or suggestions.

2) Thank the participants and announce the next lesson.

— INSTRUCTOR'S COPY

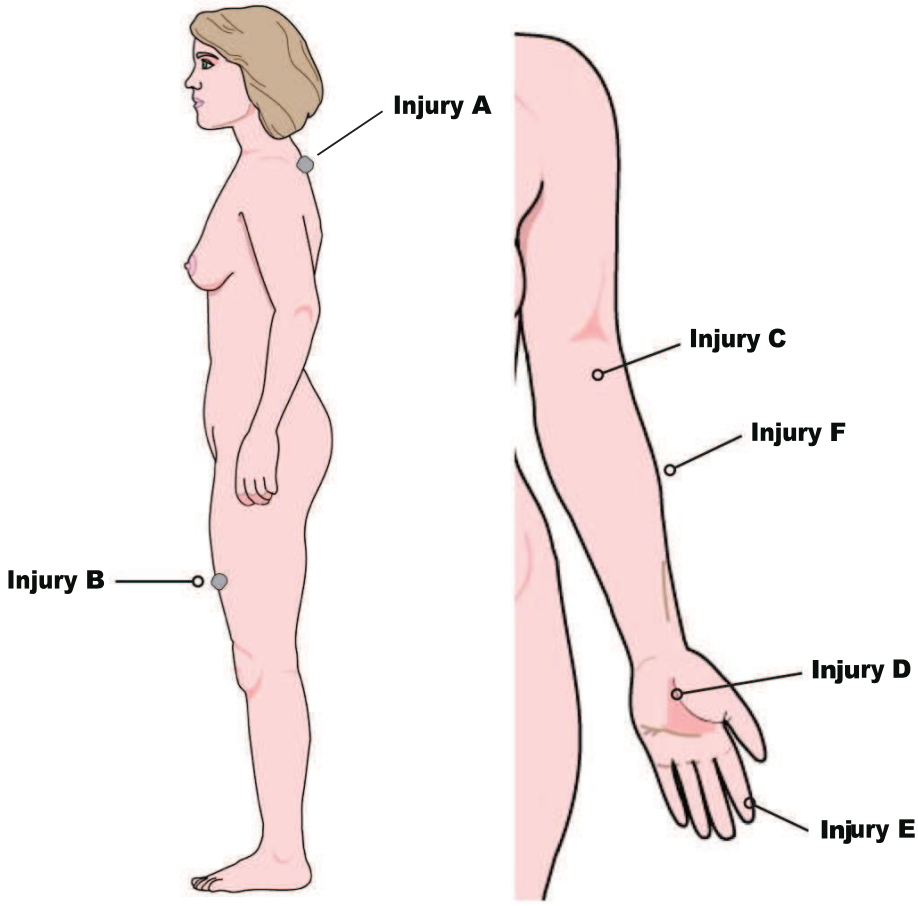
POST-TEST | LESSON 5

The Human Body

1. Define anatomical position.

Patient standing erect with arms down at the sides, palms facing forward. "Right" and "left" refers to the patient's right and left.

2. Describe the location of a wound on a patient using anatomical references. Identify the approximate location of the injuries indicated by the circles. (Respond on the following page).



Injury A: *Superior part of back, superior to the left scapula*

Injury B: *Anterior region of the left thigh*

Injury C: *Anterior region of the left forearm at the joint*

Injury D: *Anterior region of the left hand (left palm)*

Injury E: *Left second finger, anterior distal portion*

Injury F: *Anterior superior portion of the left forearm*

POST-TEST | LESSON 4

The Human Body (Cont.)

3. List the five regions of the human body on a skeletal model.

- ***Head:*** *Skull, face, jaw (mandible)*
- ***Neck***
- ***Trunk:*** *Thorax, abdomen, pelvis*
- ***Upper extremities:*** *Shoulder joint (scapula, clavicle and humerus), arm, elbow, forearm, wrist, hand*
- ***Lower extremities:*** *Hip joint (pelvis and femur), thigh, knee, leg, ankle, foot.*

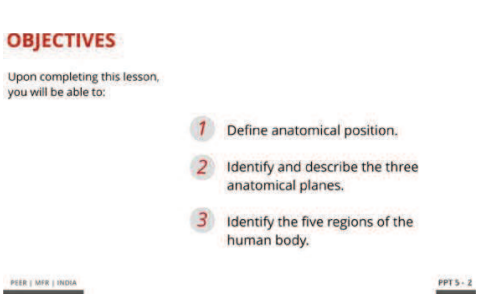
4. List five cavities of the body and the organs they contain.

- ***Cranial – brain***
- ***Thoracic (separated from the abdomen by the diaphragm) – lungs, heart***
- ***Abdominal – stomach, liver, pancreas, gallbladder, large & small intestines, spleen***
- ***Pelvic – bladder, rectum, internal female organs***
- ***Spinal – spinal cord***

LESSON 5
— PPT's

5-1

5-2



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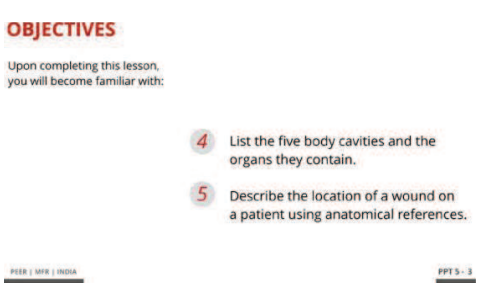

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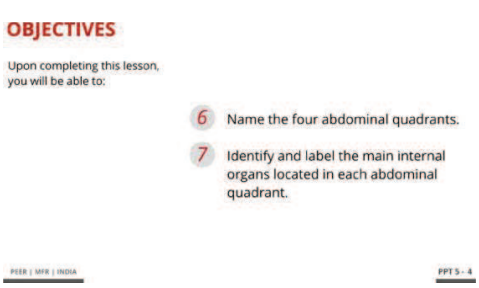

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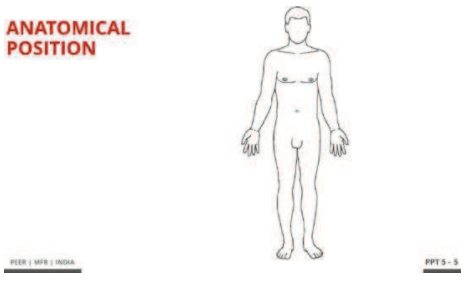

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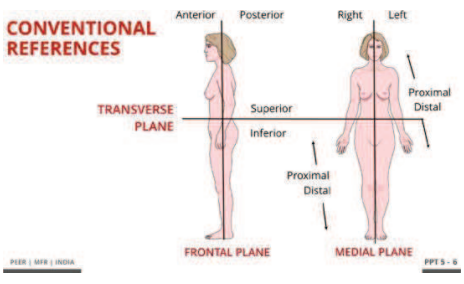
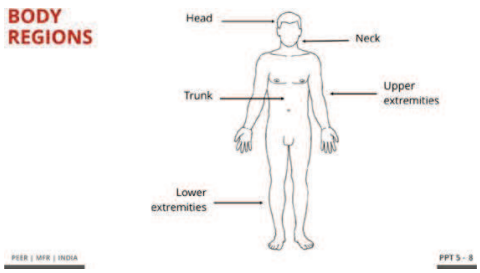


LESSON 5
— PPT's

5-7

5-8



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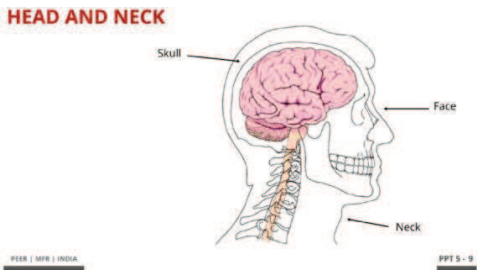

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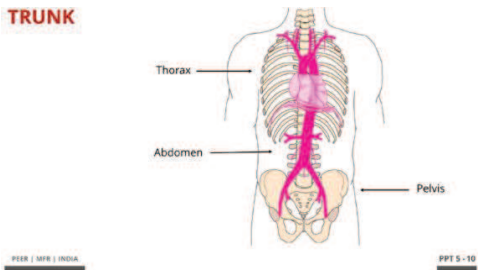

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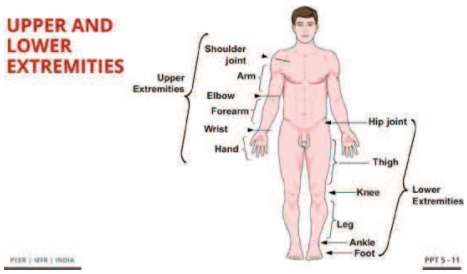

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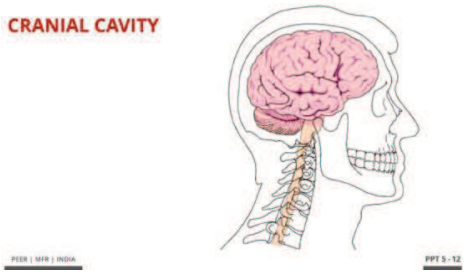
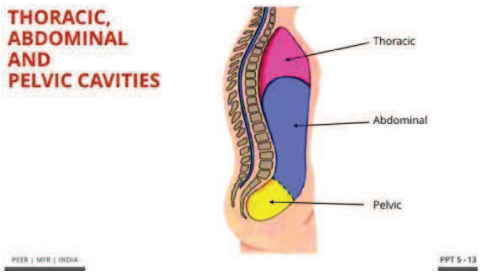


LESSON 5
— PPT's

5-13



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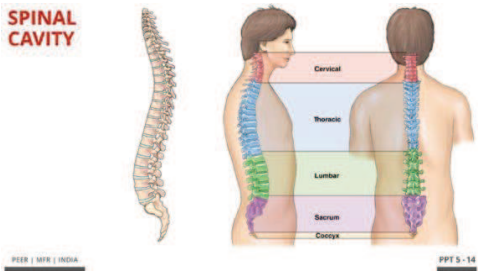

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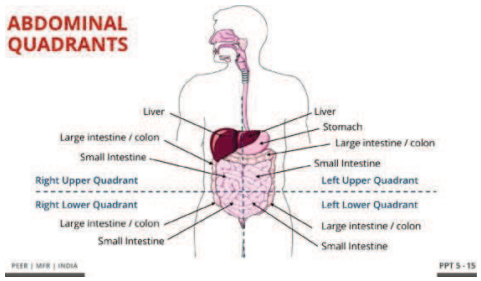

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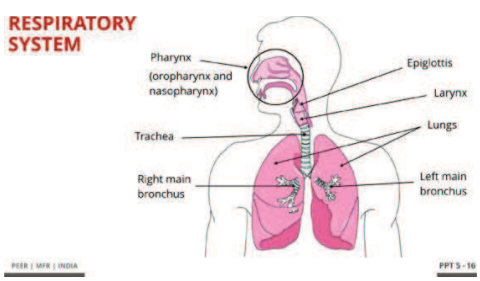

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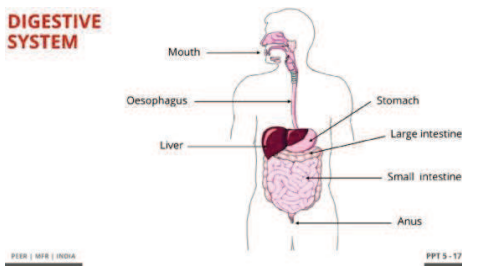

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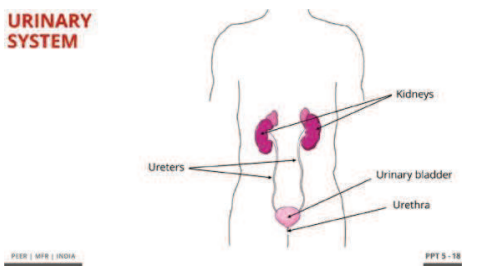

LESSON 5
— PPT's

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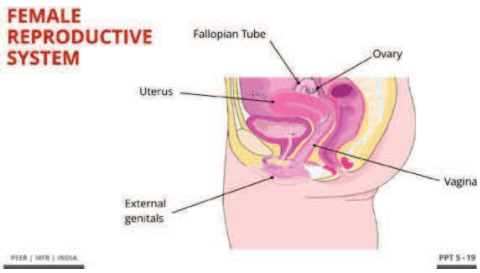

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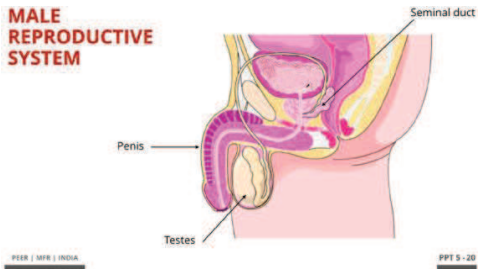

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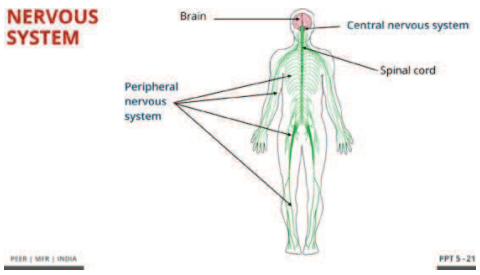

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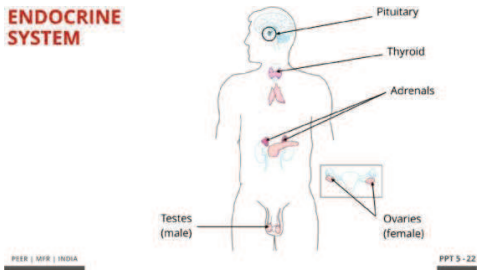

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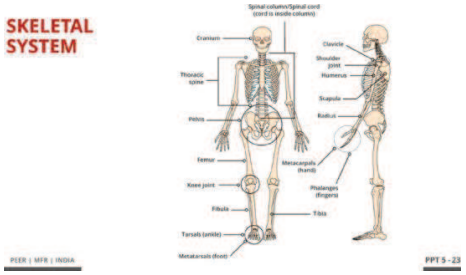

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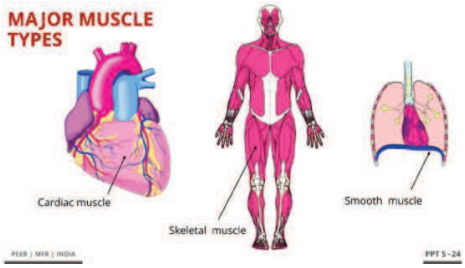
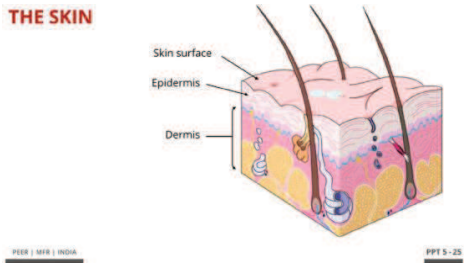


LESSON 5
— PPT's

5-25



LESSON PLAN

06 PATIENT ASSESSMENT

Duration **14 Periods (lecture-03 Periods & practical-11 Periods)**

Preparation	Review "Patient Assessment Plan" handout
Equipment / Materials:	• Powerpoint presentation • Flipcharts and board markers • Multimedia projector and screen • Extension cord • Computer • Mannequin • Small table • 4 sphygmomanometers (blood pressure cuffs) • 4 double stethoscopes (training type) • Watch with second hand • Notebooks • Pencils • Latex gloves

LESSON OBJECTIVES

Upon completion of this lesson, you will be able to:

1. List the five general procedures a medical first responder should complete when arriving at the scene.
2. List the six phases of the patient assessment plan.
3. List the six steps of the initial assessment.
4. Demonstrate a complete physical examination as defined in this lesson.

	Visual Aids and Other Materials	Time Elapsed

1. INTRODUCTION

1) Introduce the instructors and assistants.
2) Introduce the lesson.
3) Present lesson objectives. Ask a participant to read from the workbook.

▶ *PPT 6-1 to 6-3*

2. DEVELOPMENT

General procedure on arrival on the Scene

When arriving on the scene as a medical first responder, you should:

1) Ensure your own personal safety (includes the use of body surface isolation and securing the scene).

▶ *PPT 6-4*

2) Ensure patient safety.
3) Establish a general impression of the scene (determine mechanism of injury) and begin your initial assessment of the patient (if responsive, identify yourself).
4) Identify and treat life-threatening injuries.

▶ *PPT 6-5*

5) Stabilise and continue to monitor the patient.

	Visual Aids and Other Materials	Time Elapsed

Identify Yourself

1) State your name and organization.
2) Identify yourself as a medical first responder.
3) Ask the patient if you may help him/her (obtain consent).

<Have participants take notes in their WB.> ▶ *NOTE*

Immediate Sources of Information

1) The scene itself (observe, plan, react) ▶ *PPT 6-6*
2) Patient (if responsive)
3) Relatives or bystanders
4) The mechanism of injury (forces that caused the injury – kinematics) ▶ *PPT 6-7*
5) Any remarkable deformity or obvious injury
6) Any signs or characteristics of certain types of injury or illness

The sections of this lesson constitute the six phases of the **ASSESSMENT PLAN**. MFR insignia having six corners actually denotes six phases of patient assessment plan. The Assessment Plan begins with information received on dispatch. ▶ *FC 6-1*

1 Scene Size-up

Visual Aids and Other Materials

Time Elapsed

Conduct a scene size-up as described in Lesson 4, then continue with the process described in the following paragraphs.

<Discourage the development of "tunnel vision." Look around the surrounding area and be aware of escape routes.>

▶ *FC 6-2*

REMEMBER: The scene size-up ensures the safety of the people at the scene, identifies the mechanism of injury or the nature of the illness, and determines the need for additional resources. Most likely you will have no patient contact during scene size-up, but your observations, decisions and actions set the foundation for the entire call.

▶ *Refer to Lesson 4 if necessary*
TR 6-5

2 Initial Assessment

<Develop the concept that variations exist in conducting an Initial assessment based on the nature of the problem (Med-Trauma).>

▶ *NOTE*

> **Definition:** A process used to identify and treat conditions that pose an immediate threat to the patient's life.

▶ *PPT 6-8*

Patient assessment is performed on every patient every time.

The initial assessment should begin as soon as contact is made with the patient and you should initiate immediate life-saving procedures as required. The steps of the initial assessment (in order of importance) are discussed on the following pages.

2

Initial Assessment (Cont.)

Steps of the Initial Assessment

Visual Aids and Other Materials

► *FC 6-3*

Time Elapsed

2.1 Form a general impression.

As you approach the patient. If possible, obtain a chief complaint and a brief assessment of the immediate environment. (The general impression is not designed to be the final word on patient's condition, but gets you started on the right track). Determine if the situation is trauma or medical.

Neck: examine front and back (covered later in this lesson)

Apply a cervical collar if needed. You will learn how to select and apply a cervical collar in Lesson 12.
For trauma cases with suspected cervical spine injury, before continuing, immediately immobilize the cervical region immediately to prevent paralysis.

2.2 Check for responsiveness.

- Gently shake the patient's shoulders and shout, "Are you okay?" This is important for many reasons (for example, a patient with altered mental status may need airway care or other life- saving aid).
- There are four levels of responsiveness commonly used to classify patients: **Alert, Verbal, Painful, Unresponsive** often referred to as "A.V.P.U.":

A = Alert:
A patient who is alert responsive and oriented (e.g. Aware of surroundings, approximate time and date, and his/her name. Commonly referred to as being responsive to person, place and date-oriented.

V = Verbal:
A patient who responds only when spoken to.
We say he/she responsive to verbal stimulus.

P = Painful:
The patient responds only to painful stimulus.

U = Unresponsive:
The patient does not respond to any stimulus. Does not open eyes, respond verbally or even flinch when pain is applied. A deeply unconscious person is unquestionably in need of airway and other supportive care.

2 Initial Assessment (Cont.)

Visual Aids and Other Materials

Time Elapsed

**<Determining level of consciousness in infants or the elderly is difficult.
Use their immediate environment and/or family to make a determination.>**

2.3 Ensure adequate airway.

How you do this depends on patient's **responsiveness**.

▶ *NOTE*

Responsive Patient: Determine if the patient can speak clearly. Gurgling or similar sounds may indicate airway obstruction.

Unresponsive Patient: Needs aggressive airway maintenance immediately – make sure airway is open and patient is breathing adequately.

There are two methods commonly used to open the airway:

- Head-tilt/chin-liftmanoeuvre
- Jaw thrust manoeuvre

Both methods remove the tongue (most common obstruction) from the back of the throat, allowing air into lungs.

2 Initial Assessment (Cont.)

Visual Aids and Other Materials

Time Elapsed

2.4 Verify breathing

Look, listen and feel for air exchange (3-5 seconds). Respirations must be adequate. Adequate breathing is characterized by three factors:

- Full rise and fall of chest
- Easy breathing
- Normal respiratory rate

Inadequate breathing is characterized by:

- Insufficient rise and fall of chest
- Increased respiratory effort
- Cyanosis (bluish/gray discoloration of skin, lips or nail beds)
- Mental status changes
- Inadequate respiratory rate (<8 in adults, <10 in children, <20 in infants)

If airway obstruction is present, or if respirations are inadequate or absent, you must take immediate action.

Apply oxygen as needed. Select appropriate delivery system and appropriate accessories. Administering oxygen will be covered fully in Lesson 8.

Oxygen is used for both medical and trauma patients.

2 Initial Assessment (Cont.)

Visual Aids and Other Materials

Time Elapsed

2.5 Assess circulation.

Take 5-10 seconds to determine if the patient has an adequate pulse.

- **Responsive patient:**
  In verbally responsive adults, check radial pulse. Check brachial pulse for an infant. Check rate and rhythm if possible.

- **Unresponsive patient:**
  Check pulse of an unresponsive adult at the carotid artery. In children, check carotid/femoral pulse, and in infants the brachial artery.

Control serious external bleeding: Identify and treat life-threats. Do not let minor wounds sidetrack you.

<Have participants take their partner's carotid pulse.>

▶ *NOTE*

If pulse is absent, begin CPR immediately. (CPR will be covered in the next lesson.)

NOTE :-In case if unconscious patient "CAB" is used.it will cover in next lesson BLS and CPR

2.6 Patient status update.

Inform responding EMS units of your findings

- If more resources will be needed, request them.
- If patient has life threatening injuries or illness, let responding units know.
- If patient is stable with minor injuries, advise responding units.

The initial assessment should be completed and all life-threatening conditions treated before Proceeding to the physical exam.

3 Physical Exam

Visual Aids and Other Materials

Time Elapsed

Background

- The initial assessment is designed to help you identify and treat life-threatening conditions.
- The physical exam is a thorough survey of the patient's entire body. It is meant to reveal any signs of illness or injury.
- The physical exam proceeds in a logical order, usually from head to toe, but may vary from patient to patient.

The main purpose of the physical exam is to reveal any injury or medical problem that could be a threat to patient survival if left untreated.

▶ *PPT 6-9*

3.1 Principles of Patient Assessment

Patient assessment is a skill, and must be practised.

The patient assessment process involves the use of your senses. Three methods are used during your patient assessment:

- **Inspection (looking):** A method of examination that involved looking for sings of injury or illness. Simply make an overall observation of your patient, then an observation of the body.
- **Auscultation (listening):** A method of examination that involves listening for signs of illness or injury. The most important listening you will do is for air entering and leaving the lungs to determine respiratory status.
- **Palpation (feeling):** A method of examination that involves feeling for signs of illness or injury. Palpating, or feeling with your fingertips is usually done last in the exam, because it may cause pain. Actual pressure applied depends on the area and type of problem you suspect.

<Look, listen, and feel will be used in CPR lesson for airway>

▶ *NOTE*

3.2 Conducting an Examination

Visual Aids and Other Materials

Time Elapsed

Medical vs. Trauma Patients

An examination of the trauma patient is different from an examination of the medical patient.

Physical signs of an injury can be observed and palpated. Medical problems are felt by the patient. In order to provide emergency care, you must ask questions to encourage the patient to describe their symptoms.

When conducting an exam, look for the following signs of injury. You can use the mnemonic **"BP-DOC"** to remember them (deformities, open injuries, tenderness, swelling or DOTS mnemonic was used earlier):

▶ *FC 6-4*

B = Bleeding

P = Pain

D = Deformities

O = Open wounds

C = Crepitus

Some signs may be obvious; others, which are caused by interal injuries are not as obvious but potentially serious.

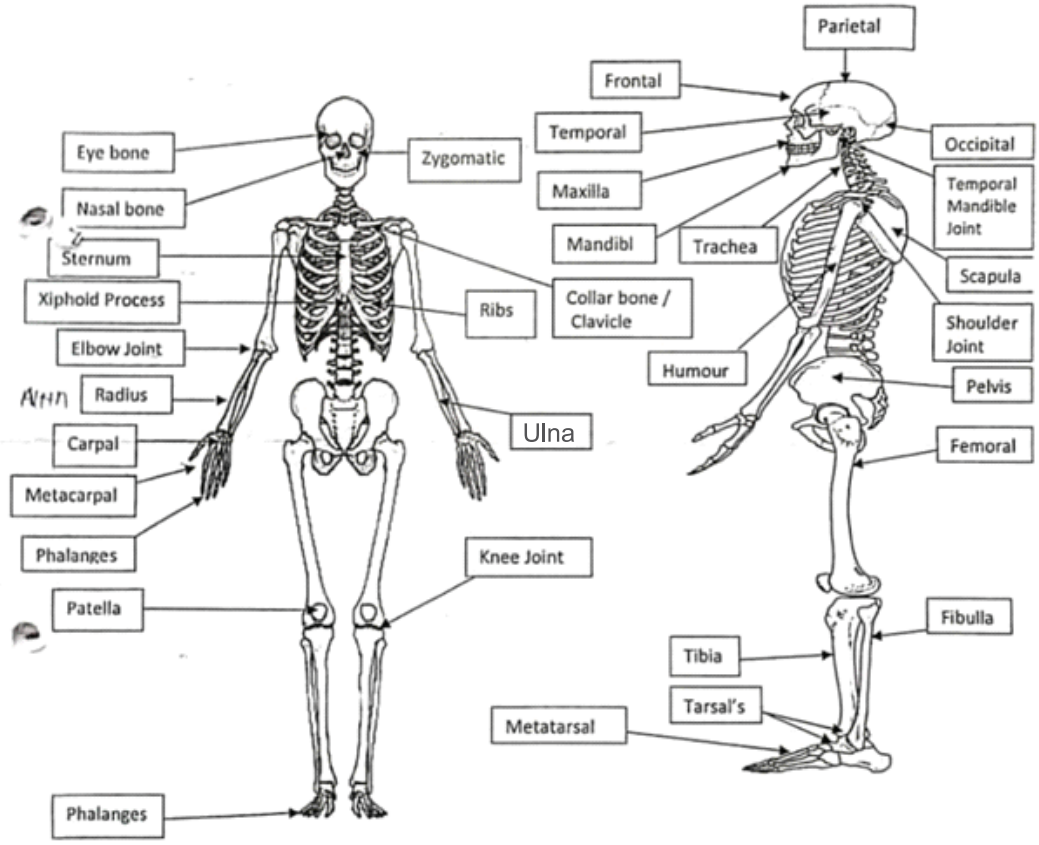
As you proceed, listen to your patient. Listening shows you care and will usually enable you to gather important information.

3

Physical Exam (Cont.)

	Visual Aids and Other Materials	Time Elapsed
3.3 Physical Exam (Head-to-Toe) **<Explain the sequence used when conducting the physical exam or head-to-toe exam. Also explain that this will be practiced in the Practical Station.>**	▶ *NOTE*	
Observe and palpate (with both hands and equal pressure), compare (symmetry), smell and listen (unusual scent and sounds) in the following order:		
1) Examination of the Head		
• **Scalp and skull:** Check for deformities, open injuries, tenderness and swelling.		
• **Ears and nose:** Look for blood or cerebrospinal fluid (CSF) in or around openings.		
• **Pupils:** Normally constrict with more light and dilate with less light; usually symmetrical (unless otherwise due to prior condition or injury - consider possible artificial eye). Abnormal findings include no reactivity to light, pupils that remain constricted, or unequal pupils.		
• **Mouth:** Check for deformities, open injuries, tenderness and swelling. Check for possible airway obstructions such as foreign objects, loose teeth, etc.		
• **Face:** Bones and muscles.		
2) Examination of the Neck **<Discuss large blood vessel and major airway structures.>**	▶ *NOTE*	
• Always go front to back (anterior to posterior).		
• Check for deformities, open injuries, tenderness and swelling.		
• Check trachea for mid-line position.		
• Palpate vertebrae.		
• Open injuries (bandage immediately with occlusive dressing to prevent air from entering veins).		
• Check for medic alert necklace.		
<Refer to Section 3 (Urgent Trauma Care), examination and immobilisation of the cervical spine. In this case examine the neck first.>	▶ *NOTE*	

BONES NAME IN PHYSICAL EXAM FROM HEAD TO TOE



3 Physical Exam (Cont.)

Visual Aids and Other Materials

Time Elapsed

3) Examination of the Chest

Any injury may involve the vital organs or major blood vessels.

- Check for deformities, open injuries, tenderness and swelling.
- Feel ribs for deformities all the way to spine.
- Palpate the sternum.

4) Examination of the Abdomen

Abdominal organs may be injured without external signs.

- Check for rigidity (hardness) or distension.
- Cuts, scrapes (lacerations and abrasions), penetrating wounds, protruding organs. Potential bleeding and infection.
- May indicate underlying injury. Palpate quadrant with pain as your last step.
- Swelling or discoloration.

5) Examination of the Pelvis

- Composed of the left and right ileum, ischium and pubic bone.
- Pelvic or hip fracture could result in blood loss of 2 litres or more.
- Internal organs, blood vessels and nerves pass through pelvic area.
- Possible spinal injury.
- Genital region: priapism in males.
- Deformities not always obvious. Palpate iliac crest (pelvic wings) and pubic bones.
- Open injuries may occur, but are uncommon. Penetrating injuries possible.
- Assess for tenderness.

3 Physical Exam (Cont.)

Visual Aids and Other Materials

Time Elapsed

6) Examination of the Lower Extremities

Common sites of injury – do not rush your examination.

- Check for deformities, open injuries, tenderness and swelling.
- Check dorsalis pedis pulse or posterior tibial pulse
- Check for motion – wiggle toes.
- Check for sensation – gently squeeze one extremity then another. Ask the patient "Can you feel this?"

<Discuss when to remove patient's shoes.>

▶ *FC 6-5*

▶ *NOTE*

7) Examination of the Upper Extremities

Common sites of injury – do not rush your examination.

- Check for deformities, open injuries, tenderness and swelling.
- Check radial pulse.
- Check for motion – wiggle fingers.
- Check for sensation – gently squeeze one extremity then another. Ask the patient "Can you feel this?"
- Check for medic-alert bracelet.

8) Examination of the Back

- Check chest wall for deformities that may indicate broken ribs.
- Check for obvious deformities and/or tenderness along entire length of spine that may indicate spinal cord injury.
- As with chest injuries, check for sucking wounds, penetrating injuries, cuts, etc.
- Blood accumulation in the flanks and/or tenderness may indicate abdominal injury.

3

Physical Exam (Cont.)

Visual Aids and Other Materials

Time Elapsed

3.4 Measuring Vital Signs

A patient's vital signs include:

- Respiration
- Pulse
- Skin
- Pupils
- Blood pressure

At the conclusion of the lesson, we will practise measuring vital signs. You can assess and monitor most vital signs by looking, listening and feeling.

Proper Equipment to Measure Vital Signs

- Wristwatch – count seconds.
- Penlight – examine pupils.
- Stethoscope – respiration and blood pressure..
- Pen and notebook – take note
- Blood pressure cuff (sphygmomanometer) – measure B/P

More important than just measuring vital signs is **measuring changes over time.** It is important to establish baseline vital signs. For example, if pulse on initial reading is 80 and later becomes 120, this indicates a possibly serious condition developing.

Age Definitions

Infant:	**Child:**	**Adult:**
0 - 1 year	1 - 9 year	above 9 years

3

Physical Exam (Cont.)

Visual Aids and Other Materials

Time Elapsed

Respiration

Normal Respiratory Rates

Age Group	Respirations per minute
Infant	25-50 rpm
Child	15-30 rpm
Adult	12-20 rpm

A respiration consists of one inhalation and one exhalation.

To count respirations, count the number of times a chest or abdomen rises and falls in 30 seconds, then multiply by 2. Pretend to count pulse or do something so the patient is unaware and breathing naturally.

When respirations are all the same frequency and depth (shallow or deep breathing), breathing is considered regular. If frequency or rate is different, breathing is irregular (rhythm).

Unusual noises (snoring or wheezing) can indicate an obstructed airway.

Abnormal breathing conditions:

- Poor rise and fall of the chest
- Increased effort
- Cyanosis

3

Physical Exam (Cont.)

Visual Aids and Other Materials

Time Elapsed

Pulse

The pulse is the pressure wave in the arteries generated by the heartbeat. It directly reflects the rate, rhythm, and strength of contractions of the heart. Each time the heart beats, arteries expand and contract. You can feel the pulse by pressing on an artery over a bony prominence.

Normal Pulse Rates

Age Group	Pulse Rate per minute
Infant	120-150 ppm
Child	80-150 ppm
Adult	60-80 ppm

When measuring pulse, note the following:

- **Pulse Rate:** Slow or fast
- **Strength of pulse**
  - Normal (full and strong)
  - Thready (weak and rapid)
  - Bounding (unusually strong)
- **Rhythm:** Are beats spaced regularly?

Rate, strength and regularity tell you what the heart is doing at any given time.

▶ *NOTE*

<Radial Pulse: Demonstrate how to take a radial pulse. Let the participants practice on each other.>

<Avoid using your thumb — it has a pulse of its own.>

Other noted locations to measure a pulse:

- Brachial – upper arm
- Carotid – neck
- Femoral – groin
- Dorsalis pedis – top of the foot
- Posterior tibial artery – medial surface of ankle

3

Physical Exam (Cont.)

Visual Aids and Other Materials

Time Elapsed

Skin

Assessment of the temperature, colour and condition can tell you about the patient's circulatory system.

Temperature

Normal body temperature: *98.6 °F or 37°C*

Method: Place the back of your hand against the patient's skin. This is called **relative skin temperature**. It is not an exact measurement, but can tell you if it is high or low.

Temperature is reported as normal, hot, cool, or cold.

Skin Colour

Skin colour provides information on the heart, lungs and other problems (circulation).

Skin colour can be characterized by:

- **Paleness** (white ashen): Caused by shock or heart attack, resulting in impaired blood flow. Also caused by fright, fainting or emotional stress.
- **Redness** (flushing): Caused by high blood pressure, alcohol abuse, sunburn, heat stroke, fevers, infection or disease.
- **Blueness** (cyanosis): A serious problem, seen first around fingertips and mouth, caused by reduced levels of oxygen due to shock, MI, poisoning, etc.
- **Yellowness**: Indicates liver disease. Includes sclera (eyes).
- **Black and blue mottling**: Caused by blood seeping under the skin (a blow or severe infection)

▶ *NOTE*

<In people with darker pigmentation, check for colour changes on lips, nailbeds, palms, ear lobes, inner surface of the lower eyelids, gums and tongue.>

Skin Condition

Reported as dry, moist or wet with respect to local environment.

3

Physical Exam (Cont.)

Visual Aids and Other Materials

Time Elapsed

Capillary Refill

Used for infants and children under 6 years old. Not always accurate in adults. Press on the nail bed and observe how long it takes for the normal pink color to return after releasing. Always re-check at the same place. Capillary refill may be delayed in patients with cold extremities. This method is used on adults in triage situations.

Pupils

Normal responses: Pupils constrict with exposure to light and dilate with less light. Both pupils should be the same size unless a prior injury or condition has changed this. To assess, shine a penlight into the eyes. If outdoors, cover the eyes and assess for dilation.

Abnormal findings: No reaction to light, pupils remain constricted (possible drug overdose), or unequal pupils (head injury or stroke).

Blood Pressure

This is the amount of pressure the blood exerts against the artery walls. It can tell you if the organs are getting the blood they need. Use a blood pressure cuff (sphygmomanometer) to measure blood pressure.

Systolic pressure is the result of a contraction of the heart, forcing blood through the arteries. **Diastolic pressure** is the relaxation between contractions. Both normally rise and fall together.

Blood pressure varies with age, gender and medical history of the patient. It is usually 10 mmHg lower in females than in males.

Normal Blood Pressure Values (mmHg)

	Adult	Child (up to 12 years old)
Systolic:	100+age, up to 150 mmHg	80+ (2 x age)
Diastolic:	65-90 mmHg	50-80 mmHg

3

Physical Exam (Cont.)

Methods

1. Listening for systolic and diastolic sound (auscultation) using a blood pressure cuff & stethoscope.

2. Feeling for (palpating) the return of a pulse as cuff is deflated. Used when is too noisy or bumpy to auscultate. Can only measure systolic blood pressure.

   <Remind participants that this will be practised in stations.>

Several factors can influence blood pressure. Some increase blood pressure while others will decrease it, such as:

- Conditions or substances that constrict blood vessels can increase blood pressure such as:
- Cold environment, stress, pain, smoking, caffeine, and decongestants.
- Heart failure, trauma and/or shock will decrease blood pressure.

Other factors can affect a reading, such as not hearing accurately, placing the stethoscope improperly, the arm not at heart level, using the wrong size cuff, or deflating the cuff too fast.

Visual Aids and Other Materials

▶ *NOTE*

Time Elapsed

4 Patient History

Visual Aids and Other Materials

Time Elapsed

At this point, re-evaluate what you observed when you arrived on scene.

- Secure scene for rescuer and patient, remove obvious mechanism of injury.
- Patient history is gathered mostly in the interview.
- Generally you ask the patient questions; however, if unresponsive, gather facts by observing scene M.O.I., looking for identification tags, speaking to family members and bystanders.

Remember differences between a medical and a trauma patient. In trauma, perform physical exam first. For a medical patient, take a history first.

▶ *NOTE*

▶ *FC 6-6*

<Discuss optional use of mnemonic "S.A.M.P.L.E.".>

S	A	M	P	L	E
Signs and symptoms	Allergies	Medication	Pertinent history	Last oral intake	Events

S Signs and Symptoms:

Signs: conditions you can observe (see, feel or hear) such as a broken wrist or unequal pupils.

Symptoms: conditions that only the patient can feel or describe, such as stomach pain or dizziness.

Begin by asking open-ended questions:

- How do you feel?
- Why did you call us today?

Avoid leading or closed-ended questions that have "yes" or "no" answers, for example:

- Do you feel pain in your leg?
- What do you feel in your chest?

Do not diagnose.
Treatment is based on assessment findings.

▶ *NOTE*

4 Patient History (Cont.)

Visual Aids and Other Materials	Time Elapsed

A **Allergies:** Determine if patient is allergic to medications, food or anything in the environment. Can help to determine possible causes of patient's condition.

M **Medications:** Identify all medications the patient is currently taking or has recently taken. These may identify a medical condition.

P **Pertinent history:** Pertinent to the emergency care you are providing.

L **Last oral intake:** Ask your patient when the last time was he or she ate or drank anything. Pertinent to a patient who is unresponsive or confused. Important if the patient needs immediate surgery.

E **Events:** Activities prior to the incident.

<Give an example, refer to Brady First Responder.> ▶ *NOTE*

5 Ongoing Assessment

A patient may be in stable or unstable condition. The assessment process must be ongoing until your patient is turned over to the next level of care. Complete the following every 5 minutes for unstable patients and every 15 minutes for stable patients.

1) Reassess LOC (alert, verbal, painful, unresponsive). ▶ *FC 6-7*
2) Reassess and correct any airway problems.
3) Reassess breathing for rate and quality. Ventilate as needed.
4) Reassess pulse rate and quality. ▶ *FC 6-8*
5) Reassess skin temperature, colour and condition.
6) Repeat any part of physical exam that may be needed.
7) Reassess your interventions (treatment) to check effectiveness. ▶ *FC 6-9*
8) Continue to calm and reassure the patient.

Maintain professionalism and respect for patient's concerns and modesty. Do not leave patient unattended.

6 Hand-off Report

Visual Aids and Other Materials

Time Elapsed

< The hand-off report can be verbal or written>

▶ *NOTE*

When you are relieved of your patient by a higher-level care provider, be prepared to give appropriate information about your patient. This is the **hand-off** report, also known as **patient transfer information.**

The hand-off report includes the following eight areas of information:

▶ *FC 6-10*

- Patient age and sex
- Chief complaint
- Level of consciousness
- Airway status
- Breathing status

▶ *FC 6-11*

- Circulation status
- Patient history
- Treatment given

The report is designed to be an up-to-the-minute account of the patient's condition, treatment and other information. Sometimes this will also appear in your written report.

Visual Aids and Other Materials	Time Elapsed

REVIEW

<Review objectives on page 1 and ensure all participants have understood them clearly.>

PRACTICAL EXERCISES

Rotate participants through the various stations according to the lesson plan.

POST-TEST

1) Verify that the objectives have been achieved.
2) Respond to the post test.

CLOSING

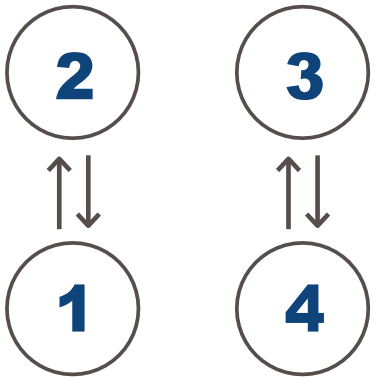
1) Comments, suggestions.
2) Thank the participants and announce the next lesson.

PRACTICAL EXERCISE
Patient Assessment

Stations 1 and 4:
Initial assessment, trauma critical care, interviewing and head-to-toe examination

Stations 2 and 3:
Measuring Vital Signs

Rotation type for this lesson:



Number of rotations:

2

Duration:

3 hours (90 minutes per station)

Participants will practice and take turns playing the role of the patient and rescuer.

<NOTE: After a brief explanation of the mechanics of this station, let participants begin practicing. Do not spend time explaining material that was already covered during lecture. An instructor will be in charge of each station and responsible for filling out the evaluation.>

PRACTICAL EXERCISE

Patient Assessment (Cont.)

Stations 1 and 4:

Initial assessment, trauma critical care, interviewing and head-to-toe examination

Materials:

- Latex gloves for each participant
- 6 sets of eye protection
- 3 pen lights
- 3 notebooks
- 3 pencils
- Skills Checklist form

Use the procedures described in the Skills Checklist and flipchart for this practical exercise. The participant is required to say out loud what he or she is doing and stating possible findings, while demonstrating the procedures outlined on the flipchart:

1. Arrival on the scene (secure or not secure)
2. Ensure personal safety (checks for all personal protective equipment).
3. Identify yourself (to the victim, the family or bystanders)
4. Perform all steps for the initial assessment.

<Tell the participants at this time whether the case is trauma or medical.>

<Treatment of the problems identified in this exercise will be practised in subsequent exercises. DO NOT establish assumed injuries or pain – what is required of the participant in this exercise is to perform all steps of the initial assessment, not to provide treatment.>

5. Perform steps for physical exam.
6. Obtain patient history.

<Remind participants that the information for the physical exam and patient history is obtained in different ways for conscious and unconscious patients.>

Patient Assessment
Stations 1 or 4

Student Name: _____ **Dates:** _____

Instructions: In this station, the participant will say out loud what he or she is doing, stating possible findings, while demonstrating each of the following procedures. Check the box showing on which attempt the participant was able to perform the step successfully. Mark UTP with an X to indicate the participant was unable to perform successfully within four attempts.

Performance Guidelines	Successful on Attempts				UTP
	1	2	3	4	
1. Scene size-up (secure or not secure).					
2. Ensure personal safety and proper use of PPE.					
3. Identify yourself (to the victim, the family or bystanders)					
4. Perform all steps for the initial assessment.					
5. Perform all steps for physical exam.					
6. Obtain patient history.					

Comments: _____

_____

_____

Overall Performance: ☐ Outstanding ☐ Successful ☐ Needs Improvement

Instructor: _____

PRACTICAL EXERCISE

Patient Assessment (Cont.)

Instructor Checklist Guide for Stations 1 and 4:

- ☐ 1. Secure the scene
- ☐ 2. Ensure personal safety
- ☐ 3. Identify yourself to patient
- ☐ 4. Determine state of consciousness
- ☐ 5. Establish open airway
- ☐ 6. Determine respiration
- ☐ 7. Determine pulse (maintaining open airway)
- ☐ 8. Assess bleeding
- ☐ 9. Cervical collar / administer oxygen
- ☐ 10. Patient interview – obtain patient history
- ☐ 11. Determine next step
- ☐ 12. Scalp and skull
- ☐ 13. Face
- ☐ 14. Ears and nose
- ☐ 15. Pupils and eyelids
- ☐ 16. Mouth
- ☐ 17. Neck
- ☐ 18. Chest (look, listen, feel)
- ☐ 19. Abdomen
- ☐ 20. Pelvis
- ☐ 21. Genital region
- ☐ 22. Lower extremities
- ☐ 23. Upper extremities
- ☐ 24. Back
- ☐ 25. If the patient is in prone position one can examine back first

PRACTICAL EXERCISE
Patient Assessment (Cont.)

Stations 2 and 3:
Measuring Vital Signs

Materials per station:

- Latex gloves for each participant
- 3 sphygmomanometers
- 3 stethoscopes
- 1 double stethoscope (for the instructor)
- Wristwatch
- 3 notebooks
- 3 pencils
- Skills Checklist form (each participant)

Use the procedures described in the Skills Checklist and flipchart for this practical exercise. The participant will practice and demonstrate the following procedures with the patient at rest (supine, seated and standing):

1. Explain to the patient that you will be taking vital signs
2. Check respirations
3. Check pulse (radial)
4. Check skin condition
5. Check pupils
6. Palpate blood pressure (systolic only)
7. Check blood pressure (use BP cuff and stethoscope)

Next, the participant in the role of the patient will need to do some type of exercise for one minute, such as jumping jacks, then have vital signs taken again. After completing these steps participant pairs should switch roles.

<Remember to form new pairs of participants.>

Measuring Vital Signs
Stations 2 or 3

Student Name: _____ **Dates:** _____

Instructions: Check the box showing on which attempt the participant was able to perform the step successfully. Mark UTP with an X to indicate the participant was unable to perform successfully within four attempts.

Performance Guidelines	Successful on Attempts				UTP
	1	2	3	4	
1. Proper use of PPE					
2. Explain to the patient that you will be measuring vital signs					
3. Check respirations					
4. Check pulse (radial)					
5. Check skin condition					
6. Check pupils					
7. Palpate blood pressure (systolic only)					
8. Check blood pressure (use BP cuff and stethoscope)					

Comments: _____

_____

_____

Overall Performance: ☐ Outstanding ☐ Successful ☐ Needs Improvement

Instructor: _____

— INSTRUCTOR'S COPY

POST-TEST | LESSON 6

Patient Assessment

1. List the five general procedures taken by the rescuer when arriving at the scene.

1) Ensure your own personal safety (includes BSI and securing the scene).

2) Ensure patient safety.

3) Establish a general impression of the scene (determine mechanism of injury) and begin your initial assessment of the patient (if responsive, identify yourself.)

4) Identify and treat life threats.

5) Stabilize and continue evaluating the patient.

2. List the six phases of the patient assessment plan.

- *Scene assessment*
- *Initial assessment*
- *Physical examination*
- *Patient history*
- *Ongoing assessment*
- *Patient hand-off (transfer)*

3. List the six steps of the initial assessment.

1) Form a general impression.

2) Check for responsiveness.

3) Ensure adequate airway.

4) Verify breathing.

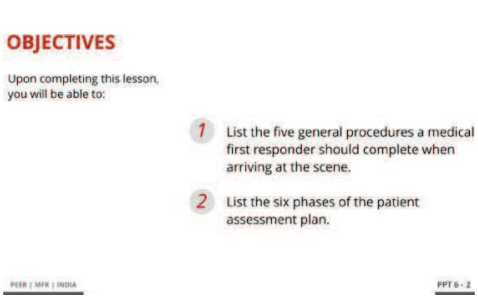
5) Assess circulation.

6) Control serious external bleeding.

LESSON 6
— PPT's

6-1

6-2



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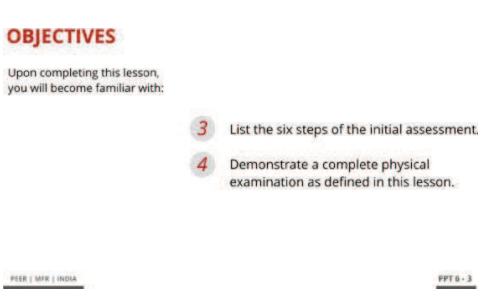

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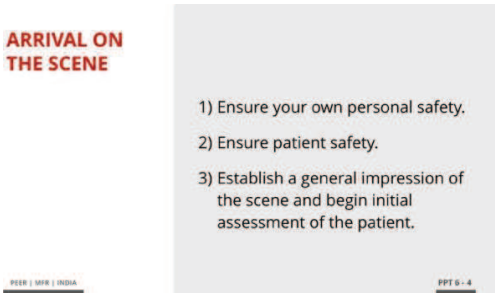

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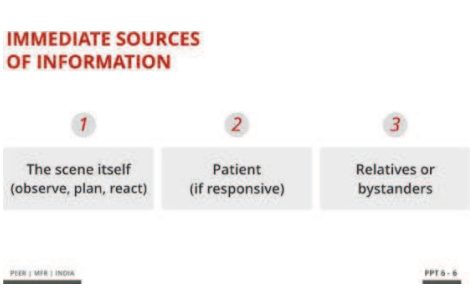
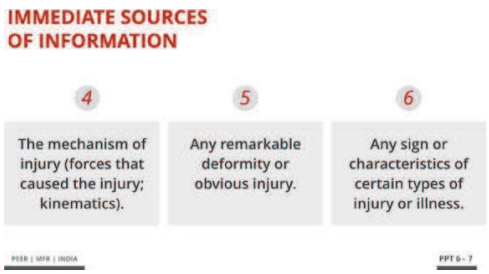
6-6



LESSON 6
— PPT's

6-7



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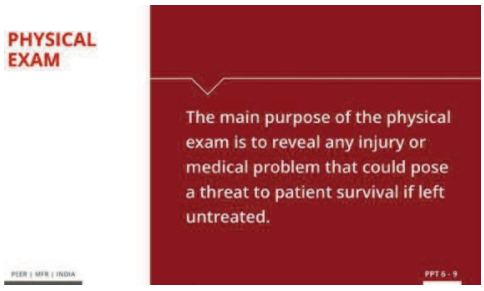

LESSON 6

— FLIP CHARTS

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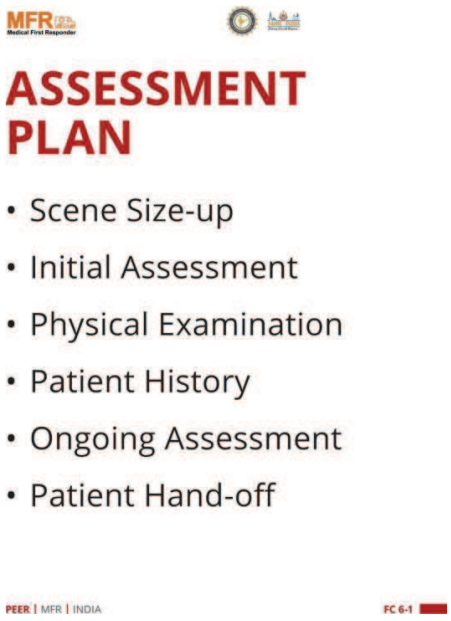

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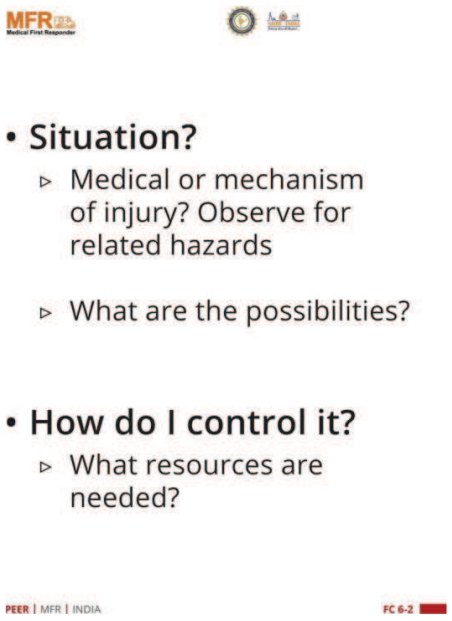

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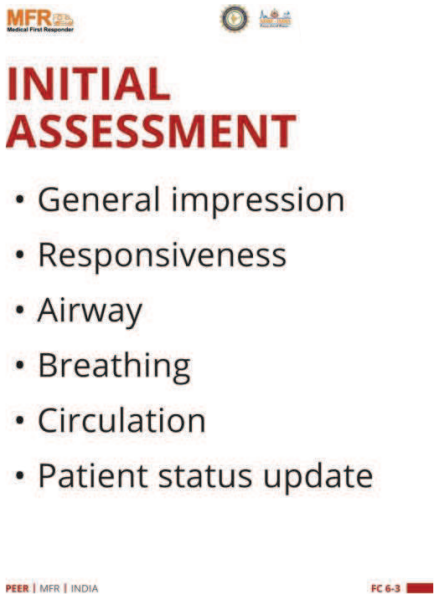

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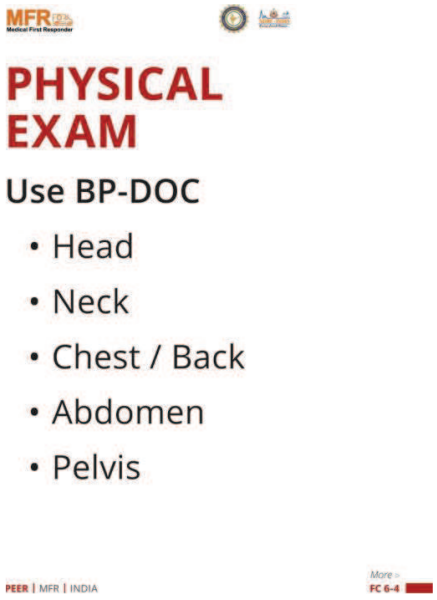
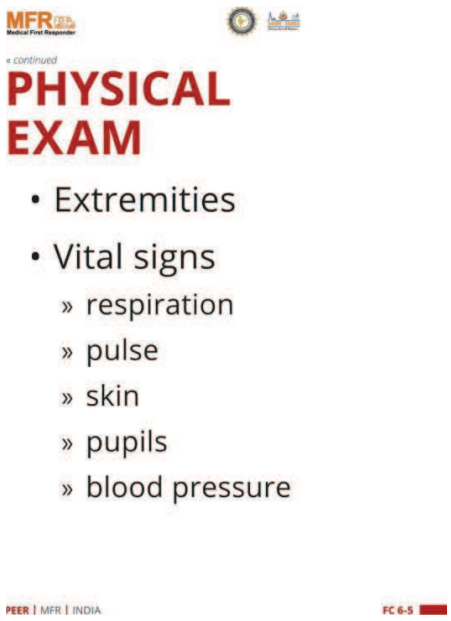


LESSON 6
— FLIP CHARTS

FC6-5



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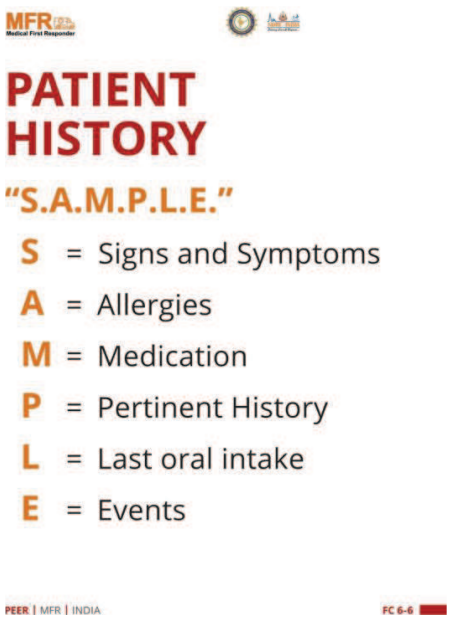

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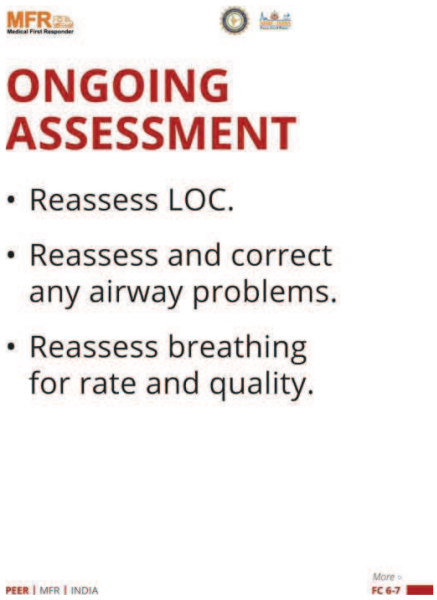

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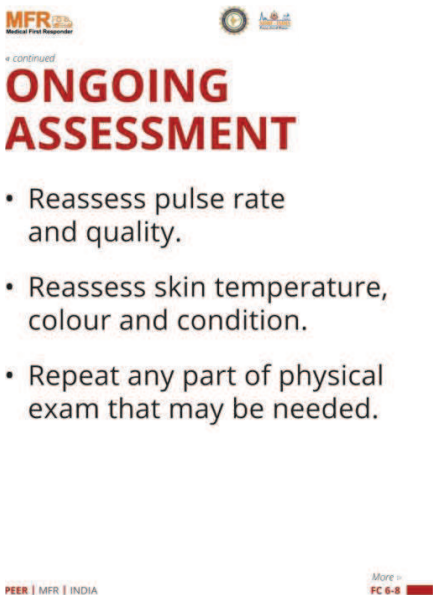
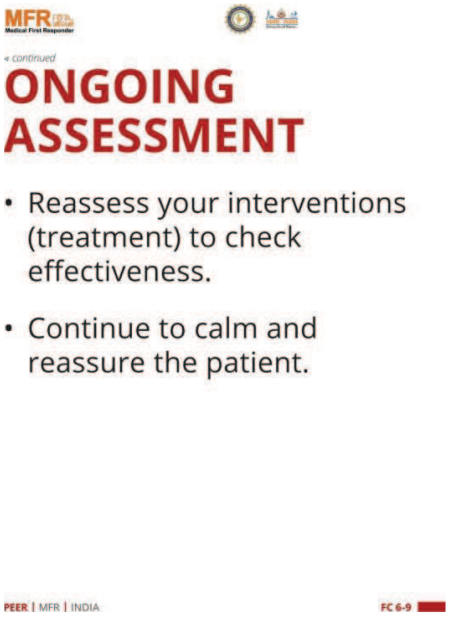


LESSON 6

— FLIP CHARTS

FC6-9



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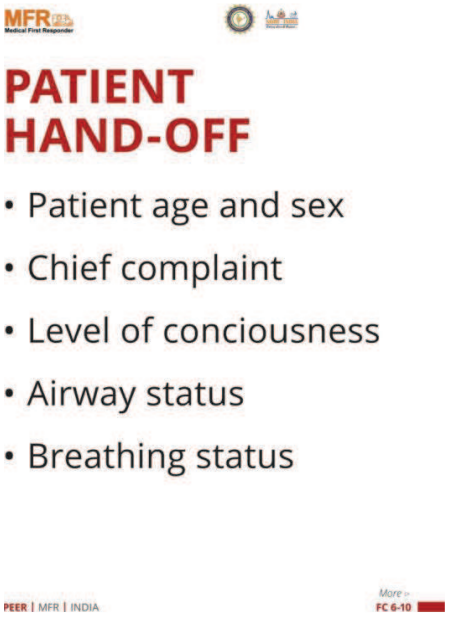

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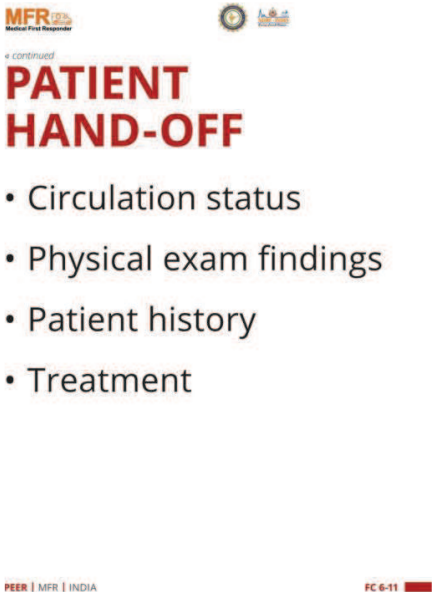

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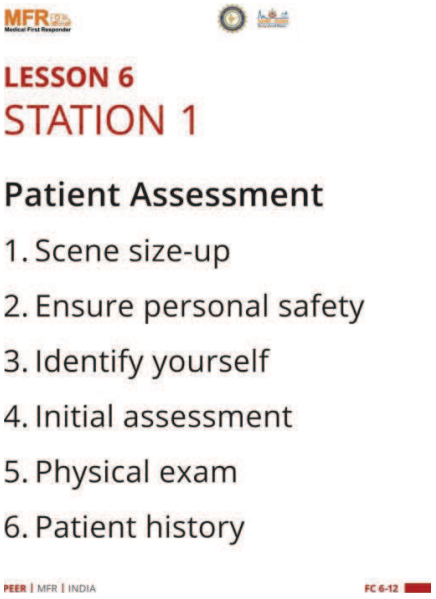

LESSON 6
— FLIP CHARTS

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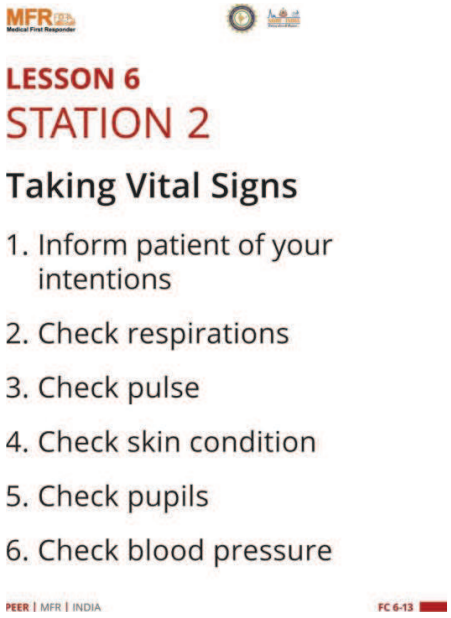

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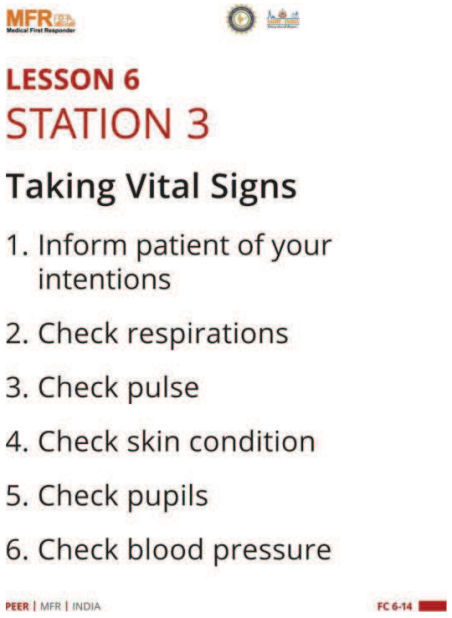

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