2025

IMMEDIATE CARE TRAUMA
TRAINER'S MANUAL

Professional Skill Development Centre
University of Health Sciences Lahore

Immediate Care Trauma Course
Trainer's Manual

(2025 Curriculum)

UNIVERSITY OF HEALTH SCIENCES LAHORE

Contents

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List of Abbreviations

Abbreviations	Subject
ABCDE	Airway, Breathing, Circulation, Disability, exposure
SBAR	Situation, Background, Assessment, Recommendation
EMS	Emergency Medical Services
AMPLE	Allergies, current Medications, Past illnesses, Last meal, and Events leading to injury.

Course overview

This 6-hour trauma care workshop introduces essential principles of emergency trauma management for undergraduate medical and nursing students

Duration & Audience:

This is a one-day (6-hour) training workshop designed for facilitators who are consultants in medicine, nursing, and allied health. It is designed for learners with limited prior trauma experience, preparing them to effectively handle trauma scenarios from pre-hospital settings through emergency department care.

The curriculum is based on internationally recognized trauma guidelines. Students will engage in short lectures, skills practice, and high-fidelity simulations to build confidence in managing trauma from the scene to the ED. Trauma is a leading cause of death in young adults worldwide, underscoring the need for such training. Rapid, organized care. This course aims to instil that urgency and systematic approach in future healthcare providers.

Module 1: Introduction to Trauma Systems (60 minutes)

Key Concepts: This opening module establishes the context and urgency of organized trauma care. Emphasize that trauma is a leading cause of death in young adults worldwide and that rapid, structured care within a well-organized **trauma system** saves lives. Introduce the concept of the **"Golden Hour"** – the critical first hour after injury when timely intervention significantly improves outcomes. Explain how trauma care is not just about individual skills but about a coordinated system: from pre-hospital responders and transport, to emergency departments and trauma centers working in unison.

Discuss how effective trauma systems involve **pre-hospital triage**, rapid transport to appropriate facilities, and trauma teams ready to receive the patient. Mention that modern trauma protocols (e.g. WHO Basic Emergency Care, ATLS) guide this course's content, underscoring current best practices.

Session outcome

By the end of this module, students should be able to:

- **Define Trauma Systems:** Explain what a trauma system is and why it exists, including components like EMS (Emergency Medical Services), trauma centers, and coordinated care pathways from the injury scene to hospital.
- **Recognize Trauma as a Public Health Issue:** State why trauma is a critical health concern (e.g. leading cause of mortality in youth) and the importance of rapid, organized care (**Golden Hour** concept).
- **Describe Pre-hospital Priorities:** Outline the first steps at a trauma scene – ensuring **scene safety**, calling for help, and initiating basic triage of multiple victims if necessary.

- **Understand Triage Basics:** Understand the principle of mass-casualty triage ("greatest good for the greatest number") and the use of simple triage categories (e.g. color-coded tags: **Red** for immediate, **Yellow** for delayed, **Green** for minor, **Black** for deceased/unsalvageable).

Teaching Strategies

- **Interactive Introductory Lecture;** Begin with a short, engaging talk or slide presentation covering trauma epidemiology and the need for trauma systems. Include a real-life anecdote or statistic to grab attention (e.g. how a trauma system improved survival in a disaster). Define key terms (trauma system, levels of trauma care, triage) in simple language.
- **Group Discussion; Pose** a scenario to the group. Let students brainstorm steps (ensure safety, call ambulance, triage victims, etc.). Use this to highlight correct actions and introduce the structured approach they will learn.
- **Triage Tag Demonstration;** Show sample **triage tags** or a visual aid depicting the Red/Yellow/Green/Black categories. This active learning memorably reinforces triage principles.

Materials/Resources

- **Slides/Visual Aids:** Slides or posters illustrating trauma statistics, the Golden Hour, and an overview of the trauma system (including a simple flowchart from injury to hospital).
- **Triage Tags and Cards:** A set of colored triage tags or mock patient cards for demonstration. If available, use sample victim cards describing injuries for a triage exercise.
- **Whiteboard/Flipchart:** To jot down student responses during the brainstorm (e.g., list of "first steps at scene") and to sketch the trauma system flow (EMS → ED → etc.).
- **Instructor References:** Copies of relevant guidelines (ATLS manual, WHO Basic Emergency Care) to show students (optional, to emphasize that content is evidence-based). No need to delve deeply into these during this module, but having them on hand reinforces credibility.

Module 2: ABCDE Primary Survey (60 minutes)

Key Concepts: This module covers the **Primary Survey (ABCDE)** – the systematic initial assessment of a trauma patient focusing on life-threatening conditions, in the priority order of **Airway, Breathing, Circulation, Disability, Exposure**. Emphasize the mantra **"treat first what kills first,"** meaning life threats are addressed in sequence before moving on. Instructors should highlight that the ABCDE approach is universal in trauma care and forms the backbone of emergency management.

Key principles include always **protecting the cervical spine** during airway management, providing adequate ventilation and oxygenation, controlling hemorrhage, rapidly assessing neurological status, and completely exposing the patient to find all injuries (while preventing hypothermia).

Students should understand that the primary survey is often repeated continuously (re-evaluation) and that **critical interventions** (like opening an airway, stopping major bleeding, decompressing a tension pneumothorax) are done **immediately when a problem is found**, without waiting to finish the whole exam. If massive external bleeding is present, it should be addressed as part of Circulation (some protocols say address catastrophic haemorrhage even before A, but for this course we maintain ABCDE with the note that obvious heavy bleeding is controlled during "C" promptly). This module builds on the basics introduced earlier (scene safety, initial ABCDE concept) and moves to hands-on skill acquisition

Session Outcome

By the end of this module, students will be able to:

- **Perform a Systematic Primary Survey:** Conduct an **ABCDE assessment** on a trauma patient in the correct order, verbally identifying findings at each step and prioritizing interventions. For example, they should be able to state: "**Airway** is clear/obstructed... **Breathing** is adequate/inadequate. **Circulation:** pulse is weak – suspect shock, start IV, demonstrating a logical flow.
- **Identify and Manage Life-Threats:** Recognize common life-threatening issues at each ABCDE step **and immediately intervene** for each.

  Examples*:* If the **airway** is obstructed, perform a jaw-thrust and insert an airway adjunct; if **breathing** is inadequate or breath sounds are absent on one side, provide bag-mask ventilation or perform needle decompression for suspected tension pneumothorax; if **circulation** is compromised (e.g. massive bleeding), apply direct pressure or a tourniquet and begin fluid resuscitation.

- **Demonstrate Key Trauma Skills:** Show proper technique for critical skills: maintain cervical spine protection during airway management, effectively ventilate with bag-valve-mask (BVM), control hemorrhage (direct pressure, tourniquet application), establish IV access, etc. (Even if not all students have done IVs before, they should learn the concept and see the technique.)
- **Reassess and Prioritize:** Explain the importance of re-checking ABCs after any intervention and continually prioritizing the most critical problem. They should verbalize understanding that, for instance, securing an airway and breathing comes before splinting a fracture.
- **Understand When to Transition to Secondary Survey:** State the criteria for moving beyond the primary survey – essentially, only after ABCDE is completed **and** the patient's vital functions are initially stabilized (no untreated life threat). They should articulate that **the secondary survey never begins until all primary survey issues are addressed and the patient is resuscitated or stable**.

Teaching Strategies

- **Focused Mini-Lecture** Start by reviewing the **ABCDE approach** in detail. Use a slide or poster for each letter of ABCDE, listing key checks and interventions. For example:

- **A (Airway + C-spine):** Check responsiveness, open airway (jaw-thrust), clear obstructions, consider airway adjuncts; always protect cervical spine.
- **B (Breathing)***:* Look, listen, feel for breathing; expose the chest, check for chest rise, breath sounds, treat issues like pneumo- or hemothorax (seal open chest wounds, decompress if tension pneumothorax is suspected).
- **C (Circulation***):* Check pulses, control external bleeding immediately, note skin color/temp, start IV fluids if needed for shock.
- **D (Disability):** Quick neuro check – level of consciousness (AVPU or GCS), pupils, movement of extremities.
- **E (Exposure/Environment):** Fully expose the patient to see all injuries, and prevent hypothermia (cover with warm blankets after examination).
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- **Skills Station Rotations:** Break the class into small groups and rotate through hands-on stations to practice critical skills (approximately 10 minutes per station). Ideally, have an instructor or facilitator at each station:
  - **Station 1: Airway Management**: Utilise an airway manikin. Students practice manual in-line cervical stabilisation (one student holds the C-spine) and opening the airway with a jaw-thrust manoeuvre. They then correctly insert an oropharyngeal airway (OPA) and practice ventilating with a bag-valve-mask while maintaining a seal and observing chest rise. Provide feedback on technique. If available, demonstrate the application of a cervical collar once the airway is secured to illustrate how to immobilise the neck**.**
  - **Station 2: Breathing & Chest Injuries:** Use a torso manikin or a simulation chest. Students practice inspecting the chest for injuries, palpating for deformities, and listening to breath sounds (even if simulated). Present a mock scenario (e.g., "Breath sounds are absent on the left and trachea is deviated to the right") and ask what they suspect – the answer is **tension pneumothorax**, prompting discussion. Demonstrate finding the anatomic site for needle decompression (2nd intercostal space, mid-clavicular line). If possible, let students handle a decompression needle (training needle) on a model but without actual puncture. Also show how to apply a vented chest seal on an open chest wound and how to stabilize a flail chest segment (e.g., with manual pressure or a bulky dressing).
  - **Station 3: Circulation & IV Access:** Use a bleeding limb simulator or mannequin. Students practice haemorrhage control: apply a tourniquet on a mock limb until bleeding "stops" and pack a wound/apply direct pressure with gauze. Then use an IV arm model for IV insertion – each student can attempt to insert a large-bore IV catheter (14–16G). If they lack IV training, the instructor can demonstrate and have them assist or at least observe the process. Discuss fluid resuscitation briefly: show a bag of IV fluids and explain concepts like not over-infusing. Have students check a partner's capillary refill to gauge perfusion, linking it to circulation assessment. Encourage communication during tasks: e.g., have them verbalize "Tourniquet on!" or "IV started!" as they would in a real trauma resuscitation. Each station uses a **checklist** of steps to guide practice and ensure key actions are covered. Instructors coach students and provide gentle correction as needed.
- **Integrated Simulation Drill:** Bring the group back together for a short, supervised simulation that ties the ABCDE steps together.

- **Debrief and Emphasize Key Points:** After the drill, debrief briefly. Reinforce correct actions and clarify any missed steps. Compliment them on any effective teamwork or communication they did

Materials/Resources

- **Airway Manikin and Adjuncts:** Adult (and/or pediatric, if available) airway training manikin; oropharyngeal airways (various sizes); nasopharyngeal airways; bag-valve-mask with mask. Cervical collars or foam blocks/tape for C-spine immobilization practice. Suction device (if available, to show clearing airway) – can be simulated if not available.
- **Chest Injury Simulation Tools:** A torso manikin or CPR manikin, stethoscopes; a large needle or decompression kit for demonstration; adhesive vented chest seals or improvised materials to demonstrate sealing a sucking chest wound. Possibly props like a section of rib or a model to illustrate flail chest.
- **Bleeding Control and IV Equipment:** A haemorrhage control trainer (bleeding limb mannequin) or simply gauze + a squeeze bulb with fake blood; tourniquets, at least one per station; rolls of gauze, dressings, and gloves. IV arm trainer with IV catheters, IV tubing, fluid bags (even if just for show); tourniquet bands for IV placement; tape. If an IV trainer isn't available, use a fake arm or demonstrate on a mannequin or fruit, focusing on the concept.
- **Checklists and Handouts:** Printed skills station checklists for instructors to use and/or to give students as a reference. These include step-by-step reminders for airway, breathing, and circulation tasks to reinforce learning. Also, an algorithm card or poster summarizing the ABCDE steps can be posted at each station or given to students as a quick reference.
- **Simulation Setup:** A trauma simulation manikin or a simulated patient,for the integrated drill.
- **Classroom Supplies:** Whiteboard/markers or flipchart to write the ABCDE outline and record answers during Q&A. A timer to keep station rotations on schedule. Audio-visual for slides if needed from the mini-lecture portion (projector or large monitor).

Module 3: Secondary Survey and Log-Rolling (60 minutes)

Key Concepts: After the primary survey and initial resuscitation, trauma care moves into the **Secondary Survey** – a thorough head-to-toe evaluation of the patient for any other injuries. Emphasize that the secondary survey is **only initiated once ABCDE is completed and the patient is relatively stabilized**. In this module, instructors should convey the importance of a **methodical, top-to-bottom examination**, including inspection, palpation, and a quick neurologic and history assessment, to avoid missing injuries.

Key components of the secondary survey include: examining the head and face (scalp wounds, facial injuries), neck (checking for signs of trauma like bruising, distension of neck veins, etc.), chest (again, looking for less obvious injuries like rib fractures), abdomen (palpating for tenderness, assessing for internal injury signs), pelvis (checking stability, since pelvic fractures can be life-threatening), extremities (looking for fractures, dislocations, neurovascular status), and **posterior surfaces**.

Log-rolling the patient is an essential skill to examine the back and spine – instructors should stress maintaining cervical spine immobilization and teamwork during the log-roll (at least 3-4 people to roll a patient in unison while protecting the neck). This module ties in the concept of **Exposure** (from ABCDE) with performing a detailed exam; students learn that fully undressing the patient and checking all surfaces (while preventing hypothermia) is crucial

. In addition, introduce the idea of obtaining a brief relevant history once life threats are addressed – often summarized by **AMPLE** (Allergies, Medications, Past medical history, Last meal, Events of injury) or a similar mnemonic, to gather context that might influence treatment. Though students are beginners, understanding that history (if available) and the exam together complete the trauma assessment is a key principle.

Session Outcome

By the end of this module, students will be able to:

- **Explain the Secondary Survey Purpose:** They should clearly state that the secondary survey **never precedes** the primary survey completion and stabilization.
- **Perform a Head-to-Toe Examination:** Conduct a systematic secondary survey on a trauma patient (simulated), examining each body region methodically for injuries.
- This includes checking the scalp (for lacerations, skull deformities), face (eyes, nose, ears for blood or CSF leak), neck (alignment of spine, neck veins, trachea position), chest (bruising, tenderness, breath sounds again for subtle findings), abdomen (tenderness, guarding, rigidity), pelvis (gentle pressure for stability – noting pain or crepitus), extremities (deformities, wounds, pulses, sensation, movement), and the back. They should practice not skipping any region.
- **Demonstrate Safe Log-Rolling Technique:** Work as a team to **log-roll** a patient with spinal precautions.
- Students should know the roles: one person maintains inline cervical spine control, two or more roll the body, and one inspects/palpates the back. They must keep the spine aligned and roll the patient toward themselves in a coordinated fashion. They should then inspect the entire back for injuries (bruises, lacerations, spine deformity) and palpate the spine for tenderness or step-offs. After inspection, the patient is gently rolled back onto a board or bed, maintaining alignment.
- **Identify Additional Injuries and Issues:** Recognize common injuries that might be found on secondary survey (e.g., long bone fractures, spinal tenderness, minor head lacerations) and state initial management steps for each (splint fractures, dress wounds, etc., while continuing monitoring). They should also demonstrate maintaining patient **warmth** (covering with blankets) after exposure to prevent hypothermia, as part of good trauma care practice.
- **Gather a Brief History (if possible):** State the key information to obtain if the patient (or a witness) can provide history, using a structured format like AMPLE. For example, asking about Allergies, current Medications, past illnesses, last meal, and Events leading to injury.

Teaching Strategies

- **Demonstration:** The instructor should first demonstrate a focused secondary survey on a trauma manikin or a volunteer. Verbally narrate each step as you do it, so students see the flow and thoroughness required: "I'm examining the head–feeling through the hair for any bleeding or deformity… Now checking the pupils and looking in the ears/nose for any fluid… Next, I inspect the neck for any bruising or swelling; I feel the spine in the neck… Now I'll listen again to breath sounds and feel the chest for tenderness or rib instability…," and so on through the entire body. When demonstrating log-rolling, use 3 assistants (if available) to show proper technique: explain how one person is at the head strictly stabilizing the neck, two or three others are along the side of the patient to roll the body. Demonstrate using a **spine board** if available (or pretend, if not) – have the patient crossed-arm, log-roll toward the team while the instructor examines the back, then roll back onto the board. Show careful handling and emphasize communication ("Ready to roll on three… one, two, and three"). This live demonstration gives students a clear mental model of what they will practice.
- **Guided Practice in Pairs/Groups):** Divide students into small groups (3-4 per group). Using manikins or each other as simulated patients, have them perform a secondary survey under instructor supervision.
- **Include History-taking:** After the hands-on exam practice, spend a few minutes on how to take a quick, relevant history.
- **Case Scenario Discussion: Present** a short case that ties primary and secondary together.

Materials/Resources

- **Trauma Manikin or Volunteer:** A full-body manikin is ideal for practicing the entire secondary survey and log-roll (preferably one with realistic anatomy for palpation
- **Spine Board and C-collar:** If available, a long spine board or rigid stretcher to practice log-rolling the patient onto it.
- **Secondary Survey Checklist/Guide:** A one-page sheet listing the regions to examine (Head, Neck, Chest, Abdomen, Pelvis, Extremities, Back) and key points
- **Blankets or Sheets:** To practice re-covering the patient after exposure
- **Sample Scenario Cards:** Small cards or sheets with brief descriptions of additional injuries for the case discussion or scenario
- **Penlight and Stethoscope:** Basic examination tools for the secondary survey. Penlights for pupils and looking in the mouth/ears; stethoscope for listening to heart and bowel sounds
- **Protective gear:** Even in simulation, have gloves available and emphasize the habit of using PPE (gloves) during patient exam (this echoes scene safety and universal precautions).

Module 4: Simulation Scenarios and Team Response (60 minutes)

Key Concepts: This module is about putting everything together in high-fidelity **simulation scenarios** and emphasizing effective **team response**.

Here, students transition from practicing individual skills to managing a full trauma case as a **team**, just as they would in real life. Instructors should stress principles of **teamwork, leadership, and role allocation**. In trauma, a coordinated team response is critical – no single provider can handle everything. Key concepts include: clearly defined **trauma team roles** (team leader, airway manager, breathing/circulation interventions, IV/medications, recorder, etc.), the importance of a brief **team assignment/plan (pre-brief)** before the patient arrives, and use of **closed-loop communication** during the resuscitation (addressed further in Module 5).

Also highlight **CRM (Crisis Resource Management)** principles as applicable: e.g., call for help early, distribute tasks, avoid fixation on one problem, and maintain situational awareness. The simulations will likely cover scenarios from pre-hospital through ED, possibly including multiple patients for triage or a complex single-patient scenario. The aim is for students to apply the ABCDE assessment and interventions in real time as a group, showing both medical management and teamwork. Creating a safe learning environment is crucial: students should be encouraged to try their best but understand that mistakes are learning opportunities. Instructors should be prepared to facilitate and then debrief thoroughly, as debriefing is where much of the learning is consolidated.

Session Outcome

By the end of this module, students will be able to:

- **Manage a Trauma Scenario as a Team:** Work together to handle a simulated trauma patient (or patients) from initial contact through transport/ED care, correctly applying the primary survey and initial resuscitation steps without step-by-step prompting. Essentially, they should demonstrate they can perform as a functional trauma team: ensuring scene safety, doing triage if multiple casualties, calling for help early, and then performing ABCDE assessment and life-saving interventions in order.
- **Effectively Assume Trauma Team Roles:** Take on and carry out specific roles in the team (e.g., Team Leader, Airway, Breathing/Circulation, Runner/IV, and Recorder). They should be able to describe the responsibilities of each role (for instance, the **Team Leader** coordinates and makes decisions, the **Airway person** secures and maintains the airway, etc.) and demonstrate role-specific tasks during simulations. Students will practice rotating through different roles to appreciate each one's importance.
- **Apply Teamwork and Communication Skills under Pressure:** Integrate the technical skills from earlier modules with **team communication** skills in a high-pressure scenario. . They should practice **closed-loop communication** – giving clear directions and having team members confirm actions – and maintain situational awareness
- **Demonstrate Leadership and Followership:** Show that they can both lead a resuscitation and also function as a team member following the leader's instructions.

Teaching Strategies

- **Team Roles Orientation:** Begin by outlining the typical roles in a trauma resuscitation team. Use a slide or whiteboard to list roles such as: Team Leader, Airway, Breathing/Circulation (Procedures), IV/Medications, Recorder/Nurse**,** etc., depending on how many students per team. .
- **High-Fidelity Simulation Scenarios** (total =30 min scenario time, can be split into two 15-min scenarios or one longer 15-min scenario with prep and debrief time separate)**:** Conduct one or more trauma simulations using either a manikin or live actor (with moulage) as the patient. Options include:
    - **Scenario 1:** Single patient trauma (e.g., motorcycle accident with head and abdominal injuries, as described earlier). The team must receive the patient (either delivered by "1122" with a handover), then do primary survey, interventions, and call for any necessary further treatment (imaging, surgery).
    - . **Time management:** Each scenario itself might run =10 minutes of active student performance, but allow a few minutes before for role assignment and after for debrief.
- **Real-Time Communication Emphasis:** During simulations, encourage the use of **closed-loop communication** and clear leadership. For example, you might brief the observing students to watch specifically for instances of good communication or lapses.
- **Debriefing after Each Scenario :**After the action, bring the team (and observers) together to discuss. Use a structured debrief model: **Reactions** – first, ask the team members how they felt and how it went for them. **Summary** – conclude each debrief with the main lessons learned from the scenario and how it prepares them for real cases. If multiple scenarios are done, repeat this debrief process for each. Students learn immensely from these reflections, often more than from the scenario itself.

Materials/Resources

- **Simulation Lab or Space:** An area configured like an emergency department bay or trauma scene. This could be a simulation center room with a trauma manikin on a gurney, or a makeshift area with mats and equipment. Arrange it with whatever you have: basic airway equipment, IV supplies, monitor (even if just a pretend monitor with vitals on a paper).
- **High-Fidelity Manikin or Actor:** A full-body trauma simulation manikin that can display vital signs and injuries is ideal.
- **Moulage and Props:** Simulated blood, wound stickers, torn clothing, C-collars, splints – any props to make the scenario realistic
- **Trauma Team Role Badges:** Print-outs or tags labelled "Team Leader," "Airway," "Circulation," "Recorder," etc., that students can wear or place in front of them.
- **Scenario Scripts and Vital Sign Cards:** Written outlines for each scenario with patient background, injuries, initial vital signs, and a timeline of changes.
- **Stopwatch/Timer:** To keep track of scenario time (and to simulate the pressure of time). You might announce time checkpoints ("5 minutes have passed… patient is getting more hypotensive") to push them to act.

Module 5: Communication and Handover (60 minutes)

Key Concepts: This final content module zeroes in on the "soft skills" that are critical in trauma care: effective **communication**, teamwork dynamics, and patient **handover** techniques. Key concepts include **closed-loop communication**, speaking clearly with directed messages. The instructor should convey that poor communication is a leading contributor to errors in trauma care, whereas good communication and leadership significantly improve patient outcomes. Additionally, **handover** (or handoff) is the process of transferring patient care information from one team to another. A structured format like **SBAR (Situation, Background, Assessment, and Recommendation)** is widely recommended for handovers to ensure no key information is lost. Students should learn how to both **give and receive a concise, structured report**.

Session Outcome

By the end of this module, students will be able to:

- **Practice Closed-Loop Communication:** Consistently use closed-loop communication during trauma scenarios – meaning if they are in a leadership role, they address instructions to specific individuals and listen for confirmation; if they are a team member, they acknowledge requests and report back after completing tasks.
- **Demonstrate Clear and Calm Information Exchange:** Communicate critical information (vital signs, exam findings, needed interventions) in a clear, concise manner even under pressure. Students should speak up if something is important (e.g., "Blood pressure is dropping to 80 systolic!") and ensure the team hears it. They should also learn to avoid communication pitfalls like using ambiguous language or failing to assert themselves if they notice something wrong.
- **Utilize Structured Handover (SBAR):** Effectively deliver a patient handover using the **SBAR format** or a similar structured tool. That means they can organize information into: **Situation** (what's going on – e.g. "18-year-old male, severe car accident, arriving with …"), **Background** (brief history and mechanism – "was ejected from vehicle at high speed, no significant medical history known…"), **Assessment** (what you found – "AB: airway intact, breathing shallow with left chest injury; C: weak pulse, BP 90/60, given 1L fluids; D: unconscious, E: multiple abrasions…"), and **Recommendation** (what's needed next – "we suspect internal bleeding, need surgical evaluation, continued resuscitation").
- **Coordinate Team Briefings and Debriefings:** Understand the value of a quick **team briefing** to assign roles and outline a game plan, as well as a **debriefing** after the event to discuss performance.
- **Recognize and Mitigate Communication Breakdowns:** Identify common causes of communication failure in trauma (noise, stress, lack of clarity, hierarchy issues) and describe strategies to overcome them. Students should come away knowing that good communication is **as important as any medical intervention** in saving trauma patients.

Teaching Strategies

- **Reflective Discussion**
- **Teach Closed-Loop Communication with Example**
- **Team Communication Exercise:** Conduct a fun exercise to highlight communication and teamwork.
- **Highlight Team Dynamics and Respect: Reinforce** that in trauma teams, every member (nurse, medic, doctor, and student) is important. Encourage **interprofessional respect**
- **Debriefing and Feedback Importance;** Although the course concludes with evaluations, mention communication in **debriefing**: that talking about what happened (as they've been doing in simulations) is a form of communication that improves future performance
- **Feedback Forms:** At course end, consider having students fill a course evaluation (this was mentioned in the curriculum wrap-up). One section can indirectly assess communication: ask how effectively they felt the team communication improved over the course. While this evaluates the course, it also prompts them to self-assess progress in this domain.
- **Instructor Feedback:** Provide each student with feedback on their communication skills, either verbally or a short written note, especially if this is a formative course. The personalized feedback reinforces the assessment and gives them clear points to work on.

Materials/Resources

- **Whiteboard/Markers:** To illustrate communication concepts (drawing the SBAR outline, listing roles, writing examples of good vs bad communication lines). Visuals help reinforce the mnemonic and key ideas.
- **SBAR Handout or Cards:** A small card or half-page handout for students with SBAR format and possibly a filled-out example. They can keep this as a reference in their pocket during simulations or future clinical shifts.
- **Role Labels:** If not already used in Module 4, have printed role cards or stickers for team roles, to use during communication exercises as well (the more they see and use roles, the more second-nature it becomes).
- **Scenario Cue Cards for Handover Practice:** Several short scenario descriptions (patient condition summaries) to use in the SBAR role-play. These can be tailored to the course context. For instance: "Gunshot wound to abdomen: 24M, pulse 120, BP 100/70 after fluids, etc." to prompt an EMS-to-hospital SBAR; and maybe an example of an intra-hospital handover like "multiple injured patients coming, need to prioritize" to practice succinct briefing.
- **Noise Simulation Audio:** An audio recording of ER background noise (people talking, monitors beeping) played from a phone or speaker to simulate a chaotic environment during the communication exercise. This helps train students to project their voice and focus on communication despite distractions. (Keep volume reasonable – goal is challenge, not impossibility.)
- **Evaluation Checklists:** Any forms or checklists from the curriculum focusing on team communication or handover. For example, a sheet that an instructor can use to tick if SBAR elements were conveyed, or if closed-loop communication was observed. These

tools ensure consistency in how instructors assess and also remind instructors to look for these behaviours.

- **Projector for Video (optional):** If there is a good short video on trauma team communication or a recorded simulation demonstrating excellent communication, it could be shown as part of teaching. Seeing an ideal example can be inspiring (e.g., a 2-minute clip of a real or simulated trauma resuscitation with clear commands and responses). This is optional and time-dependent.

Assessment Plan 60 minutes

Formative Assessment

- Direct observation with feedback during skills stations
- Peer assessment checklists for ABCDE performance

Summative Assessment

- OSCE-style skills test: Airway management, hemorrhage control, log-roll
- Short MCQ quiz : 20 questions on core concepts pretest and post test

References and Further Reading

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Appendices

Appendix A: Triage Aids (Tags and Victim Cards)

A1. Printable Triage Tag Templates:
. These can be printed on card stock, cut out, and used as tags for simulation victims. In an actual scenario, responders tie these tags to patients to indicate priority.

- **RED – Immediate:** Critical injuries or conditions that are life-threatening but could be saved with immediate intervention. **Examples:** Airway obstruction, severe bleeding, shock, or altered mental status.
- **YELLOW – Delayed:** Serious injuries that need medical care, but the patient's condition is stable enough that a brief delay (hours) won't likely be fatal. **Examples:** Open fractures without major bleeding, burns without airway compromise.

- **GREEN – Minor:** "Walking wounded." Minor injuries or those that can wait until others are treated. **Examples:** Minor cuts, scrapes, or limb injuries; patients who are ambulatory at the scene.
- **BLACK – Expectant/Deceased:** Either deceased or so severely injured that they are unlikely to survive given the available resources. **Examples:** No pulse, not breathing (and do not resume breathing with a simple airway maneuver), massive head trauma with brain matter exposed.

A2. Sample Victim Cards for Triage Exercise:
Each card includes a brief scenario and vital signs so students can determine the triage category.

- **Victim 1:** 45-year-old male, found unconscious on ground after an explosion. Breathing is noisy at 10 breaths/min, irregular. Rapid radial pulse present, skin pale and cold. Responds to pain only (moans). **Simulation vitals:** HR 130, BP 80/50, RR 10 shallow. *Expected Triage:* **RED (Immediate)** – compromised airway (needs it opened), shock.
- **Victim 2:** 30-year-old female, awake and walking around calling for help, arm fracture with minor bleeding. Breathing fast but talking in full sentences. **Vitals:** HR 110, BP 110/70, RR 24. *Expected Triage:* **GREEN (Minor)** – ambulatory, apparently minor injuries (the fracture can wait).
- **Victim 3:** 20-year-old male, lying still. Not breathing. Has an open skull injury with brain matter visible. A quick attempt to open airway yields no breathing. **Vitals:** None detectable (no respirations, no pulse palpated). *Expected Triage:* **BLACK (Expectant/Deceased)** – likely fatal injuries, no signs of life.
- **Victim 4:** 50-year-old female, conscious but unable to move legs, large bleeding wound in thigh. Breathing is 28/min and labored. Capillary refill > 3 seconds. **Vitals:** HR 120, BP 90/60, RR 28. *Expected Triage:* **RED (Immediate)** – signs of shock (tachycardia, low BP), serious bleeding; needs immediate care.
- **Victim 5:** 8-year-old child, crying loudly with superficial cuts. Breathing okay, just scared. **Vitals:** HR 100, BP 105/70, RR 22. *Expected Triage:* **GREEN (Minor)** – moving and crying (pediatric equivalent of walking).

Appendix B: Skills Station Checklists

Instructors can use the following step-by-step checklists at each skills station to guide student practice and evaluate performance. These checklists can also be handed to students as a reference or placed at the station as a self-guide.

B1. Airway Station Checklist (Use one per student to mark performance):

☐ Initial Approach: Performed manual inline cervical stabilization (self or asking assistant) before airway maneuver.

☑ **Airway Opening – Jaw Thrust:** Correctly positioned at head, used jaw-thrust maneuver (angled the jaw upward without neck extension) to open the airway.

☑ **Airway Adjunct:** Selected appropriate adjunct (OPA size measured from mouth to earlobe) and inserted it properly (inserting upside down then rotating or using tongue depressor in child, etc.). If student chose NPA (for semi-conscious patient), measured nose to earlobe and inserted with lubricant, bevel toward septum.

☑ **Assessment of Airway Patency:** Stated or checked that airway is clear (e.g., "able to breathe now" or no obstructions visible).

☑ **Bag-Valve-Mask Ventilation:** Positioned mask correctly over nose and mouth, formed a proper seal with EC hand technique, and delivered slow, effective ventilations (about 1 breath every 5-6 seconds for adults) observing chest rise.

☑ **Communication:** (If applicable) Asked an assistant to continue C-spine hold or to ventilate while they secured adjunct, demonstrating teamwork even in skills.

B2. Breathing/Chest Station Checklist:

☐ **Exposure and Inspection:** Stated need to expose chest; visually inspected the chest for injuries (wounds, deformity) and checked chest movement symmetry.

☐ **Auscultation (Simulated):** Properly placed stethoscope bilaterally (apices and bases if possible) and stated comparative findings (even if no actual sound, they should verbalize "breath sounds present/absent on right/left").

☐ **Tension Pneumothorax Recognition:** When given scenario cues (e.g., one side no sounds, hypotension, etc.), correctly identified "tension pneumothorax" as the problem.

☐ **Needle Decompression Land marking:** Located the correct anatomical site (2nd intercostal space, midclavicular line on affected side) and verbalized or mimed insertion of needle *above the rib*. Did not actually puncture unless using a proper simulator pad.

☐ **Chest Seal Application:** Demonstrated how to apply an occlusive dressing on an open chest wound (taped on 3 sides or using a commercial vented seal) and explained why (to prevent tension pneumo by letting air out but not in).

- ☐ **Flail Chest Management:** (If scenario included flail segment) Explained/demonstrated stabilization (e.g., hand or bulky dressing) and need for adequate ventilation/oxygen for such a patient.

☐ **Communication:** Verbalized findings to team/partner ("No breath sounds on right – likely a collapsed lung, I would decompress it now").

B3. Circulation/IV Station Checklist:

☐ **Bleeding Control – Direct Pressure:** Immediately applied direct pressure on a simulated bleeding wound with cloth/gauze and sufficient force. Maintained pressure for at least 30 seconds (or stated would maintain until bleeding controlled).

- ☐ **Tourniquet Application:** Placed tourniquet on limb 5-7 cm above wound (not over a joint) and tightened it until bleeding (simulated) stopped. Announced time of application (important in real scenario).
- ☐ **IV Access:** Properly applied a tourniquet on the IV arm, selected an appropriate vein, cleaned site (if simulated), inserted IV catheter at correct angle, and advanced catheter into vein model (flashback or feel pop). Applied pressure on vein and removed needle safely, attached IV line or saline lock. (If student has not learned IVs formally, credit for correct general approach and sterility).
- ☐ **Securing IV & Start Fluid:** Verbally stated they would secure the IV with tape and begin fluids (and/or actually flushed the line if part of the skill). Knew to open IV flow for a bolus if hypotensive.
- ☐ **Assessment of Circulation:** Checked pulse (or stated would), noted capillary refill on manikin or partner (<2s or >2s, as cue given) and verbalized concern if refill is delayed.
- ☐ **Shock Management:** Stated at least one step to manage shock beyond fluids: keep patient warm (blanket) or elevate legs (if no contraindication) or arrange urgent blood transfusion if appropriate. Mentioned need for rapid transport to surgery if internal bleeding suspected.
- ☐ **Communication:** In a real scenario would announce "IV access obtained" or "Tourniquet on, bleeding controlled." (Ensure student actually said or would say these).

Appendix C Skills Rubric – Immediate Care Trauma

This rubric is to be used for structured assessment of critical trauma care skills. Each criterion is scored on a scale of 0 to 2. Scores can guide decisions on Passing according to the assessment policy.

Airway Management (Jaw-Thrust and OPA Insertion)

Criterion	Description	Score 0	Score 1	Score 2
Preparation and Positioning	Positions self at the head of patient; confirms C-spine stabilization	0 = Incorrect	1 = Partial	2 = Correct

Jaw-Thrust Maneuver	Performs jaw-thrust without extending the neck	0 = Incorrect	1 = Partial	2 = Correct
OPA Sizing and Insertion	Chooses correct size and inserts properly	0 = Incorrect	1 = Partial	2 = Correct
Communication	Informs assistant of each step and findings	0 = No	1 = Partial	2 = Yes

Bleeding Control (Tourniquet Application)

Criterion	Description	Score 0	Score 1	Score 2
Site Selection	Applies tourniquet 5–7 cm above the bleeding site, not on joint	0 = Incorrect	1 = Partial	2 = Correct
Application Technique	Tightens until bleeding stops; notes time	0 = Incorrect	1 = Partial	2 = Correct
Communication	Announces tourniquet application and time	0 = No	1 = Partial	2 = Yes

Needle Decompression

Criterion	Description	Score 0	Score 1	Score 2
Recognition	Correctly identifies tension pneumothorax scenario	0 = Incorrect	1 = Partial	2 = Correct
Landmarking	Finds 2nd ICS, midclavicular line	0 = Incorrect	1 = Partial	2 = Correct
Technique Explanation	Explains needle insertion above rib	0 = Incorrect	1 = Partial	2 = Correct

SBAR Handover

Criterion	Description	Score 0	Score 1	Score 2
Situation	Clearly states the situation	0 = Missing	1 = Incomplete	2 = Clear
Background	Provides relevant history	0 = Missing	1 = Incomplete	2 = Clear
Assessment	Describes findings and interventions	0 = Missing	1 = Incomplete	2 = Clear
Recommendation	Makes appropriate recommendation	0 = Missing	1 = Incomplete	2 = Clear

Appendix D: Sample MCQ Test (Trauma Care)

The following is a set of **10 sample multiple-choice questions** that can be used for a post-course test or practice quiz. They cover key concepts from all four sessions. (Correct answers are indicated with an asterisk* and explanations for instructors are given in parentheses – these explanations would not appear on the student's test paper

IMMEDIATE CARE TRAUMA COURSE PRE TEST

Name: _____Signature _____

MCQs		Pre- Test	
1	**AN OROPHARYNGEAL AIRWAY**		
A	Is usually inserted upside down & rotated in adults	T / F	
B	Cause laryngospasm	T / F	
C	Will keep the airway of an unconscious patient clear in any circumstances	T / F	
D	Is correctly sized by measuring from the tragus to the corner of the mouth	T / F	
2	**WITH A FLAIL CHEST**		
A	The flail segment moves outward on inspiration	T / F	
B	Oxygen at 35% is advisable	T / F	
C	More than two ribs are broken in more than one place	T / F	

D	This may lead to a tension pneumothorax	T / F	
3	**A TENSION PNEUMOTHORAX**		
A	Produces tracheal deviation toward the injured side	T / F	
B	Is rapidly fatal	T / F	
C	Can be relieved with a needle in the fifth intercostal space	T / F	
D	May cause pulseless electrical activity	T / F	
4	**IN A TWO-CAR, HIGH-SPEED COLLISION**		
A	A victim thrown clear has less chance of serious injury than someone remaining in the car	T / F	
B	Victims should be left in the car until the arrival of EMS unless fire seems imminent	T / F	
C	An impaling object should be carefully removed as soon as possible	T / F	
D	A conscious patient with chest trauma has a cervical spine injury until proven otherwise	T / F	
5	**IN HYPOVOLAEMIC SHOCK**		
A	Crystalloid is replaced 1:1 for lost blood	T / F	
B	Capillary Refill Time could be undetectable	T / F	
C	A 20G IV cannula allows adequate fluid resuscitation in the pre-hospital period	T / F	
D	Blood pressure invariably falls	T / F	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
5	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**	**100**

IMMEDIATE CARE TRAUMA COURSE Post Test

MCQs		Post-Test	
1	**AN OROPHARYNGEAL AIRWAY**		
A	Is usually inserted upside down & rotated in adults	T / F	
B	Cause laryngospasm	T / F	
C	Will keep the airway of an unconscious patient clear in any circumstances	T / F	
D	Is correctly sized by measuring from the tragus to the corner of the mouth	T / F	
2	**WITH A FLAIL CHEST**		
A	The flail segment moves outward on inspiration	T / F	
B	Oxygen at 35% is advisable	T / F	
C	More than two ribs are broken in more than one place	T / F	
D	This may lead to a tension pneumothorax	T / F	
3	**A TENSION PNEUMOTHORAX**		
A	Produces tracheal deviation toward the injured side	T / F	
B	Is rapidly fatal	T / F	
C	Can be relieved with a needle in the fifth intercostal space	T / F	
D	May cause pulseless electrical activity	T / F	
4	**IN A TWO-CAR, HIGH-SPEED COLLISION**		
A	A victim thrown clear has less chance of serious injury than someone remaining in the car	T / F	
B	Victims should be left in the car until the arrival of EMS unless fire seems imminent	T / F	
C	An impaling object should be carefully removed as soon as possible	T / F	
D	A conscious patient with chest trauma has a cervical spine injury until proven otherwise	T / F	
5	**IN HYPOVOLAEMIC SHOCK**		
A	Crystalloid is replaced 1:1 for lost blood	T / F	

B	Capillary Refill Time could be undetectable	T / F	
C	A 20G IV cannula allows adequate fluid resuscitation in the pre-hospital period	T / F	
D	Blood pressure invariably falls	T / F	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
5	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**	**100**

Appendix D
PowerPoint Presentation

Professional Skill Development Centre
University of Health Sciences Lahore