The World Federation of Societies of Anaesthesiologists

The Royal College of Anaesthetists

The COOL project 2013-14

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The original version of the PTC Course Manual was an annex to Surgical Care at the District Hospital, published by the World Health Organisation in 2003.
Introductory Note to Instructor Materials

All trainee Instructors need this Instructor Course Manual (ICM) for the one day Instructor Training Day in order to teach on the 2-day PTC Course. They also need the Additional Teaching Resources for Instructors to help them teach on future 2-day PTC courses. These resources offer structured support on interactive teaching.

Faculty Trainers, who teach this Instructor Course, need the Essential Notes for the Faculty Training Team pages 59-79, and the Instructor Course Slides.

If you organise a PTC course, as Course Director you need the Logistics Handbook, which contains all the documents and resources and tips for a PTC programme.

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DISCLAIMER

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All individuals undertaking any travel on behalf of the PTC Foundation do so at their own risk and must take appropriate steps to insure themselves against all eventualities. The PTC Foundation cannot be held responsible for any liability arising from any event during a PTC course and instructors need to be aware that PTC courses are often held in dangerous locations.

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Health and Safety

All PTC instructors are expected to take all reasonable care to ensure the health and safety of all course participants and guests. This includes checking that there are no unacceptable risks, for example from electrical systems, appliances, sharp tools, broken glass, trip hazards, road traffic, food provision, sanitation, contagious diseases, or any other cause.
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Welcome to the Combined Instructor Course Manual (ICM) and Essential Notes for the Faculty Training Team

This book contains the full Instructor Course training with notes on pages 59 – 78 to help you deliver the training. 
The Instructor Course Programme is the final page of the combined booklet and the final page for the ICM. If you already have an ICM, you only need pages 59 – 78. Please go to page 60 if you are a member of the Faculty training team. You will find a list of what you need on this page**

Throughout these teaching materials we refer to five groups of people:

- Trainee Instructors: people who attend an instructor course
- Faculty Training Team (FTT): people who teach an instructor training course
- The Course Director: the person who sets up and leads a course
- Participants: people who attend a PTC course
- Instructors: people who teach on a PTC course

Here is a list of PTC resources. All materials can be downloaded with permission from the PTC website: www.primarytraumacare.org

For the Instructor:
On paper: The Instructor Course Manual
In electronic form: The Additional Teaching Resources for Instructors
The PTC course slides
The Logistics Handbook

For the Faculty Training team **
On paper: The combined Instructor Course Manual with the essential notes for Trainers
In electronic form: The Additional Teaching Resources for Instructors
The PTC course slides
The Instructor Day slides
The Logistics Handbook

For the Course Director
In electronic form: The Additional Teaching Resources for Instructors
The PTC course slides
The Instructor Day slides
The Logistics Handbook

We assume everyone will have their own paper copy of the PTC Manual.

- Please note that the PTC course slides cannot be changed. You may add pictures of your local situation, but you may not delete or add to the text slides.
Welcome to the PTC Instructor Training day

Today we cover most aspects of teaching and delivering the 2-day PTC course. We want you to enjoy teaching and running future courses.

The aims of this day are to enable you, the Trainee Instructors

- to deliver a successful 2-day PTC course
- to deepen your understanding of the PTC course content
- to become better teachers

Our pattern of training

There are six training and preparation sessions during this day. Sessions 1 2 3 4 & 6 follow the same pattern:

- **Training Input**
  for you to gain new knowledge and understanding of teaching skills and methods

- **Practical Workshop**
  time to act on the input in groups, practise the skills and receive feedback

- **Time to Reflect**
  a further opportunity to think again about what you have learned and want to put into practice; a time to ask questions if you have not understood something.

Session 5 is different from the other sessions. It looks briefly at the logistics of preparing PTC courses in general, and the 2-day PTC course that you will be teaching in particular. It is the time when you finalise who will teach what during the next two days.

Further background information and all the documents are in the *Logistics Handbook*. 
Key points and themes for the day

1. Everyone can learn how to teach and how to improve their teaching skills. You are not born a good teacher; you become one. You may find some parts of the course easier than others, but we expect you to participate fully throughout the day. If you do that you will develop good teaching skills.

2. Good teaching depends on good preparation. You will hear a lot about this! Every successful bit of teaching has been well prepared.

3. Be responsible. When you teach you are responsible for starting and finishing well, for being in control of all that happens in your class or small group. This includes creating a positive atmosphere so that the participants enjoy learning. You are also responsible for the layout of the teaching room and for equipment.

Working together

On a PTC course you work as a team so we want you to develop a positive attitude to each other; be prepared to help each other in any way. Do not hesitate to ask others to help you.

More than that, we want you to develop a positive and encouraging attitude to your course participants. This begins with learning and using their names. You are there to do everything possible to help them learn and remember what they learn. Primary Trauma Care is important!

Members of the Faculty Training Team today will also be present during the 2-day course that you teach, to support, advise and encourage you.

Our educational philosophy and approach to training

When you become a PTC Instructor you join a global family. Instructors have been trained all over the world. If you are able to teach others to improve their care of trauma patients, you are helping to save lives and reduce disability.

The methods we use and the underlying educational theory on which they are based have been proved to work in many countries of Asia, the South Pacific, Africa, South and Central America, Europe and the Middle East.

- We aim to build good relationships. This Instructor training day is designed to be as interactive as possible. This is a great way for adults to learn and it builds a better relationship between the trainee and trainer.

- We aim to create a positive atmosphere that encourages people to learn and allows them to feel safe asking questions or making mistakes.
Here are the reasons why we have structured the course as it is:

1. **Adults learn best when they are motivated, and when the information they receive is interesting and relevant**
   Today, in every training module, we focus on knowledge and skills about teaching. This is interesting and relevant to you because you will be teaching a PTC course very soon. If you teach in your professional life, you will find the training helps that too.

2. **Adults learn better through participatory learning**
   That is why we use interactive teaching methods and start the day by exploring communication techniques and interactive teaching. We include as much practical experience as possible in the day. In the *Practical Workshops* you learn from direct ‘hands on’ experience. Whenever you do a practice session you will use PTC course material. This preparation will make you ready for your next course.

3. **Adult learners appreciate well-prepared and well-structured teaching.**
   Today is clearly structured, and tightly timed. Each teaching session starts with a clear aim and finishes with a summary. Adult learners value keeping to time. We will need to keep things moving!

4. **Adults like to know what they are doing well and what they can improve.**
   They value positive reinforcement and constructive feedback to help them change. Throughout the day we will give you feedback and ask you to give feedback to each other. The purpose of feedback is to help you analyse what went well in your teaching and precisely what you might change to improve your teaching.

   Feedback should be truthful and precise. To give helpful feedback you must observe closely and base your comments on exact words, reactions of learners or specific actions. A negative learning experience such as being shamed for being wrong in public can result in loss of motivation and interest. This is why we stress how important it is to start by emphasising what went well. Then you move on to an aspect of teaching for improvement.

   These principles of feedback are relevant for you whenever you teach.

   **If you follow a cycle of listening, practising, thinking about feedback and then act on it, you will continue to improve and enjoy your teaching.**
SESSION 1: Communication Skills

Training module summary
In this session you will learn tips for using tools you all possess: your voice, body and eyes. When you use these effectively you appear confident and build a good relationship with the course participants. This helps them to focus on the content, not on you. You will continue to make improvements in these areas throughout the day.

Aim
For all trainee instructors consciously to improve in at least one aspect of their communication skills

Training module
We are starting the course with ways to improve your communications skills, because everyone is able to make immediate improvements in the way they use their voice, body and eyes when teaching.

Voice
What annoys you most about a speaker’s voice and stops you listening and learning?
• cannot hear – too quiet
• too fast
• too dull – monotonous, no variation
• words you do not understand

What advice would you give to help someone use their voice effectively?
✓ Be loud enough – make sure the back row can hear.
   Be aware of competing noise from air conditioners, people talking outside the room, traffic noise, rain storms
✓ Sensible pace, vary the pace but don’t rush
✓ Vary the pitch of your voice – use your voice to underline an important point
✓ Use simple language – write important medical terms that may not be immediately understood on a black/whiteboard.

Top Tip
You never need to shout, but most people need to speak more loudly and slowly than in normal conversation. Learn to project your voice.

Body
This covers body language, gesture and posture, where you stand, how you move.
What advice would you give on this area?
✓ Stand tall
✓ Stand still, where the majority can see you
✓ Use simple gestures if necessary
✓ Smile in order to relax  
✓ Keep your feet pointing forwards  
✓ Move towards your course participants to encourage answers to questions

**Action:** Stand up and place your feet slightly apart so you are comfortable. Take some deep breaths, smile and feel yourself relax! Then sit down.

**Top Tips**
- If course participants can see you, they will also hear better.  
- Do not keep pacing up and down.  
- If you are teaching a large group, you stand. In small groups you need to sit and be at the same level.  
- If your feet point forward you will not be tempted to turn your back and look at the slides on the screen.  
- Try to avoid repeated gestures that distract from your message.  
- Dress simply and smartly out of respect for your participants

**Eyes**

*Why is eye contact important?*
You gain immediate feedback as to whether everyone is paying attention. You give the impression that you are addressing everyone as an individual. This helps you build a good relationship with your class.

*Where should you **not** be looking?*
- At the screen  
- Out of the window  
- At one fixed spot  
- At one person  
- Only at your notes

*What advice do you have regarding good use of your eyes?*
✓ Look at the group  
✓ Look at the whole group, try to include everyone

**Top Tips**
Check your blind spot. Ask a friend to point out any section of the room you do not look at.
You are **allowed** to look at your notes. You may need some paper notes.  
You are **allowed** to look occasionally at your computer screen in front of you.  
You are **allowed** to keep an eye on the clock to ensure you finish on time.
Introduction to the Practical Workshops

Explanation of positive feedback

Why feedback?
Why positive feedback?

During this workshop and all the other workshops, whenever you present or do a practice teaching task, (which will be based on the PTC Course) you are each going to receive immediate feedback.

We want you to learn how to be aware of how you teach. To help you do this after any teaching you do, you need to ask yourself two questions:
- What did I do well?
- What can I do differently or improve?

You always start by asking: What did I do well?
This question helps to reinforce what is good and you build on what you do well. Always be positive about yourself and be positive when you give feedback to others. This creates an environment in which people learn more easily and then accept changes you suggest they make in order to improve.

Having established what went well, you move on to think about what you can improve or do differently. We can always find something to improve, as no presentation is ever perfect. Choose just one target or area to improve and aim to put it into practice in the next workshop.

When you give feedback to others, always give clear examples and base your comments on evidence.

Practical Workshop: Communication skills 30 minutes

3 minute mini-presentation in small groups
Your presentation will be a simple explanation of any part of Primary Survey, ABCDE. (PTC Course Manual, pages 7 – 8.)

The full talk takes 30 minutes but you will choose only a 3 minute section. It can be the start or the summary, or one of the letters A – E. You will not use any slides. After precisely 3 minutes a member of the Faculty Training Team will stop you.

Feedback - 3 minutes
The feedback, immediately after each mini-presentation, will focus on how well you used your voice, eyes and body. It will be based on the two feedback questions. The feedback will not look at what you say, only how you say it.

Everyone in the group will take a turn to present their mini-talk. A member of the Training Faculty will allocate a timekeeper and lead the first feedback. Then others can add further helpful comments. When everyone has had a turn, the whole group comes together.
Reflection

What was the aim for the session?
Has it been achieved?

Think about and note down what you learned for yourself.
Decide what is most important for you to do differently next time. Set your target.
• What are you going to do differently?

Think back over the whole Training Module and the Practical Workshop
• What did you learn from watching other people?
• What do you most want to remember from the training module?

Summary of Session 1

Continue to think about and improving the way you use your voice, body and eyes in
every session today. If you do this well you will look confident. Remember that if you
look confident you inspire confidence in the content of your teaching and make it
easier for the participants to learn.

By putting into practice what you learn from this session you will be more able to keep
the attention of the course participants, keeping them interested and building good
relationships.
SESSION 2: How to be an interactive instructor

Training module summary
Interactive teaching is an essential method of teaching every aspect of the course. This session explains why it is necessary and how you prepare for and use it.

Aims
For every trainee instructor
- to learn how to prepare questions
- to become confident in asking questions, listening to and dealing with the answers
- to lead a workshop interactively

Training Module Part 1: Using questions in lectures

What is interactive teaching?
It is an interaction between the teacher and the learner, and between the learners, i.e. a question or any communication. It aims to involve course participants in active learning rather than passive listening. It is also called participatory learning.

- Think of examples of interactive teaching during the PTC course?
- Give examples of interactions so far today.
- What happened when a Faculty Trainer asked you a question?
- Was all the teaching interactive?

When you teach you need a variety of teaching methods; your lectures become more interesting when you interact with the course participants. Scenarios and and skill stations involve interaction, and workshops are entirely interactive.

Some course participants already know the basic PTC content, so vary your teaching by asking questions that draw out existing knowledge in a structured way. We are not saying you should replace every lecture with a series of questions. We are saying you should vary the stimulus and include interactions as a way of doing this.

In most lectures there is a picture slide near the beginning with the title “Scenario”. It is there to provoke a question or brief interaction at the start. The <?> question slide at the end is only there to remind you to ask if everyone has understood. That is not the place for lengthy discussion.

Creating a positive learning environment is essential. You need to be encouraging in listening to responses. Never humiliate a person who gives a wrong answer.

Why is it important for you to be confident to teach interactively?
- It keeps people awake and interested
- It helps people to think about what they are learning
- You find out what they do and do not know
- It is a good method if the power fails

Why might you not want to teach this way?
- It might take longer to prepare and longer to teach
- You feel you could lose control of teaching and the group
What do you need?
You need well prepared questions.

There are two types of questions:

- **Closed questions**: these demand a one word answer or a list: yes, no, a dosage. The answers are often right or wrong.
- **Open questions**: these demand an explanation or reason. Good open questions may begin with *What if? How? When? Then what will you do? Why?*

Sometimes you need a short closed question followed by an open question. Avoid asking *who can tell me...* because usually nobody answers. Instead, be specific: *What happens if...* then if necessary direct this question to a named person.

Opportunities to use questions in lectures
Aim to include at least one interaction in every lecture.

1 The scenario slide does some of the work for you. If you use it, you may ask different people the same question to involve them and get them thinking.

2 Many statements of fact can be turned into questions. Here is a factual slide towards the end of the topic *Abdominal Trauma: Pelvic Trauma Assessment* (PTC Course slide 120).

Group exercise
Make suggestions for some questions that you might ask.

Some suggested questions for PTC slide 120:

- What is your initial approach? What do you think about first?
- What would make you suspect a pelvic injury?
- How would you test clinically?

When you give a lecture choose just one question and ask it before you put up the slide.

3 Use a brainstorm question.
*What do we mean by brainstorming?*
This is a specific type of question. It is a question to which there are many possible correct answers. The instructor goes around the group giving every person the chance to answer. It is a good way of involving everyone in the group. Once a shy person has spoken they are more likely to participate.

Examples of brainstorming questions:

- In what ways is management of trauma different for children? How is it the same?
- What different kinds of damage happen in the brain after a head injury? What other parts of the head get damaged?

*When can you use a brainstorming question?*

- at the start of a lecture, to gain attention and see what people know
- in the middle of a lecture, to regain attention
• at the end of a lecture, as a way of summarising; you could ask: *What have we learned?*
• To start a PTC Workshop discussion: eg *What is available in this hospital for pain relief?*

*How do you set about asking this type of question?*
When you ask the question, make sure everyone can hear it and give everyone a moment to think about more than one answer.

In a small group ask every participant and let them give their answer, even if they repeat what has been said. Do not comment on individual answers. In a lecture you cannot ask everyone in the room; you must decide if you will let people call out the answers or if you will ask for hands up.

*What do you do with the answers?*
First *listen* to the answer and repeat it if not everyone can hear.
If the answers are correct:
• Write them up in a clear fashion.
• Write up a list of answers, ask which is most important.
  It is helpful to have another Faculty Trainer ready to write the answers.

If the answer is wrong:
• Do not shout or be angry!
• Do not write up a wrong answer but ask other people for their answers.

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**Practical Workshop 1**
*Preparing and asking a brainstorming question*  
15 minutes

*Topics:* Chest Injuries PTC slide 91  
  Burns slide 223;  
  Secondary survey opening question

*In 3 groups:* 3 minutes:  
Prepare a brainstorm question on your allotted topic.  
Decide how you will organise the responses:  
• who will write them up  
• what you will write up  

If you have time, plan your follow-up question.

*All together:* 12 minutes  
Each group tries out their brainstorm question on the other two groups.
Reflection and feedback

Think about these questions and write notes on what you have learned.

- How difficult was it to prepare a good question?
- How did it feel asking a question rather than giving information?
- How did you respond to the answers?
- Did you give time for participants to think about answers?
- Did you remember to stand where you could be seen, use your voice well and make eye contact?
- Can everybody read what is written on the board or flipchart?
- Do you have any questions on technique?

Notes

You can find an example of interactive teaching for Chest injuries in the Additional Teaching Resources for Instructors Page 13

Training Module Part 2
How to prepare and lead PTC Workshops

Workshops take place during the morning of Day 2. They are run as small group discussions and so are entirely interactive. You need to prepare good questions to cover the key points. Everyone in the group should participate. At the end of 20 minutes you move to another group and repeat the discussion. What follows is a planning session for your next PTC course.

Why do we have Workshops?
For course participants PTC Workshops offer an informal small group in which to learn and to ask questions about anything they have not understood.

For the Instructor they give the opportunity to learn from local knowledge about local situations, in order that the discussion is relevant. They help you see if everyone has understood the difficult bits of some teaching.
What are the PTC Workshops?

Neurological Assessment
The topic Neurological Assessment in the Head and Spinal Cord contains some complicated information and the discussion leader can ask questions to revise this material; ensure that it has been understood and reinforce the main ABC message.

Pain Management/Analgesia
You will find notes on Pain in the PTC Course Manual pages 55–56.

Transportation
You must base your Workshop on the local context. The discussion will centre on applying the PTC principles to what actually happens.

Paediatrics.
The Paediatrics workshop will pick up key points from the presentation on Trauma in Children and Pregnancy.

How to prepare the teaching content
You need to plan the discussion as for any other part of the course.

Prepare
• the introduction and an introductory question,
• follow-up questions
• how you will reinforce the key points in your summary

Your aim is to draw out the key points and enable every person to make a contribution. The key points are listed in Additional Teaching Resources for Instructors pages 27 - 30

Make the whole workshop as relevant as possible to the local context.
For any topic you might start with a simple real-life clinical situation in which you want the group to come up with a specific set of answers.

Here are some sample introductions to check that the key points are understood and whether the participants are able to apply what they have learned to a real situation
• What is AVPU and why is it in Primary Survey?
• What happens when a patient is run over and comes to your hospital?
• If you need to send a patient to another hospital, how would you prepare?
• A child of two years comes into the clinic with a fractured femur...
  What do you want the BP to be?
  And the pulse?
  How much fluid should you give?
  How long will you do...?

Point out that if the group works well it will function as in the diagram.

How to organise the Workshops
Prepare the room
Before you start, make sure the chairs are in circles and that you are part of that circle. As the Workshop Instructor you should sit facing into the room with your back to a wall so that those discussing look at you rather than the other groups in the room.
Clear Instructions for Course Participants
Divide everyone into four groups, if possible different groups than those they were in for the skill stations. Explain that they are going to stay in those groups for the four different workshops, each led by a different instructor.

Timing
Each small group lasts 20 minutes.
When 5 minutes remain, an instructor acting as timekeeper, informs the group leaders how much time they have left. The Workshop Instructor begins to summarise and repeat the key points, which they have prepared.
The Instructors then move swiftly to the next group and repeat what they have just done with the second group, then the third and finally the fourth group.

Practical Workshop - Preparing for the PTC Workshop 15 minutes
Topics: Transportation, Neurological assessment, Analgesia, Paediatrics
In 4 small groups of 2 -3 each with a different PTC workshop topic. The topic allocated is the one you will lead on the follow-on PTC course.

Revise the Key points and Learning Objectives for your topic
(Additional Teaching Resources for Instructors pages 27 - 30)

Prepare
- your introduction or an introductory question
- follow-up questions
- the key points you will reinforce in your summary.

Two groups join together to form 2 larger practice discussion groups.
One trainee instructor tries out their opening questions on the others aiming to develop discussion. After a few minutes another trainee instructor from the same group sums up as if for a 20 minute discussion on the topic. Those answering must pretend they are on a PTC course and give a proper answer.

Repeat with the other topic.

Reflection and discussion
What went well?
What type of questions worked well?
Did everyone participate?
Who did most of the talking?
How was the timing?
Make a note of the most important things you learned and what you will do differently next time:

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**Further Tips for running the Workshop**

1. *Tell* the group you want them to participate.
2. Use names and include the quiet person.
3. When you ask questions, give people time to think and then answer. You can always ask the same question to a number of people – And what do you think?
4. You might ask for a show of hands, a vote in answer to a question. You can then ask people directly why they responded in a particular way.
5. Allow participants to bring up questions and see if others can answer.
6. You are responsible for leading. If someone is talking too much, thank them for their contribution, then ask what other people think.
7. If someone suggests a treatment or course of action you consider to be wrong, ask the rest of the group: Do you agree? Why? Why not? Then after listening, be clear about the right way forward.
8. If you realise that you are doing most of the talking, try rephrasing your statements as questions.
9. At the end of 18 minutes the instructor group leader draws the discussion to a close, summarises the key points and finishes on time.
10. When you repeat the session, don’t try to add things you had forgotten. Keep the message clear and simple; you only have 20 minutes.

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**Summary for Session 2**

Interactive teaching is at the heart of the PTC course. In the same way that you need to build that kind of relationship with patients, interactions also help to build a good relationship with the course participants. When they are involved in the learning, they remember what they learn and realise how much they already know.

You may have to work at encouraging every participant to be just that – a participant. Successful interactive teaching relies on good preparation.

As you become more skilled you will enjoy teaching in this way more and more.
SESSION 3: How to run scenarios

Training Module Summary
In this session you will learn about the reasons for the demonstration scenario and how to prepare and run participant scenarios using a step-by-step approach. Scenarios are an enjoyable element of any PTC course. When well led, the scenario stations are popular and entertaining. The success of your course may rely on how interactive and engaging they are.

All the scenarios are printed at the back of this manual pages 39 - 58

Aim
To give you confidence in planning and directing scenarios.

Training module
Scenarios appear on both days of the PTC course.
Day 1: The first scenario is the demonstration scenario performed by the Instructors. This sets the tone for the participant scenarios that focus on the Primary Survey. (Scenarios 1 – 8, pages 39 - 46)

Day 2: The scenarios round off the course and combine Primary and Secondary Surveys. (Scenarios 9 – 20, pages 47 - 58)

The Demonstration Scenario
Why do we have a demonstration scenario?
1. To show the participants what a clinical scenario is and how it runs.
   Participants will watch you very closely and often copy what they have seen.
2. To demonstrate how knowledge and skills on Day 1 combine in a practical situation to treat a trauma patient with many injuries.
3. To reinforce the key ABC message through active learning.

Group exercise
You are going to observe the original Faculty demonstration scenario from day 1. Make notes on the following:
1. What is the teaching aim?
2. How did the instructor directing the scenario achieve this?
3. Could you hear?
4. Could you see?
5. Why did it go well?

What do we as Instructors learn from the demonstration scenario?
1. It must be:
   - hands-on, learning, as realistic as possible
   - a positive and safe learning environment.
   - involve the whole group
   - lead to helpful feedback
   - allow no harm to the “patient”
2. You must prepare.
   Your demonstration scenario sets the scene for everything that follows, so decide what the injury details are, who plays the roles and who directs. The participants must believe their instructors can actually resuscitate a real-life trauma patient; so look confident and competent during the demonstration scenario. It is vital for you to plan and rehearse as an Instructor Team.

3. Everyone has a clear role
   The Instructor
   • sets the scene
   • gives prompts as necessary and asks questions to clarify what is happening
   • asks the participants what they observed
   • gives feedback after a scenario.

   The “doctor”
   • speaks out loud as they are assessing and treating the patient
   • communicates clearly with the nurse(s) or assistant(s)
   • uses the whole team

When you lead your demonstration scenario it needs to be lively, fun, using as many bits of kit as possible, with the patients acting loudly too. The person playing the doctor should sometimes get things wrong so that the “instructor” can give prompts to get them back to doing things right.

Participant Scenarios
Why do we have participant Scenarios?
Scenarios encourage participants to put together new knowledge and skills in a safe, real-time and realistic situation. Repeated scenarios reinforce the key message using different types of trauma patients but emphasising the same structured approach.

Scenarios enable course participants to
• put theory into practice
• learn from each other
• learn from mistakes without harming the “patient”
• develop teamwork
• think about how they communicate in a stressful trauma situation

Scenarios enable the instructor to
• see how well the PTC message has been understood
• detect errors or gaps in skill or knowledge
• know what to emphasise for the rest of the course

Scenarios are fun and excellent for breaking down barriers between participants and instructors. This in turn creates a relaxed learning environment.
The step by step approach for directing participant scenarios

1. Plan
The Instructor must be familiar with the scenarios.
Remember the overall aims: the structured approach, Primary Survey, then both Primary and Secondary and teamwork.

Prepare in advance
- how you will brief your participants
- how you will ensure the scenario moves along smoothly
- how long you have, so you don’t overrun
- how you will finish

2. Prepare the ‘set’
Gather any useful equipment available. There is a suggested list on page 12 of the PTC Logistics Manual
Prepare your scenario station with a trolley/bed/table, a nearby bench or chair; lay out the equipment.
Make sure each scenario station has enough room; they can get noisy!

3. Explain how they are organised - before the first scenario only
After the demonstration scenario one Instructor gives the reasons why we have scenarios, and then explains
- how you will organise them: (You are going to divide everyone into small groups which move around the scenario stations and practise 7 - 8 different clinical scenarios.)
- that the focus is on applying Primary Survey (before the first one, Day 1)
- that they apply everything from the whole course (before the final ones Day 2)
- everyone will get the chance to play all the different roles.

4. As the scenarios require acting a role, give some helpful tips:
- Don’t be shy!
- Act as if this is for real
- Put your hands on the patient: Look – Listen – Feel
- Use all the equipment available
- Describe in words what you are doing
- Don’t hurt the patient, e.g. don’t actually put the IV cannula in but tape it to the skin to show that you have ‘inserted’ it.
- Don’t laugh at others’ mistakes (unless they themselves are laughing too)
- Be positive and encouraging to each other
- Ask the Instructor if you are unsure about anything, or need more information

5. Allocate roles and do a briefing
For the first ‘patient’ and ‘doctor’ roles you may ask for volunteers. Make sure your participants are comfortable and not exposed – especially women if they are acting as the patient. Sometimes it is good to start with a man in that role if you have mixed groups.
If you have no volunteers, a second Instructor might play the role of the ‘patient’. You
are responsible for ensuring that every participant has a turn in every role.
There are different ways to brief the group:
  a) Brief only the person acting as the patient while others look at their available
      equipment resources. The ‘patient’ needs to know the cause and type of injuries in
      order to act them out, for example noisy breathing for an obstructed airway; fast
      breathing, confused speech or moaning in pain. Let this person be creative!
  b) Brief the whole group, and send the ‘doctor’ out while you do this.
  c) Brief the ‘patient’ with the full details. Ask 1 – 2 participants to act as observers,
     tell them what the main learning objectives are. They then give some specific
     feedback at the end.

6. Start well and keep it running smoothly
Bring back the ‘patient’/’doctor’. Set the scene and let them get going.
Your aim is to encourage the ‘doctor’ and team to find things out for themselves and
and to demonstrate how they would assess the ‘patient’. So, as the Instructor, do not give
too much information at the start.

For example: do not give chest findings until the ‘doctor’ actually listens to the chest,
percusses it, palpates for rib fractures, feels for the trachea, etc. Only after that
should you reveal a deviated trachea or any other abnormal or normal finding.

To keep things moving if they get stuck, reinforce and summarise what they have
done: “So, you have managed the obstructed airway and treated the breathing issue
by decompressing the tension pneumothorax, what is next?”
Some possible prompts if they get stuck, or confused:
  • Are you sure about that? is often a good start.
  • What are you doing there?
  • What do you think about the patient’s breathing?
  • How can you assess the breathing?
  • What would you like to do, or ask you assistants to do?

If the ‘patient’ forgets their role, for example not developing noisy breathing as the
circulation is being assessed, a comment such as “I think I can hear some noisy
breathing” reminds the ‘patient’ to act it out.

7. Know when to stop
Stop once your learning objectives have been achieved or if you have run out of time.
Stick to the script. Do not add new issues if it all runs perfectly.
Decide if they have
  • made the right diagnosis?
  • given the right treatment?
  • applied the PTC principles?

8. Give feedback
Feedback should be brief and immediate; it is not a post-mortem. Reinforce the
positive. Stick to the principles. Focus first on what went well. Ask the others in the
group for their perspective and encourage them to give feedback. Comment on
communication and teamwork. As new groups come to your station, they should be
improving and becoming more confident.
Identify the most important point for everyone to remember and learn. Your summary should reinforce the correct treatment in the particular situation rather than anything an individual did or did not do. Aim to finish on a positive note, perhaps with reference to the points in 7 above.

9. Be aware of time
Do not overrun. You have 15 minutes for each scenario. The very first one may take longer as you make sure everyone understands how things work. From then on you should get through the two scenarios at your station with each group.

**Practical Workshop**

30 minutes

Allocate four scenarios – two Primary (1-8) and two Secondary survey (9-16) to pairs of trainee instructors. These are the scenarios you will direct on the next PTC course. Decide now who will run the demonstration scenario.

Divide into two groups of 4 - 6 people

A. 5 minutes
Both groups plan and prepare a scenario. One group can work on a Primary Survey scenario, whilst the second group uses a scenario focusing on Secondary Survey. Together apply the step-by-step approach as you plan your allocated scenarios.
One Trainee Instructor runs the scenario and role-plays the Instructor; this person allocates roles and briefs their actors (other trainee instructors)

B. 6-7 minutes
Group 1: Practice run of scenario from start to giving feedback to participants

C. 3 minutes
Feedback for Group 1 led by Faculty Trainer
Brief feedback to trainee instructor about how they ran that scenario and what they should do differently

Repeat B and C with Group 2, using the other scenario.

**Further points for the Instructor team**

When you direct scenarios on a 2-day course
- One of you should be the timekeeper and remind each station when to bring things to a close.
- Allow participants to make mistakes but do not make any individual feel bad about it. Occasionally you may need to stop the scenario if your ‘doctor’ is really struggling despite your attempts to keep things moving with questions or prompts. You can then use open questions and careful feedback technique to encourage the participant to think about what went wrong and how they can improve next time.
- It is tiring to run four scenario stations so, if you are a large instructor team, work in pairs, alternately directing the scenario or giving feedback.
Reflection and discussion

Take time to think about how teaching and learning happened during the scenarios and how they reinforce the PTC course content in different ways.

1. Consider how important it is to have learning objectives. Did you achieve these?
2. Consider how it different it was as an instructor from being a participant.
3. What did you learn about how the scenarios run and how to give feedback?
   • What went well?
   • Did everyone participate? How was this achieved?
   • Were there any challenges: keeping the scenario realistic
     keeping it moving
     knowing when to stop?
   • How was feedback delivered?
   • What happened if things went wrong?
4. What is the main thing you want to remember about using a scenario to teach?

Summary for Session 3

The Instructor directing the scenario is well-prepared and confident; does not dominate but encourages the group, only speaking during the scenario when it is necessary; leads the feedback briefly but in a positive manner; and sends the group away feeling they can do it.

Keep a light touch, keep laughing and keep positive. This should be an enjoyable learning experience. You will appreciate seeing the increased knowledge, understanding and confidence of your participants.

** Suggested list of kit to make the scenarios more realistic

• Trolley, bench or table for the ‘patient’ to lie on
• Oxygen mask and tubing
• Oral airways, endotracheal tubes and laryngoscope
• IV fluid bag, giving set and IV cannulas
• Stethoscope, BP cuff
• Dressings or bandages
• Bag-valve-mask
• Cervical collar, or something used locally to stabilise the cervical spine
• Chest tubes
• Plenty of skin tape

Collect a set of this equipment for scenario teaching and to store it in clearly marked boxes. You need some if it for the skill stations after lunch, so you must make sure it is tidy and ready to use.
SESSION 4: How to run the skill stations

Training Module Summary
In this module you will learn how to teach a skill and how to run a skill station. You will watch a member of the Faculty Training Team demonstrate the skill and then you will learn how to run a whole skill station. You will apply these techniques in the Practical Workshop.

Aims
- to give you the confidence to teach a skill
- to enable you to direct a skill station

Training module
A number of skills are taught during a PTC course. They include Basic and advanced airway techniques, cervical spine immobilisation, logroll and chest drains and decompression.

The PTC lectures introduce the knowledge before you teach the skills; when you teach a skill you build on the learner’s knowledge and understanding. Therefore during the skill station you focus on teaching the skill not on all the background knowledge.

Please refer to Additional Teaching Resource for Instructors pages 20 - 26 for equipment lists, the learning objectives and further skill station options.

Why do we teach skills?
To demonstrate safe and effective methods of treatment. Many learners are anxious performing in front of others, so teach in a way that encourages their confidence.

Part 1: Teaching the skill: focus on technique

Group exercise
As you watch a Faculty trainer act out one of the skill stations, observe carefully and make notes on exactly how the “Instructor” teaches the skill. Focus on the stages and order.

Notes
General Discussion
- What happened first?
- What came next?
- Is there a clear structure? What are the stages?
- How well did the trainee learn the skill?
- What made it clear that they had learned the skill?
- Why do you think this structure is important?

Why do we teach a skill this way?
As learners become proficient they go through the stages of beginner, competent practitioner, and then experienced clinician who is able to teach. At the beginning the learner just copies the actions of the expert, but by the end they perform the skills automatically. Everyone learns best when they have to teach the skill to someone else. That is why you will encourage the learners to teach others.

Explanation of the three stage approach

PTC uses a three-stage approach to teaching skills.
The three stages are:
- Instructor demonstrates at normal speed
- Instructor demonstrates slowly, with explanation
- Learner demonstrates and explains to another learner, with instructor coaching

Before you start, explain what you will do: "First I will show you how I do the skill at the speed I would normally do it, so that you can see the skill as a whole. I will then do it again more slowly while explaining each step in detail."

- The first stage is for you the instructor to demonstrate at normal speed but not so fast that the learners cannot see what you are doing. Do this without commentary (‘silent run-through’) but make sure your group can see clearly what you are doing.

- At the second stage you repeat the skill slowly step-by-step, explaining what you are doing and why, making sure that everyone can see. If necessary, repeat individual steps to ensure understanding.

- At the third stage you ask course participant A to demonstrate the skill and explain to participant B what they are doing.

Then Participant B repeats stages 1 and 2 to Participant C and so on. Continue to give as many participants as possible a turn. As instructor, you watch closely, giving praise where it is due and correcting when necessary.

Do not assume that someone senior is an expert. They may need coaching or have learned an incorrect method.

A different approach may be needed for logroll.
Part 2: Learning to run a skill station: being responsible for the group

Group exercise
As you watch the skill station again the Faculty Training Team will act the part of course participants. Make notes on what makes the skill station successful and what can go wrong.

Notes

Points to remember
1. Good preparation
   - the teaching plan - learning objectives clear and there was a script
   - the equipment - all laid out ready
   - the space - took control of the space around the skill station to make sure everyone could see.

2. Good start
   - Gave the aims of the session
   - Set a realistic context for the skill
   - Did not talk all the time
   - Used interactive teaching ie questions to revise essential knowledge.

3. More than just the three stages
   - Interactions
   - Reinforced key points from the teaching session while directing the skill
   - What was the effect of this?
   - Why were both necessary and possible?

4. Support for learners and involvement of whole group
   - Good, positive atmosphere
   - Participants able to learn from mistakes

5. Good finish
   - Feedback
   - Questions
   - Discussion
   - Summary.

While participants take turns at the skill, you must have your eyes on the whole group and keep them involved and interested. You ask questions about what you want them to remember and discuss other potential problems or approaches to the skill.
Organisation of skill stations

1. Before the skill stations start, one instructor explains briefly what is going to happen. Give clear instructions. They are going to rotate through four skill stations. Divide everyone into same-sized groups. Tell them what time they will start.

2. During a break you prepare your teaching space for the skill stations. Get all the equipment ready. If you have time, put up signs to label each group.

3. You will run each skill station four times, each time with a different group. You need to keep to time. When a new group arrives, check who had a turn in the previous group to make sure that everyone participates fully.

Practical Workshop: running a PTC skill station  40 minutes

Start by choosing the skill stations you will run the next day, 2 – 3 instructors for each station.
You are going to practice these now.

Part 1
1 Preparation: 10 minutes
In skill station groups:
Run through the equipment list (Additional Teaching Resources pages 20 - 26); get equipment ready.
Plan your introduction, the context, learning objectives), plan the steps for your demonstration, a script if necessary, questions to ask during the participant demonstrations, summary and timing.

2 Practice: 15 minutes
In your group take turns to do the ‘run-through’ at normal speed and the demonstration with explanation.
Give each other brief feedback. You should focus on how well you teach the skill.

Part 2
Whole group together: 15 minutes
The logroll group performs with additional Faculty Training team members who may play the role of bored course participants.
Give brief feedback on interactions and involvement of the ‘course participants’
Reflection and Discussion

What did we learn about running a skill station?

- Preparation
- Good start
- Did you meet your learning objectives?
- Interaction with the group
- Involvement of the whole group
- Any difficulties with experienced people
- Finish

Take two minutes in silence to reflect on this whole session and plan what you may need to do differently as a result of the Practical Workshop.

Notes

Remember: you have to run this skill station 4 times on the PTC course. Keep to time. When you finish, direct your group to the next skill station and re-position your equipment.

Summary of Session 4

As with all other teaching, you need clear learning objectives for your skill station and good preparation. You are responsible for the whole group. You must be aware of whether everyone can see, hear and participate. You must be encouraging of the participant who is struggling.
SESSION 5: How to run a PTC course

Session Summary
During this session you will learn how to plan a PTC Course, including what needs doing before, during and after. We will also talk about how you will run the next 2-day follow-on PTC Course, working as a team. You will finalise the programme and decide who does what, and divide up the teaching so that everyone has an opportunity to put into practice what you have learned today.

The Logistics Handbook (included in the Course Director’s materials) provides more detail and the necessary paperwork. You can also download it from www.primarytraumacare.org.

Aims:
• To encourage good planning of further PTC courses
• To allocate roles for the next PTC course
• To think about working as a team

Introduction
When you organise a course you must plan carefully. Above all, pick a team who are good at doing what they promise and also include people who are good at paying attention to detail. Some might not be the best teachers but they have a gift for administration and liaising with officials.

Part 1: Areas to consider when planning a new PTC Course

People
Before the course identify:
• a local person and authorities who will approve the course and allow participants to attend.
• who to invite as Instructors
• Course Participants for two courses with 20 on each course
• the Course Director.

Programme
The PTC course programme is the same throughout the world. It is printed on the back page of the Logistics Handbook. The Course Director needs to decide who does what well in advance.

Location and venue
A suitable venue has a large sized room for the lectures, which is big enough for skill stations or discussion groups in the four corners of the room.

Cost
Work out the budget for
• hire of the room
• catering
• any accommodation
Make sure your Instructors know they will not be paid.
Publicity
Inform local media and encourage publicity for the course; this is particularly good when done in cooperation with local government and the medical hierarchy.

Food and Drink
You want to be able to eat and stop for refreshments just outside or very close to the main teaching room. Check on delivery of drinks and food just before the course.

Paperwork
Everything is listed in detail in the Logistics Handbook.
- Manuals
- Evaluation forms
- Instructor information
- PTC agreement
- Certificates
- MCQs

Follow up
- Write a report
- Set up a committee
- Regional and International networks

Part 2 Planning the follow-on PTC course
The 2-day course normally follows immediately after this 1-day Instructor Course.

People and programme
Finalise course timetable with a named instructor for each lecture and group session. Check:
- Course Director
- timekeeper
- equipment person
- daily logistics and session set-up
- IT person

Decide who will:
- explain to the participants what happens on skill stations and in scenarios
- divide the participants into groups
- remind them before lunch what time the course resumes after lunch
- be responsible for:
  - paper copy of the course slides
  - slide set is consistent and ready to go
  - catering is confirmed
  - all the forms printed and ready for registration and end of day
  - names and name labels
  - certificates
  - MCQs and marking

Set a time for a rehearsal for the demonstration scenario.
Some parts of the PTC course, specific to your country are not covered today. You will find hints on preparing these in the first section of *The Additional Teaching Resources for Instructors*. Please refer to *pages 4 - 7*

**Working as a team**

**During the day**
- You need to work together to prepare the room for different activities.
- Get the skill stations and scenarios ready with all the equipment during the breaks.
- Keep referring to your programme with the names of who does what.
- Do not leave it to the person giving the lecture to put chairs tidily into rows after discussion groups.
- Support each other at every stage, for example ushering the participants back after a break.

**Preparing the learning environment**

*Take charge of the room!*

**Before you start**
Allow plenty of time to get the teaching room ready. You should arrive at least 30 minutes before the first lecture of the day. When the course participants arrive they should come into a tidy room with everything they need laid out.

Work as a team on this. Help each other to set up the room and the projector. Be aware of sources of noise, the need for air conditioning, fresh air.

**Health and Safety**

*Take charge of health and safety!*

- Are all electric cables, flexes, sockets and connections safe?
- Is all equipment safe and in good working order?
- Are there any trip hazards?
- Are the toilets adequate, with supplies and facilities for washing hands?
- Are the food and drinks hygienically prepared and served?
- Remove or make safe any broken glass
- Remove all rubbish and sharps
SESSION 6: How to give a good PTC lecture

Training module summary
Good lecturers put across important information in a clear, structured way that helps people to learn and remember. They make the PTC topics relevant: they bring the content alive with relevant pictures, or by reference to an actual clinical case. The lectures should be adapted to your local situation and for different audiences by using relevant examples.

Good lecturers hold everyone’s attention often with moments of interaction; they know when and how to finish. They use communication skills to full advantage. Slides support their teaching.

Aims
To enable every trainee instructor to
• use the slides effectively
• deliver the PTC lectures in an interesting and informative way
• put into practice what has been learned during the one-day Instructor course

Training module
We have spent most of this day analysing different skills that will improve your ability to teach. We had a major focus on interactive teaching, because this is very important in your repertoire as a good all-round instructor.

Is there still a place for a traditional lecture? Yes! You have to give a number of lectures: ABCDE, Head, Spinal, Limb trauma, Trauma in Pregnancy, Burns. In a lecture you can put across a large amount of new material or information in a clear and structured way. A lecture does not have to be a boring recital of endless facts. This last training module of the day is designed to help you prepare and deliver good lectures.

In the final Practical Workshop everyone will present three slides from one of the lectures, so that you have the opportunity to practise standing in front of the class and teach with slides. Before you do that, we are going to work on good slide technique.

Part 1: Using slides effectively
There is a set of slides for each lecture but you do not need to use all the slides. The text of the slides cannot be changed but you may add pictures. You, NOT the slides, are giving the talk. The slides are your tool, a teaching aid to support what you have to say. The slides provide precise terminology, information and data.

1. Make sure the equipment is working before you start.
   • Allow time to set up the room and the projector.
   • Put your computer in front of you, where you can see it easily.
2. Tips for a good presentation

- Before you speak: stand comfortably, look at everyone and smile. Pause, then introduce yourself.
- Check once that the first slide behind you is showing correctly. **Do not look at the screen again.** Keep your feet pointing at the audience!
- Only look at the screen if you need to point to something
- Avoid using laser pointers; they make you turn your back on the class.
- Give people a moment to read a slide with a lot of information before you speak
- Never read only what is on the screen for the whole lecture.

3. Using slides to maintain attention and vary the stimulus

- Occasionally stop talking – let the audience read the slide in silence.
- Use a slide for occasional interaction:
  - Example: Ask about a list: *What is most important? Why?*
- Use the <B> key occasionally to gain attention half way through an intense lecture. In PowerPoint this blanks the screen. Press the <B> key on your computer, move away from your computer in order to
  - stress something important
  - tell a clinical story to illustrate
  - draw on the board to make something clearer
  - ask a question, e.g. what would be your drug of choice?
  - Ask what was on the slide!

Press any key to return to your slides.

4. What do you do if there is a power cut or the equipment suddenly stops?

- You continue without the slides, because you can refer to them on your battery-powered laptop. The Course Director will have a paper copy of the slides.
- Another instructor will try to solve the problem, but unless it is solved within a minute, do not try to go back to the slides or you will over-run.

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**Practical Workshop – Using slides with a laptop**

20 minutes

Groups of 3

Open the PTC *Limb Trauma* slides at 125 on a laptop.

Pretend you have a screen behind you.

Everyone in the group has 3 minutes to teach using the slides followed by 2 minutes for feedback.

Feedback focus: good use of laptop, presentation skills and a reminder of good communication skills.
Part 2: Giving a good lecture – planning
A memorable lecture does not just happen; it has been carefully planned in advance. Here is a checklist to help you plan:

1. Who is it for?
The PTC content has already been prepared, but as you plan think about the level of knowledge and training of your course participants. Adapt the level of detail of your teaching to the group. If you have a mixed group, be aware that some will need more explanation than others – so plan this.
   - for nurses: simply explain what these types are
   - for doctors: ask what they are, or give more explanation

2. Familiarize yourself with the content
   - Look at the key points in the *Additional Teaching Resources for Instructors*
   - Read what is in the *PTC Course Manual*
   - Read through the slides and become familiar with them
   - Practise any extra diagrams
If you feel you need one, write a brief outline.

3. Plan a good start
When you give your first lecture, introduce yourself.
Plan how you will gain everyone’s attention at the start.
Try to relate the topic to the local context or to the rest of the course, or to your own experience.
Examples:
   - Show the first picture and ask a question to reveal the level of experience of the course participants.
     *e.g. Who has seen a patient who came into your hospital ……?*
   - Use the questions linked to the picture slide
   - Link to the rest of the course: *ABC, we have now reached Circulation*
   - Express your personal interest in the topic, and/or its importance
   - Describe in one sentence something from your own clinical experience
   - Ask a brainstorming question (see Session 2).

4. Plan your timing
Check from the course programme how long you have. Not all topics are the same length. Work on the basis of 3 - 4 slides per 2 minutes. Check the number of slides against the programme. Have a short practice.

5. Plan how to keep attention during the lecture
Variety is good…
   - vary your voice
   - vary your position
   - vary the stimulus, which means during your lecture do something to interrupt the flow to make people think. Be interactive.

Why do this? After 20 minutes of lecturing, the attention of your course participants may be wandering. Make them wake up and think!
Examples are on page 36, point 3.
6. Plan a good finish and keep to time.
Know how you will end your lecture.
- Ask a fellow Instructor to hold up a sign when you have 5 minutes left.
- Plan what you will leave out if time runs out.
- A fellow instructor indicates 1 minute – you then summarise the key points.
- Do not allow questions and discussion unless you finish early. Use the question slide to ask simply if there is anything not understood. You do not want a discussion to start amongst the participants on a matter of little importance to the whole course. You are responsible for finishing on time.

Why is timing important? It is an aspect of teamwork. You must give consideration to each other and keep the entire programme running to time. You have promised to stop for lunch and finish at a certain time, so please stick to that.

If you finish early, stop. Everyone will be happy!

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Final Practical Workshop – group presentation with slides
40 minutes

*Topic:* You are going to present 3 slides from the lecture on *Circulation and Shock*

Everyone remains together.
The aim of this workshop is to allow every trainee instructor to look at the audience while teaching using slides, and to run to time. It is not to give the whole lecture.

Everyone presents their slides in succession, i.e. follow straight on from each other as in a relay race.
Everyone will have exactly the same time.

If you are happy about the idea, ask a friend to take a 30 second video of you on their phone. Watch it after the session finishes. You will learn a lot!

---

Final reflection

Think about what you did well, during the practice workshop on slide technique and in the presentation. Note one thing as a target to do better tomorrow.

Notes:
Summary for Session 6

The lecture is an important teaching method on the PTC course. It does not have to be dull and you can learn to improve your teaching through creative preparation and good use of the slides.

What is perhaps the most important point to remember? Never lecture with your back to the audience when teaching with slides!

Summary of the Instructor Training Course

We hope you feel more confident about teaching the PTC course now than you did at the start of this day.
You cannot possibly remember everything.
You will not get everything right the first time.
Build on what you do well.
Please re-read this manual.
Keep setting yourself different targets and continue to improve your teaching.

Above all, we hope we have inspired you to a life long interest in teaching and training.
SCENARIO 1
A 35 year-old man has fallen off his motorbike. At the scene he was yelling in pain. On arrival in hospital, he is now having difficulty in breathing.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Upper airway obstruction signs relieved by simple airway management Respiratory rate 28/min</td>
<td>Cervical spine Oxygen Airway</td>
</tr>
<tr>
<td>B</td>
<td>Air entry L chest much less that R Percussion note L hyper-resonant Percussion on R is normal Trachea deviated to R Tension pneumothorax</td>
<td>Urgent needle decompression brings some relief</td>
</tr>
<tr>
<td>C</td>
<td>BP 120/80 Heart rate 100 bpm</td>
<td>IV line x 2 Blood sample Fluid bolus</td>
</tr>
</tbody>
</table>

During the assessment of the circulation, the airway becomes obstructed. The patient is now quiet, not yelling.

Diagnosis: Tension pneumothorax
Obstructed airway – possible head injury as a cause

Learning Objectives
- Confident use of the ABC structure in the Primary Survey
- Recognition of an obstructed airway and a graded approach to treatment (beginning with simple things first)
- Cervical spine and airway management at the same time
- Clinical assessment, correct diagnosis and correct treatment of a tension pneumothorax
- Recognition of shock and appropriate treatment
- Starting the ABC again if the patient deteriorates
**SCENARIO 2**

A 45 year-old woman is involved in a head-on collision in a car accident. She was not wearing a seatbelt. She arrives in hospital with rapid breathing, difficulty in talking and complaining of right-sided chest pain.

<table>
<thead>
<tr>
<th><strong>ASSESSMENT</strong></th>
<th><strong>FURTHER INFORMATION</strong></th>
<th><strong>KEY POINTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Obstructed airway</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(gurgling, snoring)</td>
<td>Cervical spine care</td>
</tr>
<tr>
<td></td>
<td>Respiratory rate 30x</td>
<td>Jaw thrust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Suction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oxygen</td>
</tr>
<tr>
<td>B</td>
<td>No air entry on right side</td>
<td>Needle decompression</td>
</tr>
<tr>
<td></td>
<td>Trachea deviated to left</td>
<td>+/- chest tubes</td>
</tr>
<tr>
<td></td>
<td>Tension pneumothorax</td>
<td>results in RR 16, able to talk again</td>
</tr>
<tr>
<td>C</td>
<td>BP 100/70</td>
<td>Fluid bolus x2</td>
</tr>
<tr>
<td></td>
<td>HR 110 bpm</td>
<td>Blood test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IV line x2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Results in BP 120/80, HR90</td>
</tr>
</tbody>
</table>

**Diagnosis:**
- Obstructed airway
- Fractured ribs + right tension pneumothorax
- Likely Cervical spine injury and head injury
- Shock

**Learning Objectives**
- Confident use of the ABC structure in the Primary Survey
- Recognise an obstructed airway and use of simple methods to open and clear it
- Combined management of cervical spine and airway
- Clinical assessment, correct diagnosis and correct treatment of a tension pneumothorax, including recognition of the need for a chest tube
- Recognition of shock and appropriate treatment
**SCENARIO 3**

A 25 year-old man was hit by a speeding van as he was cycling to the market. He was not wearing a helmet. He arrives in hospital with gurgling, noisy, shallow breathing, and is unconscious. Left thigh is swollen.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
</table>
| A          | Stops breathing during assessment | Cervical spine care  
Airway support  
Bag mask Ventilation or intubate  
Oxygen |
| B          | Chest is clear  
Air entry equal  
Percussion equal | No chest injury |
| C          | HR 110  
BP 120/80 | IV line 2x  
Blood test  
Fluid bolus |
| D          | Pupils initially fixed + dilated  
Back to normal with Oxygen | Consult Neurosurgeon |
| E          | Closed femur fracture loss | Replace blood  
Immobilise/splint |

**Diagnosis:** Obstructed airway, then respiratory arrest  
Shock  
Severe head injury  
(Fractured femur)

**Learning Objectives**
- Confident use of the ABC structure in the Primary Survey
- Recognise obstructed airway and respiratory arrest, requiring full airway support with BVM or intubation
- Combined management of cervical spine and airway
- Recognition of shock and appropriate treatment
- Recognition of severe head injury
- Prevention of secondary injury by ABC management
- (Optional: recognition of femoral fracture as site of blood loss and appropriate immediate treatment)
SCENARIO 4
A 19 year-old man has been stabbed in the abdomen. On arrival in hospital, he is clutching his abdomen, complaining of severe abdominal pain.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Airway clear</td>
<td>Oxygen</td>
</tr>
<tr>
<td></td>
<td>Cervical spine OK</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Air entry diminished on the right</td>
<td>Chest drain blood ++</td>
</tr>
<tr>
<td></td>
<td>Percussion note dull on the right</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Haemothorax)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Respiratory rate 30</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>BP 80/40, HR 120</td>
<td>IV line 2x</td>
</tr>
<tr>
<td></td>
<td>Pale and sweaty</td>
<td>Blood test</td>
</tr>
<tr>
<td></td>
<td>No response to fluid</td>
<td>Fluid bolus x2</td>
</tr>
<tr>
<td></td>
<td>still hypotensive</td>
<td>Transfusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Call surgeon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prepare operating theatre</td>
</tr>
</tbody>
</table>

Diagnosis: Penetrating chest and abdominal trauma with life threatening haemorrhage: Haemothorax and Intra-abdominal bleeding

Learning Objectives
- Confident use of ABC in the Primary Survey
- Importance of oxygen even when airway is stable. Sensible approach to Cervical Spine
- Correct clinical assessment, diagnosis and treatment of a large haemothorax
- Recognition of severe shock and appropriate treatment with rapid fluid resuscitation and early blood transfusion
- Importance of re-assessment
- Recognition of “hidden bleeding” and need for urgent surgical referral and operating theatre treatment
**SCENARIO 5**
A 26 year-old woman has been shot in the neck. She arrives in hospital, conscious but with stridor and respiratory distress.

### ASSESSMENT | FURTHER INFORMATION | KEY POINTS
--- | --- | ---
A | Stridor<br>Difficulty in talking<br>Hoarse voice | Oxygen<br>Simple airway management
B | Air entry equal but soft<br>Chest clear | No chest injury
C | BP 120/80<br>HR 110 | IV x 2<br>blood test<br>Fluid bolus
| | During assessment of her circulation you notice the neck has become more swollen. There is increasing stridor and she now is unable to talk | Surgical consultation for tracheostomy<br>Consider cricothyroidotomy<br>Do not attempt intubation

**Diagnosis:** Obstructed airway from gunshot wound to larynx

**Learning Objectives**
- Confident use of the ABC in the primary survey
- Early recognition of airway obstruction and high risk injury
- Anticipation and preparation for advanced airway management / difficult airway.
- Recognition of shock and appropriate treatment. Consideration of other causes for high heart rate
- Importance of re-assessment

*Note: this scenario may trigger a discussion about difficult airways and how to manage these when skilled staff and other airway resources are limited.*
SCENARIO 6
A 60 year-old woman is involved in a high speed car accident. She was wearing a seatbelt. On arrival in hospital she is groaning in pain.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Soft snoring breathing Spits out oral airway if put in</td>
<td>Cervical spine care Oxygen Basic airway management</td>
</tr>
<tr>
<td>B</td>
<td>Chest clear Respiratory rate 28</td>
<td>no chest injuries</td>
</tr>
<tr>
<td>C</td>
<td>BP 80/60, HR 140 Cold hands and feet</td>
<td>Iv line x2 Blood for tests Fluid bolus 2 L:</td>
</tr>
<tr>
<td></td>
<td>After 1 L fluid --&gt; BP 110/70 HR 110 After 2 L - --&gt; BP 120/80 HR 80</td>
<td>Patient responds well to fluid bolus.</td>
</tr>
<tr>
<td>D</td>
<td>Now consciousness becomes normal</td>
<td></td>
</tr>
<tr>
<td>Secondary Survey</td>
<td>Tender pelvis with crepitus on palpation</td>
<td>Apply pelvic binder</td>
</tr>
</tbody>
</table>

Diagnosis: Severe shock from likely abdominal / pelvic injuries

Learning Objectives
- Confident use of the ABC in the primary survey
- Recognition of mild airway obstruction and use of simple methods
- Combined management of cervical spine and airway
- Clinical assessment and recognition of severe shock and appropriate treatment with rapid fluid resuscitation and early blood transfusion
- Importance of re-assessment
- Altered conscious state (and obstructed airway) not always the result of head injury
- Need to look for sites of bleeding and recognition of“hidden bleeding” from abdomen and pelvis
**SCENARIO 7**

A 15 year-old boy fell to the ground from a tree, landing on his head. According to his family, he was initially conscious and complained of neck pain. Over the next 30 minutes he became unconscious. On arrival in hospital he had a right-side seizure.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
</table>
| A          | Obstructed breathing (snoring, some distress) | Cervical spine care
Oxygen
Simple airway management but may need intubation |
| B          | Shallow breaths     | Patient needs ventilatory assistance with a bag and mask |
| C          | BP 130/90 HR 100    | IV access 2x
Blood tests |
| D          | Left pupil fixed + dilated Flexing to pain only | Call neurosurgeon
Prepare burr-hole |

Diagnosis: Obstructed airway
Severe head injury, (Left extradural hematoma)

**Learning Objectives**

- Confident use of the ABC structure in the Primary Survey
- Recognition of an obstructed airway and a graded approach to treatment. Understanding that a completely unconscious patient will require advanced airway management
- Combined management of cervical spine and airway
- Recognition of poor ventilation requiring assistance with bag and mask
- Recognition of severe head injury and prevention of secondary injury by ABC (optional: recognition of likely intracranial bleeding requiring urgent surgery)
SCENARIO 8
A 45 year-old factory worker is crushed by a container truck at work. He is brought into hospital with severe breathing difficulties.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Respiratory rate 40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shallow breathing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cyanosed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cervical spine care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simple airway management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oxygen</td>
</tr>
<tr>
<td>B</td>
<td>Bilateral wheeze and crepitation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air entry much reduced on right side</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paradoxical movement on right anterior chest (flail chest)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percussion note dull on right side</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Needs intubation for flail chest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analgesia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drain blood from the right chest</td>
</tr>
<tr>
<td>C</td>
<td>BP 100/60 HR 140</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good response to fluid</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IV access 2x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blood tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fluid bolus x2</td>
</tr>
</tbody>
</table>

Diagnosis: Respiratory distress with severe chest injuries
Crush injury with right-sided flail chest and haemothorax
Shock

Learning Objectives
• Confident use of the ABC structure in the Primary Survey
• Combined cervical spine and airway management. Importance of oxygen
• Correct clinical assessment, diagnosis and treatment of fractured ribs, a flail segment and large haemothorax
• Understanding that advanced airway management can be required for severe breathing problems
• Recognition of shock and appropriate treatment
• Importance of reassessment
• Understanding that a fast heart rate is not always or only caused by shock.
• Importance of analgesia
SCENARIO 9
A 25 year old woman has been assaulted with a large heavy stick. On arrival in hospital she has extensive facial injuries, stridor and respiratory distress. She is cyanosed and is making groaning sounds.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Basic airway management does not relieve the airway obstruction</td>
<td>Suction, jaw thrust, Chin lift, Bag mask ventilation</td>
</tr>
<tr>
<td></td>
<td>Bag mask ventilation is difficult</td>
<td>Must intubate</td>
</tr>
<tr>
<td>B</td>
<td>Chest: air entry normal, Breathing sounds OK</td>
<td>no chest injuries</td>
</tr>
<tr>
<td>C</td>
<td>BP 130/90 HR 110</td>
<td>IV line, Blood tests, Fluid bolus</td>
</tr>
<tr>
<td>D</td>
<td>Pupils equal and normal response to light, Opens eyes to voice, Localizes to pain</td>
<td></td>
</tr>
<tr>
<td>Secondary Survey</td>
<td>Swollen right femur</td>
<td>Log roll, analgesia</td>
</tr>
</tbody>
</table>

Diagnosis: Obstructed and difficult airway from facial fractures, Moderate blood loss and shock, Fractured femur

Learning Objectives
- Confident use of the ABCDE structure in the Primary and Secondary surveys
- Early recognition of airway obstruction and high-risk injury. Graded approach to management, moving from basic to advanced airway techniques
- Recognition of shock and appropriate treatment.
- Clinical assessment of neurological state
- Importance of Secondary Survey to detect other injuries, including log roll
- Don't forget analgesia!
SCENARIO 10
A 70 year old man was burnt in a house fire. It took 4 hours for him to reach hospital. On arrival, still dressed, he has a burnt area covering his chest and abdomen. He is groaning in pain, appears to be in respiratory distress and is confused.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>No facial or airway burns on inspection Voice not hoarse Respiratory rate 30 SpO2 88% on air</td>
<td>Oxygen Basic airway management</td>
</tr>
<tr>
<td>B</td>
<td>Air entry normal R = L</td>
<td>SpO2 94% with oxygen</td>
</tr>
<tr>
<td>C</td>
<td>BP 90/70 HR 130 Cold periphery Good response to fluid bolus</td>
<td>IV access 2x Blood tests Fluid bolus</td>
</tr>
<tr>
<td>D</td>
<td>Alert, oriented after oxygen</td>
<td></td>
</tr>
<tr>
<td>E + Secondary Survey</td>
<td>30-40% burns front of chest, abdomen, both thighs and some of right arm</td>
<td>Burns care Resuscitation Tetanus prophylaxis Supportive treatment</td>
</tr>
</tbody>
</table>

Diagnosis: Burns 30-40% with inhalation injury to the lungs.

Learning Objectives
- Confident use of the ABCDE structure in the Primary and Secondary Surveys Assessment of airway in burns patients and understanding of airway risks
- Clinical assessment of breathing and consideration of further support
- Recognition of shock and appropriate treatment
- Importance of exposure (including log roll & remove clothes) and secondary survey to detect other injuries,
- Specific burns management; assessment of area burnt, use of formula to calculate fluid requirements and rate of fluid resuscitation, analgesia, temperature control, tetanus prophylaxis
SCENARIO 11
A 26 year-old woman, 30 weeks pregnant, suffers a road accident. On arrival in hospital, she complains of abdominal pain and is very distressed about her baby.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Respiratory rate 20</td>
<td>Oxygen</td>
</tr>
<tr>
<td></td>
<td>Able to talk</td>
<td>Cervical spine care</td>
</tr>
<tr>
<td></td>
<td>Complaining of dyspnoea and pain</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Air entry normal</td>
<td>No chest injuries</td>
</tr>
<tr>
<td></td>
<td>Percussion normal</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>BP 90/60 HR 140</td>
<td>Left lateral position</td>
</tr>
<tr>
<td></td>
<td>Blood pressure remains low if not resuscitated in left lateral position. Good response to fluid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV line 2x</td>
<td>Blood for tests</td>
</tr>
<tr>
<td></td>
<td>Blood pressure</td>
<td>Fluid bolus 2x</td>
</tr>
<tr>
<td>D</td>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>Secondary Survey</td>
<td>Tender abdomen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fundal height at xiphisternum (too high)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foetal heart sounds are not heard</td>
<td></td>
</tr>
</tbody>
</table>

Diagnosis: Shock and uterine trauma with placental abruption and separation

Learning Objectives
- Confident use of the ABCDE structure in the Primary and Secondary surveys
- Assessment of combined Airway and Cervical Spine management
- Importance of left tilt when supine during resuscitation of pregnant women
- Recognition of shock and appropriate treatment. Understanding of the different physiology and vital signs in pregnant women
- Importance of Secondary Survey to detect other injuries, including log roll
- Specific pregnancy management; assessment of pregnant uterus, assessment of foetus, recognition of severe uterine injuries, analgesia in pregnancy, importance of reassurance
**SCENARIO 12**
An 8 year-old boy is riding a bicycle and is hit by a car. He is brought to the hospital and is complaining of abdominal pain.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Airway clear, Respiratory rate 24</td>
<td>Cervical spine care Oxygen</td>
</tr>
</tbody>
</table>
| B          | Air entry R = L
Percussion note R = L
Expansion R = L
Chest sounds normal | No chest injury |
| C          | BP 70/40 HR 140
Periphery cold
Capillary return 4 seconds
BP 80/60 HR 120 after first 20 ml/kg
After next 20ml/kg 100/70 HR 90 | IV line 2x
Blood for tests
Fluid bolus 20ml/kg |
| D          | Fixed dilated pupil right side.
Not responding to pain | |

**Diagnosis:** Severe shock. Blood loss from an unknown site
Head injury with deterioration and obstructed airway
Likely right sided intra-cranial haemorrhage

**Learning Objectives**
- Confident use of the ABCDE structure in the Primary and Secondary Surveys
  Assessment and recognition of severe shock and appropriate treatment.
- Understanding of the different anatomy, physiology and vital signs in children and how this influences treatment
- Importance of re-assessment. Rapid recognition of deterioration and re-starting the ABC structured approach
- Neurological assessment and recognition of severe injury
- Importance of Secondary survey and looking for a site of hidden bleeding
**SCENARIO 13**
A 25 year-old man has been injured in an explosion and fire at a factory. He is on his way to hospital with facial burns and a chest injury.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Hoarse voice</td>
<td>Cervical spine care</td>
</tr>
<tr>
<td></td>
<td>Burns around and in his mouth</td>
<td>Oxygen</td>
</tr>
<tr>
<td></td>
<td>Black sputum</td>
<td>Prepare for intubation</td>
</tr>
<tr>
<td></td>
<td>No stridor, RR 30</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Air entry: reduced on right</td>
<td>Chest drain</td>
</tr>
<tr>
<td></td>
<td>Percussion dull on right</td>
<td>Rib fractures</td>
</tr>
<tr>
<td></td>
<td>Tender to palpation right chest</td>
<td>Haemothorax</td>
</tr>
<tr>
<td>C</td>
<td>BP 90/60</td>
<td>IV access 2x</td>
</tr>
<tr>
<td></td>
<td>HR 120</td>
<td>Blood for tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IV Fluid</td>
</tr>
</tbody>
</table>

During assessment of circulation, he develops increasing stridor. If he has not been intubated, return to A.

| A          | Unable to talk, stridor | Intubate if not already done |
| Secondary survey | Loss of hearing, swollen and deformed |  |
|            | R arm, burns over face and upper chest |  |
|            | (around 15%)             |  |

Diagnosis:
- Early airway obstruction and high risk threat to airway from burns
- Blast injury with possible cervical spine injury
- Right rib fractures and right haemothorax.

**Learning Objectives**
- Confident use of the ABCDE structure in the Primary and Secondary Surveys
- Assessment of Airway in burns patients and understanding of airway risks
- Anticipation of advanced airway management and difficult airway
- Clinical assessment and recognition of fractured ribs and haemothorax, and appropriate management
- Recognition of shock and appropriate treatment
- Importance of Secondary Survey to detect other injuries, including log roll
- Specific burns and blast management; assessment of area burnt, fluid resuscitation, analgesia, temperature control, tetanus prophylaxis, recognition of typical blast injuries
### Scenario 14
A 45 year-old male prisoner is stabbed in the back in a fight. He is unable to move his legs and is having problems breathing. He complains of pain in the right chest.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Able to talk with difficulty Airway is clear</td>
<td>Oxygen No cervical spine injury</td>
</tr>
<tr>
<td>B</td>
<td>Air entry absent on R Percussion note hyper-resonant Trachea deviated to left</td>
<td>Decompress right side Tension pneumothorax</td>
</tr>
<tr>
<td>C</td>
<td>BP 90/60 HR 120 Bot remains 90/60 HR 100</td>
<td>IV access 2x Blood for tests Fluid bolus x2</td>
</tr>
<tr>
<td>D</td>
<td>Alert</td>
<td></td>
</tr>
<tr>
<td>Secondary survey</td>
<td>Reflexes absent in lower limbs Sensory level loss up to T8</td>
<td>Must include log roll</td>
</tr>
</tbody>
</table>

**Diagnosis:** Spinal injury of T7-T8 Tension pneumothorax Mild spinal shock

**Learning Objectives**
- Confident use of the ABCDE structure in the Primary and Secondary Surveys Clinical assessment and recognition of tension pneumothorax with appropriate management
- Recognition of shock and appropriate treatment
- Importance of Secondary Survey to detect other injuries, including log roll
- Clinical assessment of neurological system and recognition of spinal injury
SCENARIO 15
A 32 year-old woman has fallen from a cliff on a remote island. It has taken 4 days for her to reach hospital. She has an obvious compound fracture of her left femur and a swollen left calf. The leg smells. She appears very confused.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Airway clear. Respiratory rate 30</td>
<td>Oxygen Cervical spine care</td>
</tr>
<tr>
<td>B</td>
<td>Chest normal</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>BP 100/40 HR 120 Bounding pulse Temperature 39 Celsius</td>
<td>IV access Blood tests Fluid bolus x2</td>
</tr>
<tr>
<td></td>
<td>Good response to fluid</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Confused</td>
<td></td>
</tr>
<tr>
<td>Secondary survey</td>
<td>Pulseless, cold left foot</td>
<td>Fasciotomy Antibiotics</td>
</tr>
</tbody>
</table>

Diagnosis: Septic shock from compound fracture
Compartment syndrome left calf

Learning Objectives
- Confident use of the ABCDE structure in the Primary and Secondary Surveys Care of cervical spine in a high risk injury, even with delayed presentation
- Clinical assessment and recognition of septic shock
- Treatment of septic shock
- Importance of Secondary Survey to detect other injuries, including log roll
- Clinical assessment of limb injury, recognition of compartment syndrome and appropriate treatment
**SCENARIO 16**
A 4 year-old girl has been run over by a car. She is brought into the Emergency department straight away. She is not breathing.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>No breath sounds</td>
<td>Cervical spine care</td>
</tr>
<tr>
<td></td>
<td>No chest movement</td>
<td>Open airway</td>
</tr>
<tr>
<td></td>
<td>Unable to ventilate</td>
<td>Bag mask ventilation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intubation (ETT size 5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Urgent needle</td>
</tr>
<tr>
<td>B</td>
<td>After intubation, notice no chest movement on right side</td>
<td>Decompression</td>
</tr>
<tr>
<td></td>
<td>Percussion note resonant on right</td>
<td>Chest drain for haemopneumothorax</td>
</tr>
<tr>
<td></td>
<td>Trachea deviated to left</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>BP 60/50 HR 130</td>
<td>Unable to put in IV line on 2 attempts</td>
</tr>
<tr>
<td></td>
<td>Capillary return slow</td>
<td>Intraosseous needle</td>
</tr>
<tr>
<td></td>
<td>Good response BP 90/60 HR 100</td>
<td>Fluid bolus 2x20ml/kg (weight 16kg)</td>
</tr>
<tr>
<td>D</td>
<td>Now open eyes and biting ETT</td>
<td></td>
</tr>
<tr>
<td>Secondary survey</td>
<td>Rigid abdomen</td>
<td>Pelvic binder</td>
</tr>
<tr>
<td></td>
<td>Crepitus / unstable pelvis</td>
<td></td>
</tr>
</tbody>
</table>

Diagnosis: 
- Respiratory arrest
- Right tension haemopneumothorax
- Shock with likely intra-abdominal bleeding and fractured pelvis
- Possible head injury

Learning Objectives
- Confident use of the ABCDE structure in the Primary and Secondary Surveys
- Recognition of respiratory arrest and immediate treatment with basic, then advanced airway management. Cervical spine care at the same time.
- Clinical assessment, recognition and treatment of tension haemopneumothorax
- Clinical assessment and recognition of shock. Appropriate use of intraosseous needle for urgent fluid resuscitation
- Understanding of the different anatomy, physiology and vital signs in children and how this influences treatment. Correct calculation of weight and ETT size.
- Importance of Secondary survey and looking for sites of hidden bleeding
**Extra Scenarios**
We have provided some extra scenarios here for you to use if required. Some of them may suit your local context more than the first 16 scenarios. Also, you may use scenarios based on your own experience.

**SCENARIO 17**
A 40 year-old man is the driver in a car accident. He was ejected from the car and was found 20 metres away. On arrival in hospital

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
</table>
| A          | Stridor and respiratory distress  
Loose teeth and blood on oral suction  
Airway management is not effective  
Ventilation with bag mask not effective  
Attempted intubation failed 2x  
Now patient is cyanosed | Cervical spine care  
Oxygen  
Basic airway management  
Bag mask ventilation  
Attempt intubation | Cricothyroidotomy (surgical airway) |
| B          | Continue Primary Survey (ABCD) | |
| C          | Heart rate 120, BP 120/70  
Capillary refill 2 seconds | |
| D          | Unconscious | |

Secondary Survey

Plan: Follow with tracheostomy

**Learning Objectives**
- Confident use of the ABC structure in the Primary Survey
- Recognition of an obstructed airway and using a graded management approach from basic to advanced airway techniques
- Cervical spine and airway management at the same time
- Recognition of need for surgical airway (failed intubation) and knowledge of surgical airway technique
SCENARIO 18
An 18-month child is rushed to hospital after falling off a balcony onto hard ground. He is unconscious in his mother’s arms. The parents are crying and distressed.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Unconscious infant</td>
</tr>
<tr>
<td></td>
<td>Soft snoring</td>
</tr>
<tr>
<td></td>
<td>Slight cyanosis</td>
</tr>
<tr>
<td></td>
<td>Paradoxical chest / abdomen movement</td>
</tr>
<tr>
<td></td>
<td>Oxygen</td>
</tr>
<tr>
<td></td>
<td>Cervical Spine care</td>
</tr>
<tr>
<td></td>
<td>Basic airway</td>
</tr>
<tr>
<td></td>
<td>Bag Mask ventilation</td>
</tr>
<tr>
<td></td>
<td>Possible intubation</td>
</tr>
<tr>
<td>B</td>
<td>Bruising of chest wall</td>
</tr>
<tr>
<td></td>
<td>Crepitus over R chest</td>
</tr>
<tr>
<td></td>
<td>Poor respiratory effort</td>
</tr>
<tr>
<td></td>
<td>Soft crackles both lung fields</td>
</tr>
<tr>
<td></td>
<td>Ventilatory support required:</td>
</tr>
<tr>
<td></td>
<td>Bag Mask or Intubation (preferred)</td>
</tr>
<tr>
<td></td>
<td>(ETT size 4, 4.5)</td>
</tr>
<tr>
<td>C</td>
<td>Heart rate 160</td>
</tr>
<tr>
<td></td>
<td>Capillary refill 4 seconds</td>
</tr>
<tr>
<td></td>
<td>Cold peripheries</td>
</tr>
<tr>
<td></td>
<td>IV attempt: only tiny cannula in back of hand</td>
</tr>
<tr>
<td></td>
<td>Intraosseous access</td>
</tr>
<tr>
<td></td>
<td>Fluid bolus 20ml/kg (weight 11kg)</td>
</tr>
<tr>
<td></td>
<td>Reassess, second bolus</td>
</tr>
</tbody>
</table>

Secondary Survey
Bruising over chest wall
Large swelling over occipital area, bruising around eyes
Swollen, deformed R thigh

Diagnosis: Obstructed airway and respiratory failure
Severe head injury (possible base of skull fracture), fractured ribs
Right femoral fracture. Possibility of non-accidental injury (NAI)?

Learning Objectives
• Confident use of the ABCDE structure in Primary and Secondary Surveys
• Recognition of an obstructed airway and using a graded management approach from basic to advanced airway techniques
• Clinical assessment and recognition of respiratory failure and appropriate management
• Clinical assessment, recognition and appropriate treatment of shock
• Paediatric specific: understanding anatomical and physiological differences, use of IO access, prevent hypothermia, parental involvement, consideration of Non Accidental Injury
SCENARIO 19
A woman with a 38-week pregnancy is brought in to the clinic by her husband. She has had boiling hot cooking oil tipped over her face, neck and upper body in an argument. She is now screaming in pain, with the oil still all over her clothes, hair and skin.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Screaming</td>
<td>Stop the burning: remove all clothes and use cold water to cool Oxygen</td>
</tr>
<tr>
<td></td>
<td>Respiratory rate 28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oil on lips, face and neck</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Full thickness burns all over front of chest and neck</td>
<td>IV access - ?Lower limbs, intraosseous or central access Left tilt, Fluid Bolus</td>
</tr>
<tr>
<td></td>
<td>Chest clear</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor respiratory effort (pain)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Heart rate 130, BP 110/90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Difficult IV access (arms and hands burnt)</td>
<td></td>
</tr>
<tr>
<td>Secondary survey</td>
<td>Burns over 25 – 30% body (face, neck, front chest, arms)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abdomen non-tender. Fundal height appropriate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foetal movements active and foetal heart heard</td>
<td></td>
</tr>
<tr>
<td>Next steps</td>
<td>Analgesia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Referral for urgent Caesarean Section / delivery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depth of burns: consideration of antibiotics?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family violence</td>
<td></td>
</tr>
</tbody>
</table>

Learning Objectives
- Confident use of the ABCDE structure in the Primary and Secondary Surveys
- Importance of left tilt when supine during resuscitation of pregnant women
- Recognition of shock and appropriate treatment. Understanding of the different physiology and vital signs in pregnant women
- Burns management; first aid, airway risk assessment, depth of burns, size of burns and fluid resuscitation, analgesia
- Specific pregnancy management; assessment of pregnant uterus and foetus, analgesia in pregnancy, importance of reassurance, recognition of risks.
SCENARIO 20
A 25 year-old woman was working in her shop when an explosion occurred in the street (perhaps a land mine, perhaps a bomb – no-one is sure). The window shattered, and shards of glass flew into her body. She has multiple cuts and is covered with blood when a taxi delivers her to your hospital.

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>FURTHER INFORMATION</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Speaking softly</td>
<td>Oxygen</td>
</tr>
<tr>
<td></td>
<td>Respiratory rate 32</td>
<td>Care with cervical spine</td>
</tr>
<tr>
<td></td>
<td>Large shard of glass in L neck</td>
<td>Do not remove glass</td>
</tr>
<tr>
<td>B</td>
<td>Multiple cuts over chest</td>
<td>Three way dressing over sucking chest wound</td>
</tr>
<tr>
<td></td>
<td>Large open wound R lateral chest wall. Sucking noise</td>
<td>R chest tube (blood and air drain out)</td>
</tr>
<tr>
<td></td>
<td>Reduced breath sounds on R</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Heart rate 130, BP 80/60</td>
<td>IV line x 2, blood taken</td>
</tr>
<tr>
<td></td>
<td>Pale, cool peripheries</td>
<td>Fluid bolus x 2</td>
</tr>
<tr>
<td></td>
<td>No improvement after 3rd bolus</td>
<td>Fluid bolus, get blood</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Massive transfusion</td>
</tr>
<tr>
<td>Secondary Survey</td>
<td>Penetrating wounds over R lateral abdomen (only seen on log roll)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distended, tender abdomen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partially amputated L leg at knee, heavy bleeding</td>
<td></td>
</tr>
<tr>
<td>Next steps</td>
<td>Massive transfusion required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urgent Surgical referral (penetrating neck and abdomen injuries)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct pressure, splinting of leg</td>
<td></td>
</tr>
</tbody>
</table>

Learning Objectives
- Confident use of the ABCDE structure in the Primary and Secondary Surveys
- Early recognition of airway risk (penetrating injury) and specific management. Care for cervical spine in complicated injury
- Clinical assessment, recognition and appropriate management of sucking chest wound
- Recognition of severe shock and appropriate treatment. Recognition of ongoing bleeding and need for massive transfusion. Knowledge of massive transfusion.
- Importance of Secondary Survey to detect other injuries, including log roll
- Care of limb threatening injury
- Don’t forget analgesia!
# Instructor Day Course Programme

<table>
<thead>
<tr>
<th>Time</th>
<th>Duration</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.00</td>
<td>15</td>
<td>Registration, and Trainee Instructors fill in forms</td>
</tr>
<tr>
<td>8.15</td>
<td>15</td>
<td>Welcome; Introduction to the day; Our educational philosophy</td>
</tr>
<tr>
<td>8.30</td>
<td>55</td>
<td><strong>SESSION 1: Communication skills</strong></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Training input</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Explain Feedback</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>Practical Workshop</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Reflection and Summary</td>
</tr>
<tr>
<td>9.25</td>
<td>80</td>
<td><strong>SESSION 2: Interactive teaching</strong></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Training Input 1: Questions in lectures</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Practical Workshop</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Reflection</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Training Input 2: PTC Workshops</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Practical workshop</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Reflection and summary</td>
</tr>
<tr>
<td>10.45</td>
<td>20</td>
<td><strong>Refreshment break</strong></td>
</tr>
<tr>
<td>11.05</td>
<td>80</td>
<td><strong>SESSION 3: Scenarios</strong></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Training Input</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Practical scenarios</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>Practical Workshop</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Reflection and summary</td>
</tr>
<tr>
<td>12.25</td>
<td>45</td>
<td><strong>Lunch Break</strong></td>
</tr>
<tr>
<td>13.10</td>
<td>80</td>
<td><strong>SESSION 4: Skill Stations</strong></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Training Input 1: Teaching the skill (with demo)</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Training Input 2: Running the skill station (with demo)</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Organisation of the skill stations</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>Practical workshop: Set up and practice the station</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Role play log roll</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Reflection and Summary</td>
</tr>
<tr>
<td>14.30</td>
<td>35</td>
<td><strong>SESSION 5: How to run a PTC Course</strong></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>In a new venue</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Who does what the next day</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Taking charge of the room and safety</td>
</tr>
<tr>
<td>15.05</td>
<td>15</td>
<td><strong>Refreshment break</strong></td>
</tr>
<tr>
<td>15.20</td>
<td>90</td>
<td><strong>SESSION 6: Slides and Lectures</strong></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Training input 1: Using slides effectively</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Practical Workshop: Speaking with slides on a laptop</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Training input 2: Preparing the PTC lectures</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>Final Presentations</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Final feedback and reflection</td>
</tr>
<tr>
<td>16.50</td>
<td>10</td>
<td>Confidence matrix; Evaluations; Summary of the day; Certificates</td>
</tr>
<tr>
<td>17.00</td>
<td></td>
<td><strong>FINISH</strong></td>
</tr>
</tbody>
</table>