

A BEGINNER'S GUIDE TO **PRE-HOSPITAL EMERGENCY MEDICINE**

Unofficial delegate report of the
2016 IBTPHEM Induction Course



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INTRODUCTION

As new Clinical Fellows in EM (with PHEM) in Bangor Emergency Department, North Wales, we were fortunate enough to join the new UK PHEM subspecialty trainees for their 7-day induction course at the Fire Service College at Moreton-in-the-Marsh in early August 2016.

This provided a really useful grounding in Prehospital Emergency Medicine, and the full immersion simulations helped us to appreciate the painful reality of the physical and human factors hazards that are rife in the prehospital environment.

This short report contains the key learning points that we took away from the course.

We must make an important disclaimer. Whilst we try to make our reports as accurate as possible, this whole publication is based upon *our notes made during the course* with all the attendant distractions and possibility of misrecording the words of individual speakers.



Whilst we have cross-checked information where possible, we can accept no responsibility for any errors or omissions we have made (or that the speakers made, and we may have inadvertently propagated).

You should never change your clinical practice based solely on a report like this, but, we hope it will provide you with a springboard for learning & discussion.

*Daniel Sedgewick
& Nicki Pollard
November 2016*

Our key reflections

- The green text boxes like this contain our thoughts after attending the course and reflecting upon it - they aren't necessarily repeating or reflecting the material delivered by course faculty.

GLOSSARY

The prehospital world has its own set of acronyms & abbreviations which we have decoded for you here:

AVLS	Automated Vehicle Location System
CCC	Clinical Contact Centre
CCP	Critical Care Practitioner
CCS	Casualty Clearing Station
DAS	Difficult Airway Society
DCA	Double Crewed Ambulance
ECA	Emergency Care Assistant
ECP	Emergency Care Practitioner
EOC	Emergency Operations Centre
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
FPHC	Faculty of Prehospital Care
HART	Hazardous Area Response Team

HEMS	Helicopter Emergency Medical Service
KTD	Kendrick Traction Device
NARU	National Ambulance Resilience Unit
PCS	Patient Care Services
PTS	Patient Transport Services
RLO	Rail Liaison Officer
RRV	Rapid Response Vehicle

CONTENTS

Page	Topic
1	Front cover & edition number
2	Introduction
3	Contents & appeal to fundraise for the Tusk Trust
4	Introduction to EMS / EMS Staff (UK perspective)
5	What happens in ambulance control / working with the Police
6/7	Clinical snippets
8	Team (crew) resource Management including the Human Factors Dirty Dozen
9/10	Practical skills used in PHEM
11	First shameless advert for the Bangor ED Clinical Fellow posts
12/13	Extrication from crashed vehicles
14/15	Safety at hazardous scenes
16	Second shameless advert for the Bangor ED Clinical Fellow posts
17/18	Major incidents
19	Course review/feedback / Reporting team bios
20	The Last Page - contact for feedback and another Tusk Trust appeal

CHARITY APPEAL

Please help us support Tusk Trust

We created this report because we're passionate about FOAMed.

We have donated many hours of our free time to produce this for you: time and energy we could have devoted to fundraising for a charity we care about very much. So, if you enjoy it and find it useful, could you consider making a donation to the **Tusk Trust**? If everyone who read our conference reports gave just £1/\$1 we could raise a significant amount of money.

This wonderful charity is dedicated to protecting rhino and elephant populations (amongst other conservation projects) endangered by poaching and other threats.

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1. INTRODUCTION TO EMS SYSTEMS

EMS systems around the world can be state or private run, hospital based, charity run or as in most countries, a combination. There are two main models of EMS response:

The Anglo-American Model	Paramedic/EMT crews ('ALS/BLS' in America)
The European Model	Physician-led system with assistants who can be nurse, paramedic or EMT

Some systems have a combination of these two responses. For example the UK and Australia have a mainly paramedic/technician based response supplemented by physician-led critical care teams.

UK Ambulance Service Structure

Ambulance service operations in the UK are split into two functions: Patient Transport Services (PTS) (known as Patient Care Services or PCS in Wales) and Emergency Medical Services (EMS)

EMS Response Modalities

Traditional double crewed ambulances (DCAs) are supplemented by single crewed rapid response cars, motorcycle response units and cycle response units helping to reduce response time.

Specialist Resources

- The **Hazardous Area Response Team (HART)** consists of ambulance clinicians who are specially trained to go into hazardous areas. These can include confined space, heights, public disorder and water. They are equipped to deal with each of these types of incident and have specialist vehicles to carry their equipment. Initially formed as part of the terrorism response network, the bases are located near large cities.
- **Helicopter Emergency Medical Services (HEMS)** are helicopter-based critical care teams which respond to the sickest patients.

2. EMS STAFF (UK PERSPECTIVE)

Emergency Care Assistant

Drives ambulance under emergency conditions, operates ambulance equipment and assists qualified practitioners.

Emergency Medical Technician

Qualified ambulance practitioners, able to use all ambulance equipment independently, treat a wide range of emergency and urgent conditions and use oral, nebulised and IM medication.

Paramedic

Registered healthcare professionals able to practice autonomously. Have all technician skills plus enhanced assessment skills, Advanced Life Support skills, IV/IO cannulation, IV drug administration, Advanced airway management (at least supraglottic airway, many intubate), ECG recording and interpretation.

Emergency Care Practitioner/Advanced Practitioner

Paramedics or nurses with increased assessment skills and the ability to supply a wider range of medication with a remit for providing treatment in the community.

Critical Care Practitioner

Paramedics or nurses with higher level critical care skills. Can work as an independent response or as part of a helicopter based critical care service e.g. HEMS.

Multiple names, multiple roles

Although the College of Paramedics published a Career Framework for post-registration paramedics in 2014, terminology for roles with advanced training (and their scope of practice, banding and job descriptions) still seems variable across the UK.



3. WHAT HAPPENS IN AMBULANCE CONTROL

Ambulance control rooms are known by different names in different parts of the UK:

- ambulance control
- emergency operations centres
- emergency dispatch centres
- clinical hubs
- clinical contact centres/CCC (as in Wales).

These centres traditionally had two main functions: **call taking** and **dispatch**.

Call takers (“call handlers”) answer 999 and urgent calls, prioritise them using an approved prioritisation system (Advanced Medical Priority Dispatch System (AMPDS) or NHS Pathways) and provide emergency advice to callers e.g. in delivering a baby or CPR.

Dispatchers (called “allocators” in Wales) allocate appropriate resources to calls, liaise with crews at scene and ensure an appropriate spread of emergency cover by available resources. Dispatchers can use Automated Vehicle Location System to determine the nearest resource to a call in real time.

Additionally, clinicians are based in most emergency control centres to deal with 999 calls by telephone, provide clinical advice to crews and arrange more appropriate clinical care for patients.

Specialist operations and HEMS desks oversee their respective resources and look out for particular jobs to send an air

ambulance or HART team to. HEMS desks are often manned by HEMS paramedics/practitioners so a clinician and dispatcher decision can be made on their allocation.

THE POLICE



EMS professionals in the UK inevitably end up working regularly with police forces, whose main priority is to **protect life**, followed by protecting property, followed by preserving order.

The UK has 45 Territorial police forces, plus 3 Special Police Forces (British Transport police, Civil Nuclear Constabulary and MOD police).

Each force consists of different departments including local policing, investigation, special operations and custody. There are 5 levels of medical training within the UK police forces:

1. Basic first aid (for all officers)
2. Emergency first aid at work (for all public facing officers)
3. First aid skills for custody
4. First Aid at Work Police (Higher level of first aid training)
5. Enhanced (Police medics who are often based with armed response units and are trained in trauma care, airway management, defibrillation etc.)

4. CLINICAL SNIPPETS

Primary Survey

- Make your first primary survey your best primary survey!
- Don't keep going back and forth to check: did you listen properly to the back of the chest? Are you sure there isn't abdominal tenderness?



Adult Cardiac Arrest

- With any patient in extremis or post arrest, think whether this patient is safe to transport in a helicopter: once strapped in they are difficult to access and chest compressions can't be started easily in the air.
- Optimisation for travel is essential.
- Even if the patient is unsuitable for transportation by helicopter, Critical Care Teams can provide value by providing “ground assist” i.e. the team travels in the back of the ambulance with the patient.

Paediatric Cardiac Arrest

- Check drug doses and volumes really carefully! With the pressure of the situation it's really easy to make a mistake.
- The JRCALC app and pocket book (carried by most paramedics in the UK) have ‘page for age’ sections with correct drug doses and volumes pre-calculated.
- Other apps are available, and your service may have its own app or aide memoir.

Traumatic Cardiac Arrest

- It can be a difficult decision which algorithm to go down: did the patient have a medical cardiac arrest and then fall or crash, or did the trauma cause the cardiac arrest?
- In a traumatic cardiac arrest, ventilation, volume replacement and chest decompression are important initial interventions.
- There is fairly robust evidence for resuscitative thoracotomy in penetrating traumatic cardiac arrest.
- The evidence for resuscitative thoracotomy is less robust in blunt trauma, but this may be considered within 10 minutes of cardiac arrest.
- One of the more difficult discussion topics was chest compressions during cardiac arrest: course participants discussed different approaches to dissuading members of the team, and their risk vs. benefit in a medical vs trauma cardiac arrest.

Traumatic CA if you can't do the advanced interventions: things to mentally prepare for

- Think about guidelines that you are working under. For example, JRCALC allows ALS, needle decompression and fluid resuscitation.
- For more advanced interventions, consider early activation of critical care resources (e.g. physician or CCP-staffed assets) or a quick scoop and run to the nearest hospital.
- Advanced interventions need to be performed within (very few) minutes of cardiac arrest to be of benefit, so time is of the essence.

Analgesia

- Remember splinting and non-pharmacological methods (e.g. femoral shaft fractures are less painful when reduced).
- Ketamine can be used between 0.1mg/kg and 0.5mg/kg for adjunct analgesia: know your local guidelines and SOPs.

Clinical snippets - continued

Maternal trauma

- Assume a shocked heavily pregnant patient with a rigid abdomen is bleeding.
- Extricate her as rapidly as possible and prepare to perform resuscitative hysterotomy if the patient has a cardiac arrest (if within scope of practice).

Spinal Cord Injury

- Should be treated as seriously as traumatic brain injury.
- Maintain the blood pressure, avoid hypoxia and work quickly.

Lacerations to the neck

- Airway and swelling should be monitored very carefully.
- Bleeding to the anterior neck (in zones I, II and III) can make airways significantly difficult to manage.
- Ensure the surgical airway kit is close to hand!

Maxillofacial trauma

- Maxillofacial injuries can bleed severely and cause airway compromise. In severe MaxFax trauma and where significant bleeding is present:
- Rapidly control the airway.
- Beware of the potential for the airway to be obtunded with sedation.
- RSI and ETT is safer for the airway.
- Following intubation, manually reduce fractures, apply nasal epistats, bite blocks and C-spine collar (in that order).

Chest trauma

- For decompression of the chest, finger thoracostomies are effective but the patient must first be receiving positive pressure ventilation

Gunshot wounds/blast injuries

- Scene safety is paramount.
- Look after your team; is it safe to approach?
- Ensure you're wearing PPE and police are informed.
- Use the 4 C's approach; Confirm, Clear, Cordon, Control.
- There is potential for patients to rapidly deteriorate following primary, secondary, tertiary and quaternary blast injury.
- Recheck dressings and tourniquets regularly to ensure continued haemorrhage control.

Limb Amputation

- In the event of ongoing patient deterioration or scene safety concerns, it may be necessary to amputate part of a limb to ensure the best care.
- This is a decision made with (if possible) top-down cover and by two experienced clinicians.
- Don't let the dramatic limb injury distract from a thorough primary survey.
- Amputation will generally be *in absolute extremis* where a patient is trapped and needs to be removed in order to save life.
- Fire crews carry tools which will do the job, but will be reluctant to use them on a limb... and reluctant to let you use them.
- The best compromise may be a hand saw from the fire appliance.

Pre-Hospital practicalities

- Create a designated area for 'kit dump': this should ideally allow you enough space around your patient to access them from all angles.
- Always think a few steps ahead.
- Make sure your kit isn't going to blow away - especially if working near helicopters!
- In the prehospital environment, you aren't just juggling clinical decisions. You also have to factor in logistics, egress, travel times, and where to take the patient (e.g. is going to a PCI centre more appropriate?) and sometimes whether the patient actually needs to go to hospital at all.

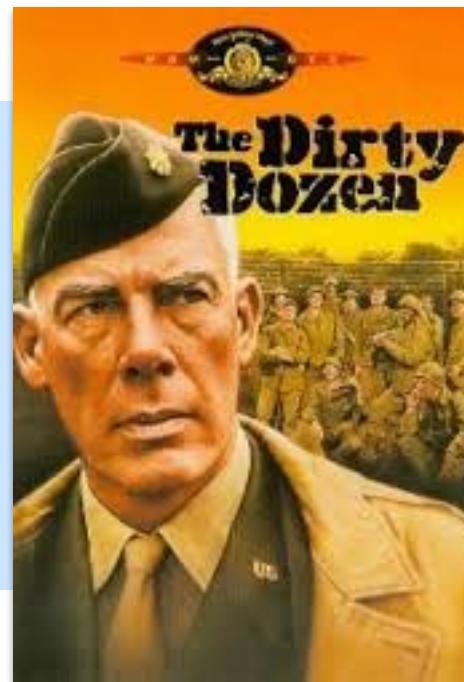


5. TEAM RESOURCE MANAGEMENT (aka Crew Resource Management)

During the course we found that although theoretical knowledge, technical skills and clinical judgement are really important aspects of PHEM, a detailed knowledge of **human factors** is vital to navigating the many risks that unpredictable teams and environments can throw up.

Humans are prone to committing unsafe acts. We need to be vigilant to avoid, trap and mitigate error. High reliability organisations undertake tens of thousands of high reliability operations per year with few errors (e.g. airlines, formula 1 pit crews etc). We should aim to operate in a similar way. By demonstrating hyper-vigilance we assume that the worst will happen so that we are prepared for adverse events.

The 'dirty dozen' are twelve common causes of adverse events:



The Human Factors Dirty Dozen

Too much...

- Distraction
- Complacency
- Fatigue
- Norms
- Pressure
- Stress

Too little...

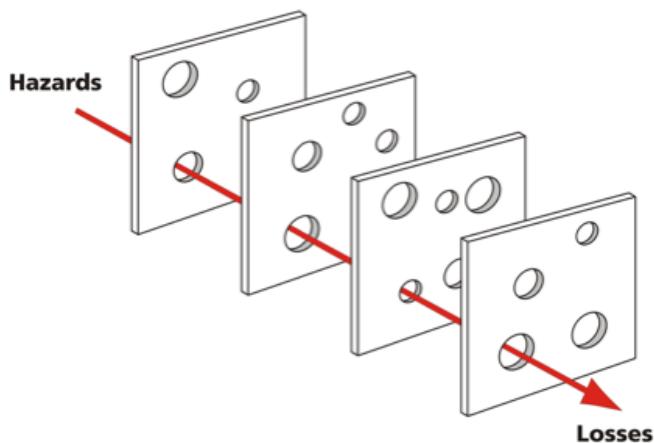
- Assertiveness
- Awareness
- Communication
- Knowledge
- Resources
- Teamwork

By being aware of this dirty dozen, we know what conditions can lead to errors happening, and work to actively avoid them.

Who's flying the plane?

Situational awareness is important in the prehospital environment. When focussed on a procedure etc, make sure someone is controlling the overall care of the patient and watching the monitor.

All of us have a limited mental bandwidth, and the need to assess a critically ill patient, manage a scene, control team members, concentrate on practical tasks and make decisions regarding transport can easily overload this bandwidth. The result can be getting distracted from keeping an overview of the patient's condition, so it is essential to delegate this task at times.



Most of us are aware of Reason's 'Swiss Cheese Model' (left) The dirty dozen are all ways to create holes in the cheese. Working at a prehospital scene can be fraught with these 'holes' and most of us could identify many of the dirty dozen creeping into our simulation scenarios.

6. PRACTICAL SKILLS

Catastrophic Haemorrhage

- Catastrophic haemorrhage should be treated in a stepwise manner.
- **Field dressings** are large pads with bandages (often elasticated) attached, and some types have plastic cups to apply pressure over a particular point.
- As always it's important to know the ones available in your kit and how to apply them quickly.
- If pressure isn't doing the trick, a **haemostatic gauze** such as Celox can be used. This is used to pack a cavity (not brain tissue, but everything else) and direct pressure then needs to be applied for 3 minutes.
- **Tourniquets** save life but can cause problems, and should only be used if bleeding is uncontrolled via other means.
- Don't be afraid to gain initial control with a tourniquet, then release it once an alternative solution is in place.
- There are a couple of different types available so be familiar with both.



Circulatory access & management of hypovolaemia

- **The intraosseous route** for circulatory access is very useful, but use the humeral intraosseous insertion site when possible: it is nearer the heart, has higher flow rates and is easily accessible, including when the patient is trapped.
- The humeral head and anterior tibia are both commonly used sites (in civilian HEMS helicopters, the left humerus is preferred incase of need for in-flight IO administration).
- Use **permissive hypotension** in trauma: a blood pressure of 80-90mmHg is acceptable. This prevents clot disruption and dilution of clotting factors.
- Exceptions include head and spinal injuries, where it is important to maintain a decent MAP.

RSI

- Optimise your position; you need 360 degree access.
- Don't perform RSI in the back of an ambulance!
- Have an RSI kit dump at the 'head end' with your assistant.
- If the sun is too bright, use an umbrella or create a shield/shadowed area to ensure that both patient & intubator are in the shade.
- Sometimes, the intubation is so urgent that there is no time for a full checklist: most services will have a reduced checklist of about 4 items to use in extremis.
- The decision to perform a paediatric RSI must be made with top cover approval (if time allows) and the checklist completed.

Surgical Airways

- Remember Difficult Airway Society (DAS) algorithms.
- Surgical airway (scalpel, dilators +/- finger, bougie, tube) is best for front of neck access.

Airway management
when you can't do the RSI:
decisions you need to
mentally prepare for

- Most paramedics, and some doctors in non-RSI assets, will be limited to profoundly unconscious/cardiac arrest patients to consider ETT, and needle cricothyroidotomy instead of surgical.
- If faced with a patient who really ought to be RSI'd, you will have to decide very quickly whether to request urgent support from another asset or service with RSI capability, or, to scoop and run to the nearest suitable ED (e.g. major trauma unit).
- There's no point in hanging around at scene waiting for HEMS back-up if you could be in a suitable ED resus room with a tube down before HEMS colleagues have arrived and done anything useful.

Splinting

Collars

- Reasons for application: apart from the obvious protection of a suspected C-spine injury, it is a large visual clue for staff that C-Spine precautions are in place, even if the indication for application is dubious.
- Make sure you know how to size cervical collars: measure in finger breadths the vertical distance between the top of the patient's trapezius and bottom of their jaw. Translate this onto the sizing system on the type of collar that you are using. Make sure you are familiar with the types of collar in use in your service. There are adjustable collars, or sets of fixed size collars. Common brands are Laerdal and Ambu.
- Become familiar with the FPHC consensus statements on spinal immobilisation.

Immobilisation Devices

Extrication boards (previously known as long spinal boards) are used to slide people onto for extrication purposes. They are no longer used to transport patients, so the patient should always be transferred onto another device.



Orthopaedic (scoop) stretchers divide into two, and can be placed under the patient one half at a time with minimal movement. Head blocks and straps can be attached for spinal immobilisation. They are more comfortable than extrication boards, but still carry a risk of pressure sores, so patients requiring transport over longer distances should be transferred onto a vacuum mattress.

Vacuum mattresses are made of plastic and filled with small beads. When air is evacuated from the mattress they become rigid. They provide good immobilisation and are more comfortable than a scoop stretcher. The scoop itself can be used to transfer a patient onto a vacuum mattress where necessary (don't forget your vacuum pump when running up the hill to the patient).

Pelvic splints

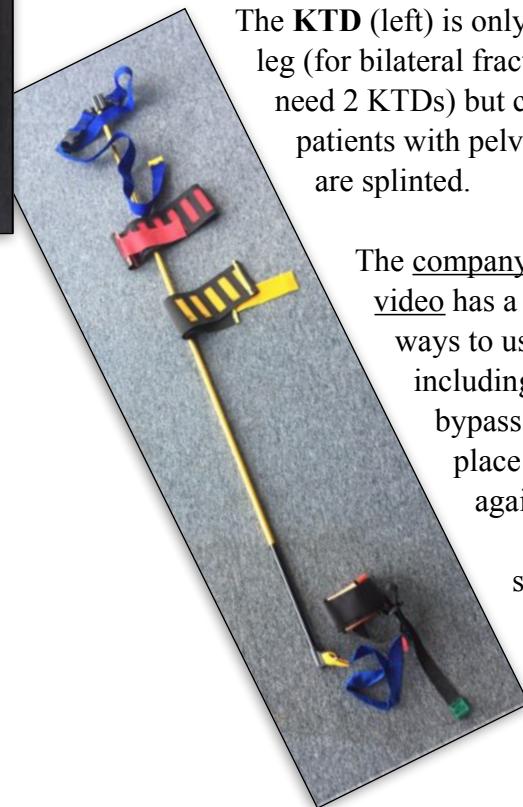
Pelvic splints should be applied where there is suspicion of a pelvic fracture through significant mechanism or the patient is unable to be evaluated safely i.e. intubated. They perform two roles: anatomical reduction and providing stability. Ensure you are comfortable with whichever device your service uses (common types are Sam Sling, T-Pod or Prometheus) and - once again - be familiar with the relevant FPHC consensus statement. Don't forget to correct vertical shear, and to bind the feet around the malleoli to help with the pelvic binding.



Femoral Traction splints

Common types are Sager or Kendrick Traction Device (KTD) and again it is important to be familiar with whichever device your service uses as they are all operated in different ways.

Femoral traction splints are used for mid-shaft femur fractures. The **Sager** can be used to apply traction to both legs at the same time, but cannot be used in patients with pelvic fractures.



The **KTD** (left) is only used on a single leg (for bilateral fractures you would need 2 KTDs) but can be used in patients with pelvic fractures who are splinted.

The company's instructional video has a host of different ways to use the KTD, including using two to bypass the pelvis and place the pressure against the axilla, and for splinting arm fractures!

Apply NOW for the Bangor Clinical Fellow posts

NHS Jobs: 050-ED-CF-11-16 ★ Closing date 30/11/16

MENU

A La carte menu for the perfect year out after ACCS ST/CT3 (any specialty)

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- Hill-walking, mountain-biking, rock-climbing & wonderful road cycling
- Sailing, kite-surfing, horse-riding
- Affordable house rental prices
- Flexible, annualised rota (LTFT very easily arranged)



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Medical Education

- Teaching practice with medical students, paramedic students, MSc students and junior colleagues
- Help develop our simulation programme
- PGCertMedEd fully funded for 12-month posts starting Aug/September



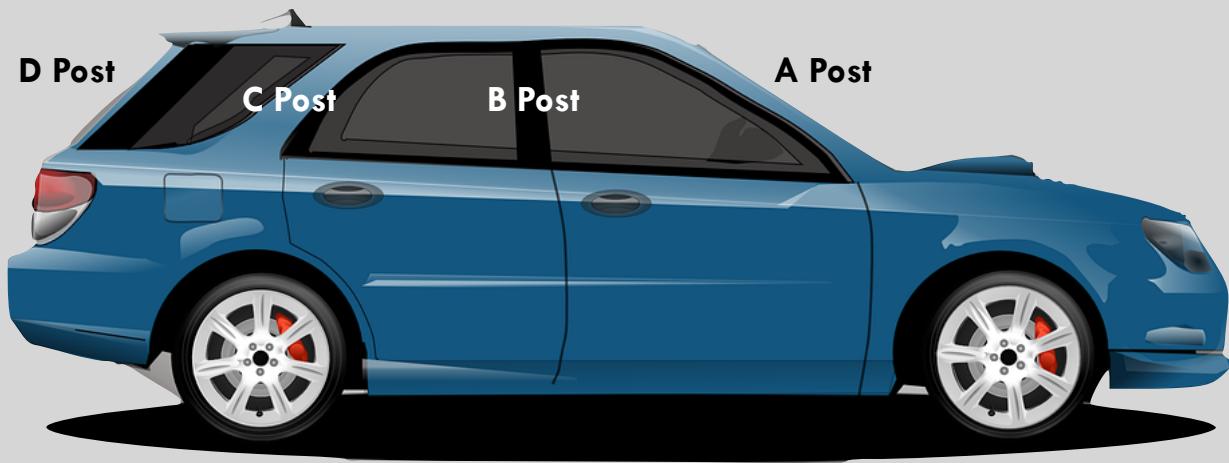
Management/Quality Improvement

- Dreading trying to populate your management portfolio whilst battling with FRCEM & the demands of ST4-6?
- Enjoy the luxury of 2 sessions a week (plus your SPA session) of tailor-made, supported activities and projects



7. EXTRICATION

Extrication terminology



A Plan: A controlled extrication where possible in the safest possible means

B Plan: If the patient needs to come out quicker due to their condition. i.e. a rapid extrication plan

If the patient's condition is **immediately life threatening**, the priority is to get the patient out as quickly as possible by whatever means.

Stages of extrication

Fire & Rescue Services in the UK have standard plans for extricating patients trapped in vehicles in a variety of positions. All their extrication plans follow a standard 6 staged approach:

1. Scene assessment and safety
2. Stabilisation and initial access
3. Glass management
4. Space creation
5. Full access
6. Immobilisation and casualty extrication techniques

Manual Handling

Prehospital work frequently involves manual handling.

Before undertaking manual handling, an assessment should be made of the following using the TILE approach:

- Task
- Individual
- Load
- Environment

Manual handling should follow these principles:

- Avoid
- Assess
- Reduce

Avoid manual handling where possible, where it is not possible assess using TILE, and reduce the risk to the minimum level, for example by splitting or modifying loads (e.g. adjusting rucksack straps), sharing the load between crew members, ensuring a comfortable working position and staying well hydrated.

Common extrication plans

The following photographs illustrate some of the common extrication plans used, depending on the position that the car is found in.

Upright car

The roof is removed and the patient pulled onto an extrication board then backwards out of the car.



Upside down car

Access is made through the boot and the casualty pulled out backwards on an extrication board.



Car on its side

Access is made by peeling back the roof and bringing the casualty out on an extrication board through the space created in the roof.



8. SAFETY IN HAZARDOUS SCENES

Working in prehospital teams can mean being sent to patients who are trapped in a variety of hazardous situations. The UK has a network of Hazardous Area Response Teams (HART) based at strategic locations. These teams are experts at operating in dangerous environments and should be requested to attend incidents where patients are trapped in hazardous areas. During the course we were put through simulation scenarios underneath trains, at the top of towers, in collapsed buildings and confined spaces. Here are our tips to keep yourself safe:

Working at height

- Always use harnesses and helmets and follow training.
- Often best left to the HART team (or other specialised rescue assets) if you haven't been trained in the safety procedures.



House fires

- Never enter a burning building (don't be drawn in by the shouting casualty)
- Treat smoke as a 'flammable vapours' which have the potential to ignite at any time
- Stay at least 10m away from burning buildings and liaise with the fire brigade
- Beware of need for early intubation in patients with potential airway burns.



Confined spaces

- All confined spaces are potentially hazardous low oxygen environments.
- Do not enter, *no matter the urgency*, until the fire service or HART have attended, with gas monitoring equipment and breathing apparatus.
- Often the confined space will need to be vented by the fire service to make the area safe.
- Don't send in a team mate as a canary, they risk becoming another casualty!



Railways

- Contact the Railways Incident Officer (RIO) prior to your approach.
- They offer advice on the line i.e. stop train flow, ensure power is ‘turned off’ and that it is safe to approach. Some lines may have a third electrified rail or overhead power lines: ensure these have been turned off prior to approach.
- Avoid walking on the metal railway line or the wooden sleepers as they can be very slippery.
- The best place to cross the track is on the ballast (stones) in-between the sleepers.
- When travelling along the railway line, the safest passage is via the “cess” or the grassy area at the side of the track (if a train is coming you should be safe there).



Chemical incidents

- Hazard warning signs should be displayed on lorries/trains carrying chemicals: these give an indication of what is being carried and the type of hazard.
- Fire control have access to expert advice on precautions needed.
- Product data sheets should also be available wherever chemicals are in use.
- Until you are sure what you are dealing with, stand upwind and well away from the hazard.
- Beware of chemicals in garden sheds or being transported in unmarked vans in smaller quantities (they may be transported without the appropriate paperwork or warnings)
- Your face mask is not a Self Contained Breathing Apparatus - don't approach without knowing that it's safe!



When it is easier to go up than down...



Photo: RAF SARF

Sea King approaching Warwick Castle to winch out a patient from top of the castle tower

In tall historic buildings with no lifts (e.g. castles) or locations inaccessible on foot, don't forget about the option of requesting assistance from a SAR Helicopter with winch (hoist) capability. They can reach anywhere in the UK within an hour of being requested: they aren't confined to boats and mountains!



Photo: Abersoch RNLI

Preparing to winch casualty out of riverbed below the bridge in Abersoch, North Wales

Applications now open for the famous Bangor ED Clinical Fellow posts: Emergency Medicine with a choice of 20% playtime in Pre-Hospital EM (we accept PHEM beginners), MedEd or Management/QI. Or you can mix 'n' match.

Wanna make a start in PHEM?

Our Clinical Fellows send their friends to us, ask to stay longer, and return as HSTs or consultants: we're probably are the UK ED with the happy "problem" of too many middle grade doctors rather than too few!

We offer fab jobs in a friendly small DGH ED (50k/yr) with a fantastic case-mix, including major trauma.

North West Wales is a great place to live, with Snowdonia & the beaches of Anglesey on the doorstep, yet only one hour from Chester/M6 or three hours by train to London. If you're looking for a fun, CV-enhancing "year out" after ACCS then visit our website and call us for a chat to find out more.

- Apply now for starting dates between Aug 2017 and August 2018 (flexible start dates available)
- 12-month posts, open to post-ACCS trainees of all specialties, or applicants with equivalent experience
- 6-month accelerated option for EM trainees, who can pick anything from 6 to 12 months
- PHEM posts include Helimed shifts (and we'll fully fund a PHEM course for 12-month posts, such as this ICBTPHEM Induction, ATACC or PHTLS)
- MedEd posts include a fully funded PGCertMedEd for 12-month posts.

Tweet - @mmbangor

Email - Linda.Dykes@wales.nhs.uk

Tel - 01248 384003 & ask for Helen Salter, Pete Williams or Rich Griffiths (EM Consultants)



*Applications now open
on NHS Jobs*

Ref 050-ED-CF-11-16

Closes 30th November 2016

Hospital name is Ysbyty Gwynedd,
Bangor, Gwynedd

www.mountainmedicine.co.uk

9. MAJOR INCIDENTS

- Major Incident planning and management is governed by the Civil Contingencies Act.
- Category One responders (i.e. police, fire, NHS) need to prepare and plan based on local risks as per the community risk register.
- Make sure you know what is likely to happen in your local area.
- Where are major transport hubs, chemical sites, military bases etc?

Major incidents by their very nature can be chaotic. It is imperative to attempt to bring order to the chaos by using a CSCATT approach:

Command & Control

Safety

Communication

Assessment

Triage

Treatment

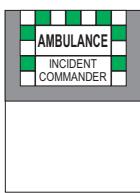
Transport

Command & Control

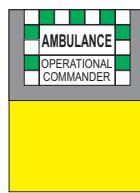
- Co-ordinate walking people into one space
- Create cordons with police tape
- Identify a leader and use tabards to identify them
- Make contact with the commanders from the other emergency services
- If you are on scene in the immediate after-effects of the incident it may be too hyperacute to gain any control: stick to the CSCATT principles to establish some order.
- The Joint Emergency Services Interoperability Programme (JESIP) was established in 2012 to streamline work between the emergency services.

Who's who? Tabards at major incident scenes

Tactical Commander (Ambulance Incident Commander)
White lower half with green & white checked shoulders.



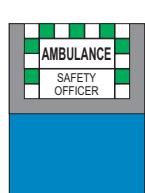
Ambulance Operational Commander and any functional role not individually listed
Saturn yellow lower half and green & white checked shoulders.
Insert as per role.



Airwave Tactical Advisor
Green & white check



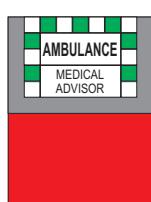
Ambulance Safety Officer (ASO)
Blue lower half with green & white checked shoulders.



Decontamination Officer
Purple lower half with green & white checked shoulders.



Doctor
Red lower half with green & white checked shoulders.



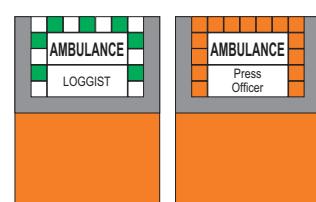
Strategic Advisor, Tactical Advisor or National Inter-Agency Liaison Officer (NILO)
Green lower half with green & white checked shoulders.
Insert as per role



Ambulance Entry Control Officer (ECO)
Green & yellow all over check.



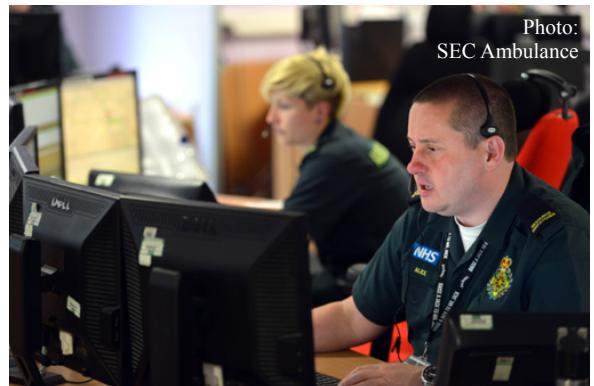
Logist
Orange lower half and green & white checked shoulders. All orange is any support function.



Communication

After a very brief assessment of the situation, provide a METHANE report to ambulance control:

- Major incident declared
- Exact location
- Type of incident
- Hazards
- Access and egress
- Number and type of casualties

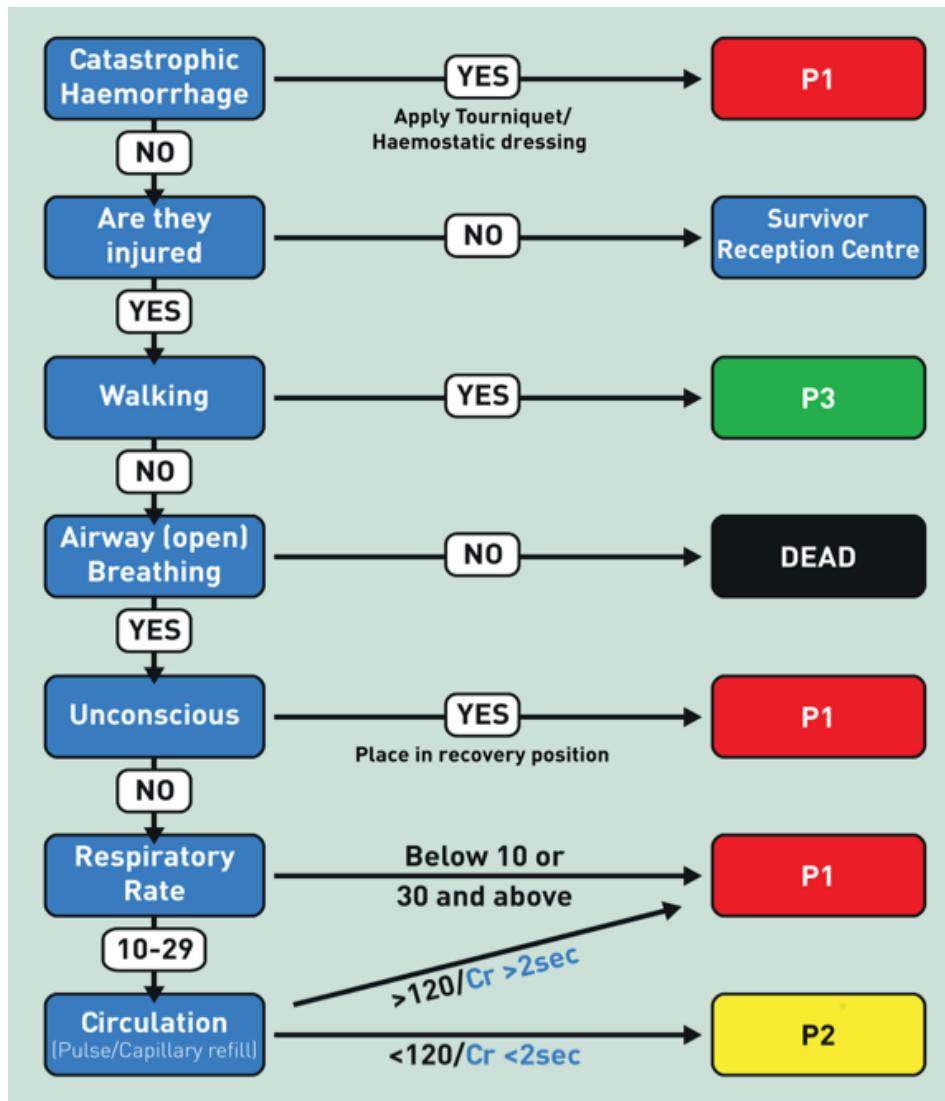


Triage

- Carry out simple interventions only, e.g. tourniquets, haemostatic dressings, OP airways, placing patients in the recovery position.
- Use the NARU **triage sieve** (below) to triage patients into P1, P2, P3 and Dead to determine treatment and extrication priority.
- Use a more detailed **triage sort** at the casualty clearing station to determine transport priority.

Further reading

The National Ambulance Resilience Unit (NARU) website has loads of useful information about major incident management and some e-learning modules www.naru.org.uk and also visit the JESIP website - www.jesip.org.uk



Triage Sieve example

ABOUT THE COURSE

IBTPHEM Induction Course

Cost: £1800
Location: Fire Service College, Moreton-in-Gloucestershire
Marsh, Gloucestershire
Duration: 7 days in early August

The IBTPHEM national induction course is the annual induction course for trainees beginning PHEM subspecialty training. August 2016 was the first year that it had been opened up to non-trainees (including doctors at ST4 level and above, nurses and paramedics).

The course included ensuite accommodation in individual rooms, and all meals are provided. Simulations were provided on the incident ground at the Fire Service College. This provided a unique, fully immersive environment to train in, with the benefit of fire service personnel to take part in the scenarios too.

The course faculty were all highly experienced PHEM personnel, involved in teaching on the PHEM programme throughout the UK. They were all very open to questions, and gave very supportive feedback following scenarios. The course was arranged with 2 days of lectures and skill stations followed by 3 days of fully immersive scenarios and 1 day of major incident training.

As Bangor ED Clinical Fellows doing the PHEM option, a PHEM course is included in the package and work paid for us to go: the 2 of us attended this one, and other Fellows are going to other PHEM courses, such as ATACC and PHTLS.

Our ratings:



Facilities



Food



Accommodation



Teaching

Overall



Fantastic

ABOUT THE REPORTERS

Daniel Sedgewick - @DanielSedgewick



Daniel graduated from Southampton Medical School in 2011. After foundation training and the first half of emergency medicine training in the South of England, he moved to Bangor to take up the EM/PHEM Clinical Fellow post in August 2016 whilst on OOPE from the Oxford Deanery.

Prior to, and during, medical school, Daniel worked as a call taker and dispatcher in ambulance control. He is interested in all things prehospital, both clinically and service design/delivery. His favourite areas of the emergency department are resuscitation and paediatrics.

Nicki Pollard



Nicki completed her foundation years and ACCS Emergency Medicine training in West Yorkshire after graduating from Leeds Medical School in 2011.

The calling of the Welsh hills tempted her across the Pennines to become a Bangor ED Clinical Fellow in EM/PHEM 2016-2017 whilst on a mixture of OOPE/OOPT from the Yorkshire Deanery.

Linda Dykes - @mmbangor



Linda came up with the idea of reporting conferences like this, and “encourages” her trainees to participate when they have been somewhere good on study leave! 😊

Linda graduated from Newcastle Medical School in 1996. She trained in Emergency Medicine in the Northern & Mersey Deaneries, and in General Practice in North Wales. She has been a Consultant in Emergency Medicine since 2005 in Bangor in North Wales, and is perhaps best known for devising the hugely successful Clinical Fellow programme that has led to Bangor ED having the happy “problem” of too many doctors rather than too few.

Linda is currently seconded to Community COTE and GP. She is also the Clinical Lead (EM) for NHS 111 Wales, and prior to her current secondment spent two years working two sessions a week in the Welsh Ambulance North Control Room: she enjoys a portfolio career and moving closer to her ideal job combining EM plus EMS/primary care interface, and teaching! Linda’s research interest is Mountain Medicine (she is Director of the Bangor Mountain Medicine project) & she particularly enjoys teaching medical students and paramedics.

The last page...

THE END

That's it folks - the end of our unofficial report of the 2016 IBTPHEM Induction Course. Please tell us what you thought of what we've produced: firstly, it's all good fodder for our appraisal/revalidation folders but much more importantly, we also need to know if we have any corrections to make!

if you have any feedback/suggestions please email Linda.Dykes@wales.nhs.uk or contact us via Twitter at [@mmbangor](https://twitter.com/mmbangor).

And if you are on Twitter or Facebook and enjoyed the report, please, please help to disseminate the link to it... this is an all-volunteer production, and many dozens of hours of precious and scarce free time have been donated by the reporting team and designer/editor to bring this to you. Seeing the number of hits rack up makes it all worth it. And finally, do bear in mind that the team who produced this are all healthcare workers, definitely not professional journalists and designers!

Please feel free to share this document widely, in the spirit of #FOAMED & #FOAMems, but it may not be used for commercial purposes without our express consent.

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Please help us fundraise for the Tusk Trust

This report hasn't cost you anything.

If you have found it useful, please could you make a donation to the Tusk Trust, a wonderful charity dedicated to protecting rhino and elephant populations endangered by poaching and the greed for rhino horn and ivory?

We have donated many hours of our time to preparing this report for you, and this is a way of enabling us to fund-raise whilst helping you.

If everyone who reads this report donates even £1/\$1 we could raise a substantial amount of money.

[You can visit our Just Giving page by clicking here.](#)

