AWSEM NEWS

All Wales School of Emergency Medicine

Welcome to the first AWSEM newsletter!

The All Wales School of Emergency Medicine was set up in 2010, and is one of 20 regional schools of EM throughout the UK. This is the first AWSEM newsletter, based upon the educational & clinical governance contents of the highly successful Emergency Department newsletter produced by Ysbyty Gwynedd in Bangor. It will be distributed around Wales, either as a stand-alone publication or incorporated into local ED newsletters, and will provide an opportunity for ED staff across the country to contribute. In the meantime, this issue is brought to you mainly courtesy of Bangor & Bridgend!

AWSEM: Who's Who

HEAD OF SCHOOL
Sarah Spencer - sarah@awsem.org.uk

TRAINING PROGRAMME DIRECTOR
Amanda Farrow - amanda@awsem.org.uk

CAREERS LEAD
Linda Dykes - linda@awsem.org.uk

ACADEMIC LEAD
Adrian Evans - phillip.evans2@wales.nhs.uk

LTFT TRAINING LEAD
Jane Gwilliam - jane.gwilliam@wales.nhs.uk

PAEDS EM LEAD
Kirsty Dickson-Jardine - kirsty.dicksonjardine@wales.nhs.uk

ULTRASOUND LEADS
North: Hywel Hughes (Wrexham) hywel.hughes@wales.nhs.uk supported by Rob Perry (Bangor) rob.perry@wales.nhs.uk
South: Mike Obiako (Merthyr) michael.obiako@wales.nhs.uk supported by Sarah Shewring (Bridgend) sarah.shewring@wales.nhs.uk

SIMULATION LEAD
Fiona Rae
fiona.rae@wales.nhs.uk

SAS/NCCG LEAD
Ryan Hobbs - ryan.hobbs@wales.nhs.uk

CHAIR OF CEM WELSH BOARD
Aruni Sen - aruni.sen@wales.nhs.uk

COLLEGE TUTORS

Cardiff & Vale University LHB
Zareena Jedaar
zareena.jedaar@wales.nhs.uk

Aneurin Bevan LHB
Francis Richardson (Newport)
francis.richardson@wales.nhs.uk

Abertawe Bro Morgannwg University LHB
Amanda Farrow (Bridgend) (currently fulfilling this role in addition to TPD)
amanda@awsem.org.uk

Cwm Taf LHB
Michael Obiako (Merthyr)
michael.obiako@wales.nhs.uk

Hywel Dda LHB
Jeremy Williams (Carmarthen)
jeremy.williams@wales.nhs.uk

Betsi Cadwaladr University LHB
Robin Roop (Wrexham)
robin.roop@wales.nhs.uk

SPECIALTY MANAGER (ACCS/EM)
Lisa Bassett
bassetl@cardiff.ac.uk

Sarah Spencer's Secretary
Kate Graham
kate.graham@wales.nhs.uk

CONTENTS

- Conference Reports
- CRASH 2 & Tranexamic Acid in trauma
- Clotting Factors in ED
- Workplace Based Assessments
- Changes to the Resus Guidelines
- The Emergency Airway course
- Learning Tale
- Posters from Wales presented at CEM

An AWSEM Technical Bulletin

CONTRIBUTIONS: PLEEEEEEEEASE!!!

Please help make AWSEM News a success!

Contributions (and/or ideas!) to sarah@awsem.org.uk or linda@awsem.org.uk

CONFERENCE REPORTS

COLLEGE OF EMERGENCY MEDICINE ANNUAL CONFERENCE

13-15th September 2010, Birmingham

"Learning from Each Other": Civilian & Military Emergency Care

Report by Dr Sarah Spencer (Bridgend) & Dr Linda Dykes (Bangor)

BLOOD, GUTS, GORE (& GREAT FOOD!).....

Every conference has a unique feel to it, and a conference hosted by our military EM colleagues was always going to be a bit different…

However it was pretty unique experience to be waiting in the queue for the particularly delicious lunch chatting with someone covered in "blood", missing both legs and with strands of charred "flesh" dangling from their stumps, accompanied by the sound of machine-gun fire from the mezzanine level!

Army, RAF & navy medics - coupled with "Amputees in Action" - certainly provided some thought provoking material.

" Seniority Saves Lives" was a theme of the conference, although "experience saves lives" may be more accurate… all care being consultant delivered (or at least consultant-supervised) is saving lives in Camp Bastion and would have the same impact in the NHS, and it is something we must aspire to.. it is about rapidity of decision-making.

As expected, hypotensive resuscitation, the management of massive haemorrhage, the use of tourniquets & the "right turn" (skip resus and go straight to theatre for operative resuscitation with the most critically injured.. so called because the operating theatres in Bastion are a "right turn" on entering the facility) featured heavily, but so it should… the experiences of military medics in Iraq & Afghanistan has already revolutionised how we treat major trauma in the UK, particularly the early and aggressive use of blood products.

The current injury patterns being caused by Improvised Explosive Devices (IEDs) were deeply sobering…. apparently, in the early days of the Afghanistan conflict, the IEDs would only blow feet off, but now they are so powerful they are blowing off entire lower limbs and causing horrific open-book pelvic fractures.

The use of whole-body CT scanning was advocated (in any patient who could possibly have it - even if unstable)… trauma gurus are trying to get away from the old saying of the CT being the "donut of death" - the argument being if you don't know what is going on, how can you possibly prioritise management decisions with any logic? CT scanners are very quick now, and we ought to make earlier and better use of them, although patient outcome and delays to CT still requires evaluation.

There was a Simulation track on the first afternoon, which provided interesting fodder…. Bob Stone's talk on simulation innovation made clear it is all about psychology… "high fidelity" simulation is all well and good but until we have a holodeck, it's not going to work as we would like. "Psychological fidelity" describes what's needed, and also explains that inappropriate fidelity can distract - who hasn't laughed at SimMan's inflating tongue (anaphylaxis) or blue LEDs in corner of the mouth (cyanosis)?

Overheard at CEM 2010….

"Phwoarrr, have you seen the Danish army officers?"

"If I hear the word 'deploy' one more time I'm going to commit murder"

"The [British] army docs look like they've escaped from the set of "Blackadder Goes Forth…."

"Why are some of the senior bods wearing gold toilet chains?"

An AWSEM Technical Bulletin

There were several table-top exercises, workshops & demos of varying successes…

The mock-up of a field hospital resus room (above) was position in the middle of the trade stand hall, and it was pretty cool (we particularly liked the "casualty's" fake blood eye drops, and he did do good blood-curdling screams) though this was slightly distracting whilst window shopping for new toys for the ED!

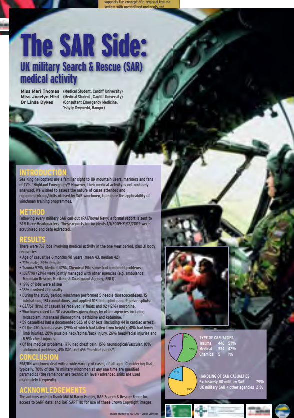
The big surprise was the scaled-down Chinook helicopter body, where demo-simulations of a MERT team evacuation was taking place (above).

There were some good workshops on tabletop exercises - we liked the extended major incident tabletop particularly, revising and applying the MIMMS principles (Major Incident Medical Management & Support) with the scenario of a helicopter crash at an Afghanistan aid post, near a village and "oh by the way there're a sniper trying to kill you 500m away…"

An over-riding message was that we need to run simulation training days for teams, rather than per speciality - training with the people we work

alongside in the real world to improve our team working & clinical effectiveness.

As is customary at CEM conferences, there was a very strong showing from Wales (especially Bangor!) in the poster presentation section, ranging from Dr Rob Perry's study of equestrian-related injuries presenting to Bangor ED (above) to multiple posters from the Bangor Mountain Medicine project, two of which are seen here.



Sarah's thoughts on the Free Paper sessions…..

Lynsey Flowerdew presented an interesting introduction to the assessment of non-technical skills in the ED. Unfortunately the brevity meant that it was lacking some detail which I would have liked – but I'm going to email her at some point to ask for more info.

The "integrated emergency care reduces hospital admissions and reduces in-hospital mortality" talk threw up more questions than it answered for me – we run a similar system in Bridgend but it seems that **Adrian Boyle** didn't have the answers either.

Very interesting to listen to **Chris Turner** (ED Consultant in Stafford, appointed after the enquiry *[into excess deaths at that hospital]* but before the publication of the formal enquiry report) talk about mortality reporting and how they did it (without kow-towing to the audit dragons who wanted to make it so much more complicated). Clearly an important piece of work given the place he worked – and fascinating to hear about some of the problems they faced in Stafford at that time.

THE VERDICT: Good Bits

Really well organised
Really good food
Thought provoking content
Super venue
Lots of posters from Welsh EDs!

But we'd have to say….

Signposting could have been better (very few delegates browsed the posters which is a dreadful shame)

We were slightly startled by a 45 minute bagpipe band session!

EMSWORLD EXPO
Formerly Known as EMS EXPO

EMERGENCY MEDICAL SERVICES CONFERENCE
29 Sept-1 Oct, Dallas, Texas, USA

Report by Dr Linda Dykes (Bangor)
don't get jealous, the trip was self-funded!

SEX & RESUSCITATION……

No kidding, that was the title of the opening plenary session of the EMS Expo!

Attracted by a specific "Educator Stream" I decided to precede a US holiday with a trip to Dallas to the biggest EMS conference in the USA.

So after the Star-Spangled Banner (sung unaccompanied by a Texas fire chief with a stunning tenor voice…. although the listening audience looked disturbingly like they were having a mass MI as they placed their hands over their hearts!), a march-thru the hall by a Texas fire department pipe band (what *is* it about 2010 emergency medicine conferences and pipe bands?!), and a genuinely moving audio-visual memorial to the dozens of American EMS personnel killed in the line of duty in the preceding year, the conference began.

So, back to the sex. It was actually a talk about the growing suspicion that sex hormones may have a role to play in treating cardiac arrest and major trauma patients…

"Resuscitative Endocrinology". In a large series of out of hospital cardiac arrests, females did better than males despite being older and much less likely to have been in VF/VT, most strikingly in the under 50s where 28% survived… even in the asystole group, 20% of the women under 50 years survived.

And there's a suggestion that oestrogen may be neuroprotective: in males with severe traumatic brain injury (TBI), outcome was better in those with higher oestrogen levels in CSF, and there's some animal work to suggest that oestrogen infusion can protect against brain damage from stroke.

So, with oestrogen having anti-inflammatory, anti-oxidant & anti-apoptosis effects.. on any cell in the body… could it be used therapeutically?

It's possible…. two RCTs are already underway in Texas, one assessing the effects of a 0.5mg/kg IV dose of Premarin in TBI and the other in traumatic haemorrhagic shock. The trials are outlined at http://clinicaltrials.gov/ct2/show/NCT00973102

> **THE VERDICT:**
>
> **The Good Bits**
>
> Really well organised
> Some brilliantly presented sessions
> Some revelationary content
> Lots of firemen!!! :-)
>
> **But I'd have to say….**
>
> No refreshments, no lunch, and the only choice of eateries was deep fried everything...
>
> Delegate badge were barcode-scanned every session (for a personalised CPD certificate)…. great idea.but couldn't they set it to silent? It "bonged" every time… hundreds of times for each session as people entered the room….

In a talk on **NSTEMI** I was fascinated to learn that the Americans prefer fentanyl to morphine (they don't have diamorphine available) in cardiac chest pain, as it causes less reduction in pre-load than morphine… might make a nice CTR topic?

Ever struggled to get a **decent ECG** on a patient pouring sweat in resus? Tops tips were to try Tincture of Benzoin to help the electrodes adhere, and try just rubbing the skin - firmly - with dry 4x4 swabs, which remove dead skin and also slightly abrade the skin.

An interactive session on the **obstructed airway** brought home one top tip: after looking in the airway, suction with something wide bore (they suggested cutting an ETT above the cuff) before ventilating.. graphically illustrated by a PM photo of a glove, inhaled by a demented nursing home resident, that lay in the trachea with a finger down each main bronchus.

Bearing in mind this conference took place a fortnight before the new ALS guidelines were released across the world, there was lots of speculation and much talk of **compression-only CPR**, with some urban pre-hospital systems reporting impressive improvements in survival-to-discharge (e.g. 4.7% to 17.6% in out-of-hospital cardiac arrests with definite VF) by forgetting about ventilation and concentrating uninterrupted compressions. The sound-bites were impressive, although probably rather simplistic:

- "Compression-only CPR allows CO2 to rise, which encourages gasping, which is a *whole* lot better than IPPV…"
- "You don't need 5 litres/ minute ventilation in cardiac arrest, ventilation is proportional to flow and you ain't got much flow!.."
- "the pO2 of venous blood is the same as the pO2 of arterial blood at the top of Kilimanjaro, and that's enough to live on…"

A speaker from Tucson claimed that their survival rates from out-of-hospital CA had increased to 38% by doing compression-only CPR for the first four cycles (but using an OPA +/- one or even two NPA, and applying an oxygen face mask) - I'm guessing once again in an urban system where four cycles would get you to the ER, and with

a figure of 38% I doubt they defined "survivor" as surviving at 30 days… but let's not be churlish, the take-home message was very much that concentrating on uninterrupted chest compressions pays dividends (and if we managed to get an output back on 38% of our out of hospital cardiac arrests in Bangor I'd be very happy).

"Man versus Machine" was a graphic, entertaining and gruesome talk about the dangers of farm machinery in a country that isn't too hot on health & safety legislation - gross, but fascinating. Did you know that tractor rollovers are the leading cause of farm deaths in the USA? Or to carefully check the joints more proximal to an extremity that has been caught in machinery?

"Drugs on the street where you live" was another cracker… starting off with Cocaine, used since the 6th century when workers were given a handful of coca leaves to reduce hunger, increase activity, increase tolerance to heat or cold and produce euphoria…. just what we need in the NHS perhaps? *"… you'd eat less and work more in crappy circumstances and you'd like it"*!

"Dopamine turns an idea into an event…."

The section on crystal meth was particularly interesting, as I found I knew hardly anything about it, but by considering the physiological effects of cocaine, amphetamines and methamphetamine together, it didn't seem quite so alien after all… all cause dopamine depletion, increase cholinesterase activity, cause CNS overstimulation and have a variable effect on BP.

Still, I had no idea that a cardiac arrest caused by these drugs could be almost impossible to treat - even with optimal and immediate resuscitation efforts in hospital. It's because the calcium channels stop working in the myocardium, they nickname it "stone heart".

PCP - phencyclidine or "Angel Dust" - sounds like nasty stuff, and the speaker emphasised the potential for unpredictable, sudden extreme violence - "Tie them up… you *must* restrain them…"

"Agitation is chasing you round the ambulance, violence is if they catch you…"

After a canter through ecstasy, ketamine, LSD and magic mushrooms, the talk wrapped up with glue/solvent sniffing (did you know aerosol whipped cream can be abused??) with the cheerful thought that there's a 22% fatality rate in naive users… these drugs increase cardiac sensitivity to adrenaline and strenuous exercise or emotional stress can precipitate cardiac arrest.

Talks on **Crush injury** ("usually takes 4-6 hours to become a problem, but can be in as little as one hour if a big enough crushing force against a hard surface") and the continuing debate on **pre-hospital airway management** were interesting, but not much new.

"Reperfusion injury is a bit like a metabolic backdraft… remember the movie??.. when half-burned stuff is suddenly exposed to oxygen…."

For me, however, the whole reason I attended the event was for the educator stream and I was inspired by two talks in particular, both by Heather Davis of UCLA.

"Active Disengagement" outlined strategies to best work with students who aren't exactly disruptive, but aren't playing ball either. As well as various strategies to encourage engagement (see box), the importance of it was described:

- If you don't make students play, they rate classes lower (because they leave the room as they came in)
- Engaged students perform 20% better and waster less time
- Engaged students are less stressed, cause fewer problems and are more satisfied.

However, I'm not sure how many British students would welcome peer review by having class-mates vote regularly for "which three people in this class do you hope never to work with?"!!

Encouraging Engagement

- Measure progress ("it's like having a cop car on your tailgate - you suddenly drive better!)"
- Make sure skill stations are all signed up - the disengaged student will try not to play
- People want to belong to something bigger than themselves - give our students some ideals to strive towards
- Ask students what grades they want… and bear in mind they should be working harder than you!
- Set expectations high
- Participation contracts - and known consequences

Finally, **"Alternatives to lecturing"** was full of great ideas for workshop-based material and quick-to-run exercises based on sound learning theory.

In summary? Three days of 10-hour a day conference is pretty tough when jet-lagged but what a bargain conference fee - under £160. Shame that the conference hotel - the stunning Dallas Hyatt Regency - was an eye-watering £200 per night!

CRASH-2

CRASH-2: a brief critical appraisal in the style of the FCEM exam

Dr Sarah Spencer, Consultant in EM, Bridgend

Some specialities are awash with good-quality randomised controlled trials (RCTs) but in Emergency Medicine, top-quality trial data is quite hard to come by - which is why, when a major trial reports, it's something we should take notice of. Firstly, because the results may change our clinical practice (and CRASH-2 will)… and secondly because EM trainees have to critically appraise a paper as part of their exit exam, the FCEM. We asked Sarah Spencer, the Head of AWSEM, to appraise the CRASH-2 trial in an abbreviated version of the current format of the FCEM exam...

"Effects of tranexamic acid on death, vascular occlusive events, and blood transfusion in trauma patients with significant haemorrhage (CRASH-2): a randomised, placebo-controlled trial"

1. ***Provide no more than 200 word summary of this paper in the box. Only the first 200 words will be considered and short bullet points are acceptable.***

Objective: to assess the effects of early administration of a short course of tranexamic acid on death, vascular occlusive events and the receipt of blood transfusion in trauma patients.

Method: a randomised, double-blind placebo-controlled trial conducted in 274 hospitals in 40 countries. Patients were eligible if they were within eight hours of injury and showing signs of, or suspected to be at high risk of, significant haemorrhage. Included patients were randomised to receive either tranexamic acid (1g over 10 minutes and a further 1g over 8 hours) or a placebo. Block randomisation (block size eight) was achieved using computer generated random numbers. The primary outcome was death in hospital within 4 weeks of injury.

Results: Results were analysed for 20127 (99.6% of those randomised). 10060 received tranexamic acid and 10067 received placebo. Both all-cause mortality and death due to bleeding were significantly reduced with tranexamic acid. The relative risk of death with tranexamic acid was 0.91 (0.85-0.97, p=0.0035); death due to bleeding was 0.85 (0.76-0.96, p=0.0077)

Conclusion: Tranexamic acid reduced the risk of death in trauma patients showing signs of, or suspected to be at risk of, significant haemorrhage and should be considered for all such patients.

2. ***List FOUR strengths of the study design in this paper.***

   i. The randomisation was block randomisation which helps ensure near equal numbers in the treatment arm as in the placebo arm.

   ii. The blinding was excellent, achieving placebo and tranexamic acid ampoules which were indistinguishable and keeping participating clinicians unaware of treatment allocation.

   iii. Analysis was done on an 'intention to treat' basis which reduces the risk of bias due to drop-out or non-adherence to protocol.

   iv. The inclusion criteria were kept simple without lengthy accompanying exclusions: this makes the trial practicality straightforward, less prone to drop out or inappropriate inclusion or exclusion and produced pragmatic results.

3. ***Describe TWO possible improvements to this paper.***

   i. Measurement of fibrinolytic activity (the reduction of this by tranexamic acid is thought to be the reason for its apparent benefit in this trial) may clarify the mechanism responsible for the improved mortality – and could inform further research into the best doses to use.

   ii. Among the 'outcome measures' the authors mention measures of dependency being made at hospital discharge or on day 28 – using the Modified Oxford Handicap Scale. There is no further mention of this outcome measure at any point in the results or discussion: either there should be or it should be omitted.

4. ***Will you give your next significantly bleeding (or suspected to be significantly bleeding) trauma patient tranexamic acid?***

YES! Intravenous tranexamic acid – 1 gram over 10 minutes, another gram over 8 hours.

The pragmatic study population and huge sample size support the 'generalisability' of CRASH-2 so I can apply it to my local population.

With an NNT (Number Needed to Treat) of 67.6 (to prevent a death) I'll have to give a lot of tranexamic acid… but there was no apparent increase in adverse events so the NNH (Number Needed to Harm) could be reasonably expected to be very very high. Tranexamic acid is pretty cheap – even at BNF prices with a per-patient cost of £6.20 it's only £419.12 to save a life… which is a bit of a bargain.

Download a pdf of the full paper, and read more about the trial, at www.crash2.lshtm.ac.uk/

In case you were wondering…. CRASH-2 didn't show any reduction in the need for blood transfusion in trauma. This may be partly because it's only survivors who need blood transfusions….. those who die, cease needing blood. Read the discussion section of the paper and see what you think.

Implementing CRASH-2:

Who gets it? - All major trauma patients who are - or who might be - "at risk of significant haemorrhage". The triallists defined this as: "Patients with major trauma who are likely to need an early blood transfusion in the view of the attending doctor after taking into account mechanism of injury, findings from secondary survey, physiology and response to fluid infusion." In other words, the decision to give tranexamic acid can be made clinically, in resus….

How? - Tranexamic Acid 1g over 10 minutes followed by another 1g over 8 hours, given as soon as possible (but if you forget in resus, give it as soon as possible: CRASH-2 recruited up to 8 hours after injury). See below.

Why? - It saves lives, it's safe, and it costs less than a tenner!

Actions needed - add to your trauma charts, teach staff, order the stuff from pharmacy

How to give tranexamic acid in major trauma…..

- Comes as 100mg/ml (so 1g = 10 ml)
- Dilute with 5% glucose or 0.9% sodium chloride (stick it in a bag of 100ml NS is probably the easiest thing to do)
- In major trauma, give 1g over 10 minutes and then 1g over 8 hours.

Clotting factors, coagulation disorders & the ED

Whilst we're talking about drugs that have traditionally been the toys of our haematology colleagues, have you ever given clotting factors to ED patients? With in-patient medical cover being increasingly squeezed, some haematology wards can no longer offer open-access out-of-hours to haemophilia/vWD patients who self-present requiring a top-up of the appropriate clotting factors. Which means, surprise surprise, they are likely to arrive in the ED.

If you've never seen a bleeding haemophiliac before, *don't panic*. Most know precisely what treatment they need - or carry a card telling you. And if they don't know, the transfusion staff probably do. Today's recombinant clotting factors are much easier to mix than the older, intermediate-purity plasma-derived products, although the "safer mixing gadgets can be a bit baffling"! We would suggest arranging teaching sessions for nursing as well as medical staff - but in an emergency pick the brains of the nurse in charge of your local haematology ward!

Workplace based assessments...the 2010 CEM update

by Dr Sarah Spencer, Head of AWSEM

Workplace based assessments (WBA) have been with us for a while now: all educational and clinical supervisors - and any other staff who complete these assessments for trainees at any level - should already be au fait with Case-based Discussion (CbD), Direct Observation of Procedural Skills (DOPS), Mini Clinical Examination (mini-CEX) and MSF (multisource feedback).

Yeah yeah, we know all that, so what's new?

From August 2010 there have been some major changes implemented to the way in which WPBAs are administered during EM training. These changes apply from CT1 upwards - including all ACCS trainees (colleagues in Bangor, Cardiff, Newport, Swansea and Wrexham *take note!*).

There are specified mandatory assessments which must be completed (at various levels) in order for trainees to progress: all Educational Supervisors will be asked to confirm that they have read the relevant parts of the CEM website and are sufficiently conversant with the CEM curriculum to ensure that the WPBA needs of their trainees can be fulfilled. If we don't understand what trainees are supposed to be doing we risk letting them down when it comes to ARCP time and they haven't been able to meet the requirements to progress to the next year of training. With only twelve months extension to training allowed it is vital that we support our trainees in achieving all their WPBA requirements.

Summative as well as formative assessments

The first major change is that there are now summative as well as formative assessments. These are essentially the same process as the formative assessments, but the trainees will approach an assessor when they feel ready to be assessed as having achieved an appropriate standard in the relevant competency.

Although summative, they can be undertaken as often as the trainee needs in order to achieve an appropriate standard. Where the standards are not met, learning needs may be identified and thus addressed before the summative assessment is attempted again. In this way the trainees are supported and their training directed instead of being left floundering and bewildered.

Acute care Assessment Tool (Emergency Medicine)

The second major change is the introduction of the ACAT-EM assessment tool: this Acute Care Assessment Tool (Emergency Medicine) allows for a more global assessment and is further removed from being a 'tick box' exercise than some perceive other WPBAs to be (it could be suggested that such a perception suggests that the perceiver isn't comfortable with using the WPBA tools we already have?) The ACAT-EM looks at a range of domains within one assessment tool and assesses work over a period of time (within a shift, or a whole shift) which enables a broader view of a trainee's abilities: see table, right.

Mandatory WPBAs

The third big change is the introduction of mandatory WPBAs: previously trainees could choose whatever they wished to be the subject of their WPBAs.

Recognising that some trainees have managed to get a long way through their training without some fundamental knowledge and skills under their belt, there are now mandatory subjects for some of the WPBAs. These are summarised in the CEM "List of Presentations And Procedures" found on the curriculum pages of the College website.

OK, this is a crazy number of assessments... how can it be done?

Completion of WPBAs just becomes a 'way of life' for trainers and trainees: in this way the training which takes place on the shop floor (which we are already doing) becomes recognised as being a part of the assessment process which ensures delivery of the breadth of the curriculum. Every patient encounter is a learning opportunity... and a WPBA opportunity. Trainees are responsible for ensuring that they complete these assessments - but we must support them in their efforts and be willing to participate in the processes. Concerns have been raised about the 'deliverability' of this assessment workload - but with so much training already taking place on the shop floor it will be a relatively small step to formalise that.

Wanna know more?

For those who are interested, background information about workplace-based assessments is available: http://www.gmc-uk.org/Workplace_based_assessment_31381027.pdf.

Detailed information about the CEM implementation of workplace based assessment is available at: http://www.collemergencymed.ac.uk/Training-Exams/Work%20place%20based%20assessment/default.asp - which is where you will find all the forms you could possibly wish to complete!

The ACAT (Emergency Medicine)

Assessment Domains	Description
Clinical assessment and clinical topics covered	Quality of history and examination to arrive at appropriate diagnosis- made by direct observation in different areas especially in the resuscitation room. No more than 5 APs should be covered in each ACAT and each should involve a review of the notes and management plan of the patient.
Medical record keeping	Quality of recording of patient encounters including drug and fluid prescriptions
Investigations and referrals	Quality of trainees choice of investigations and referrals
Management of patients	Quality of treatment given (assessment, investigation, urgent treatment given involvement of seniors
Time management	Prioritisation of cases , doesn't spend too much time with any one patient
Management of floor/ area/team working	Appropriate relationship with and involvement of other health professionals
Clinical leadership	Appropriate delegation and supervision of junior staff
Handover	Quality of handover of care of patients between EM and in patient teams and in house handover including obs/CDU ward
Patient safety	Able to recognise effects of systems, process, environment and staffing on patient safety issues
Overall clinical judgement	Quality of trainees integrated thinking based on clinical assessment, investigations and referrals. safe and appropriate management, use of resources sensibly

And finally……

There are other skills that our trainees have to develop during their higher training, particularly. Knowledge of both Emergency Medicine Ultrasound (FAST and vascular access) and Rapid Sequence Induction are not only expected in the skill set of a 2010 trained Emergency Physician but are fair game for the FCEM OSCEs from next year. Whilst it is not (yet) expected that every department can provide comprehensive training in all necessary skills within the ED, it is expected that every trainer will facilitate trainees acquiring all the necessary skills wherever they may need to go to do so.

The CEM website - http://www.collemergencymed.ac.uk is your friend... and Ed Sups and Clin Sups should make themselves aware of all training-related content which is relevant to them and their trainees. It looks daunting but it all makes sense and it's quite easy to follow!

The new ALS Guidelines - goodbye atropine!

The eagerly-awaited 2010 revision to the international resus guidelines were announced in October. Whereas some dramatic changes had been rumoured (for example, adrenaline had been tipped to disappear, and were the guideline-makers brave enough to opt for CPR continuing during defibrillation?) the actual new guidelines are really not all that different from the old ones.

The main difference is the dumping of routine atropine from the asystole/PEA algorithm.

Also:

- Compressions, compressions, compressions…. harder and faster (5-6cm, 100-120/min) and keep them up… any pauses must be minimised, so we now compress whilst charging the defib.
- Adrenaline in VF/VT now goes in after the third shock (plus amiodarone)

- If ROSC is achieved, titrate the oxygen to give sats of 94-98%
- No more drugs via the ETT: if you can't get IV access, get IO access.

These are just a selection of headliners: check out http://www.resus.org.uk/pages/guidesum.pdf and, of course, the full new guideline…. and check with your hospital when you are switching to the new algorithms!

The UK TEAM (Training in Emergency Airway Management) Course: What it is, what it's like (& should you try it!)

by Dr Rob Perry, Consultant in EM, Bangor

What is this course?

It's a two day course which teaches the 'knowledge, skills and attitudes' required to manage the airway safely in an emergency.

Does this mean it will teach you to do a Rapid Sequence Intubation (RSI)?

Yes – and no! The theory and process of RSI are taught as part of the course, but it is not intended to make anyone 'RSI competent' – this requires plenty of supervised practice and experience! However, it does serve as an excellent introduction to RSI for doctors who don't do it regularly.

Who runs it?

The UK TEAM course is a joint venture between the College of Emergency Medicine and the Royal College of Anaesthetists (who currently occupy the same building). The course is administered by the RCoA and booking forms can be obtained from their website; the CEM website also has more details.

Who is it aimed at?

A tricky question! As an EM consultant, the only 'new' information was about the drugs used in RSI, and this only formed a small part of the course. I feel the course would have been most beneficial to me when I was a 1st or 2nd year SpR, but there is a catch – the course organisers say that they want candidates to have had at least 6 months' experience in either anaesthetics or ITU. Nowadays ACCS trainees will have had this, but it was not universal before. On the other hand, they don't seem to enforce this rule too strictly , as there was an F2 in my group.

How long is the course? How much does it cost? Where is it held?

The course runs over two full days, though we had a latish start on Day 1 and an early finish on Day 2 to allow for travel time. The course fee was £395. I attended at the RCoA in London, but courses are also held in Bristol, Birmingham and Edinburgh. There appears to be one course held per venue per year.

What topics are covered in the course?

Oxygen delivery, airway equipment, airway assessment, prediction of the difficult airway, indications for intubation, preparation and execution of RSI, pharmacology of anaesthetic drugs, difficult and failed airways/ failed intubation drills, post-intubation care and non-invasive ventilation.

Who teaches on the course? What was the mix of candidates?

The instructors are all consultants in either Emergency Medicine or Anaesthetics. The course has a pleasant atmosphere and you do feel that everyone is on the same team, with no inter-specialty disagreements! The candidates on my course were almost all working in Emergency Medicine, though there was a wide spectrum of seniority, with one or two senior consultants present.

What is the teaching style?

Most of the teaching is scenario-based – it will be immediately familiar to anyone who has been a candidate on an ALS or ATLS course. The candidates are divided into small groups, and everyone gets several chances to 'lead' a scenario, with the other candidates acting as helpers. The scenarios are run as simulations, with artificial patients, but real monitors and equipment.

There is almost no didactic lecture-based teaching, though there are a few discussion workshops. The course manual is a small handbook of about 150 pages and is very easy to read. There is a pre-course MCQ, but it's just for practice and you don't have to sit another one during the course!

Was the course valuable and worthwhile?

Very much so. It was also a lot of fun! As mentioned above, much of the material was previously known to me, but this was valuable information in itself. The controversy over whether Emergency Physicians should be performing RSIs has given the procedure an air of mystery and perhaps even a whiff of 'forbidden knowledge!' The TEAM course places RSI in its proper context. RSI requires a great deal of training and practice to execute safely, and can certainly be dangerous if attempted by those who

are untrained or unprepared for the potential complications. However, it is still a procedure, and not intrinsically more difficult than many others that we perform routinely. (If any anaesthetists are reading this, don't panic – I'm not planning to do any unassisted!)

Another point made frequently on the course was that RSI is only one part of emergency airway management. There are very few situations in which it has to be done without delay, and many in which it may be more prudent to avoid it altogether.

The faculty presented information in an interesting and memorable way. There were a number of useful mnemonics for advanced airway management which I will find useful in the future (though I gather they have reduced the number of these taught on the course in order to avoid confusing the candidates!)

Would you recommend the course to others?

Yes! I found myself wishing that I had done the course early in my SpR career, and I would particularly recommend it to anyone at a similar stage. However, it must be recognised that there are many demands on study leave. A senior trainee in EM must stay current in (and if possible instruct on) ALS, ATLS and APLS, while finding time to attend conferences, management courses, ultrasound courses, MIMMS courses, etc. etc. I would say that UK TEAM is an excellent course, but not an essential one. Highly recommended if you can fit it around other commitments!

AWSEM TALES TO LEARN FROM...

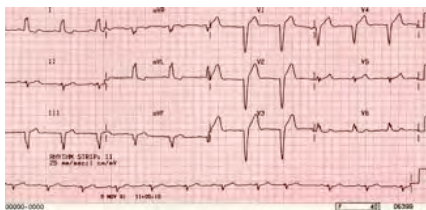
Sharing when things have gone less than well – and what has been learned – is possibly the most useful and almost certainly the most popular function of ED newsletters. We've only got room for one here this time: look out for a special "Clinical Tales" issue, Spring 2011!

PATIENT ARRIVED BY AMBULANCE? LOOK AT THE PRF.....

A 999 ambulance turned up in the ED just as the department had filled its last space. The charge nurse asked the arriving ambulance to wait in the majors area until they could free up some space. The ambulance crew did not express any concerns with regards to their patient, and no pre-alert had been received by the ED with regard to the status of the patient.

15 minutes later, when a space had been made, ED nurse 1 took handover: the patient presented with epigastric pain following D&V, and had a previous history of hiatus hernia. On checking vital signs, the patient was slightly tachycardic, but he didn't have any pain at this time. He was triaged Orange ("unwell adult with abnormal pulse"). The ambulance documentation was not with the patient at this time, and was presumed to have been taken to reception by the relatives who accompanied the patient, as sometimes occurred in this particular department.

ED Nurse 2 then took over and requested an ECG. An ECG technician arrived to do the ECG (if it had been a "chest pain" the nurses would have done it themselves) then hung it on the patient's curtain.



By now, ED Nurse 2 was busy with another patient, but ED Nurse 3 saw the ECG on the curtain, spotted the gross ST elevation & depression, and took it to a middle grade doctor.

It was at this time that ambulance documentation turned up - including an ECG strip with the same obvious abnormalities, and a PRF where the crew stated that ST depression and elevation had been present on the ECG, but was "outside their thrombolysis criteria". Yep, the crew had been treating for possible MI….

They'd administered aspirin and oxygen and recorded vital signs, but none of this had been included in their handover to the ED nursing staff. The patient was taken into the resuscitation room and thrombolysed, but the failure of the handover process, compounded by the delay in the ambulance documentation being seen by ED staff resulted in a 50-min delay to lysis. After investigation, some questions remained…

- Where was the ambulance paperwork during the patient handover? *[in Bangor, we can't seem to stop it all gravitating towards reception!]*

- Why had the working diagnosis of MI not been conveyed during handover to ED staff? The ambulance crew said they had given this detail to control, but it had not then been relayed to the ED. Had the crew assumed that the ED already knew the working diagnosis was MI?

The following actions were agreed:

- The ED should be pre-alerted about any patient attending the department with an MI.
- Ambulance crew will no longer give relatives their documentation to take down to ED reception.
- ED nursing staff will sign the bottom of the ambulance PRF after handover has taken place, to ensure the document is part of the handover and that ED staff are aware of what is documented on their form. When the ambulance PRF is reviewed, hopefully provision will be made for this "handover acceptance" signature.
- Ambulance crews will be reminded to show their ECGs to ED staff.

Morals of the story? Firstly, ambulance PRFs/ECGs are a vital part of the clinical record and should remain with the patient. Secondly, why don't we have facilities to talk directly to ambulance crews? It was a recommendation in NCEPOD's "Trauma Who Cares", and it might have been jolly useful here.....

AWSEM posters from Wales at CEM!

BANGOR - the colourful ones on the top row! Three more can be seen in the conference report. Most, including "Those in Peril On the Sea" (which also won Best Poster at the Integrated Pre Hospital Care conference in Coventry in November) were by Linda Dykes team of Mountain Medicine medical students, but Rob Perry's equine-related injury series showed Bangor isn't a one-trick pony [geddit??!].

MORRISTON - one from Perumal, Dalavaye &Evans, and another from Mothukuri et al, and

BRIDGEND - Rhian Farquharson (SpR) and two from Katy Guy (StR).

compiled by Linda Dykes & Sarah Spencer