PLASTIC SURGERY OUTREACH TEAM

Burns and plastic nurse specialists collaborate to manage polytrauma at its most challenging

As part of University Hospital Birmingham NHS Foundation Trust, Selly Oak Hospital (SOH) is home to the West Midlands Regional Burns and Plastic Unit, providing local, national and international expertise on burns and plastic surgery. The unit provides world class care for our injured service personnel.

The service is supported by a small but dedicated team of military nurses from the Royal Centre of Defence Medicine (RCDM), with the desire to provide the best possible care for the increasingly complex conflict injuries that we are seeing.

The complexity of wounds treated at SOH has created the clinical requirement for us to use our expertise to ensure early co-operation between Trauma & Orthopaedics and Burns and Plastic Surgery, led respectively by Wg Cdr Sergeant and Lt Col Jeffery.

We believe that the appropriate early management of complicated open fractures needing soft tissue reconstruction is vital if service personnel are to receive optimal treatment leading to recovery and independent lives. This collaborative approach ensures we are working to achieve the best possible clinical outcome in the immediate and long term.

Managing complex wounds
The Plastic Surgery Outreach Team (PSOT) consists of advanced practitioners who possess the experience to advise and educate on the often difficult and complicated management problems associated with extensive complex wounds which have sustained large soft tissue loss.

The successful integration of military nursing staff within the team has been an important
This issue's guest editorial is by Kay Fawcett, Chief Executive Nurse at the University Hospital Birmingham NHS Foundation Trust (UHBFT).

The Royal Centre for Defence Medicine (RCDM) officially opened on 2 April 2001 with the Princess Royal in attendance. On that day, a small number of military nurses joined the local UHBFT workforce of over 3,000 nurses, and started a partnership of collaborative working arrangements that has gone from strength to strength.

I was present when this small band of military nurses commenced, and few would have envisaged what lay ahead for the next seven years. During this time, there have been considerable changes and challenges, resulting in substantial media and public attention, that has not always presented an accurate picture of just how hard the civilian and military nurses work in providing a world class service for injured Service personnel, and the people of south Birmingham.

I warmly welcome the opportunity to write this guest editorial, as I am committed to ensuring that the collaborative nursing witnessed within UHBFT is given the full opportunity to develop. Civilian and military nurses are justifiably proud of their care delivery, as the past year has witnessed increasing numbers of military casualties that has resulted in developing new levels of clinical nursing competences that require mediums such as the RCN Defence Forum newsletter to inform our colleagues.

There have been lessons learnt on both sides, and benefits are being witnessed from new initiatives and practice development in areas such as tissue viability, pain management and trauma and orthopaedic care. When these advances are sufficiently mature, they will undoubtedly set the foundations for strong academic and research activities; and I look forward to nursing at UHBFT / RCDM advancing clinical practice across the NHS. I hope that I will meet a members of the RCN Defence Forum at the RCDM Clinical Conference on 29 October 2008 where a number of the recent advances will be included in the conference programme.

Finally, I would like to take this opportunity to thank the RCN for their continuing support to the Birmingham nursing community; and to the Defence Nursing Forum for their efforts in raising the profile of defence nursing. I strongly support the forum’s aspiration to increase the number of civilian nurses within the forum membership, and to see more contributions from civilian nurses caring for military patients. Of course, there is the benefit that membership to any three RCN forums is free.

Over 50,000 spectators attended Twickenham on 20 September 2008 for the Help for Heroes rugby game which pitched rugby legends such as Martin Johnson and Lawrence Dallaglio alongside acting tri-Service personnel in a charitable event to raise money for injured Soldiers.

Many RCN Defence Forum members were present and enjoyed an excellent day out in an occasion that raised over £1,000,000. The event also helped to keep the support for injured Service personnel on the agenda, by reemphasizing to the wider public the high trauma and extensive injuries that some Service personnel are experiencing in their line of duty, and also the outstanding clinical care that is being delivered by civilian and military nurses.

Military medicine, and the requirement to provide first rate care for sailors, soldiers and aircrew has traditionally been instrumental in shaping and developing clinical care within the NHS, and the current conflicts are taking these developments to new levels. The recent challenges faced in Iraq and Afghanistan have resulted in the highest level of British casualties since the Korean War (1950-53), but with casualties now surviving where they would have previously died.

The rapid access to medical care, and the speedy evacuation to the Role 4 treatment facility provided by the NHS Birmingham hospitals is keeping personnel alive, with the consequence that civilian and military nurses face clinical challenges that are not routinely replicated in other health care institutions. The result is that nursing staff employed in areas such as trauma and orthopaedics, burns and plastics, mental health, intensive care, neurology, tissue viability and pain management have significantly improved their clinical competencies by responding dynamically to the new challenges and experiences. Significant lessons are being learnt.

The RCN Defence Forum will be supporting the RCDM Clinical Conference on 29 October 2008, which presents an opportunity to highlight these clinical developments and the strategies in place to advance care further and substantiate these developments through quantifiable research. The study day contains some excellent presentations, and will demonstrate the benefits of a multi-professional approach, that respects and accommodates the contributions from civilian and military clinicians, in shaping NHS care for all users.

Alan Finnegan
The NHS is effectively the defence Role 4 medical facility and, as one team, we must ensure that our injured service personnel receive the best care and management that it is possible to give.

**Our injured soldiers are unique**

The severity of their injuries results in complex pain management challenges. Pain also results from combinations of psychological, emotional, environmental and social factors. Thus the assessment and effective management of their pain is a complicated and challenging process.

Familiarity with the issues, expert current knowledge base and experience in caring for injured soldiers is essential to enable facilitation of management involving a multimodal, proactive multidisciplinary approach.

The acute pain team at UHBFT is led by Consultant Nurse Debby Edwards and, as part of the RCDM pain management strategy, Flt Lt Jo Potter has been seconded to work with team. Jo is assisting Debby with a review of any issues and an audit of pain management as well as an ongoing review of all operationally wounded military patients.

It is hoped that this work will demonstrate that we are doing a good job – however, we must address any issues identified. Through innovation, education and training, and research and audit we will ensure that patients receive the quality of care that they deserve.

This role has already enhanced what was an excellent, positive and collaborative working relationship between the RCDM personnel and NHS staff, and we will continue to ensure effective pain management for our injured soldiers.

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step forward in maintaining a consistent management approach of service personnel – not only with the varied expertise on offer, but to maintain and deliver the highest possible standards of care at Role 4, which are facilities provided by the NHS in the UK.

With these additional staff the PSOT can deliver care for service personnel admitted to either SOH or its sister Hospital Queen Elizabeth. Through this the team is benefiting from a much broader range of cases, which in turn has furthered our exposure to a more diverse patient case load, thus developing our clinical practice.

Assessing injuries and planning wound treatment is fundamental to the success and timing for soft tissue cover. Patients are often assessed in theatre and an appropriate plan of care is implemented. Opportunities to assist and support the plastic surgeon are expanding through the demonstration of our specialist knowledge and achievement with wound care techniques. Our provision is now providing a unique service to the injured personnel we treat.

**Multidisciplinary expertise**

In addition, the PSOT has a unique awareness of the importance of a multidisciplinary approach to the management of these patients. And we never hesitate to involve experts in nutrition, tissue viability, microbiology, infection control and acute pain management.

The requirement to remain flexible and adaptable is foremost when working as part of the PSOT. Delivering a highly specialised service can be demanding and requires a level of proficiency and professionalism which has been proven in the delivery of high standards of care.

The underlying motivation for this stems from knowledge of reconstruction in burns injuries. Injuries to service personnel in recent years have evolved with the battlefield, presenting polytrauma at its most challenging.

The team has the support to be autonomous and this has enabled us to be proactive in problem solving, evolving into a unique service. The dedication of individual team members has been fundamental to its success and will continue to provide the best possible care to service personnel.
I have served in the Princess Mary's Royal Air Force Nursing Service for just over 23 years now and have nursed in total for 30 years. The last four years I have been privileged to serve as the Specialist Nurse Adviser for Trauma & Orthopaedics (T&O SNA) RAF and for the last two years I have been the first incumbent Defence Specialist Nurse Adviser (DSNA) for T&O.

I joined RCDM Birmingham in September 2006 following a directive from the Defence Medical Services Department (DMSD) to augment the T&O wards at RCDM to provide specialist nursing care for injured service personnel returning from operational deployments overseas.

In October 2007 I was approached by the civilian senior nurse for T&O and OC Clinical for RCDM, and asked to manage a new project aimed at improving the care of patients admitted to the trust with fractured neck of femur (NOF).

And so the role of Trauma Navigator Co-ordinator came to be established at Birmingham.

**Project aim**
The role, although not new, has been established in several trusts around the country and is responsible for providing innovative and progressive care for patients throughout all specialities. However, this is the first time this role had been created specifically to look at such a distinct cadre of patients with a defined aim in mind.

With every role there has to be a functional aim so that a job description can be formulated to meet the requirements and responsibilities of the task. However, this project was taking place at the inception of the role. With no prior data or benchmarks to re-evaluate or improve upon, my remit was simple: bring down the mortality rate of the NOF patients admitted to this trust.

**Role function**
Initially it was envisaged that when a patient was admitted via A&E with a suspected NOF, the Trauma Navigator would be contacted and take over the initial assessment, initiate standard protocols to confirm diagnosis, commence fluid resuscitation and ensure adequate pain relief.

By taking on this role for the NOF patient in A&E, it would effectively “pull the patient into the trauma system,” therefore facilitating a more efficient patient transition from A&E to the ward and to definitive surgery.

It quickly became apparent that this was an ambitious primary goal and, although it remains a principal aim, it was necessary to scrutinise the current service by conducting an extensive audit looking at all aspects of the patient’s pathway. This would provide the requisite hard data necessary to substantiate recurring areas of concern, enhance or revise standard treatment protocols, initiate new practice and...
achieve the gold standard of care for the patient.

The audit has been underway for six months, averaging 40 new patients per month. The data collected cover all aspects of the patient pathway – from point of admission, through surgery and to discharge/transfer from T&O. This information is presented on a monthly basis to a divisional team consisting senior representatives of the multidisciplinary team and divisional directors.

The way forward – findings, actions and objectives

To assist timely evolution of the navigator role at UHB, I have been in close communication with the surgical co-ordination team based at Sutton Coalfield who have been providing a navigation role for all surgical admissions for 10 years. This co-operation has been forged to facilitate an exchange of ideas and information between the two trusts, providing me with invaluable advice, guidance and practical instruction.

In conjunction with UHB Clinical Education Department, work is ongoing to formulate new and innovative nursing protocols (itemised here) that will be required to develop a nurse practitioner role. It is anticipated that this further expands into a training programme for others to gain practitioner status:

- nurse-requested X-rays (high dose radiation for hips)
- nurse drug formulary for nurse prescribing in A&E
- nurse examination and diagnosis
- blood test requesting and interpretation of results
- phlebotomy
- cannulation
- insertion of femoral cannula for routine femoral nerve block.

In conjunction with the Professor of Trauma & Orthopaedics and the lead consultant for the care of patients with NOF, a definitive protocol for the daily examination of the patient by the junior doctors has been instigated. This has been devised to assist in the early recognition of the deteriorating patient and to reduce potential or actual problems that may delay surgery or post surgery complications and impact on the patient’s length of stay.

Nurse training needs analysis was carried out to establish the skill/knowledge level of all grades of nursing staff on the T&O wards in several areas: These are:

- recognition of the deteriorating patient – fluid balance, blood result analysis
- mobilisation of the T&O patient – pre- and post-surgery, including bed bound patients, patients on crutches, stairs and traction
- application and care of the patient with traction
- care of the spinal injured patient
- nutritional care of the trauma patient
- care of the patient with NOF – pre- and post-operatively
- record keeping – standards, terms and standardisation.

Finally, with the results of the above assessment a progressive rolling programme of education is being prepared to meet the training needs of T&O staff.

Summing up

The prospect of project managing the inception of a new role with potential for profound and critical changes to a very vulnerable patient group was daunting at best. With no comparisons or models to lead the way, the job has challenged every facet of my ability in a way akin to mountain climbing with no rope.

Auditing has been invaluable – the guiding light – and changes have already taken place, sticking points have been highlighted and the potential for lasting change has become evident.

My remit remains the same and is matched by all members of the multidisciplinary team engaged in the care of patients with a fractured neck of femur. That is, their survival and recovery is our charge and we must provide the very best care possible. It must be reviewed regularly and critically to ensure gold standard care that is sustainable.

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ASIC is an active and productive international organisation that works for the air forces of Australia, Canada, New Zealand, the United States and the UK. Its principal objective is to ensure member nations are able to fight side-by-side as airmen and women in joint and combined operations. This is achieved by the standardisation of doctrine, operational procedures, material and equipment. ASIC also facilitates the exchange of technical information and arranges the free loan of equipment between member nations for test and evaluation purposes.

ASIC's permanent headquarters are based in the USA with an international staff from a broad range of military disciplines. ASIC nations should be able to progress projects without the language barriers that may exist in other international forums.

### Aeromedical Evacuation SMEs

The Air and Space Medical Group forms part of the "Agile Combat Support" (ACS) Group which met in New Zealand at the end of last year (December 2007).

Each nation provided subject matter experts (SME) in response to the agreed ASIC agenda. Air Command nominated myself and Mr Chris Last (Medical and General Supplies Integrated Project Team – M&GS IPT), as Aeromedical Evacuation (AE) SMEs, to join a wider UK delegation.

The AE project group undertook two tasks aimed at facilitating AE interoperability between ASIC nations. The end point for each project was to produce an international advisory publication.

1. **produce a checklist to enable one nation’s medical equipment to be airworthiness approved for use on other ASIC nations aircraft.**
2. **agree AE medical equipment training standards.**

Each nation already had an established AE capability with associated structures and processes. Therefore, debate focused on finding common ground from which “principle” minimal standards could be built. All nations were already adherent to STANAG 3204 Aeromedical Evacuation.

Equipment airworthiness is a critical capability to ensure that patients receive appropriate monitoring and treatment throughout the evacuation chain. While mobile phones are not used on commercial aircraft as they present a flight-safety hazard, it is less well known that all electrical devices – including medical devices – may emit electromagnetic radiation and compromise flight safety.

Furthermore, the aircraft electrical systems may effect sensitive medical equipment, leading to incorrect readings and function with consequent risk to the patient.

### Sharing relevant information

An important element of ASIC meetings is the exchange of information between nations. Sharing relevant information concerning current and future AE equipment procurement and airworthiness test data could save ASIC nations millions of pounds/dollars. However, complete interoperability would require all five nations to agree to undertake airworthiness testing to a common standard, using common assessment techniques.

Deployed medical facilities evacuation chains increasingly rely on the support of other nations. However, the international community refers to medical drugs by different names. This is a problem when uplifting drugs from another nation during an AE mission, but a project to
develop or agree a reference document that cross-references drug names could resolve this.

Moreover, if it were possible to agree to test/use blood products universally without national restrictions, it would enhance interoperability and patient care. I am sure there is a good reason why nations use different electrical sockets, volts/amps, drive on the right (wrong) side of the road and use different gauge railway track, but it does not aid interoperability – I was glad not to be representing the Department of Transport!

Military AE activity varied enormously between the ASIC nations. The data list here were provided by the SME and demonstrate the approximate number of AE missions undertaken annually:
- USA (22,000)
- UK (4,000)
- Australia (110)
- Canada (60)
- New Zealand (12).

These figures should be understood within the context of different countries having different definitions of what constitutes an AE flight, but nevertheless they show that the UK is in the forefront of AE.

Sharing relevant AE information between international allies with the aim of improving interoperability and increasing standards will in time support the chain of command. JTCCC is inclusive of all the disciplines involved in the total care of the patient. At RCDM there is representation from both civilian and military clinical staff.

Detailed minutes are generated each week to track the progress of each governance issue. These minutes are then circulated to units in advance of deployment to assist in the preparation of clinical staff and are used to inform training scenarios within the 2 Medical Brigade pre-deployment HOSPEX.

OVERVIEW

JTCCC shares detailed clinical feedback on evacuated service personnel

The Joint Theatre Clinical Case Conference (JTCCC) was established in March 2007 and runs as a weekly telephone conference linking the field hospitals in Iraq and Afghanistan to RCDM Birmingham, Headley Court, Permanent Joint Headquarters, HQ 2 Medical Brigade and RAF Brize Norton aeromedical evacuation cell.

JTCCC is chaired by the Defence Professor Emergency Medicine. The principal aim is to provide clinical feedback on UK service personnel evacuated to the UK for definitive treatment. It has become the focus for all clinical issues to be raised in relation to major trauma, from point of wounding through to Role 4, and for rapid resolution to be supported by the chain of command.

JTCCC is inclusive of all the disciplines involved in the total care of the patient. At RCDM there is representation from both civilian and military clinical staff.

DIARY DATES

Emergency care matters
Making your voice heard in emergency care
Location: De Vere Hotel at Daresbury Park, Warrington, Cheshire
Date: 14 November 2008 to 15 November 2008
Call for abstracts

RCN Critical Care Forum annual conference and exhibition
Location: RCN Headquarters, London
Date: 12 June 2009 to 13 June 2009
Call for abstracts
RCN Critical Care Forum annual conference and exhibition The future shape of critical care

RCN Society of Orthopaedic and Trauma Nursing
23rd International Conference and Exhibition
Location: Newcastle Civic Centre, Newcastle Upon Tyne
Date: 24 September 2009 to 26 September 2009
Flying high: Reaching new heights in orthopaedic and trauma nursing

Renal care across communities
A series of workshops on renal disease and care management
Belfast – RCN Northern Ireland Thursday 4 December 2008

RCN EVENTS
www.rcn.org.uk/events

Workshop fee only £25!
Congratulations to all who ran, leapt, jumped and otherwise cheered us on at the AMS track and field event. LCpl BARBARA STANISLAS has now caught her breath and sends this report.

Team RCDM goes the distance for fitness, fraternity – and fun!

The sky remained blue for both days of the Army Medical Services athletics sports meet on 7–8 June. This year’s event was organised by 4 General Support Medical Regiment and held at the Garrison Stadium in Aldershot.

The Royal Centre for Defence Medicine team was definitely moved by the spirit of participation. It brought together athletes from Queen Elizabeth and Selly Oak Hospitals, RCDM HQ and the Defence School of Health Care Studies and was managed by Captain Marshall and Sgt Gordon.

Being the first team representing RCDM at the AMS athletics sports meet, they came out in full force and were ready with more than enough participants for the events – so much so that some athletes had to (most disappointingly) drop out voluntarily from several competitions.

Taking to the track and field

Nevertheless Team RCDM took advantage of the great weather and demonstrated their talents on the track and their fervour on the field in contesting against several other athletic teams across the Army Medical Services. Those teams included MDHU Frimley Park, MDHU Portsmouth, 4 GS Med Regt, 5 GS Med Regt, and the undisputed championship team from 1 Close Support Medical Regiment who have won the AMS Athletic Games four years in a row.

On your marks! Get set! Go!

And go they did ... each one to the finish line while the others shouted out and cheered, expending energy as if they were running the race themselves.

Lt Richards, year 1 doctor, emerged as the gold medal winner in three long distance events – male 3000m steeplechase and the 1500m and 800m races. The tri-athlete was not only a star on the tracks, but was ready with top tips and words of advice for his fellow team members on how to attack the tracks and win.

LCpl Fianko, student radiographer and previous gold medal winner of the male 110m hurdles, was not too satisfied with his third place in the same race, but recognised the abilities of his adversaries and admitted he had not trained as much as he should have.

LCpl Stanislas who was disqualified in the first day heat of the female 100m hurdles came back in the 400m female hurdles and took second place for the silver medal.

Pte Chinyandura, student operating department practitioner, showed perfect form, speed and agility as he kept his place from start to finish of the male 110m hurdles and was thrilled to receive gold.

On to greater challenges

All three star athletes were selected to represent the AMS and compete in the Inter-Corps Team Athletic Championships 2008 held at the Tidworth Oval. There they would be up against seasoned competitors from the wider Army.

Other RCDM stars got the opportunity to meet and chat with Major General Hawley, the Director General, Army Medical Services, who didn’t take to the tracks himself, but extended his congratulations, support and encouragement to everyone.

Team RCDM came together out of individual belief in self and interest in being fit to race. We left Birmingham mostly strangers and returned home, each of us, with the shared experience of gelling as a team and going for gold – with, of course, mutterings about training for AMS Athletics 2009.

Here are Capt Bob Marshall QARANC and the RCDM athletics committee