



ON CALL FOR WAR: WORK AS A CONSULTANT RESERVIST WITH THE DEFENCE MEDICAL SERVICES

David Rew

Despite inner city knife crime among feral youths, violent trauma is still rare in the UK. Across the globe, the weapons of war wreck lives and bodies in countless thousands in many failed states. Whatever our personal views on the rights and wrongs of expeditionary warfare, our professional responsibilities as UK trained surgeons come into much sharper focus when those lives and bodies belong to young British service personnel in the remote and demanding conditions of Iraq and Afghanistan.

The Defence Medical Services (DMS) provide the infrastructure and staffing of the operationally deployed medical units from a cadre of regular, fully employed personnel and from the Territorial Army, RAF and Royal Naval Reserves, who in turn represent the NHS and many other walks of civilian life. From the end of WWII until the end of the Cold War in 1990, the Reserves were just that, held mainly in anticipation of major conflagration in Europe, while surgeons in the regular DMS attended the various minor skirmishes of a much contracted Army, Royal Navy and Royal Air Force on the fringes of Empire.

With the contraction of the Armed Forces from a million men and women to some 200,000 regular personnel, the need and capacity for a fully staffed "cradle to grave" military health service has disappeared. The DMS is now heavily dependent upon NHS trained and employed volunteers to meet its operational commitments and to supplement the re-invigorated DMS, and will remain so. While recruitment and career opportunities in the regular surgical cadre have been much improved in recent years, there remains an acute operational need for senior and broadly trained clinicians from the Reserves to staff the field units.

I have been privileged to witness and participate in the dramatic changes and advances in the capabilities of the Defence Medical Services in a parallel and continuing reserve military career of 33 years from my time as a teenager at Sandhurst in 1975; through the special and airborne forces as a medical student and junior surgical trainee in the early 1980s; and to an Armoured Brigade forward surgical team through Iraq during the retaking of Kuwait in the First Gulf War of 1991 as a higher surgical trainee. 1991 saw the first major use of military medical reservists since the Korean War in the early 1950s. It set a precedent for change in Whitehall thinking which now regards the DMS Reserve as a fully functional component of the "Order of Battle", through which, for example, independent TA Field Hospital Squadrons and surgical teams have provided with distinction much of the deployed health care infrastructure in Iraq and Afghanistan since 2003.

Since 1991, the focus on casualty care has shifted from mass casualty triage to providing the highest attainable standards of care for small numbers of casualties, matching the highest peacetime standards of clinical governance to field conditions. Through the 1990s, new systems were developed for field intensive care and aeromedical evacuation, along with new approaches to multidisciplinary surgical team working and damage control interventions, which raised the standards of care and outcome for combatants and local civilians much higher than had previously been thought possible in field conditions.

Through late 2003 onwards in Iraq, and subsequently from 2005 onwards in Southern Afghanistan, the steady flow of multiply wounded and complex casualties from insurgents using sophisticated ambush and improvised explosive techniques has obliged further improvements in methods of protection, in front line first aid, in helicopter evacuation, in field hospital trauma management protocols, in team working practices, in rearward evacuation and in UK national support infrastructure, now focussed upon the Royal Centre for Defence Medicine and Selly Oak Hospital in Birmingham. These advances have produced remarkable and unexpected survivors among extensively injured combatants and civilians. They also make a major contribution to the morale, confidence and expectations of troops working at the extremes of operational and environmental risk. Practices and skills are continually evolving as teams and individuals are recycled through deployments, and the full story has yet to be told.

Employment practice for clinician reservists has also evolved significantly. Specialist surgical skills and commitment are in continued demand by the Defence Medical Services at present.



Figure 1: David Rew at camp Bastion, Helmand province, Afghanistan, January 2008.

Earlier expectations of a "once in a lifetime" war mobilisation have been superseded in the past few years by invitations to deploy as frequently as possible, by tripartite arrangement with individual NHS employers. The small cadre of consultant reservists has been fully integrated into the regular deployment plot to help sustain operations under the direction of the Defence Consultant Advisors. My own NHS career has already been punctuated and spiced up by war deployments to the Gulf in 1991 and in 2003, to Afghanistan in 2008 (and again in 2009) and by numerous training exercises and overseas deployments



Figure 2: A Chinook arriving at Camp Bastion Hospital heliport with casualties, February 2008.

For many years, TA service has been borne at considerable personal risk by the small cadre of committed clinicians who have kept the faith, because of time necessarily spent away from NHS work, and because of highly ambivalent attitudes of employers and colleagues to such service and to mobilised absences. Fortunately, the enlightened support of the best employers, allied to high level media focus, political recognition of the achievements of the clinical teams near the front line and the stream of VIP visitors to Basra and Helmand, has overturned such attitudes. For the first time this year, reserve service has been explicitly recognised within the national ACCEA process, as reservists are also excluded from the military ACCEA scheme.

Most importantly, Reserve DMS service has been sensibly tailored to NHS employment needs, so clinical deployments are of relatively short duration, although more frequent than before. The Reserve Forces Act of 1996 provides for protected civilian employment during the deployment cycle of six months every five years, which is now necessarily interpreted very flexibly in the National Interest. A typical reserve consultant's deployment and absence from NHS work lasts for 10 weeks, comprising two weeks of pre-deployment individual, collective and operational training, six weeks of deployed working and a short phase of post tour readjustment leave. The impact of absence is substantially mitigated by reasonable email and internet communications from the field hospitals, so absence from the country does not lead to invisibility in the domestic work environment.

During deployment, a typical field hospital squadron is a lean grouping comprising one surgical team (one consultant orthopaedic and one general surgeon) and supporting staff; a well drilled A & E department; 4 to 6 ITU beds, 15 to 30 ward beds, digital radiology and CT scanning,

laboratory and welfare units, and a tight management structure, run by less than 100 staff. Forward of the hospital front doors are the anaesthetic led, helicopter borne Medical Emergency/Immediate Response Teams (MERT or IRT), and beyond the back door are the anaesthetic led Critical Care Aeromedical Support Teams (CCAST). They shepherd sedated, ventilated ITU patients back to the UK by helicopter, by Hercules transport aircraft, and by strategic airlift on modified jet airliners and air freighters, such that a casualty undergoing major resuscitative surgery in Helmand or Basra may well wake up 24 hours later in a hospital ward in the UK.

A senior deployed surgeon will thus be full time on call and will have additional responsibilities for advice to field commanders and professional leadership within the field hospital. He or she will play a key role in making clinical judgements on intervention and restraint in a complex evacuation chain for UK service personnel and a demanding socio-economic environment for local civilian and combatant casualties, which will draw upon the full range of professional and technical skills and experiences.

During my own deployment in Helmand in January and February 2008, I and my orthopaedic colleague, working as a team, were involved in the full spectrum of neurosurgical, torso, chest abdominal, pelvic and sub-speciality trauma on UK, Afghan police, army, civilian and Taliban personnel, and on injuries ranging from domestic burns to high velocity gunshot and multi-limb, multi-organ, mine and blast trauma, ranging from the superficial to fatal. We were involved in securing the stabilisation, safe evacuation and subsequent survival of several of the most severely injured soldiers, and in attending too many of the airhead ceremonial farewells and flypasts for those who were not so lucky. And this fairly typical work pattern was during a relatively quiet period in the winter months!



Figure 3: General surgical trauma with attitude: an Afghan Farmer shot twice through the upper abdomen and chest after declining hospitality to a roving Taliban band.

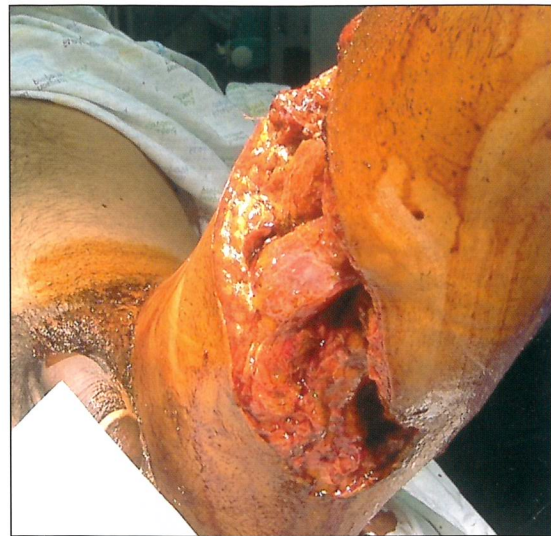


Government legislation and an accord between the NHS and the DMS provides for security of employment and protection of income and pension over this period, which is nevertheless inevitably disruptive of domestic and civilian professional life. This pattern of deployment is likely to persist for some years to come, as the DMS draws down on the experience of its senior consultant cadre. There remains a need for additional volunteer reserve surgeons to relieve pressure on the deployment rota, and service is not confined to the young. The broad experience and perspective of surgeons trained in the "pre-Calman" years is invaluable. One senior colleague has acquired a breast full of operational medals and a lifetime's worth of experience after signing up in his late 50s.

Reserve military surgical service and deployment brings considerable professional satisfaction from working among the high achieving men and women who make up the modern Armed Forces; from team-working in ways rarely possible in the NHS; from using the full range of one's professional skills, discipline, common sense and judgement over an extended period; and in dealing with and overcoming the challenges of the most demanding multi-system trauma, alongside conventional disease and injury. It also brings close involvement and privileged insight into the events that, for better or worse, are making and shaping the history books.

It demands a range of personal attributes and skills to allow effective clinical service delivery to the highest governance standards in a complex multidisciplinary team and in relative isolation at the front end of a clinical care pathway some 3,000 to 4,000 miles long. These include the capacity for congenial clinical and professional leadership within an experienced clinical team; the ability to impose calm and order in demanding trauma calls; the acceptance of the disruptions, austerities, risks and inconveniences of the military system with good humour; a reasonable standard of personal fitness; the breadth and flexibility of skills to adapt rapidly, effectively and safely to demands as diverse as burns, paediatric neurosurgery, thoracic, abdominal, hepatic and extensive soft tissue trauma; and a commitment to the individual and collective training regimes, standards and systems which allow deployed medical units to work together effectively with the minimum of fuss and preparation. If you can't take a joke, then don't join the Army!

There is a particular challenge for the Defence Medical Services, for the Royal Colleges, for the ASGBI, for the Specialty Associations and Societies, and for the Schools of Surgery, in matching the realities of shortened training programmes and specialisation with the continuing need for broadly trained general, emergency and trauma capable surgeons. One particularly powerful training method which has been developed and refined within the DMS is the use of simulation, whether it be of cadaveric dissection on the Royal College of Surgeons' Definitive Surgical Trauma Skills Course; a range of short



Figures 4, 5 and 6: A through and through soft tissue gunshot wound of the left thigh of an Afghan National Army officer, showing the effectiveness of old established Red Cross protocols in wound management. The wound was immediately debrided, viable muscle preserved and packed with cotton gauze, efficiently secured with staples. At five days, the clean wound is unpacked and readily closed with skin staples, pending full functional rehabilitation.

specialist courses such as in Neurosurgery, or on Mangled Extremities; or at the unique national field hospital simulator near York, where hospital staffs are regularly and effectively exercised prior to operational deployments in a facility which can be reconfigured to test new systems and routines at will.



Figure 7: Debridement of the cranium of a six year old child struck in the head with a penetrating missile fragment from a Taliban weapon, with no prospect of immediate further evacuation to the provincial neurosurgical unit. The CT scan was an invaluable aid to planning. She made a full recovery with no discernible neurological deficit at 5 days.

Such courses and exercises are of established and indispensable value in pre-deployment preparation, but the principle has yet to be exploited to the full, and in a systematic way, for skills enhancement in mainstream surgical training and team-working in civilian practice.

There is no precedent in recent times for such frequent recall of senior NHS specialists to the colours, and we are still feeling our way forward to a viable and durable model. Such deployments are hugely dependent on the goodwill and support of family and friends, of NHS colleagues and of managers, for which and for whom long range planning and openness are essential. They are demanding and tiring. They produce no "heroes" welcome" on return to the banalities and stresses of every day civilian and domestic life, where twelve months of commitments have to be compressed into the remaining nine months of each year.

Hippocrates is frequently quoted as stating that war is the only proper training ground for a



Figure 8: The effects of a minestrike on the leg of an Afghan policeman, producing traumatic amputation. Such shredded and contaminated wounds are all too common. Note the application of the combat tourniquet, now on widespread issue, whose immediate use has been a lifesaver following many such injuries.

surgeon. While we are fortunate indeed that he was manifestly wrong, there is no doubt that war drives innovation in medicine and surgery to counter progress in the technology of destruction, and never more so than in multidisciplinary trauma care and team-working in the badlands of Iraq and Afghanistan in recent times. It also reveals, exercises and educates surgical skills at the extremes of human physiology and bodily damage which are rarely seen in civilian life in the UK.

Rudyard Kipling was an astute and timeless observer of the human condition, whose writings and poetry a century ago still define our attitudes to the citizen soldiery of Tommy Atkins and to life and death on the North West Frontier today. He challenged us to fill the unforgiving minute with sixty seconds worth of distance run. To partake as a reservist in the work and achievements of the modern Defence Medical Services is to live two parallel professional lives to the full.



Figure 9: The complexities of war. A talib amputee, casualty of an unequal firefight with an Apache helicopter, helps care for a child admitted with severe malnutrition to the new Camp Bastion hospital in Helmand province in early 2008.

Editor's Note:

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