and treatment of all wounds. Traumatic amputations managed in the field hospital will require cleaning and revision to minimise potential necrosis and infection.

**Injuries**

Most injuries occur as a result of blasts sustained by an activated improvised explosive device (IED), commonly known as a landmine. Activation may have been by foot or vehicle and the mechanism will impact upon the severity of injuries sustained. Other injuries result from gunshot shots, rocket propelled grenade attacks and occasional road traffic collisions.

The most common injury resulting from an IED is traumatic or immediate surgical amputation of the legs. Shrapnel is blasted upwards and outwards and can cause extensive damage, including abdominal injuries, trauma to upper limbs including amputation, extensive soft tissue damage and/or burns, bony fractures from being flung away from the blast and facial injuries, including penetrating eye injuries.

Although staff are working in a regional trauma centre, the care of wounded soldiers has provided a steep learning curve for all team members. Wounds need to be constantly inspected and remain open for long periods of time, often for weeks after injury. The patient may require surgical debridement every 48–72 hours.

Managing open wounds between surgical episodes is challenging. Topical negative pressure (TNP) therapy has been widely used with chronic diabetic ulcers (Jones et al., 2005), and has been very successful with this patient group. Our experience with military personnel has led to further development of TNP equipment to treat large acute wounds – an advance in technology that is now available to all patients. This is illustrated in Fig 1 and Fig 2.

The types of wounds dressed with TNP vary from open stump wounds to open abdominal wounds; it is not uncommon for one patient to have both of these. The addition of external fixators for pelvic or leg fractures can further complicate these wounds, and skill is needed to position the dressings to create a good seal for the vacuum (Fig 1).

**Infections**

In the early phases of the Afghanistan war there was a high incidence of infection with multi drug resistant (MDR) Acinetobacter in IED wounds, symptoms of which were evident by the time patients reached the UK. Acinetobacter is a Gram negative bacterium that is found in drinking and surface waters, soil, sewage and various types of foods.

Isolating or cohorting these patients was important but several factors, including the number of infected patients and the high numbers of visitors, prompted a revision of infection control policies to minimise cross infection. This was achieved by small changes, such as limiting the number of people entering a bed space to two at any one time. This change was prompted by large ward rounds – military ward rounds can involve 11 clinicians at once.

Some bedsides are also demarcated with lines on the floor to discourage staff from entering unless absolutely necessary, and providing a physical reminder to put on an apron and gloves where appropriate.

The incidence of colonisation or infection of MDR Acinetobacter is less common now, but we still maintain precautions for although this is discouraged where possible. If no multi resistant infections have been isolated after seven days, this higher level of personal protection can be stepped down.

Patterns of infection can be largely attributed to the area where military operations are being carried out. MDR Acinetobacter was more prevalent in the desert areas of Afghanistan; lately, operations have moved to farmland areas and, again, this is reflected in the clinical presentation of wounded soldiers. All patients from this area are immediately started on an antifungal regimen and are reviewed daily by a consultant microbiologist.

Patients are screened for a variety of tropical diseases in addition to our routine screening programme. During the malaria season (May to November), they will also receive antimalarial prophylaxis for four weeks.

**Pain management**

Many of the soldiers are amputees and neuropathic pain is a major problem (see article on page 21 for more information on phantom limb pain). The acute pain team has developed a successful regimen to treat pain from these injuries.

On the first day of their repatriation, these patients are prescribed amitriptyline and pregabalin, and the dose is adjusted over time. These drugs will be started even if the patient is sedated to allow a therapeutic level to be reached. In addition, they will also be prescribed regular paracetamol, tramadol, and possibly codeine. This regimen is also helpful for brachial plexus injuries from gunshot wounds.

Sciatic nerve blocks have been used in the field hospital to manage pain associated with bilateral leg amputation. These can be left in place for three to four days and are helpful while waiting for the oral analgesic regimen to take effect. Patient controlled analgesia is also helpful in patients who can use their hands.

**Nutrition**

Injured soldiers involved in active duty may have very little reserve to cope with the massive catabolism associated with critical injury.

Early nutritional care is important and feeding will be started as quickly as possible following arrival at UHB. Where abdominal injuries are present and a considerable delay to feeding is expected, alternatives – including total parenteral nutrition – are considered. Facial injuries may rule out nasal or oral feeding.