Introduction
The conflicts in Afghanistan and Iraq have led to advances in battle care emergency medicine that have enabled military personnel to survive devastating injuries that would have once proved fatal [1]. These improved outcomes have been credited to the high quality consultant led trauma care from point of injury on the battlefield to arriving back in the UK [11]. Little empirical data exists regarding physical and psychological outcomes in traumatic amputees following rehabilitation. This information is required in order to continue the development of evidence based best practice in trauma rehabilitation.

Physical Outcomes at Discharge
A walking distance of 132m to 342m is the typical distance required to gain access to the local essential shopping facilities[23]. Healthy age-matched adults are able to walk 459 - 738 metres in 6-minutes[3].

<table>
<thead>
<tr>
<th>6MWD (metres)</th>
<th>Unilateral Non-Op</th>
<th>Bilateral</th>
<th>Triple</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean (95%CI))</td>
<td>544</td>
<td>544</td>
<td>445</td>
<td>387</td>
</tr>
<tr>
<td>*(495-593)</td>
<td>(462-625)</td>
<td>(398-492)</td>
<td>(283-491)</td>
<td>(457-521)</td>
</tr>
</tbody>
</table>

Table 1. Six minute walk distance (6MWD). * indicates a significant difference between unilateral amputees to multiple amputees.

Injury Severity on First Admission
The leading cause of injury in operationally injured amputees is by an improvised explosive device (IED). The explosive nature of this blast has caused devastating injury to UK military personnel often requiring prolonged and complex rehabilitation. The 65 amputees analysed in this study have experienced among the highest injury severity scores recorded in the literature and were treated at the Defence Medical Rehabilitation Centre (DMRC), Headley Court, UK.

Psychological Outcomes at Discharge

- 75% of all amputees attained AMP-Pro functional mobility score typical of an active adult or athlete.
- 91% of all amputees attained at least a functional mobility score typical of a community walker.
- 84% of all amputees were able to walk independently in their prosthesis.
- 95% can mobilise independently with an aid/adaptation.
- 95% have the ability to perform activities of daily living independently or independently with the use of an aid/adaptation.
- 91% of amputees that were reported to be able to “walk independently anywhere in any weather”.

Conclusion
Patients who have completed intensive rehabilitation exhibit physical and psychological attributes that are comparable, and in some cases superior to healthy age-matched adults in the community. It is reassuring to both patients and clinicians that despite experiencing major traumatic injuries amputees have the potential to achieve normal levels of function following intensive rehabilitation, indicative of preparedness for full integration back into society.

References

Figures 1. Bilateral amputee on first admission to (DMRC) Headley Court, UK.

Rehabilitation at Headley Court
The mean duration of rehabilitation for the total cohort was 34 months (95% CI = 30 – 37) and the mean number of admissions was 11 (95% CI = 10-13). The length of rehabilitation varied based on the number of amputations and severity of injury experienced. Amputee rehabilitation consists of intensive, consultant-led, interdisciplinary team treatment. The primary aim of amputee rehabilitation is the enhancement of functional mobility that will support reintegration back into society.

Figures 2. Images of progressive interdisciplinary rehabilitation at DMRC, Headley Court.