

## NIHR i4i Challenge Awards Call 6 – Trauma and Critical Care

### Scope

Trauma is the leading cause of death among children and young adults and the number one cause of lost life years. Every year across England and Wales 10,000 people die after injury, and many thousands are left severely disabled for life (1). The National Audit Office estimated in 2010 that major trauma costs the NHS between £0.3 and £0.4 billion a year in immediate treatment, and that the annual lost economic output as a result of major trauma is between £3.3 and £3.7 billion (2).

The National Institute for Health Research (NIHR) Invention for Innovation (i4i) Challenge awards are based on themed calls in areas of existing or emerging healthcare need, and applications are invited for the development of innovative technological solutions in trauma and critical care, covering the whole pathway from admission through to recovery and rehabilitation. Applications are encouraged that are seeking to develop technologies with the potential to influence all aspects of the patient pathway and improve outcomes through early intervention, effective management of major trauma and critical care, rapid decision making, active monitoring approaches and tailored treatments and therapies.

Applications may cover one of the following fields:

- resuscitation
- stabilisation
- transfusion
- anaesthetics and anaesthetic devices
- diagnosis and monitoring, including before arrival at A&E
- neurotrauma
- burns
- sepsis
- physical and mental rehabilitation occurring during critical care
- pain management.

Applications must describe how the proposed solution will be integrated into the pathway of care. A high level of engagement with local and/or regional NHS infrastructure is essential and the establishment of multi-centre collaborations to facilitate robust validation and quicker translation into the clinic is strongly encouraged.

The re-purposing of existing technologies and interventions or incremental changes to



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technologies in current clinical use will not be considered unless they include significant innovation to address the specific needs of this stage of patient care.