The future of trauma care in the UK

Addressing the care quality issues of two very different patient groups is the priority to improve trauma care in the UK: the older patient with a fragility fracture and the seriously injured patient. They have in common the challenge to provide multi-professional cross-institution prompt treatment in services in which they have not historically been given primacy. Current deficiencies are borne of a lack of integrated services and designated facilities, competing priorities and, for the critically injured, a low incidence, high acuity, complexity and limited available expertise. There are abundant outcome data, published research, national reports and a contemporary professional consensus to rapidly move to efficacious and cost-effective local and national service redesign.

The author has been tasked, by the Secretary for State for Health, and answering to Professor Sir Bruce Keogh, Medical Director for the NHS (England), to develop and implement programmes to deliver:

1. Regional networks for the care of patients suffering major trauma
2. Integrated care for patients with fragility fractures.

Measurement of the care and the service elements necessary to effect high quality care for these two patient groups would also provide a good surrogate marker for the quality of care of other injured patients. The role of the National Clinical Director is to work in two areas, policy and implementation. Influencing policy will be achieved within the Department of Health by advising ministers and working with other National Clinical Directors, policy groups, health-care professionals and social care to ensure credible and effective metrics, sensitive payment tariff structures, promoting audit and informing commissioning to develop best practice.

As the implications for service delivery develop, it will be appropriate to work with the National Institute for Health and Clinical Excellence to achieve consistency and to emphasize the cost advantage of changing to higher quality efficacious care. The structural organization aspect of the necessary transformation can be delivered through benchmarking provided by the established professionally-led national audits Trauma Audit Research Network (www.tarn.ac.uk) and National Hip Fracture Database (www.nhfd.co.uk). It will be essential to identify areas for further research to be fed into the National Institute for Health Research programmes.

Reform of the care pathways for both patient groups is likely to be highly cost-effective. Currently for the seriously injured, there is a lack of appreciation of severity, delayed investigation and surgery, both borne of case infrequency and a lack of seniority in assessing staff. This was highlighted by the National Confidential Enquiry into Patient Outcome and Death (2007) report *Trauma; who cares?* The result is poor care, avoidable disability and death, complicated prolonged hospital stay and slow rehabilitation.

The current situation

The older person with a fragility hip fracture represents one of the most expensive and commonest NHS and social care challenges – totalling £2 billion a year. The number of fragility fractures exceeds cases of stroke, transient ischaemic attack and ischaemic heart disease each year. Despite high levels of medical co-morbidities and frailty, the input of medical geriatrics care in the perioperative period and in rehabilitation remains woefully low. Avoidable delays to surgery, inadequate rehabilitation and patchy falls prevention and bone health services typify many NHS hip fracture care pathways. The publications from the British Orthopaedic Association (2007, 2008) and British Geriatrics Society illustrate the issues.

Implementation of policy change should be primarily achieved by educating and working through the 10 strategic health authorities to promote locally sensitive primary care trust and social care commissioning of acute trusts. The new strategic health authority medical directors will need to drive implementation of their bespoke major trauma networks. The strategic health authorities will look to the National Clinical Director for Trauma Care for interpretation of their current provisions and to promote effective pathways and options for service configuration.

Fragility fracture management

We need to achieve integrated services for both inpatients and outpatients – creating comprehensive prevention, fracture care and rehabilitation pathways to achieve a prompt safe return to previous domicile and independence where possible with a diminished risk of further fall or fracture (Department of Health, 2009). Currently many of the necessary elements of the service exist but are unfocussed, given low priority and are disjointed across both professional, and secondary and primary care boundaries.

There are expensive inefficiencies in the acute hospitals and community facilities. Audits of indicator diagnoses for this group (hip and wrist fracture patients) show the current limitations for inpatients are: inadequate (ortho)geriatric medical support, delays to surgery from competing surgical priorities, and barriers to seamless rehabilitation and discharge. For outpatients, the issues relate to poor needs assessments for preventive therapies and the segregation or inconsistent availability of bone health and falls services.

There are sufficient good practice models established and a national audit (National Hip Fracture Database; The Information Centre and National Hip Fracture Database, 2009) for benchmarking professionally-derived standards so that service reconfigurations can be achieved. Guided by the National Institute for Health and Clinical Excellence these quality improvements will be built into Payment by Results and commissioning in the short to medium term. The recognition of hip fracture by Lord Darzi (2008) as one of the key diagnoses to apply Best Practice Tariff to in 2010 will be a powerful lever in effecting change. The key issues for implementation will be manpower in geriatric medicine, dedicated operating lists, rapid access to rehabilitation, and bone health investigative capacity.

Regional trauma systems

The aim must be to achieve commissioning of regional trauma systems for the seriously injured that use the individual local and regional services to optimize treatment by promptly accessing specialist care. The fundamental change must be to move from the illogical position that the first receiving hospital, clinicians or paramedics, which is unable to deliver the definitive care, remains responsible for the delivery of that specialist care. Once it is clinically evident that the patient needs specialist treatment, be it at the roadside, in the resuscitation room or after inpatient investigation, the regional system or specialist unit must take the responsibility for providing that care and transferring the patient rapidly and safely to a hospital that can deliver the definitive care.

Each hospital in the system should be designated based on its specialities and facilities; the current somewhat ad-hoc distribution of specialties will require bespoke arrangements in each trauma network – not all transfers will need to go to the major trauma centre. The system and transfer arrangements will evolve over time based on the performance against clinical quality standards of care, consensus protocols and guidelines; many of these are already published by specialty groups and further guidance will be forthcoming in 2010.

Various triage and transfer options are available: bypass, open access, retrieval teams and negotiated access. The geography and service configurations suggest different regional systems will work differently but may all be measured against the same standards. Trauma network boundaries need not match strategic health authority territories. Professional national audit (in the form of the Trauma Audit Research Network) exists to monitor and report unit and network performance. Each system must also be capable of responding to major incidents and cross-regional working for national disasters.

The challenges will be in securing:

1. Locally sensitive pre-hospital triage
2. 24-hour consultant trauma team leaders
3. Neurosciences and general critical care capacity
4. Interventional radiology (which will increasing become a primary treatment)
5. Ambulance service retrieval options
6. Rehabilitation.

The latter is potentially the major confounder; each patient treated at the major trauma centre will have complex physical and neuropsychological rehabilitation needs. The patient's rehabilitation will have to be defined and initiated by the major trauma centre's specialists. The patient must be transferred to his/her local hospital with a personal prescription for rehabilitation managed by a named key worker from the major trauma centre. There will be a tension to be managed between the need to achieve that thoroughness and the release of beds to receive incoming trauma cases.

Historically rehabilitation services have been poorly supported and an important tool for the network will be a rehabilitation directory to maximize access to the available resources. In the same way as the network takes responsibility for definitive emergency care as soon as that is identified, so must rehabilitation services to optimize rehabilitation potential.

Conclusions

There has been a growing desire from all parties over the last 10 years to create order and credible structures to care for both these patient groups. In the author's opinion, service redesign, based on patient-important and professionally derived standards of care, is overdue. This will be achievable, cost-effective and welcomed by patients, their families and doctors, their advocates. **BJHM**

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KEY POINTS

- It is illogical in major trauma that a receiving clinician who is unable to undertake the specialist definitive patient care remains responsible for delivering that care.
- We will move to bespoke inclusive major trauma networks appropriately designed to match the local geography, facilities and expertise.
- For older people with fragility fractures currently there are expensive inefficiencies in orthogeriatric support, delays to surgery and disjointed rehabilitation.
- Commissioning based on quality metrics derived from national professional audits will be the levers for cost-efficacious care and improved outcomes.