

Medical Peri-operative liaison Service (orthogeriatrics)

**A report and audit on the introduction of the peri-operative
medical liaison service for orthopaedics**

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Introduction:

In July 2005 a review was performed to establish a model for the relationship between orthopaedic, medical and rehabilitation of emergency trauma patients admitted onto Taunton Ward. This looked specifically at fractured neck of femur patients (#NOF). (1)

At that time the model of care consisted of:

Emergency care:

Emergency patients were admitted to Taunton Ward after being assessed in A&E. They were operated on at the first opportunity having been deemed fit for surgery by the on call anaesthetist if necessary.

If any medical problems were identified the appropriate medical consultant opinion was sought via a paper consultant to consultant referral system (the "purple")

Rehabilitation:

Patients having undergone orthopaedic surgery receive their initial rehabilitation on Taunton ward. In a significant number of cases they are discharged directly from Taunton ward to their previous address without the need for further rehabilitation.

Those patients that required inpatient rehabilitation were transferred to Clifton, Mount and Kingfisher (Andover) wards.

Patients were selected for transfer to the rehabilitation wards by the consultant Nurse in rehabilitation and placed on the waiting list for each ward dependent on their home address.

The main three concerns that arose from this review were;

1. Delays in the time from admission to surgery

There were a number of causes for these delays. The most common was that #NOF admissions are usually elderly and often have significant co-morbidity that delays immediate surgery. The paper consultant to consultant paper referral system was accepted as being slow, significantly increasing the delay to theatre.

2. Delayed transfers from the acute to the rehabilitation wards.

Many patients requiring inpatient rehabilitation arrive on the rehabilitation wards up to three weeks following their hips surgery. This constitutes a significant delay into the rehabilitation setting and makes the prospect of discharging a patient before twenty one days very challenging. The delay in transfer was due to the overall demand for rehabilitation beds throughout the Trust which is heightened by the number of delayed discharges on the rehabilitation wards.

3. Total length of stay.

It was also hoped that the overall length of stay would be reduced. The report discovered that the total length of stay following a #NOF was on average **39 days**. It was hoped to reduce this to **21 days** or less.

As a result of this review it was decided to adopt a model consisting of an integrated trauma and rehabilitation unit based on Taunton ward.

4. Elective patients

It became apparent that a regular senior medical input into the orthopaedic pre-assessment clinic would help the identification and management of medical, anaesthetic and social issues before patients are admitted for their surgery.

The new model

Trauma

Trauma patients are admitted to Taunton ward under the care of the orthopaedic surgeons and their juniors, but a consultant physician would review all admissions and address any immediate medical problems in order to optimise their status and ensure they are medically fit for theatre as soon as possible. Any ongoing medical problems in the post operative period are also addressed by the consultant physician. This model is favourable compared to other possible models. (2) (3)

Elective

The consultant physician attends the pre-admissions clinic on a daily basis in order to identify and address any medical or anaesthetic issues.

How the service works:

Trauma patients

- Trauma patients are assessed in A&E and referred to the orthopaedic team on call.
- The patient is admitted onto Taunton ward under the care of the orthopaedic team
- All admissions are reviewed between 0730 and 0830 (Monday to Friday) by a consultant physician, and any medical management or investigations initiated.
- At 0830-0900 a multidisciplinary trauma meeting is held consisting of the orthopaedic consultant who has been on call, consultant physician, junior orthopaedic team, anaesthetist and theatre nursing sister and all cases are reviewed and the days trauma list drawn up
- On Tuesday mornings the consultant physician leads the Multi-Disciplinary Team Meetings. This significantly helps discharge planning, identifying any medical, social or rehab issues. A ward round of any patients with concerns is then conducted.
- All referrals to rehabilitation are screened by a consultant physician

Advantages of this service:

- All admissions are reviewed by a consultant physician within 24 hours and any acute medical problems are identified and addressed.
- Medical optimisation at a senior level ensures that any urgent investigations are requested and expedited
- Cardiac echos (previously a significant source of delay) are performed instantly
- In the cases where other specific specialist opinion is required consultant to consultant direct discussion abolishes any delay
- Rapid identification of those patients requiring HDU/ITU input
- Investigation and treatment of osteoporosis is instigated at admission
- In cases where there is any concern about fitness for surgery consultant to consultant discussion can formulate management.
- Attendance of the trauma meetings every morning ensures good communication and highlights the needs of the old and frail.
- In collaboration with the anaesthetists, theatre staff and orthopaedic surgeons the most optimal trauma list is planned.
- Discharge planning is highlighted from day one
- Patients suitable for transfer to rehab wards are rapidly identified
- Patients who are *not suitable* for transfer to rehab wards are identified. This prevents inappropriate admissions to rehab facilities

- Problematic discharges are addressed at a senior level.
- Senior input into relative discussions on continued medical problems, end of life issues and discharge plans.

Elective patients

- Consultant physician attends the pre-assessment clerking clinic on a daily basis.
- On Wednesday afternoons the consultant physician attends the MDT meeting on St Cross ward and conducts ward round of any patients that are of concern.

Advantages of this approach

- Patients who are not medically fit for surgery are identified and therefore not admitted and then cancelled.
- Patients who have medical conditions are optimised before surgery.
- Patients who have anaesthetic concerns are identified and discussed with the anaesthetic department at a senior level
- Possible social problems which may hamper discharge are identified and managed.
- The MDT meeting identifies any problems that are delaying discharge.

Audit:

The service was started on the first of December 2005 and data has been collected since then

This Audit sample covers 1st December 2007 to May 31st 2007

Average number of reviews on 07.30 ward round = **4.7 / day**

Number of # NOF = **30.3 / month**

An audit was conducted in the month *before* the ortho-geriatric service was established (November 2005) and a comparative audit was performed in June 2006.

	Pre-orthogeriatrics service (Nov 2005)	June 2006	June 2007
Percentage of #NOFs getting to theatre in 0-48 hours.	43%	78%	91%
Percentage of #NOFs getting to theatre in 0-24 hours	30%	43%	65%

It should be remembered that Southampton have a well established ortho-geriatric service for many years and their patient numbers are much greater.

What is best practice?

There is a proven association between delay in operation and mortality (4). Although it is recommended that surgery is performed within 24 hours of admission(5), it is widely accepted that for many reasons, this is very difficult to achieve at present and hence 48 hours is often used for comparative data, however we should continue to strive for a 24 hour threshold. (5)

Length of stay:

The length of stay recorded, includes time spent at rehab facilities, **from admission to discharge from the Trust ie not just on Taunton Ward.**

	Pre-orthogeriatric Service (November 2005)	June 2006	June 2007
Percentage of patients Discharged within 21 days Of admission	35%	43%	62%
Total average length of stay	39days	29day	16days

Reasons for delayed discharge

Taunton Ward:

- **Awaiting placement**
- **Awaiting social Service input**
- **Awaiting O.T Assessment**
- **Awaiting psychiatric review**
- **Awaiting package of care**
- **Complex relative issues**

N.B The reasons for delays from the rehabilitation wards are not explored here.

Transfers to rehab / discharge from Taunton / Mortality:

	Pre service (2005)	June 06	June 07
Discharged from Taunton:			67%
Transferred to Rehabilitation:			17%
Mortality:	6.6%*	9%	8%
Other transfers:			8%

* mortality figure Pre-service was calculated using retrospective data collection from HIS etc and is probably not as accurate as the prospective data used in this audit

Comments / conclusions / observations

There has been significant improvements in a number of areas:

- Time to theatre
- Length of stay
- Quality of medical care (See previous report) (7)
- Mortality figures remain constant and reflect the “baseline” for this elderly and frail population

The orthogeriatric liaison service is just one part of an excellent team consisting of doctors, nursing staff, therapists and discharge liaison staff. The excellent skills and communication between members this multidisciplinary team is resulting in significant recordable benefits for the patients and Trust.

Audits in progress:

- Comparison of elective patients cancelled for medical reasons before and after the introduction of the orthogeriatric service

Further developments:

- Continue to accommodate the increase in elective and emergency workload
- Aim to increase the number of patients who are initiated on osteoporosis medication before discharge
- Aim to decrease the length of stay to below 14 days

References:

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(2) Ortho-geriatric liaison- the missing link. **R Wakeman, P.D.Sheard, G.H.Jenner. Journal of Bone and Joint Surgery. 2004,86, 636-638**

(3) A Comparative Study of Rehabilitation Outcomes of Elderly Hip Fracture Patients: The advantages of a Comprehensive Orthogeriatric Approach. **A. Adunskey, A Luskey, M Arad, J Heruti, The Journals of Gerontology, June 2003, 58A, 6, 542-547**

(4) Mortality associated with delay in operation after hip fracture: observational study. **BMJ 21st April 2006**

(5) Delivering quality and value. Focus on Fractured neck of Femur. **Department of Health 2006.**

(6) Curriculum for the foundation years in postgraduate education and training. **Foundation Programme Committee of the Academy of Medical Royal Colleges. 2005**

(7) Orthogeriatrics; The First Eight Months. **Andrew Oswell, July 2006**