Orthopaedic Rapid Recovery
Enhanced Recovery after Surgery
Trauma & Orthopaedic Learning Session 1
by Neil Windsor, 29.07.11
Rapid Recovery has transformed the dynamic away from the “passive patient” and “expert health professional”, to one where power and responsibility is shared via a “mutually agreeable Rapid Recovery contract”.

Increasing evidence shows that when people are informed, engaged and share in decisions about their care, they have better health and a higher quality of life. Making services more person-centred raises the quality of care. It leads to better health outcomes, higher user satisfaction, joined up care and a more cost efficient and streamlined system.
What is Enhanced/Rapid Recovery?

An evidence-based approach to elective surgery, ensuring that patients are in optimal condition for treatment.

Controlling postoperative physiology

- preop optimisation/information
- attenuation of stress
- pain relief
- exercise
- oral nutrition

Reduced morbidity and accelerated convalescence

perioperative changes in functional capacity

- surgery
- multi-modal intervention (pain relief, exercise, feeding, stress-reduction)
- conventional treatment

Days

Weeks

Kehlet Br J Anaesth 1997; 78: 606-17
What is Rapid Recovery?

Works on the idea of multi-modal intervention (pre/peri/post-operatively) ensuring patients are:

- Are in the optimal condition for treatment
- Are better informed about their care
- Are exposed to extensive pre-habilitation
- Experience a more streamlined, standardised care pathway
- Are exposed to evidence-based methods of enhancing care
- Experience optimal post-operative rehabilitation
Conventional Knee Pathway

Conventional Pathway
- Minimal information for patients
- Little patient education
- Minimal protocolisation or pathways
- Anaesthesia prohibiting EM
- Use of PCA’s, Drains, Catheters
- Admission Day Before Surgery

Conventional Outcomes
- Limited Patient Satisfaction
- ‘Acceptable’ not ‘Excellent’ outcomes
- 6 days in hospital
- Day 0/1 in bed

You Are III
Patients obviously needing surgery may wait. Time from Clinic/ESP to referral excessive.

Patients not offered surgery date at this point. Service only available after 16:15.

No formal patient education. Mixed messages.

No Joint School.

No formal patient education. Mixed messages.

Separate Hospital visit.

Patients have pre-op 10-14 days after initial consultation.

Physiotherapy assessment.

Separate Hospital visit.

Decision to treat. Pt listed.

Patient fit for surgery.

Yes

No

Refer back to GP.

Decision on FFS too late in pathway.

No formal post-operative support service.

No Physiotherapy input on DOS.

Patients pain scored.

Ward.

Patients admitted day before surgery.

Surgery.

Unnecessary Bed Day cost.

Varied Anaesthetic techniques with no consensus.

Ineffective use of LIA Use of blocks delaying mobilisation.

Varied list start times.

Day 1
- Physio to chair
- Check X-Ray

W/E radiography service

W/E Physiotherapy cover

Day 2
Physio input x2

W/E Physio. and OT issues

Day 3 to discharge
Physio input x2

Transport issues

TTO issues

Post Discharge
Availability of telephone advice

Discharge

Consultant discharges all patients

PKR treated the same as TKR

No mobilization

PCA

Bed availability

PONV

No mobilization

Ward

Patients pain scored.

B

Architects

Wrexham Maelor Hospital Orthopaedic TKR patient pathway general process map
What Did We Do?

Developed an Orthopaedic-specific Rapid Recovery Programme

**Aim** - Redesign our existing Orthopaedic pathway (using Kehlet’s model) to positively influence the patient care process before, during and after joint replacement surgery.
Challenged Traditional Assumptions

Why do we admit patients the day before surgery when there is often no clinical benefit?

Why do we use Opiods for pain relief when we know they can make patients sick and less alert?

Why do we let patients rest in bed for the first 24hrs post-operatively, despite evidence to show early mobilisation accelerates recovery?
Rapid Recovery Knee Pathway

RR Pathway
- Patient/Coach Guides, Daily Diaries, Exercise Sheets
- Joint School
- Protocol-driven care
- Multi-Modal Anaesthesia/LIA
- No Drains, PCA’s, Catheters
- Robust Audit including PROM’s
- Admission Day of Surgery via Arrivals Lounge

RR Outcomes
- Streamlined and standardised care from referral to discharge
- Highly motivated, unidirectional team
- Excellence in outcomes
- Mobilisation in recovery
- 2-3 hours in bed
- 3 days in hospital
A New ‘Rapid Recovery’ Pathway?

RR Pathway

1. Extensive Pre-Op Education  
   – Joint School
2. Extensive Patient Information

Pre-Operative
Joint School

- Consultant Surgeon
- Consultant Anaesthetist
- Physiotherapist
- Occupational Therapist
- Ward Staff
- Theatre Staff
- Pharmacist
- CNS Orthopaedics
- Public Member
Patient Feedback

• “I came to this meeting feeling rather confused but I now feel that all aspects have been explained that I am more relaxed and easy about the procedure. Thank you very much.”

• The NHS talks about empowering patients, but Joint School involved me in my care to a far greater degree than any previous operations at WMH

• “Having this seminar has relieved a lot of anxiety and being personally involved in my care.”

• A wonderful service offered an extremely helpful and enlightening experience all staff friendly and a relaxed atmosphere.”
Professional Patient Information
Pre-Operative

Patient Management Guide

Coach Guide
Professional Patient Information
On Admission

**Daily Diaries**

- **In the Arrivals Unit / Ward:**
  - You will be admitted to the Orthopaedic Arrivals Unit / Ward.
  - Your blood pressure, temperature and breathing will be measured.
  - Your urine test for the theatre will be completed.
  - Blood tests will be requested.
  - You will be seen by your Anaesthetist.
  - You will be checked by your surgeon, your consent will be checked and a mark will be placed on the wrist which is to be operated on. Date of discharge will also be confirmed.
  - The Junior Nurse will escort you to the pre-theatre area where you can change into your Theatre gown.

- **In the pre-theatre area:**
  - You will be met by the Recovery Nurse who will check your theatre check list items - ensuring you to the anaesthetic room.

- **Following your operation:**
  - Your drip, oxygen and machine giving your pain killers will be continuously checked.
  - Your arm band will be checked, as will your drip.
  - The Physiotherapy or Nurses will advise you to get out of bed and walk as often as possible.
  - A Nurse or Physiotherapist will visit you every hour.
  - Your blood pressure, pulse, temperature and pain scores will be measured regularly.

**Exercise Sheets**

- **Total Knee Replacement Exercise Sheet:**
  - The Physiotherapist will see you the next day after your operation.
  - You will then be seen every other day during your stay in hospital. It is important to follow your exercises and watch your activities until you are discharged.

  - **Exercise 1:**
    - Take 8 deep breaths every hour to encourage lung expansion.
    - Bend and straighten your knee briefly, keeping your knees straight during the exercise and also stretch your calf muscles.

  - **Exercise 2:**
    - Repeat 10 times at least 3 times a day.

  - **Exercise 3:**
    - Rotate both ankles in a clockwise and anti-clockwise direction.

  - **Exercise 4:**
    - Repeat 10 times at least 3 times a day.

**Ticket Home**

- **Patient Name:**
  - Discharged: Yes / No

- **Consultant:**
  - Discharged: Yes / No

- **Physiotherapy:**
  - Discharged: Yes / No

- **Other Information:**
  - Date Going Home:
  - SDS Written:
  - X-Ray Done:
  - Transport Arranged:
  - Ticket Home
A New ‘Rapid Recovery’ Pathway?

RR Pathway

3. Change in Anaesthetic Regime
4. Change in Intra-Operative Pain Relief
5. Mobilisation in Recovery
A New ‘Rapid Recovery’ Pathway?

RR Pathway

6. Change in Post-Operative Pain Relief
7. Early Mobilisation
Early Mobilisation
Post Discharge

- Helpline
- Follow up calls
- District nurse
- Immediate opd access
- Patient satisfaction and outcomes data
Learning to Date

• Small but cumulative changes to practice
• No additional resources required
• Significant decrease in length of stay
• Increased patient satisfaction
• Better patient outcomes
• The new ‘best practice’ model
Critical Success Factors

- Holistic Approach to Care
- Clinical Leadership
- Cohesive Multi-Disciplinary Team
- Consistency of Message Throughout Pathway
- Whole System not Piecemeal Change
- Extensive Patient Involvement
Efficiency Outcomes

If we can roll-out Rapid Recovery ‘Knees’ to all Orthopaedic Consultants in BCULHB the following savings can be made:

- Bed Days Released - 2610
- Potential Extra Activity - 874
Revolutionary new knee replacement could see patients walking just TWO HOURS after surgery

By DAILY MAIL REPORTER
Last updated at 4:15 PM on 22nd July 2010

Medics have come up with a new system of knee replacement that could see patients walking just two hours after surgery.

Most patients who undergo the new method are allowed to leave hospital within 24 hours and some are able to go home within a day of going under the knife.

Consultant orthopedic surgeon Tony Smith at North Wales NHS Trust devised the system with a team of physiotherapists, anaesthetists, nurses and hospital managers.

They combined their ideas with the latest innovations from Australia, Copenhagen and the USA.

Instead of being laid up in bed for at least 24 hours, patients are encouraged to bend their legs to almost 90 degrees as soon as possible and to take their first steps.

The concept is so alien to most patients that the...
Next Steps

1. Roll-Out to all Consultants across the 3 BCUHB Sites
2. Enhanced Recovery #NoF
3. Walk patients back to the ward from recovery???
4. Daycase Hip/Knee Replacements???