ACI - Acute Low Back Pain Workshop

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Today

Physiotherapy ED involvement

A new telephonic initiative to enhance care of patients that are discharged with ALBP or ANP

Case study
Executive Summary - Introduction

- “Major cause of disability, 25% of Australians having LBP at any one time.

- High levels of disability result in personal and societal economic costs.

- The direct costs of managing ‘back problems’ in Australia in 2012 is estimated to be almost $A4.8 billion.

- Approximately $220 million was reimbursed by Medicare in 2013 for spinal imaging, much of which could have been avoided if the numerous international guidelines for ALBP were followed.”
“40% of those reporting an episode of ALBP recover within six weeks.

However, 48% still have pain and disability after three months and of these almost 30% do not recover by 12 months.

A key problem in the management of ALBP is the number of people who develop chronic LBP following an ALBP episode.

We expect that early appropriate care may reduce such a transition.”
Model of Care - Management of people with acute low back pain

Highlights three important areas for improvement:

- more appropriate clinical examination and use of radiological imaging only as necessary
- better use of appropriate analgesia
- enhanced patient education.
Key Principles of the model of care

**Principle 1: Assessment – history and examination**
A systematic and formal history and examination including the consideration of red flags is required at the outset to determine the pathway of care for each individual patient.

**Principle 2: Risk stratification**
Prognostic risk stratification tools, such as the STarT Back and Örebro questionnaires, stratify patients into low, medium or high risk groups, determining the amount and type of treatment that they require.

**Principle 3: Patient education**
From the first assessment, each person will receive one-on-one discussion and support of self-management, along with electronic and paper-based education packs that detail the best practice management.

**Principle 4: Active physical therapy encouraged**
Physical therapies will primarily be a ‘hands off’ approach. The emphasis is on self-management assisting the patient to understand their condition and a staged resumption of normal activities. Consultation with team members may include a physiotherapist or practice nurse.

**Principle 5: Begin with simple analgesic medicines**
Where pain medicines are required it is best to begin with simple analgesics using time-contingent dosing. Non-steroidal anti-inflammatory medications can be used for short time-frames after consideration of possible adverse reactions. Opiates should be avoided.
Key Principles of the model of care

**Principle 6: Judicious use of complex medicines**

In the presence of persisting severe leg pain, some complex medication regimens may support pain control. These include tricyclic anti-depressants, anticonvulsant agents and serotonin noradrenaline reuptake inhibitors. However, caution is required considering the impact of potential mood changes and somnolence. Opiates are less effective in this patient group, and corticosteroid spinal injections offer only short-term pain relief and should not be initiated in the primary care setting.

**Principle 7: Cognitive behavioural approach**

The principles of cognitive behavioural therapy are used to ensure the patient is supported to understand the relationship between beliefs and behaviours, and to develop a goal-orientated plan of care.

**Principle 8: Only image those with suspected serious pathology**

Imaging is only indicated when a thorough patient history and physical examination indicates that there may be a medically serious cause for the lower back pain.

**Principle 9: Pre-determined times for review**

Review each individual’s progress at two, six and twelve weeks. If there has been insufficient progress then change the treatment plan as outlined in the MoC.

**Principle 10: Timely referral and access to specialist services**

If the patient has not recovered by twelve weeks arrange for review by a musculoskeletal specialist as outlined in the MoC.
Updated Guidelines for the Management of Back Pain (Koes et al 2010)

An updated overview of clinical guidelines for the management of non-specific low back pain in primary care
Synthesis of 13 Countries and 2 European guidelines

Classification into 3 groups:

- **Serious pathology** *(less than 1%)*
- **Radicular Syndrome** *(Back pain with leg pain)* *(5-10%)*
- **Non Specific pain** *(90-95%)*
Majority of patients with acute back pain
Non specific (90 - 95%)
Physiotherapy services in ED

- In the management of acute low back pain
  - Decrease pain and improve patient satisfaction
    
    (Lau et al 2008)

- Primary-contact physiotherapists manage a minor trauma caseload without misdiagnoses or adverse events

  (Sutton et al 2015)
Emergency Department - RNSH

- Jan 2016 – funding for ED Physiotherapist 0.5 FTE
- From August 2016 Triage Physio - more time available
- ED Physiotherapy service 7 days a week 8am - 4.30pm
- See patients with NSLBP or ALBP with Leg pain
- Do not have Advanced Care Practitioner Status
Acute Back Pain Management Guidelines

**Analgesia:**
- Paracetamol/NSAIDs
- Oxycodone/Tapentadol
- Pregabalin/gabapentin for a radiculopathy

**Spinal cord or cauda equina compression**
- Leg pain with neurological signs
- Spinal Surgery

**Back pain with or without leg pain, but no neurological signs**
- Exclude non mechanical causes
- Physiotherapy Review

**Infection**
- Spinal Surgery

**Tumour**
- Rheumatology

**Fragility fractures**
- Stable
  - Rheumatology
  - Spinal Surgery
- Unstable
  - Rheumatology
  - Spinal Surgery

**Spondyloarthropathy**
- Rheumatology

**Imaging**
This is dependent on the clinical situation and concerns about missing serious pathology. However the general advice is:

- **Acute mechanical back pain** does not require imaging
- **Presence of neurological signs** usually requires an MRI scan
- **Acute back pain in osteoporosis** requires an X-ray for fractures
- **Infection or metastatic disease** will require a CT or MRI scan

If unsure, discuss with the relevant Registrar or Consultant
Criteria for patients to be seen

- Non specific back pain, particularly if they are difficult to mobilise
- Back and or leg pain without neurology
Learnings from the key principles of the MoC – From the key elements:

- **Assessment -** History and Examination is thorough as all patients are seen by a JMO at least

- **Risk Stratification -** Use of the short form Orebro

- **Simple analgesics initiated by triage nurse……often the use of opioids are necessary**
Learnings from the key principles of the MoC – From the key elements:

- Education – Use of ECI handout and opportunity to discuss content
- Active Physical Therapy encouraged
- Judicious use of imaging

Translated into 5 languages!
Learnings from the key principles of the MoC – From the key elements:

- Review timeously
- Referral to Physiotherapy, Rheumatology Back Pain or Pain service as appropriate
231 patients offered Physiotherapy in ED

Back and Neck Pain Patients seen in ED Feb 16 - April 2017

Month - (Note: Decreased staff availability in Dec 16 and Jan and March 17)
231 patients seen by physiotherapists in ED from Feb 2016 – April 2017

**Age**
- Average: 54
- Median: 53
- Range: 16-94

**Gender**
- Patients seen by Physio in ED - Percentages
- Female: 49
- Male: 51
Most commonly back pain

Presentations seen by Physio in ED

- Neck pain: 10
- Back Pain: 90
84% (194 pts) Discharged, most within 4 hours

Outcomes for patients seen by the physiotherapy service in ED from Feb 2016 - April 2017

- Discharged within 4 hours: 166
- EMU: 28
- Admitted: 37
Outcomes for patients that were seen in ED as at 30 April 2017

- Local private physiotherapy: 66
- RNSH Physiotherapy: 31
- Other NSUHD Physiotherapy: 9
- Rheumatology Back Pain Clinic: 6
- Acute Private Hospital Admission: 4
- Pain service: 3
- Chiropractor: 2
- Private rehab - day program: 1
- Osteopath: 1
Anecdotally the ED doctors are keen to have patients seen by the physiotherapist

- Acknowledgment of our specialist skill set
- Increase chance of discharge
- Patients tend not to represent
Emergency Department Case Presentation

Mr H - 28 year old man IT worker

Sudden onset of lumbar back pain extending into his buttocks and legs posteriorly associated with pins and needles and numbness as he was walking in the city leaving a meeting.

Stood still for 30 minutes

Got into car and drove self to RNSH ED arrived at 13:11
- At nursing triage: 9/10 pain - 2X Panadeine Forte - very little effect
- Too painful to sit down
- Very fearful about the severity of the pain on onset – possible damage??!!
- Limited neuro Ax by the JMO in standing: Neurologically intact/ nil bladder and bowel symptoms
- One hour later given 5mg Endone, 5mg Diazepam and 400mg Ibuprofen
● Physio consult: Initially in standing!

● Subjective AX

  – Well and healthy, no other medical issues
  – Lived at home with parents
  – Long history of back pain
  – Last episode managed by chiropractor 2X/week for a few months. His last appt 6 months ago
Physiotherapy management

Literature related to Acute back pain - in standing .. whilst analgesics were taking effect.

Opportunity to have questions answered

Able to lie down with min assistance 45 min later

**Neuro Ax:**

Sensation, Reflexes and Sensation intact,

Decreased SLR bilaterally
Physiotherapy management

Explanation:
- Acknowledging the severity of the pain (9/10)
- +++ Reassurance that this acute on chronic NSLBP
- explanation that we have screened for anything serious
- No evidence of anything serious…no trauma
- Rarely associated with structural damage but rather an inflammatory episode
- No need for imaging
- Expect a good recovery as their backs are structurally strong, may take up to 6 weeks, but often less
Physiotherapy management

- Treatment
  - Deep breathing – relaxation of back and belly in spasm..NB++
  - Gentle mobility exercises in lying
  - Pain relieving postures for sleeping later with pillow between knees
  - Mobilised

- Advice to keep up regular analgesia
- Advice to avoid bed rest and to keep moving
Outcome:

- Pt happy to sit in a chair. Pain level 6/10 and dropping
- Hand over to ED doctor.
- Doctor screening - pain level still high
- Dr keen to admit patient… but patient felt confident to manage his pain at home and requested discharge
- D with letter to local physiotherapist at 15:53 (2hrs and 42 min)
Telephonic Follow up?

- What happens to these patients once they are discharged?

- Can we intervene where patients are prone to develop long term /chronic issues?

- Could we add value in a cost effective manner?
Telehealth in the management of Acute Low Back Pain?

Could the use of electronic systems and telehealth have potential to ensure more effective care in a sustainable way?

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Use of eHealth technologies to enable the implementation of musculoskeletal Models of Care: Evidence and practice

Helen Slater, Blake F. Dear, Mark A. Merolli, Linda C. Li, Andrew M. Briggs
When do patients present to ED?

![Bar chart showing the number of back and neck pain patients presenting to ED at different times of the day (00:00 - 24:00) across months (Feb-15, Feb-16, Feb-17).]
Follow up call after Discharge from Emergency Department

- Report - Patients with “Back or Neck Pain” is generated via Explorer Menu (Average 35 per week)

- Follow up call - Discharged patients with NSLBP or Back and Leg pain (Average of 12 calls per week)
  - within 10 days to ensure that they are on the correct pathway
  - Make contact - Average 6 people per week
  - 10 minutes / call
Telephonic follow up - Telehealth

- According to a script
- Messages as per MoC
- Documented in EMR
- Message left if necessary with call back details
Telephonic follow up - Telehealth

- Advice and encouragement
- Use of e-mail to supplement resources
  - Dr Mike Evans - Low back Pain Video link
  - ECI exercise sheet
  - CSP “10 Things you need to know about your back”
- Referral to local physio, RNSH physio, GP or to rheumatology back pain clinic NB to prevent chronicity
Telephonic follow up - Telehealth

- Issues for patients:
  - Concern that they still have pain
  - Often not taking regular medication
  - Fear of returning to activity and back to work
  - Environmental factors that may be contributing to the pain….mainly sitting dose
  - Reinforcing that imaging is not necessary
Feedback from the patients

- Grateful for the contact and follow up
- Relief that there is nothing serious and that they were worried previously but now see that they are in fact improving… the situation feels more manageable
- Knowledge of how to manage their pain next time
- ?? Prevention of readmission
Telephonic follow up of discharged patients

535 patients were called - 268 (50%) were contacted

Representation to ED within 30 days

<table>
<thead>
<tr>
<th>Called by not contacted</th>
<th>Contacted</th>
</tr>
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<tbody>
<tr>
<td>13</td>
<td>3</td>
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Feb 2016 - 30 April 2017
Mr H??? Follow up phone call 1 week later

- Feeling a lot better - Back at work after 3 days
- Pain level 4/10
- Now taking Paracetamol regularly and replacing it with Panadeine Forte occasionally
- Has seen physio once and was due to see them again the next day
- Confident that he is on the mend and that he is been well cared for
- Thanked us for the care in ED and the follow up phone call
Physiotherapy Input in ED

29/2/16 - 30/4/2017

46% (799) of patients presenting to ED with spinal pain receive physiotherapy input

Follow up calls made (messages left) 16
Received advice telephonically 13
Received Physio in ED 2
Offered RNSH Physio after contact
In Conclusion

- Offering an Physiotherapy service in ED and a follow up telephone call service that is contribution to preventing admission and representation

- Assisting development of a clear pathway for all patients presenting with spinal pain