Musculoskeletal Network Forum 2018

Auditorium, Kolling Institute, Royal North Shore Hospital

Thursday, 22 February 2018

#MSKF18
Musculoskeletal Network Forum 2018

Overview

The Agency for Clinical Innovation (ACI) works with clinicians, consumers and managers to design and promote better healthcare for NSW.

We provide expertise in service redesign and evaluation, specialist advice on healthcare innovation, initiatives including clinical guidelines and models of care, implementation support, knowledge sharing and continuous capability building.

Our Clinical Networks, Taskforces and Institutes provide a unique forum for people to collaborate across the NSW Health system. By bringing together leaders from primary, community and acute care settings we promote an integrated health system.

Audience

This event brings together doctors, nurses, allied health professionals and managers that work in NSW health services, consumers contributing to ACI networks, researchers, private health service providers, consumer organisations, and others who are interested in advancing musculoskeletal health in Australia.

Photographs

Photographs taken at this event may be published by the ACI for internal and/or external promotion, education or research purposes. If you do not wish your photograph to be taken please notify our staff.

Aims

The Forum will share the work, progress and outcomes of service sites, implementation groups and researchers that builds understanding and supports improved health care services for people living with musculoskeletal conditions.

This includes:

- Management of people with acute low back pain
- Early experience of implementing Leading Better Value Care
- Paediatric Rheumatology
- Elective hip or knee joint replacement
- Osteoarthritis Chronic Care Program
- Osteoporotic Refracture Prevention
- Implementation of these models of care in primary care settings

#MSKF18

@RehabRobyn @nswaci
@thompsonjuliak @Jentragardh

Event contacts

Robyn Speerin
Musculoskeletal Network Manager
robyn.speerin@health.nsw.gov.au
Mob. 0429 925 518

Jennifer Tragardh
Project Officer Musculoskeletal Network
jennifer.tragardh@health.nsw.gov.au
Ph. 9464 4688 Mob. 0447 607 903

Julia Thompson
Project Officer Musculoskeletal Network
julia.thompson2@health.nsw.gov.au
Ph. 9464 4672 Mob. 0447 633 496
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<td><strong>Robyn Speerin</strong>, Manager, Musculoskeletal Network, ACI</td>
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<td>9.05 am</td>
<td>Welcome to Country</td>
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<td><strong>Uncle Allen Madden</strong>, Metropolitan Local Aboriginal Land Council</td>
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<td>9.15 am</td>
<td>Welcome to Northern Sydney Local Health District</td>
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<td><strong>Session 1</strong></td>
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<td>Chair: Matt Jennings, Director Allied Health, Liverpool Hospital, South Western Sydney Local Health District; Co-chair ACI Musculoskeletal Network</td>
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<td>9.25 am</td>
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<td><strong>Chris Shipway</strong>, Director, Primary Care and Chronic Services, ACI</td>
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<td>Changing Culture and Improving Practice in Orthopaedics</td>
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<td><strong>Megan White</strong>, Clinical Nurse Consultant, Concord Hospital SLHD</td>
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<td><strong>Priya Gnanakumaran</strong>, Physiotherapist, Concord Hospital SLHD</td>
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<td>AdvaNSYD – Pathway: Advanced recovery for joint replacement in Northern Sydney</td>
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<td><strong>Anna Butcher</strong>, Service Development Manager, Musculoskeletal and Neuroscience Networks NSLHD</td>
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<td><strong>Andrew Ellis</strong>, Director, Musculoskeletal and Neuroscience Networks NSLHD</td>
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<td>10.25 am</td>
<td>Osteoarthritis Chronic Care Program (OACCP), Primary Care Model</td>
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<td><strong>Carin Pratt</strong>, Senior Musculoskeletal Physiotherapist, Royal North Shore Hospital, NSLHD</td>
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<td>Chair: Chris Needs, Rheumatologist, Royal Prince Alfred Hospital, Sydney Local Health District; Co-chair ACI Musculoskeletal Network</td>
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<td>11.00 am</td>
<td>Implementation of an evidence-based model of care for low back pain in emergency departments: Protocol for the Sydney Health Partners Emergency Department (SHaPED) trial</td>
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<td><strong>Gustavo C Machado</strong>, Bethan Richards, Chris Needs, Rachelle Buchbinder, Ian Harris, Kirsten Howard, Kirsten McCaffery, Laurent Billot, James Edwards, Eileen Rogan, Rochelle Facer, David Lord Cowell, Chris G Maher, for the SHaPED trial Investigators</td>
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<td>Sydney School of Public Health, The University of Sydney</td>
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<td>11.15 am</td>
<td>Clinical audit of a newly established public acute low back pain service</td>
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<td><strong>Elaine Ng</strong>, Christopher Needs, Peter Youssef.</td>
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<td>Department of Rheumatology, Royal Prince Alfred Hospital, SLHD</td>
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| 11.30 am | Development of an online data analytics dashboard to measure unwarranted clinical variation in the emergency department: The STARS Back Pain App  
Sydney School of Public Health, The University of Sydney |
| 11.45 am | How common is imaging for the management of low back pain in primary care?  
*Aron Downie*, Mark Hancock, Hazel Jenkins, Rachelle Buchbinder,  
Stacy Goergen, Ian Harris, Martin Underwood, Chris Maher  
*Musculoskeletal Health, Sydney School of Public Health, The University of Sydney* |
| 12.00 pm | Sleep interventions for osteoarthritis and spinal pain: A systematic review and meta-analysis of randomised controlled trials  
*Kevin KN Ho*, Paulo H Ferreira, Marina B Pinheiro, Danielle Aquino Silva, Christopher Miller, Ron Grunstein, Milena Simic  
*Musculoskeletal Research Group, Physiotherapy, Faculty of Health Sciences, University of Sydney* |
| 12.15 pm | Feedback and Discussion |
| 12.30 pm | Lunch & Poster Session |
| 1.30 pm  | Chair: Ian Harris, Orthopaedic Surgeon, Liverpool Hospital, South Western Sydney Local Health District; Co-chair ACI Musculoskeletal Network  
**Leading Better Value Care overview**  
*Robyn Speerin*, Manager ACI Musculoskeletal Network |
| 1.45 pm  | **Leading Better Value Care Musculoskeletal implementation progress and update**  
*Julia Thompson & Jennifer Tragardh*, Project Officers ACI Musculoskeletal Network |
| 2.00 pm  | **District experience 1: Murrumbidgee Local Health District**  
*Michelle Hilton*, Leading Better Value Care Project Officer, Clinical Redesign Unit MLHD  
*Katherine Drum*, OACCP and ORP Project Lead MLDH |
| 2.15 pm  | **District experience 2: Illawarra Shoalhaven Local Health District**  
*Anne Poulton*, Project Manager Leading Better Value Healthcare ISLHD |
| 2.30 pm  | **District experience 3: Northern Sydney Local Health District**  
*Anna Butcher*, Service Development Manager, Musculoskeletal and Neuroscience Networks NSLHD |
<p>| 2.45 pm  | Feedback and Discussion |</p>
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<td>3.00 pm</td>
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| 3.20 pm| **Rheumatology transition. A coordinated approach**  
**Niddrie F, Myles A, Major G, Singh-Grewal D, Chaitow J**  
*Department of Rheumatology John Hunter Hospital and John Hunter Children’s Hospital HNELHD* |
| 3.35 pm| **Are elderly people bothered by the appearance of their wrist after a distal radius fracture?**  
**Lawson, A., Santhakumar, P., Harris, I., Naylor, J. and Churches, T.**  
*Whitlam Orthopaedic Research Centre, Ingham Institute for Applied Medical Research, UNSW* |
| 3.50 pm| **Early identification and intervention in patients with musculoskeletal injuries in the workplace**  
**Michael Nicholas, Dan Costa, Mick Gleeson, Fiona Blyth**  
*Pain Management Research Institute, Kolling Institute of Medical Research and Sydney Medical School* |
| 4.05 pm| Feedback and Discussion                                              |
| 4.20 pm| Presentation of the Lyn March Award 2018                             |
| 4.25 pm| Wrap up & Close                                                      |
|        | **Poster Session**                                                  |
|        | **Viewing during lunch break**                                       |
|        | **Efficacy and safety of low-dose codeine containing combination analgesics for pain: Systematic review and meta-analysis**  
**Christina Abdel Shaheed, Chris Maher, Andrew McLachlan**  
*Musculoskeletal Health, Sydney School of Public Health, The University of Sydney* |
|        | **Is pregabalin effective in reducing leg pain associated with sciatica?**  
*Musculoskeletal Health, Sydney School of Public Health, The University of Sydney* |
|        | **Transcutaneous Electric Nerve Stimulation (TENS) for acute low back pain: Systematic Review**  
**Justine Binny, Joshua Wong, Shirali Garga, Chung-Wei Christine Lin, Chris G Maher, Andrew McLachlan, Adrian Traeger, Gustavo C Machado, Christina Abdel Shaheed**  
*Musculoskeletal Health, Sydney School of Public Health, The University of Sydney* |
|        | **Physiotherapists in the emergency department: A scoping review**  
**Giovanni E. Ferreira, Adrian C. Traeger, Chris G. Maher**  
*School of Public Health, Sydney Medical School, The University of Sydney* |
Changing Culture and Improving Practice in Orthopaedics “Time to Move”

Megan White, Clinical Nurse Consultant, Concord Hospital SLHD
Priya Gnanakumaran, Physiotherapist, Concord Hospital SLHD

Megan is currently undertaking a Master of Research. She has a keen interest in recovery after orthopaedic surgery and looking at the continuing challenges within the acute care setting. Today Megan will present her findings and discuss ongoing challenges to orthopaedic cultures in the clinical setting.

Notes
AdvaNSYD – Pathway: Advanced recovery for joint replacement in Northern Sydney

Anna Butcher, Andrew Ellis
Musculoskeletal and Neuroscience Networks NSLHD

**Background**: Approximately 590 elective hip and knee arthroplasties are performed annually in NSLHD with variation in care across 5 sites; length of stay as well as cost that is higher than NSW and state exemplar averages. The NSLHD Musculoskeletal Health, Burns/Plastics, Spinal & Trauma Network was tasked in 2015 to review any factors that may influence outcome and benefit the patients requiring elective arthroplasty. An Expert Working Group was established to identify ways to reduce inefficiencies and improve LoS as well as cost.

**Aim/Objective**: To deliver excellent care for patients requiring lower limb arthroplasty - by providing appropriate, efficient, equitable care which aligns with evidence based practice measured through:

- Reduced variation in care processes
- NSLHD services achieving state benchmarks for quality care and cost-effectiveness

**Intervention**: A standard NSLHD pathway for elective hip and knee arthroplasty was developed that aims for an average 4 days LOS. Processes to streamline pre-operative, peri-operative and post-operative care are being implemented in a 3 stage approach.

Standardised patient reported outcome and experience measures are collected and service provision is evaluated to inform future quality improvement.

**Outcomes**: The benefits of this project will be:

- Improved staff and patient satisfaction with processes and outcomes.
- Improved cost-effectiveness leading to sustainable health service provision.

**Conclusion**: Establishment of standardised care pathways / virtual service centre for elective arthroplasty is a complex and lengthy but worthwhile process that benefits patients, staff and hospital systems.

**Notes**
The OA CC Program (OACCP), Primary Care Model

Carin Pratt, Physiotherapist, Royal North Shore Hospital, NSLHD

**Background:** The OACCP is a Multidisciplinary chronic disease management program targeting individuals with hip and/or knee osteoarthritis. The RNSH has serviced 1500 patients awaiting elective hip and/or knee joint replacements over the last 7 years.

**Aim:** The extension of OACCP into Primary Care aims to bridge the gap between tertiary and private sectors and allow participants access to appropriate care at the right time and place. The Primary Care model enhances access to multidisciplinary services within NSW health/private practitioners, increases communication within tertiary and private sectors and promotes shared learning.

**Design:** The Primary Care Model was a pilot study carried out at RNSH, allowing extension of services into primary care and facilitating Multidisciplinary access across the LHD.

**Method:** Referral pathways were created with 75 General Practitioners. Patients were assessed by a Musculoskeletal Coordinator for an initial consultation and 3 consecutive monthly consultations. Patients were also seen in a one-off Thursday afternoon clinic with a Rheumatologist.

The OACCP uses a collaborative multidisciplinary approach, utilising Chronic Disease Management Plans (CDMP) / Team Care Arrangements (TCAs) and private health insurance to facilitate access to allied health services in the community. The development of the OACCP Powerforms and Powernotes within Electronic Medic Records (eMR) allowed clinicians to capture and review all relevant clinical information.

**Results:** 122 participants were included in the evaluation conducted by the Institute of Bone and Joint Research, which suggests that this model can significantly improve clinical outcomes.

**Conclusion:** The OACCP, Primary Care Model significantly improved participants function, mobility and pain and facilitated their access to allied health services within the community.
Implementation of an evidence-based model of care for low back pain in emergency departments: Protocol for the Sydney Health Partners Emergency Department (SHaPED) trial

Gustavo C Machado, Bethan Richards, Chris Needs, Rachelle Buchbinder, Ian Harris, Kirsten Howard, Kirsten McCaffery, Laurent Billot, James Edwards, Eileen Rogan, Rochelle Facer, David Lord Cowell, Chris G Maher, for the SHaPED trial Investigators

Background: Patients with low back pain often seek care in emergency departments, but the problem is that many patients receive unnecessary or ineffective interventions, and at the same time miss out on the basics of care, such as advice on self-management.

Aim/Objective: A stepped wedge cluster randomised controlled trial will be conducted to implement and evaluate the use of the Agency for Clinical Innovation (ACI) model of care for acute low back pain at four emergency departments in New South Wales, Australia.

Intervention: Clinician participants will be emergency physicians, nurses and physiotherapists. Codes from the Systematised Nomenclature of Medicine – Clinical Terms – Australian version will be used to identify low back pain presentations. The implementation intervention, targeting emergency clinicians, will comprise educational materials and seminars, and an audit and feedback approach. The effectiveness of the implementation intervention will be assessed by comparing the post-intervention period with the retrospective baseline control period.

Outcomes: Health service delivery outcomes are routinely collected measures of imaging (primary outcome), opioid use, and inpatient admission. Patient reported outcome measures include pain intensity, physical function, quality of life, and experience with emergency service. The study received ethical approval from the Sydney Local Health District (RPAH zone) Ethics Committee (X17-0043). Australia New Zealand Clinical Trials Registry: ACTRN 12617001160325.

Conclusion: We hypothesised that the implementation of an evidence-based model of care for low back pain will improve emergency care by reducing inappropriate use of tests and treatments and improving patient outcomes.

Notes
Clinical Audit of a newly established Public Acute Low Back Pain Service

Elaine Ng, Christopher Needs, Peter Youssef.

Wagga Wagga Rural Referral Hospital/St Vincents Hospital Darlinghurst

Department of Rheumatology, Royal Prince Alfred Hospital, Camperdown

Background: The NSW Agency for Clinical Innovation recently released an evidence-based model of care for management of people with Acute Low Back Pain (ALBP MoC) 1. Previous studies have shown poor uptake of treatment principles2.

Aim/Objective: To audit the management of patients attending a public hospital Acute Back Pain Clinic (ABPC) against the current agreed basic care standards of the ALBP MoC.

Intervention/Method: A retrospective clinical record review was undertaken of patients attending the clinic over a 6-month period.

Outcomes: Of the 66 patients who attended the ABPC, 34% (n=23/66) had ALBP, 14% (n=9/66) had acute on chronic LBP (ACLBP) and the remainder had chronic back pain or another disease. Most ALBP patients (n=12/23, 52%) were referred from the emergency department, whereas most ACLBP patients (n=6/9, 67%) were referred by their general practitioner. Seventeen ALBP patients (74%) reported leg pain and six (26%) had non-specific LBP. Many of the 32 ALBP and ACLBP patients were documented to have received health education (72%) and advice about exercise (78%), however only five were assessed for yellow flags. Most ALBP and ACLBP patients were managed with simple analgesia (81%); three of whom were commenced on opioids and three referred for corticosteroids injection. Of the fifteen patients with ALBP who returned for follow-up (n=15/23, 65%), all had improvement in pain, with pain completely resolving in five.

Conclusion: This audit reinforces the overall excellent prognosis of both non-specific and radicular associated back pain. It shows scope to improve documentation of red and yellow flags assessments in ALBP patients.

Notes
Development of an online data analytics dashboard to measure unwarranted clinical variation in the emergency department: The STARS Back Pain App

Gustavo C Machado, Mauricio Olivera, Noel Baidya, Hannah Storey, Bethan Richards, Chris G Maher
Sydney School of Public Health, The University of Sydney
Institute for Musculoskeletal Health, Sydney Local Health District
Performance Monitoring, System Improvement & Innovation Unit, Sydney Local Health District
Rheumatology Department, Royal Prince Alfred Hospital

Background: Efforts to reduce unwarranted clinical variation are reliant on tools that can readily measure the care routinely provided to patients. Unfortunately, it is common for emergency department data to be fragmented across various databases. Although adoption of electronic medical records may help address some aspects of information fragmentation, efforts to reduce unwarranted clinical variation in the emergency care for low back pain have been hindered by a lack of timely access to data.

Aim/Objective: An online data analytics dashboard was designed and developed to capture, store and analyse emergency department data of patients presenting with low back pain.

Intervention: This study was conducted at the Sydney Local Health District (SLHD), which has three emergency departments that see over 150,000 patients annually. An online data analytics dashboard was designed and created using Qlik Sense® by a multidisciplinary team of researchers, clinicians, and information technology experts.

Outcomes: The online data analytics dashboard (Back Pain App) was developed within the SLHD Targeted Activity & Reporting System (STARS). It displays the total number of presentations for low back pain at the three SLHD’s emergency departments, as well as subsequent admissions to hospital. Data displayed in the dashboard reflect emergency department practice for low back pain management, such as proportion of patients receiving a) laboratory tests, b) imaging, and c) pain medications. The dashboard also displays demographics and characteristics of patients, including age, gender, days and hours presenting, mode of arrival, and emergency triage category.

Conclusion: The STARS Back Pain App will provide emergency clinicians with a summary of their clinical performance. It will also allow us to efficiently collect outcomes of the implementation of the ACI model of care for acute low back pain and monitor the long-term impact of our strategy to reduce unwarranted clinical variation.

Notes
How common is imaging for the management of low back pain in primary care?

Aron Downie, Mark Hancock, Hazel Jenkins, Rachelle Buchbinder, Stacy Goergen, Ian Harris, Martin Underwood, Chris Maher

Musculoskeletal Health, Sydney School of Public Health, The University of Sydney

Background: Overuse of imaging remains a concern in the management of low back pain (LBP). It is unclear if imaging proportions vary across different settings or has changed since the introduction of diagnostic imaging guidelines.

Aim/Objective: We aim to estimate the proportion of patients who received diagnostic imaging referral when they seek care for LBP, explore trends over time, and effect of study level factors on imaging proportion.

Method: We searched Medline, Embase, and CINAHL from 1995 to 2017, for studies that reported imaging ordered or performed for patients presenting to primary contact care (PCP, ED, Allied-health) for an episode of LBP. Pooled estimates, trend over time, and effect of pre-specified study level factors on proportion were explored using random effects meta-analysis/regression.

Outcomes: Forty-one studies were identified (from 4,543 articles) representing approximately 17,902,000 consultations and 3,908,000 imaging events over 19 years. 85% of studies scored moderate or high for summary risk of bias.

For simple imaging, the pooled proportion was 21.6% (95%CI 14.7 to 30.4, low quality evidence); and complex imaging was 14.1% (95%CI 10.4 to 19.0, low quality evidence). There was no trend in simple imaging over time. The proportion of complex imaging increased from 2.5% to 17.6% over 19 years (β=0.8%, 95%CI 0.5 to 1.0, R2=45%), when adjusted for collection method, decision timing, initial consultation, geographic region, setting, and image count method.

Conclusion: Approximately 3 in 10 people currently receive at least one form of imaging when presenting to primary care for LBP. Referral for complex imaging has increased despite introduction of diagnostic imaging guidelines in 1995.

Notes
Sleep interventions for osteoarthritis and spinal pain: A systematic review and meta-analysis of randomized controlled trials

Kevin KN Ho, Paulo H Ferreira, Marina B Pinheiro, Danielle Aquino Silva, Christopher Miller, Ron Grunstein, Milena Simic
Musculoskeletal Research Group, Physiotherapy, Faculty of Health Sciences, University of Sydney

Background: Osteoarthritis and spinal pain are the highest contributors to global disability, and insomnia symptoms are highly prevalent in these conditions. Management of insomnia may improve health outcomes of these patients.

Aim/Objective: Determine if sleep interventions improve pain and sleep in people with osteoarthritis and/or spinal pain

Methods: Medline, Embase, AMED, PsycINFO, CENTRAL, CINAHL and PEDro were searched from their inception date to July 2017. Keywords relating to “sleep”, “osteoarthritis”, “spinal pain”, and “randomized controlled trial” were combined. Included RCTs investigated the use of sleep interventions for people with osteoarthritis and/or spinal pain, and measured at least one sleep related outcome. Meta-analyses were performed to pool mean differences for pain and sleep quality. PROSPERO: CRD42016036315

Results: Of 1445 unique records, 24 studies were included. Sixteen studies included participants with spinal pain, seven included people with osteoarthritis, and one included a mixed population. Sleep interventions included pharmacological and non-pharmacological methods. Intervention periods ranged from four to ten weeks. Thirteen studies were of moderate quality (PEDro score ≥ 6/10). Overall sleep interventions decreased pain (pooled mean difference: visual analogue scale -6.22/100, 95% CI: -10.24 to -2.21, I2=67%), and improved sleep efficiency (9.55/100%, 95% CI: 5.41 to 13.69, I2=70%), insomnia symptoms (Insomnia Severity Index -5.09/28, 95%CI: -8.22 to -1.96, I2=82%) and sleep quality (Pittsburgh Sleep Quality Index -1.53/21, 95% CI: -2.85 to -0.20, I2=52%) at post-intervention. These were maintained up to 18 months post-intervention.

Conclusion: Sleep interventions may be incorporated into management strategies for people with osteoarthritis and/or spinal pain to improve their pain and insomnia symptoms.

Notes
Rheumatology Transition: A coordinated approach.
Niddrie F, Myles A, Major G, Singh-Grewal D, Chaitow J
Department of Rheumatology John Hunter Hospital and John Hunter Children’s Hospital, HNELHD

Background: Both paediatric and adult rheumatology services are available on the John Hunter Hospital campus, but operate independently and are located at opposite ends of the hospital. This presented an opportunity to develop an evidenced based, coordinated program to assist patients transitioning from paediatric to adult rheumatology services.

Aim/Objective:
- To set up a dedicated clinic for adolescents and young adults with rheumatic disease.
- To develop a rheumatology specific package for patients requiring transition from paediatric to adult health services.

Intervention: Patients are identified from age 13 to attend the new AYARD clinic (adolescent and young adult with rheumatic disease). The new clinic was introduced 12 months ago and is attended by both adult and paediatric rheumatology medical and nursing staff.

After a systematic qualitative study\(^1\) and review of the literature, a rheumatology specific transition program was developed.

Outcomes:
- Feedback from an exploratory survey of 11 patients and 12 parents/carers demonstrated positive support for the AYARD clinic.
- Implementation of the new transition program will commence in 2018. The program will be presented.

Conclusion: Paediatric and adult rheumatology services at one location allowed a coordinated approach to transition, through a dedicated clinic and rheumatology specific transition program.


Notes
Are elderly people bothered by the appearance of their wrist after a distal radius fracture?

Lawson, A., Santhakumar, P., Harris, I., Naylor, J. and Churches, T.

Whitlam Orthopaedic Research Centre, Ingham Institute for Applied Medical Research, UNSW

Introduction: Wrist deformity is common following treatment for a wrist fracture, particularly non-operative (plaster) treatment in older people. There is scant literature concerning patient-perceived wrist deformity and little evidence on the extent to which patients are concerned or bothered by residual deformity following a wrist fracture. The aims of this study were to explore whether older patients with wrist fractures who reported wrist deformity were bothered by it, to what extent they were bothered and whether this correlated with treatment type and patient-reported functional outcomes. The authors also aimed to investigate test-retest reliability of the ‘bother’ question.

Method: A cohort of patients aged 65 years and older who were treated at Liverpool Hospital between 2010 and 2014 for a distal radius fracture were invited to participate in a telephone survey. Participants were surveyed on deformity, degree of bother from the deformity, pain and functional outcome. The researchers also assessed the test-retest reliability of the deformity and the bother questions which were devised for the study.

Results: There were 98 eligible people identified from the departmental database and 41 of these participated in the survey. The deformity and the bother questions were found to have excellent test-retest reliability. Out of 41, 14 (34%) believed they had a deformity but only 4 (10%) of the 41 reported that they were bothered and all were treated with closed reduction. None of the patients treated with internal fixation were bothered by deformity. The 4 participants who were bothered by deformity reported poorer functional outcomes compared to those not bothered.

Conclusion: Patient-perceived deformity appears to be more common among patients treated by closed reduction and may be associated with patient-reported function. Understanding the degree to which patients who experience the complication of wrist deformity following the treatment of their fractured wrist would help in balancing the benefits and risks of surgical treatment.

Notes
Early identification and intervention in patients with MSK injuries in workplace

Michael Nicholas, Dan Costa, Mick Gleeson, Fiona Blyth
Pain Management Research Institute, Kolling Institute of Medical Research and Sydney Medical School

**Background:** Soft tissue injuries are the most common work-related injuries. Most return to work with little lost time, but a small proportion are delayed in their recovery (and delayed return to work, RTW). The longer injured workers are away from work, the greater their risk of long-term health and financial difficulties.

**Aim/Objective:** A controlled trial of an intervention with injured workers that incorporated implementation science principles to reduce lost time from work.

**Intervention:** A protocol-based approach involving the injured workers, their workplace, their insurance case manager, their GP and physiotherapist, and selected psychologist. Injured workers were screened for psychosocial risk factors for delayed recovery, and where relevant a coordinated intervention was implemented to address the risk factors with the individual workers and their workplace.

**Outcomes:** Significantly reduced lost time from work was demonstrated, relative to the control (usual care) condition.

**Conclusion:** Brief screening for psychosocial risk factors is feasible and if addressed can achieve better RTW.

**Notes**
Efficacy and safety of low-dose codeine containing combination analgesics for pain: Systematic review and meta-analysis

Christina Abdel Shaheed, Chris Maher, Andrew McLachlan
Musculoskeletal Health, Sydney School of Public Health, The University of Sydney

Acknowledgements: This research was funded by the Therapeutic Goods Administration Australia.

**Background:** Concerns over misuse of combination analgesics containing low-dose codeine have risen in line with regular provision of these medicines.

**Aim/Objective:** To investigate the efficacy and safety of low-dose codeine combination analgesics for pain.

**Intervention:** We searched MEDLINE, EMBASE, Cochrane Database of Systematic Reviews, CENTRAL, CINAHL and PsycINFO for eligible RCTs evaluating combination analgesic products containing low dose (15 mg/tablet or 30 mg/dose) codeine.

**Outcomes:** Two authors extracted data and assessed risk of bias. Data were pooled using a random effects model with strength of evidence assessed using GRADE. Primary outcome was immediate pain relief (3-hours post-administration) on the 100-point visual analogue scale.

Nine placebo-controlled RCTs for dental, hip or post-surgical pain were eligible. There is low quality evidence from three single-dose trials [n=211] that the combination codeine plus ibuprofen provides immediate but small pain relief for dental pain; Mean Difference (MD) [95% CI] -12.7 [-18.5, -6.9]. Two trials used multiple-dose regimens and provide evidence of pain relief for hip osteoarthritis and temporomandibular joint pain; MD [95% CI] -19.0 [-31.2, -6.8] and -26.0 [-44.5, -7.5] respectively. One study reported a higher incidence of drowsiness in the treatment group compared with the placebo group RR [95%CI] 19.3 [1.2, 306.5].

**Conclusion:** Single doses of combination low-dose codeine analgesics provide immediate pain relief for dental pain. A multiple dose-regimen may provide greater pain relief and a longer duration of effect. Further research examining typical use of these medicines is needed as well as better capture of safety data.
Is pregabalin effective in reducing leg pain associated with sciatica?


Musculoskeletal Health, Sydney School of Public Health, The University of Sydney

Background: Sciatica is characterised by radiating leg pain and evidence regarding medical treatments is limited. Pregabalin is effective in treating some neuropathic pain conditions (e.g. post-herpetic neuralgia) but robust evidence is lacking for its use in reducing the neuropathic pain component associated with sciatica.

Aim/Objective: We examined the efficacy and safety of pregabalin in reducing leg pain intensity in patients with sciatica by conducting a randomised, double-blind, placebo-controlled trial.

Intervention: Participants were randomised to receive either pregabalin at 150mg/day, adjusted to ≤600mg/day or matching placebo for up to 8 weeks depending on tolerability.

Outcomes: The primary outcome was the leg-pain intensity, scored from zero (no pain) to 10 (worst possible pain). Secondary outcomes included extent of disability, back-pain intensity and quality-of-life measures. Outcomes were measured at pre-specified time points over one year, with week 8 as the primary time-point.

A total of 209 patients underwent randomisation; 108 received pregabalin and 101 received placebo. At week 8, the mean unadjusted leg-pain intensity score was 3.7 in the pregabalin group and 3.1 in the placebo group (adjusted mean difference [MD], 0.5; 95% confidence interval [CI], −0.2 to 1.2; P = 0.19). At week 52, the mean unadjusted leg-pain intensity score was 3.4 in the pregabalin group and 3.0 in the placebo group (adjusted MD, 0.3; 95% CI, −0.5 to 1.0; P = 0.46). No significant between-group differences were observed in any secondary outcome. More adverse events were reported in the pregabalin group (n events=227) versus the placebo group (n events=124), with dizziness the most common adverse event reported in both groups.

Conclusion: Pregabalin did not significantly reduce the intensity of leg pain associated with sciatica nor significantly improve any other outcomes compared with placebo at week 8 or at one year. However, the incidence of adverse events was significantly higher in the pregabalin group than in the placebo group.
Transcutaneous electric nerve stimulation (TENS) for acute low back pain: Systematic review

Justine Binny*, Joshua Wong*, Shirali Garga, Chung-Wei Christine Lin, Chris G Maher, Andrew McLachlan, Adrian Traeger, Gustavo C Machado, Christina Abdel Shaheed. *Both authors contributed equally to this work

Musculoskeletal Health, Sydney School of Public Health, The University of Sydney

Background: There has been no systematic evaluation of the efficacy of transcutaneous electrical stimulation (TENS) for acute low back pain (LBP).

Aim/Objective: The aim of this systematic review was to investigate the efficacy and safety of TENS in acute LBP. We searched MEDLINE, EMBASE, Cochrane Database of Systematic Reviews, CINAHL and PsycINFO (inception to July 2017) for randomised placebo-controlled trials.

Intervention: TENS

Outcomes: The primary outcome measure was immediate term pain relief (within 2 weeks of administration) assessed using the 100 mm Visual Analogue Scale (VAS). A mean difference (MD) of ≥10 points on the 100-point pain scale was considered clinically significant. Methodological quality of eligible studies was assessed using the PEDro scale. An overall quality assessment rating was provided, in accordance with the GRADE criteria. Three placebo-controlled studies (n=182) were eligible for inclusion. One high quality trial (n=63) provides moderate quality evidence (downgraded for imprecision) that ~30 minutes treatment with TENS in an emergency-care setting provides clinically significant pain relief for severe acute LBP in the immediate term compared with sham TENS (MD -28.0 [95% CI -32.7, -23.3]). Two other studies which administered a course of TENS over a period of 4-5 weeks, in non-emergency settings, reported negative findings. There were no reported adverse events data or longer term follow-up data.

Conclusion: TENS may provide important pain reductions in severe acute LBP patients being transported to the hospital, but larger studies are needed to support these findings. There is a further need to capture data on adverse events and longer term outcomes.
Physiotherapists in the emergency department: A scoping review

Giovanni E. Ferreira, Adrian C. Traeger, Chris G. Maher

School of Public Health, Sydney Medical School, The University of Sydney

Background: Emergency departments (ED) are under pressure due to overcrowding. Extending the scope of practice of allied health professionals, such as physiotherapists, has been implemented to improve patient flow through the ED. However, several aspects of the work of physiotherapists in the ED are not well understood.

Aim/Objective: To provide an overview of the literature that considers physiotherapists working in the ED in relation to their roles, patient profile, safety, effectiveness, efficiency, cost effectiveness and the provision of low value care.

Intervention: A scoping review was conducted. PubMed, EMBASE, CINAHL and Cochrane CENTRAL were searched from inception to September 2017. Two reviewers screened studies for eligibility. A narrative synthesis of the results was performed.

Outcomes: We included 27 studies, 5 randomised controlled trials (n=1434), 12 prospective observational studies (n=153,767), 6 retrospective studies (n=9968), 2 surveys (n=61), 1 case report (n=3) and 1 qualitative study (n=11). Physiotherapists primarily managed patients with low urgency musculoskeletal conditions. Physiotherapists appeared to have similar clinical effectiveness and costs compared to other providers (4 RCTs), however no study had evaluated cost-effectiveness. Physiotherapists were associated with increased efficiency (8 observational studies) and reduced low-value care (1 observational study). Safety was poorly reported with only 3 observational studies reporting implausibly low adverse event rates.

Conclusion: The available evidence suggests that physiotherapists may be similarly effective to other health providers in managing low urgency musculoskeletal conditions in the ED. There is uncertainty about appropriate training and a lack of robust studies investigating the efficiency, safety and cost-effectiveness of this model of care.
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