The Clinical Effectiveness Bulletin aims to highlight some key pieces of evidence, published in the previous month.

Where possible, links to the full text documents are included. If you are employed by UHN, NSCHT, Stoke on Trent Public Health or you are CCG or practice staff in North Staffordshire, get in touch to find out more about your NHS library service.
Current Sources:

Cochrane Library  http://www.thecochranelibrary.com/
Health Technology Assessment (HTA) Database  http://www.journalslibrary.nihr.ac.uk/hta
https://discover.dc.nihr.ac.uk/portal/home
Department of Health  http://www.gov.uk/dh
King’s Fund  http://www.kingsfund.org.uk/
Nice Guidance  https://www.nice.org.uk/guidance
Social Care Institute for Excellence  http://www.scie.org.uk/
NICE  http://www.nice.org.uk/
SIGN  http://www.sign.ac.uk/new.html
Primary Care Commissioning  www.pcc-cic.org.uk
Chartered Society of Physiotherapy  www.csp.org.uk
NHS Digital (formerly HSCIC)  http://content.digital.nhs.uk/
Queen’s Nursing Institute:  http://www.qni.org.uk/
NMC  www.nmc.org.uk
RCN  https://www.rcn.org.uk/
Campbell Collaboration  http://www.campbellcollaboration.org/
Local patient and public information groups
https://bmcmusculoskeletaldisord.biomedcentral.com/
https://archivesphysiotherapy.biomedcentral.com/

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Commissioning

How is the NHS performing? March 2018 quarterly monitoring report
King’s Fund
The King’s Fund published its first quarterly monitoring report in April 2011 as part of our work to track, analyse and comment on the changes and challenges the health and care system is facing. This is the 25th report and aims to take stock of what has happened over the past quarter.

We find that more patients are facing long waits for hospital treatment, with those experiencing the longest waits often most in need of treatment. With demand for services continuing to rise it’s very unlikely that meeting waiting time targets will become more achievable, with implications for how the NHS protects patients waiting the longest.

NHS homeopathy ending in London
BBC News
According to a BBC news item, the Royal London Hospital for Integrated Medicine (RLHIM) will no longer be providing NHS-funded homeopathic remedies for patients. A spokeswoman for the trust said: "No NHS funding will be spent on homeopathic medicines at the RLHIM." This brings the Trust in line with many others who do not fund homeopathic treatments.

Learning disabilities and behaviour that challenges: service design and delivery
NICE guideline
This guideline covers services for children, young people and adults with a learning disability (or autism and a learning disability) and behaviour that challenges. It aims to promote a lifelong approach to supporting people and their families and carers, focusing on prevention and early intervention and minimising inpatient admissions.

Person-centred care improves quality of life for care home residents with dementia
NIHR Signal
A person-centred care intervention for people with dementia living in care homes improved their quality of life, reduced agitation and improved interactions with staff. It may also save costs compared with usual care.

The WHELD intervention involves training staff in person-centred care, with a focus on improving social interactions and appropriate use of antipsychotic medications. An early study suggested it could halve antipsychotic use.

This larger-scale NIHR trial conducted across 69 UK nursing homes focused on exploring the effects on quality of life and other symptoms. WHELD gave small-scale, but important improvements. It didn’t reduce antipsychotic use, as this was low to start with, which is in line with policy to limit use. It supports the feasibility of the intervention, but there is a need to understand which components are most effective and could be implemented on a wide scale with sustainable effects.
How commissioners use research evidence
NIHR
Researchers want their work to be used and useful, but may not always understand the context in which decisions are made. Most health and care organisations aim to base decisions on the best available evidence, but accessing and interpreting the right evidence at the right time is hard. Researchers need to do what they can to make their research as useful as possible to those making decisions under pressure.

The NIHR has funded six particular studies in the past five years on the use of evidence by commissioners. Some of this research may also be relevant to service managers in hospital trusts and other care providers and systems.

This highlight includes studies into the behaviour of individual managers and the way in which commissioning organisations make sense of and use research information when making decisions. The findings provide some practical pointers for researchers to make their work more accessible and relevant to commissioners and managers

Public Health and Lifestyle Services

A systematic review of economic evaluations of local authority commissioned preventative public health interventions in overweight and obesity, physical inactivity, alcohol and illicit drugs use and smoking cessation in the United Kingdom
Journal of Public Health
Background
Since 2013, local authorities in England have been responsible for commissioning preventative public health interventions. The aim of this systematic review was to support commissioning by collating published data on economic evaluations and modelling of local authority commissioned public health preventative interventions in the UK.
Methods
Following the PRISMA protocol, we searched for economic evaluations of preventative intervention studies in four different areas: overweight and obesity, physical inactivity, alcohol and illicit drugs use and smoking cessation. The systematic review identified studies between January 1994 and February 2015, using five databases. We synthesized the studies to identify the key methods and examined results of the economic evaluations.
Results
The majority of the evaluations related to cost-effectiveness, rather than cost-benefit analyses or cost-utility analyses. These analyses found preventative interventions to be cost effective, though the context of the interventions differed between the studies.
Conclusions
Preventative public health interventions in general are cost-effective. There is a need for further studies to support justification of continued and/or increased funding for public health interventions. There is much variation between the types of economically evaluated preventative interventions in our review. Broader studies incorporating different contexts may help support funding for local authority-sponsored public health initiatives.
Physical activity, diet and other behavioural interventions for improving cognition and school achievement in children and adolescents with obesity or overweight

Cochrane Review
Despite the large number of childhood and adolescent obesity treatment trials, we were only able to partially assess the impact of obesity treatment interventions on school achievement and cognitive abilities. School and community-based physical activity interventions as part of an obesity prevention or treatment programme can benefit executive functions of children with obesity or overweight specifically. Similarly, school-based dietary interventions may benefit general school achievement in children with obesity. These findings might assist health and education practitioners to make decisions related to promoting physical activity and healthy eating in schools. Future obesity treatment and prevention studies in clinical, school and community settings should consider assessing academic and cognitive as well as physical outcomes.

Physical activity and the environment

NICE guideline
This guideline covers how to improve the physical environment to encourage and support physical activity. The aim is to increase the general population’s physical activity levels. The recommendations in this guideline should be read alongside NICE's guideline on physical activity: walking and cycling.

First step in development of pill-based vaccines

Cardiff University
The non-biologic influenza vaccine, which can be delivered orally, could herald a revolution in vaccine delivery.

Stable at room temperature, the new type of vaccine, which could be given in pill form, does not require refrigeration – a process that can account for most of the cost of delivery of many current vaccines.

Vaccines that do not require refrigeration can be transported more easily and are more suitable for developing countries where it can be difficult to keep things cool.

Professor Andrew Sewell, from Cardiff University’s School of Medicine, who led the study, said: “There are many benefits to oral vaccines. Not only would they be great news for people who have a fear of needles but they can also be much easier to store and transport, making them far more suitable for use in remote locations where current vaccine delivery systems can be problematic.”

Clearing up some myths around e-cigarettes

PHE
No doubt you will have seen some of the stories in the media recently following the publication of PHE’s latest update of the evidence on e-cigarettes. E-cigarettes do seem to be a bit like Marmite, courting controversy among the public and media alike.

Not surprisingly, there are lots of inaccuracies and misconceptions about e-cigarettes and vaping. This blog looks at the most common myths and provides the facts.

Our latest comprehensive independent e-cigarette review, authored by leading academics in the tobacco control field, looks at the up-to-date international data and peer-reviewed research.
Crossing the border for a sugar fix
BBC News
Norway’s sugar tax has had unexpected consequences for shops along its border. Cheaper confectionary prices in Sweden have created a new reason to travel.

Pulse oximetry screening for critical congenital heart defects
Cochrane Review
Pulse oximetry is a highly specific and moderately sensitive test for detection of CCHD with very low false-positive rates. Current evidence supports the introduction of routine screening for CCHD in asymptomatic newborns before discharge from the well-baby nursery.

Drug misuse prevention
NICE Quality Standard
This quality standard covers the prevention or delay of harmful use of drugs by children, young people and adults most likely to start using drugs, or already experimenting or using drugs occasionally. This includes illegal psychoactive substances, solvents, volatile substances, image- and performance-enhancing drugs, prescription-only medicines and over-the-counter medicines. It describes high-quality care in priority areas for improvement.

Stop smoking interventions and services
NICE Guideline
This guideline covers stop smoking interventions and services delivered in primary care and community settings for everyone over the age of 12. It aims to ensure that everyone who smokes is advised and encouraged to stop and given the support they need. It emphasises the importance of targeting vulnerable groups who find smoking cessation hard or who smoke a lot.

Use of evidence in public health, volume 2
Greg Fell, Sheffield DPH
Greg Fell’s blog on RCTs in public health begins: “stop asking ‘does it work?’ and instead ask ‘how does it contribute?’” Here he explores RCTs, and how to measure outcomes for complex systems interventions.

General Practice

Prevention and treatment of low back pain: evidence, challenges, and promising directions
The Lancet
Many clinical practice guidelines recommend similar approaches for the assessment and management of low back pain. Recommendations include use of a biopsychosocial framework to guide management with initial non-pharmacological treatment, including education that supports self-management and resumption of normal activities and exercise, and psychological programmes for those with persistent symptoms. Guidelines recommend prudent use of medication, imaging, and surgery. The recommendations are based on trials almost exclusively from high-income countries, focused mainly on treatments rather than on prevention, with limited data for cost-effectiveness.
However, globally, gaps between evidence and practice exist, with limited use of recommended first-line treatments and inappropriately high use of imaging, rest, opioids, spinal injections, and surgery. Doing more of the same will not reduce back-related disability or its long-term consequences. The advances with the greatest potential are arguably those that align practice with the evidence, reduce the focus on spinal abnormalities, and ensure promotion of activity and function, including work participation. We have identified effective, promising, or emerging solutions that could offer new directions, but that need greater attention and further research to determine if they are appropriate for large-scale implementation. These potential solutions include focused strategies to implement best practice, the redesign of clinical pathways, integrated health and occupational interventions to reduce work disability, changes in compensation and disability claims policies, and public health and prevention strategies.

**Different durations of corticosteroid therapy for exacerbations of chronic obstructive pulmonary disease**

Cochrane Review
Information from a new large study has increased our confidence that five days of oral corticosteroids is likely to be sufficient for treatment of adults with acute exacerbations of COPD, and this review suggests that the likelihood is low that shorter courses of systemic corticosteroids (of around five days) lead to worse outcomes than are seen with longer (10 to 14 days) courses. We graded most available evidence as moderate in quality because of imprecision; further research may have an important impact on our confidence in the estimates of effect or may change the estimates. The studies in this review did not include people with mild or moderate COPD; further studies comparing short-duration systemic corticosteroid versus conventional longer-duration systemic corticosteroid for treatment of adults with acute exacerbations of COPD are required.

**Attention deficit hyperactivity disorder: diagnosis and management**

NICE guideline
This guideline covers recognising, diagnosing and managing attention deficit hyperactivity disorder (ADHD) in children, young people and adults. It aims to improve recognition and diagnosis, as well as the quality of care and support for people with ADHD.

**Heavy menstrual bleeding: assessment and management**

NICE guideline
This guideline covers assessing and managing heavy menstrual bleeding (menorrhagia). It aims to help healthcare professionals investigate the cause of heavy periods that are affecting a woman’s quality of life and to offer the right treatments, taking into account the woman’s priorities and preferences.
Rehabilitation and Occupational Health

Prevention and treatment of low back pain: evidence, challenges, and promising directions
The Lancet
Many clinical practice guidelines recommend similar approaches for the assessment and management of low back pain. Recommendations include use of a biopsychosocial framework to guide management with initial non-pharmacological treatment, including education that supports self-management and resumption of normal activities and exercise, and psychological programmes for those with persistent symptoms. Guidelines recommend prudent use of medication, imaging, and surgery. The recommendations are based on trials almost exclusively from high-income countries, focused mainly on treatments rather than on prevention, with limited data for cost-effectiveness. However, globally, gaps between evidence and practice exist, with limited use of recommended first-line treatments and inappropriately high use of imaging, rest, opioids, spinal injections, and surgery. Doing more of the same will not reduce back-related disability or its long-term consequences. The advances with the greatest potential are arguably those that align practice with the evidence, reduce the focus on spinal abnormalities, and ensure promotion of activity and function, including work participation. We have identified effective, promising, or emerging solutions that could offer new directions, but that need greater attention and further research to determine if they are appropriate for large-scale implementation. These potential solutions include focused strategies to implement best practice, the redesign of clinical pathways, integrated health and occupational interventions to reduce work disability, changes in compensation and disability claims policies, and public health and prevention strategies.

Standard (head-down tilt) versus modified (without head-down tilt) postural drainage in infants and young children with cystic fibrosis
Cochrane Review
The limited evidence regarding the comparison between the two regimens of postural drainage is still weak due to the small number of included studies, the small number of participants assessed, the inability to perform any meta-analyses and some methodological issues with the studies. However, it may be inferred that the use of a postural regimen with a 30° head-up tilt is associated with a lower number of gastroesophageal reflux episodes and fewer respiratory complications in the long term. The 20° head-down postural drainage position was not found to be significantly different from the 20° head-up tilt modified position. Nevertheless, the fact that the majority of reflux episodes reached the upper oesophagus should make physiotherapists carefully consider their treatment strategy. We do not envisage that there will be any new trials undertaken that will affect the conclusions of this review; therefore, we do not plan to update this review.

Interview based malnutrition assessment can predict adverse events within 6 months after primary and revision arthroplasty – a prospective observational study of 351 patients
BMC Musculoskeletal Disorders
Background
Being at risk for malnutrition can be observed among hospitalized patients of all medical specialties. There are only few studies in arthroplasty dealing with defining and assessing malnutrition as such a potentially risk. This study aims to identify the risk for malnutrition following primary (pAP) and revision arthroplasty (rAP) (1) using non-invasive interview based assessment tools and to analyze effects on clinical outcome (2) and quality of life (3).
Methods
A consecutive series of hospitalized patients of a Department of Arthroplasty at a Level 1 Trauma Center in Western Europe was observed between June 2014 and June 2016. Patients were monitored for being at risk for malnutrition at hospital admission (T1) and 6 months post surgery (T2) by non-invasive interview based assessment tools (NRS 2002, SF-MNA, MNA). Adverse events, length of hospital stay and quality of life (HRQL, SF-36) were monitored.

Results
351 (283 pAP/ 68 rAP) patients were included. At T1, 13.4% (47) / 23.9% (84) / 27.4% (96) and at T2 7.3% (18) / 17.1% (42) / 16.0% (39) of all patients were at risk for malnutrition regarding NRS/SF-MNA/MNA. Prevalence of malnutrition risk was higher in rAP (22.1–29.4%) compared to pAP (11.3–26.9%). Patients being at risk for malnutrition showed prolonged hospitalization (NRS 14.5 to 12.5, SF-MNA 13.7 to 12.4, MNA 13.9 to 12.3 days, p < 0.05), delayed mobilization (NRS 2.1 to 1.7, SF-MNA 1.8 to 1.7, MNA 1.9 to 1.7 days), lower values in HRQL and more adverse events.

Conclusions
There is a moderate to high prevalence of risk for malnutrition in arthroplasty that can easily be assessed through interview based screening tools. Being at risk for malnutrition can reduce the clinical outcome following pAP and rAP. Patients with an impaired nutritional status show reduced values in physical and mental aspects of HRQL. Non-invasive interview-based nutritional assessment can predict adverse events in primary and revision total arthroplasty and can therefore help identifying patients at risk before surgery.

Self-care of chronic musculoskeletal pain – experiences and attitudes of patients and health care providers
BMC Musculoskeletal Disorders
Background
Self-care is often the first choice for people with chronic musculoskeletal pain. Self-care includes the use of non-prescription medications with no doctor’s supervision, as well as the use of other modern and traditional treatment methods with no consultation of the health care provider. Self-care may have positive effects on the successful outcome of a multidisciplinary approach to treatment. The aim of this study was to investigate the experiences and attitudes of patients and health care providers to the self-care of chronic musculoskeletal pain.

Methods
Qualitative Phenomenological study, where the data were collected by the method of an audio-taped interview in 15 patients at the outpatient clinic for pain management and in 20 health care providers involved in the treatment of those patients. The interviews were transcribed verbatim and analyzed by principles of Interpretative Thematic Analysis.

Results
Topics identified in patients: a) positive aspects of self-care, b) a need for pain self-care, c) social aspects of pain self-care. Topics identified in health care providers: a) aspects of self-care, b) a need for self-care c) risks of self-care.

Most of patients have positive attitude to self-care and this is the first step to pain management and to care for itself. The most frequent factors influencing decision about the self-care are heavy pain, unavailability of the doctor, long awaiting time for the therapy, or ineffectiveness of methods of conventional medicine. The health care providers believe that self-care of chronic musculoskeletal pain may be a patient’s contribution to clinical treatment. However, good awareness of methods used is important in this context, to avoid adverse effects of self-care.
Conclusion
Patients understand the self-care of musculoskeletal pain as an individually adjusted treatment and believe in its effectiveness. Health care providers support self-care as an adjunction to clinical management only, and think that self-care of musculoskeletal pain acts as a placebo, with a short-lived effect on chronic musculoskeletal pain.

The influence of preoperative determinants on quality of life, functioning and pain after total knee and hip replacement: a pooled analysis of Dutch cohorts
BMC Musculoskeletal Disorders
Background
Previous research has identified preoperative determinants that predict health related quality of life (HRQoL), functioning and pain after total knee or hip arthroplasty (TKA/THA), but these differed between studies and had opposite directions. This may be due to lack of power and not adjusting for confounders. The present study aims to identify the preoperative determinants that influence health related quality of life (HRQoL), functioning and pain after total knee or hip arthroplasty (TKA/THA).
Methods
We pooled individual patient from 20 cohorts with OA patients data (n = 1783 TKA and n = 2400 THA) in the Netherlands. We examined the influence of age, gender, BMI and preoperative values of HRQoL, functioning and pain on postoperative status and total improvement. Linear mixed models were used to estimate the effect of each preoperative variable on a particular outcome for each cohort separately. These effects were pooled across cohorts using a random effects model.
Results
For each increase in preoperative point in HRQoL, the postoperative HRQoL increased by 0.51 points in TKA and 0.37 points in THA (SF-36 scale). Similarly, each point increase in preoperative functioning, resulted in a higher postoperative functioning of 0.31 (TKA) and 0.21 (THA) points (KOOS/HOOS-ADL scale). For pain this was 0.18 (TKA) and 0.15 (THA) points higher (KOOS/HOOS-pain scale) (higher means less pain). Even though patients with better preoperative values achieved better postoperative outcomes, their improvement was smaller. Women and patients with a higher BMI had more pain after a TKA and THA. Higher age and higher BMI was associated with lower postoperative HRQoL and functioning and more pain after a THA.
Conclusions
Patients with a better preoperative health status have better outcomes, but less improvement. Even though the independent effects may seem small, combined results of preoperative variables may result in larger effects on postoperative outcomes.

Enriched food and snacks can increase nutritional intake in older people in hospital
NIHR Signal
Enriching hospital food with energy or protein may improve nutrition in older people in hospital. Studies assessed in a systematic review showed consistent effects of enriched or fortified foods compared with usual nutrition. The extent of increased consumption varied depending on the amount and type of foods added.
Malnutrition is common in older people in hospital, but patients may not enjoy consuming oral nutritional supplement drinks. This finding supports the Government’s strategy for improving food and drink standards in NHS hospitals. Preparing foods containing added energy or protein is a simple way to increase nutrient intake that is likely to be cheaper than alternatives.
Flexibility in meal preparation and providing snacks when patients want them rather than at defined intervals may also be beneficial.

**Pulmonary rehabilitation improves exercise tolerance in pulmonary fibrosis**

**NIHR Signal**

People with idiopathic pulmonary fibrosis who received pulmonary rehabilitation could walk 44 metres further in six minutes than those who did no exercise. Quality of life also improved. Pulmonary fibrosis is a rare condition where scar tissue builds up in the lungs making them stiff and causing breathing difficulty. The term idiopathic means there is no known cause. It tends to get worse over time, reducing a person’s activity levels. Pulmonary rehabilitation is a core part of care, but most programmes were based on evidence in people with chronic obstructive pulmonary disease which is the commonest lung condition. This review looked at whether it improved outcomes for pulmonary fibrosis. Only five small trials were available, and there are some concerns about the quality of evidence. However, this may be the best evidence attainable. Programme content varied making it difficult to know which exercises help most and it’s unknown whether it affects prognosis. The review supports the use of pulmonary rehabilitation as currently recommended.

**Physiotherapy**

**An audit of the utilization of physiotherapy assistants in the musculoskeletal outpatients setting within a primary care physiotherapy service**

**Musculoskeletal Care**

**Background**

Physiotherapy assistants account for approximately 20% of the physiotherapy workforce across a community health service in North Staffordshire. Although their job descriptions state that the post is primarily clinical, their role depends heavily on the qualified physiotherapists and how they utilize their clinical skills.

**Methods**

An audit of the physiotherapy assistants’ tasks was carried out to reveal whether the physiotherapy assistants’ time spent on clinical tasks complied with their job descriptions. Using the audit improvement cycle, pathway mapping of specific anatomical areas was performed to identify which parts of treatment can be carried out by physiotherapy assistants, clarify the physiotherapy assistants’ clinical role and standardize treatments. A competences and training needs analysis was completed and physiotherapy assistants were trained before the pathways were implemented. Finally, the physiotherapy assistants’ practice was re-audited and job satisfaction questionnaires were redistributed after the pathways were implemented.

**Results**

The results showed that, following the implementation of the pathways, the amount of working time that physiotherapy assistants spent treating patients increased from 9% to 16%. Their job satisfaction changed from 11% prior to the implementation of the pathways to 100% post-implementation.

**Conclusions**

Using defined pathways in the treatment of musculoskeletal conditions of the peripheral joints provides the framework to standardize delegation of clinical tasks from qualified physiotherapists to
physiotherapy assistants. However, the utilization of such pathways needs to be examined further, to clarify the clinical and cost effectiveness of delegating clinical work to physiotherapy assistants, and also the perceptions of qualified physiotherapists

**Prevention and treatment of low back pain: evidence, challenges, and promising directions**  
The Lancet  
Many clinical practice guidelines recommend similar approaches for the assessment and management of low back pain. Recommendations include use of a biopsychosocial framework to guide management with initial non-pharmacological treatment, including education that supports self-management and resumption of normal activities and exercise, and psychological programmes for those with persistent symptoms. Guidelines recommend prudent use of medication, imaging, and surgery. The recommendations are based on trials almost exclusively from high-income countries, focused mainly on treatments rather than on prevention, with limited data for cost-effectiveness. However, globally, gaps between evidence and practice exist, with limited use of recommended first-line treatments and inappropriately high use of imaging, rest, opioids, spinal injections, and surgery. Doing more of the same will not reduce back-related disability or its long-term consequences. The advances with the greatest potential are arguably those that align practice with the evidence, reduce the focus on spinal abnormalities, and ensure promotion of activity and function, including work participation. We have identified effective, promising, or emerging solutions that could offer new directions, but that need greater attention and further research to determine if they are appropriate for large-scale implementation. These potential solutions include focused strategies to implement best practice, the redesign of clinical pathways, integrated health and occupational interventions to reduce work disability, changes in compensation and disability claims policies, and public health and prevention strategies.

**Effectiveness and costs of a vocational advice service to improve work outcomes in patients with musculoskeletal pain in primary care: a cluster randomised trial**  
Pain  
Musculoskeletal pain is a common cause of work absence, and early intervention is advocated to prevent the adverse health and economic consequences of longer-term absence. This cluster randomised controlled trial investigated the effect of introducing a vocational advice service into primary care to provide occupational support. Six general practices were randomised; patients were eligible if they were consulting their general practitioner with musculoskeletal pain and were employed and struggling at work or absent from work <6 months. Practices in the intervention arm could refer patients to a vocational advisor embedded within the practice providing a case-managed stepwise intervention addressing obstacles to working. The primary outcome was number of days off work, over 4 months. Participants in the intervention arm (n = 158) had fewer days work absence compared with the control arm (n = 180) (mean 9.3 [SD 21.7] vs 14.4 [SD 27.7]) days, incidence rate ratio 0.51 (95% confidence interval 0.26, 0.99), P = 0.048. The net societal benefit of the intervention compared with best care was £733: £748 gain (work absence) vs £15 loss (health care costs). The addition of a vocational advice service to best current primary care for patients consulting with musculoskeletal pain led to reduced absence and cost savings for society. If a similar early intervention to the one tested in this trial was implemented widely, it could potentially reduce days absent over 12 months by 16%, equating to an overall societal cost saving of approximately £500 million (US $6 billion) and requiring an investment of only £10 million.
Walking balance is mediated by muscle strength and bone mineral density in postmenopausal women: an observational study

BMC Musculoskeletal Disorders

Background
Depletion of ovarian hormone in postmenopausal women has been associated with changes in the locomotor apparatus that may compromise walking function including muscle atrophy/weakness, weight gain, and bone demineralization. Therefore, handgrip strength (HGS), bone mineral density (BMD) and body composition [percentage body fat mass (%BFM), fat mass (FM), Fat-free mass (FFM) and body mass index (BMI)], may significantly vary and predict WB in postmenopausal women. Consequently, the study sought to 1. Explore body composition, BMD and muscle strength differences between premenopausal and postmenopausal women and 2. Explore how these variables [i.e., body composition, BMD and muscle strength] relate to WB in postmenopausal women.

Method
Fifty-one pre-menopausal (35.74 ± 1.52) and 50 postmenopausal (53.32 ± 2.28) women were selected by convenience sampling and studied. Six explanatory variables (HGS, BMD, %BFM, FFM, BMI and FM) were explored to predict WB in postmenopausal women: Data collected were analyzed using multiple linear regression, ANCOVA, independent t-test and Pearson correlation coefficient at p < 0.05.

Result
Postmenopausal women had higher BMI(t = + 1.72; p = 0.04), %BFM(t = + 2.77; p = .003), FM(t = + 1.77; p = 0.04) and lower HGS(t = − 3.05; p = 0.001), compared to the premenopausal women. The predicted main effect of age on HGS was not significant, F(1, 197) = 0.03, p = 0.06, likewise the interaction between age and %BFM, F(1, 197) = 0.02, p = 0.89; unlike the predicted main effect of %BFM, F(1, 197) = 10.34, p = .002, on HGS. HGS was the highest predictor of WB (t = 2.203; β=0.3046) in postmenopausal women and combined with T-score right big toe (Tscorert) to produce R² = 0.11;F(2, 47)=4.11;p = 0.02 as the best fit for the predictive model. The variance (R²) change was significant from HGS model (R² = 0.09;p = 0.03) to HGS + Tscorert model (R² = 0.11;p = 0.02). The regression model equation was therefore given as: WB =5.4805 + 0.1578(HGS) + (− 1.3532) Tscorert.

Conclusion
There are differences in body composition suggesting re-compartmentalization of the body, which may adversely impact the (HGS) muscle strength in postmenopausal women. Muscle strength and BMD are associated with WB, although, only contribute to a marginal amount of the variance for WB. Therefore, other factors in addition to musculoskeletal health are necessary to mitigate fall risk in postmenopausal women.

The influence of preoperative determinants on quality of life, functioning and pain after total knee and hip replacement: a pooled analysis of Dutch cohorts

BMC Musculoskeletal Disorders

Background
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Conclusions
Patients with a better preoperative health status have better outcomes, but less improvement. Even though the independent effects may seem small, combined results of preoperative variables may result in larger effects on postoperative outcomes.

Exploring cued and non-cued motor imagery interventions in people with multiple sclerosis: a randomised feasibility trial and reliability study
Archives of Physiotherapy
Background
Motor imagery (MI) is increasingly used in neurorehabilitation to facilitate motor performance. Our previous study results demonstrated significantly improved walking after rhythmic-cued MI in people with multiple sclerosis (pwMS). The present feasibility study was aimed to obtain preliminary information of changes in walking, fatigue, quality of life (QoL) and MI ability following cued and non-cued MI in pwMS. The study further investigated the feasibility of a larger study and examined the reliability of a two-dimensional gait analysis system.

Methods
At the MS-Clinic, Department of Neurology, Medical University of Innsbruck, Austria, 15 adult pwMS (1.5–4.5 on the Expanded Disability Status Scale, 13 females) were randomised to one of three groups: 24 sessions of 17 min of MI with music and verbal cueing (MVMI), with music alone (MMI), or non-cued (MI). Descriptive statistics were reported for all outcomes. Primary outcomes were walking speed (Timed 25-Foot Walk) and walking distance (6-Minute Walk Test). Secondary outcomes were recruitment rate, retention, adherence, acceptability, adverse events, MI ability (Kinaesthetic and Visual Imagery Questionnaire, Time-Dependent MI test), fatigue (Modified Fatigue Impact Scale) and QoL (Multiple Sclerosis Impact Scale-29). The reliability of a gait analysis system used to assess gait synchronisation with music beat was tested.

Results
Participants showed adequate MI abilities. Post-intervention, improvements in walking speed, walking distance, fatigue, QoL and MI ability were observed in all groups. Success of the feasibility criteria was demonstrated by recruitment and retention rates of 8.6% (95% confidence interval, CI 5.2, 13.8%) and 100% (95% CI 76.4, 100%), which exceeded the target rates of 5.7% and 80%. Additionally, the 83% (95% CI 0.42, 0.99) adherence rate surpassed the 67% target rate. Intra-rater reliability analysis of the gait measurement instruments demonstrated excellent Intra-Class
Correlation coefficients for step length of 0.978 (95% CI 0.973, 0.982) and step time of 0.880 (95% CI 0.855, 0.902).

Conclusion
Results from our study suggest that cued and non-cued MI are valuable interventions in pwMS who were able to imagine movements. A larger study appears feasible, however, substantial improvements to the methods are required such as stratified randomisation using a computer-generated sequence and blinding of the assessors.

Health Visiting and Nursing

Nutrition and hydration
NHS Improvement
This resource discusses how hydration and nutrition can help to prevent pressure ulcers.

Pulse oximetry screening for critical congenital heart defects
Cochrane Library
Pulse oximetry is a highly specific and moderately sensitive test for detection of CCHD with very low false-positive rates. Current evidence supports the introduction of routine screening for CCHD in asymptomatic newborns before discharge from the well-baby nursery.

Campaign urges nursing staff to take rest breaks
RCN
The RCN has published a suite of resources designed to encourage nursing staff to “rest, rehydrate, refuel” during shifts.

Two thirds of respondents said there aren’t enough staff to do their job properly.
RCN
Staff report working under more pressure and feeling less able to deliver a good quality service. They feel less enthusiastic about their jobs and more dissatisfied with pay, the survey results reveal.

Social Care

Green paper on social care. SCIE written evidence
SCIE
Written evidence submitted by SCIE. It includes the suggestion for an 'innovation scaling fund' and a call for a thorough-going consultation with the sector and people who use services to inform and test options.
Learning Disability

Learning disabilities and behaviour that challenges: service design and delivery
NICE guideline
This guideline covers services for children, young people and adults with a learning disability (or autism and a learning disability) and behaviour that challenges. It aims to promote a lifelong approach to supporting people and their families and carers, focusing on prevention and early intervention and minimising inpatient admissions.

Attention deficit hyperactivity disorder: diagnosis and management
NICE guideline
This guideline covers recognising, diagnosing and managing attention deficit hyperactivity disorder (ADHD) in children, young people and adults. It aims to improve recognition and diagnosis, as well as the quality of care and support for people with ADHD.

Mental Health

Withdrawal versus continuation of long-term antipsychotic drug use for behavioural and psychological symptoms in older people with dementia
Cochrane Review
There is low-quality evidence that antipsychotics may be successfully discontinued in older people with dementia and NPS who have been taking antipsychotics for at least three months, and that discontinuation may have little or no important effect on behavioural and psychological symptoms. This is consistent with the observation that most behavioural complications of dementia are intermittent and often do not persist for longer than three months. Discontinuation may have little or no effect on overall cognitive function. Discontinuation may make no difference to adverse events and quality of life. Based on the trials in this review, we are uncertain whether discontinuation of antipsychotics leads to a decrease in mortality.

People with psychosis, aggression or agitation who responded well to long-term antipsychotic drug use, or those with more severe NPS at baseline, may benefit behaviourally from continuation of antipsychotics. Discontinuation may reduce agitation for people with mild NPS at baseline. However, these conclusions are based on few studies or small subgroups and further evidence of benefits and harms associated with withdrawal of antipsychotic is required in people with dementia and mild and severe NPS.

The overall conclusions of the review have not changed since 2013 and the number of available trials remains low.
**Older Adults**

**Withdrawal versus continuation of long-term antipsychotic drug use for behavioural and psychological symptoms in older people with dementia**

**Cochrane Review**

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**Person-centred care improves quality of life for care home residents with dementia**

**NIHR Signal**

A person-centred care intervention for people with dementia living in care homes improved their quality of life, reduced agitation and improved interactions with staff. It may also save costs compared with usual care.

The WHELD intervention involves training staff in person-centred care, with a focus on improving social interactions and appropriate use of antipsychotic medications. An early study suggested it could halve antipsychotic use.

This larger-scale NIHR trial conducted across 69 UK nursing homes focused on exploring the effects on quality of life and other symptoms. WHELD gave small-scale, but important improvements. It didn’t reduce antipsychotic use, as this was low to start with, which is in line with policy to limit use. It supports the feasibility of the intervention, but there is a need to understand which components are most effective and could be implemented on a wide scale with sustainable effects.

**Enriched food and snacks can increase nutritional intake in older people in hospital**

**NIHR Signal**

Enriching hospital food with energy or protein may improve nutrition in older people in hospital. Studies assessed in a systematic review showed consistent effects of enriched or fortified foods compared with usual nutrition. The extent of increased consumption varied depending on the amount and type of foods added.
Malnutrition is common in older people in hospital, but patients may not enjoy consuming oral nutritional supplement drinks. This finding supports the Government’s strategy for improving food and drink standards in NHS hospitals. Preparing foods containing added energy or protein is a simple way to increase nutrient intake that is likely to be cheaper than alternatives. Flexibility in meal preparation and providing snacks when patients want them rather than at defined intervals may also be beneficial.

Palliative Care

Living and Dying Well After Stroke
Evidently Cochrane
Much is written about living with stroke, but little about dying after stroke. Yet most people with a severe stroke will die within 6 months. Does palliative care have a place to help such people maximise their quality of life and help them die as well as possible? Is it needed? Do people want it? How well does rehabilitation address people’s emotional needs as well as their physical?