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**Background** This study aimed to identify theoretically based modifiable factors that predict whether chiropractors manage patients with low back pain without ordering lumbar x-rays.

**Methods** A mailed survey with psychological measures was collected from a random sample of Ontario (Canada) and Practice Network (US) chiropractors. The outcome measures were behavioural intention and behavioural simulation (scenario decision-making). Explanatory variables included constructs from motivational theories (Theory of Planned Behaviour (TPB), Theory of Interpersonal Behaviour (TIB)), action theories (Operant Learning Theory (OLT) and Planning (action and coping)), and two other constructs: personal moral norm and habit as measured by the Self-Reported Habit Index (SRHI). Multiple regression analyses examined the predictive value of each theoretical model individually for simulation and intention outcomes.

**Results** 31% of North American chiropractors returned completed questionnaires. Overall, TPB and TIB, followed by personal moral norms and OLT best explained behavioural simulation. Theory level variance explained among Ontario and US chiropractors was respectively: TPB 59%; 52.0%, TIB 57%; 54.0%, personal moral norm 49%; 46.0%, OLT 49%; 52.0%, action planning 28%; 29%, and SRHI 42%; 48%. Constructs from TPB and TIB best explained behavioural intention. Theory level variance explained was respectively: TPB 85%; 74%, TIB; 83%; 81%, OLT 62%; 69%, and SRHI 59% and 52% for SRHI.

**Conclusion** These models explained up to 59% of the variation in behavioural simulation and up to 85% in intention to manage back pain patients without x-rays. Results may inform development of theory-based behaviour change interventions to implement imaging guideline recommendations among North American chiropractors. These models explained up to 59% of the variation in behavioural simulation and up to 85% in intention to manage back pain patients without x-rays. Results may inform development of theory-based behaviour change interventions to implement imaging guideline recommendations among North American chiropractors.

#### 048 DEVELOPMENT OF FIRST AID GUIDELINES FOR RECREATIONAL ATHLETES BY BELGIAN RED CROSS-FLANDERS

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**Background** Belgian Red Cross-Flanders (BRCFI) is active in many fields including first aid training, for which BRCFI develops evidence-based guidelines according to AGREE II.

**Objectives** Development of evidence-based recommendations for recreational athletes who perform one of 15 sport disciplines, defined by popularity, medical costs and injury risk in Flanders (Belgium). Initiatives concerning wording and accessibility were taken to develop implementable guidelines adapted for laypeople. These guidelines will also be used by the Flemish Government to update its information sources.

**Methods** 10 databases for guidelines, systematic reviews or individual studies were searched and draft recommendations were formulated based on the best current evidence. The quality of evidence was assessed using the GRADE approach. A guideline development group, including a multidisciplinary expert panel (co-authors PV, JB, RM and KP), discussed the draft recommendations while taking into account the evidence, and validated the final recommendations.

**Results** 32 systematic reviews and 2 guidelines that met the methodological criteria were identified as valuable source of studies. Additionally, 73 individual studies were included. The overall quality of the body of evidence varied from moderate to very low. Recommendations, written in active and explicit wording, were organised in a structure in order to be searchable via sports discipline, anatomical localisation, type of intervention, and injury.

**Discussion** Preferences of the target group were taken into account when selecting the sport disciplines and when formulating the evidence-based recommendations.

**Implications for Guideline Developers/Users** Involving the target population is an added value for developing an implementable evidence-based guideline.

#### 049 EVIDENCE BASED TREATMENT GUIDELINES: AT WORK IN A MICROCOSM

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**Background** Medical treatment under workers' compensation represents just a minuscule portion (about 3 percent) of total medical costs in the US. Furthermore, legislation and rules are determined autonomously by each state. Worker's comp medical care, and the outcomes of that care, in each state theoretically can represent a microcosm of what could be achieved in an entire country. Impact of Evidence-based Treatment Guidelines: A trend began in 2003, starting with California, for states to consider adopting Evidence-Based Treatment Guidelines as a mechanism to insure timely and quality care for injured workers by following the least invasive, most-effective treatments today's science has to offer. Bi-products to the effective implementation of EBTG, include earlier return to work, better outcomes resulting in reduced indemnity costs, less friction in the system (providers know what treatments are authorised and will be paid for), fewer episodes of over-utilisation of services, and decreased medical costs, benefiting employers, insurers, providers and business. Outcomes where true EBTG have been implemented: Ohio adopted EBTG in 2003. A Pilot conducted in 2005 showed a

decrease in medical costs by 64%, lost days by 69% and treatment delays by 77%. Texas adopted EBTG in 2006; Total costs have declined by 50%, patients are recovering more quickly, more providers are willing to treat these patients, opioid abuses have declined and many states are looking to adopt this model. Other state outcomes and essential elements needed in an EBTG will be discussed.

#### 050 DEVELOPING EVIDENCE-BASED CLINICAL PRACTICE GUIDELINES FOR PRIMARY CARE PHYSIOTHERAPY: A LOCAL INITIATIVE

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**Background** In primary care physiotherapy in Sweden, there is a lack of evidence-based clinical practice guidelines to support clinicians and patients in clinical decision making. A local initiative to develop and implement evidence-based clinical practice guidelines for PTs in primary care was initiated by a regional health authority.

**Objectives** To develop evidence-based clinical practice guidelines for physiotherapy treatment of low back pain, neck pain, and subacromial pain, for use in primary care physiotherapy in Sweden.

**Methods** The guideline development was performed by a project team of five primary care physiotherapists in a systematic process that was guided by a 7-step guideline development model by Grol et al. We performed systematic database searches, critical appraisal of the evidence base using GRADE, and formulated evidence-based practice recommendations.

**Results** The guideline format follows recommendations from AGREE II. The guidelines consist of a brief summary on the first page; a brief introduction to the topic with up-to-date information on definition of the condition, prevalence and prognosis; recommendations on patient management according to strength of evidence; a discussion section, and a detailed reference list. Detailed search strategy and search results, summaries of the body of evidence, recommended outcome measures, and patient information were provided in appendices to the guidelines.

**Discussion** Rigorous guideline development methodology was considered important to get clinicians' attention and approval - a requisite for regular use. Clinicians welcomed the initiative.

**Implications for Guideline Developers** It is important for clinician acceptance that guidelines are brief, to the point and relevant.

#### 051 CAN WE AUTOMATICALLY PRODUCE GENERIC DECISION AIDS FOR THE CLINICAL ENCOUNTER DIRECTLY FROM GRADE GUIDELINE RECOMMENDATIONS? EXPERIENCE FROM THE SHARE-IT PROJECT

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**Background** Although decision aids (DA) can help to communicate evidence to patients, their production is time consuming, often not based on the best available evidence or rapidly outdated. Linking trustworthy guidelines and DA for shared-decision making could both overcome these limitations and enhance guideline dissemination.

**Objectives** To test the feasibility of automatically translating any recommendations from GRADE guidelines into generic and interactive DA accessible on tablet computers for clinicians and their patients in the clinical encounter.

**Methods** As part of the DECIDE project, we developed a framework for translating components of GRADE into DA, following the International Patient Decision Aid Standards. Using a recently published guideline, we implemented that framework in our MAGIC (Making Grade the Irresistible Choice) application - a prototype electronic guideline tool and publication platform that can automatically display recommendations in multilayered presentation formats.

**Results** Our prototype was able to automatically translate a large number of GRADE recommendations and their supporting evidence into electronic and interactive DA. Preliminary results of user-testing in real patient-clinician interactions suggest that these DA can be used at the point of care to discuss estimates of treatment effects for patient relevant outcomes, confidence in estimates, burden of treatment, and cost issues.

**Discussion** This study provides a proof-of-concept that components of GRADE recommendations can be interactively displayed in generic tools for interactive shared-decision making in a wide range of treatment alternatives.

**Implications for Guideline Developers/Users** Our electronic DA offer promising opportunities to disseminate guidelines at the point of care.

#### 052 TOOLS FOR COMMUNICATING MAIN MESSAGES CONVEYED BY CLINICAL PRACTICE GUIDELINES (CPGS) - MAKING PATIENT RESOURCES USER FRIENDLY

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**Background** The Alberta Ambassador Guideline Adaptation Programme developed two CPGs on the management of low back pain and headache in primary care. Various guideline companion documents were developed for patients.

**Objectives** To review the process and outcomes of involving patients/public in the development of guideline resource documents.

**Methods** Focus groups of different compositions and using various sampling strategies were called upon: self-selected members from national patient pain association (patient information sheets); members of the public who serve on a standing Lay Committee (patient information sheets, comic book); purposive recruitment by market research company (comic book). Participants answered questions related to the content, format, and presentation of patient resources using different interview methods.

**Results** Discussion themes included wordiness of documents, language accessibility, use of logos, and trustworthiness. Multiple suggestions for improvements that were sensitive to the needs of participants were considered before publication of final products. The comic book was not published.