agreement test for different raters in systematic reviews. 3. How to from evidence to recommendations in guidelines. 4. Exploration of the application of GRADE in clinical stage (e.g., whether the guideline covers prevention, screening, assessment, treatment, rehabilitation or monitoring); Exploration of the application of GRADE in different areas such as public health, health policy and system. 5. The establishment and development of GRADE centre such as the Chinese GRADE centre and Spanish GRADE centre and how to promote the implementation of GRADE.

**Conclusion** As a new paradigm, the GRADE approach provides a comprehensive, explicit, and transparent methodology for grading the quality of evidence and strength of recommendations about the management of patients, however, GRADE is not a perfect system and still need to develop itself and been disseminated widely.

**P049 EVIDENCE DISTRIBUTION OF A COMPREHENSIVE MUSCULO-SKELETAL GUIDELINE**

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**Background** Occupational Medicine focuses on return to functionality and work, however the overwhelming majority of injuries are musculoskeletal and require very specific clinical situation evidence review. Body part areas addressed include spine, shoulder, elbow, hand/wrist/forearm, hip/grain, knee and ankle/foot. Interventions assessed include diagnostic, therapeutic, and medical therapies.

**Objectives** To assess the theoretical evidence distribution of a comprehensive musculoskeletal guideline and its potential application in practice. Methods: Evidence ratings (A, B, C) were determined by expert data extraction from over 5,000 randomised controlled trials (RCT), non-RCT evidence was designated as insufficient (I). RCT evidence ratings were quantified on an 11 point scale that assessed appropriateness, biases and effectiveness. High quality evidence was defined as 8.0–11 points, moderate 4.0–7.5, and low < 4.0 points. A level evidence (strong) was defined as 2 or more high-quality RCTs, B (Moderate) 1 high-quality or multiple moderate-quality, C (Limited) at least one study of moderate-quality. Low quality, observational or conflicting evidence was designated as Insufficient (I). A similar profile was used for diagnostic evidence recommendations. Evidence ratings were verified by independent writing panels.

**Results** Only 0% of 2500 recommendations were supported by a Limited (C) or better evidence base. When adjusting for frequency of occurrence from a claims data base, and cost was estimated in only 14% of costs were associated with quality RCT studies.

**Conclusions** These data suggest that the majority of musculoskeletal clinical decisions do not have a sufficient evidence base for rules-based decision making.