ISSLS Focus Group:
Best practices for conducting and reporting spine research involving registry-enhanced administrative data.

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Spine research based on administrative data, with or without complex sampling design, has rapidly expanded in recent years. Such data are increasingly linked to spine registries and clinical records to create enhanced research databases. Administrative data is readily accessible and affordable. Some of the most important research findings in the field of spine have derived from analysis of administrative data. They are useful for deriving national estimates of utilization and costs, evaluating population-based policy-effects, and often include a large sample size that facilitates the detection of rare outcomes such as adverse events. Administrative data avoiding particular biases that may creep into other study designs.

Despite these advantages, research using administrative data also has major limitations. They often lack clinical detail, poorly estimate disease severity, involve many technical nuances, and require researchers need to be particularly knowledgeable about the possibilities of misclassification, selection bias, and unmeasured confounding. Finally, because administrative data are observational by nature, definitive causal statements are prohibitive.

The Focus Group will identify best practices for conducting, reporting and reviewing research involving the analysis of administrative data. The group will sample existing literature to identify best practices and common obstacles involving the analysis of administrative data. It will summarize the validity and reliability of administrative algorithms based on codes from the *International Classification of Disease* and the *AMA's Current Procedural Terminology*, including classifying spine-related ICD-10 codes. Finally, the group will seek to develop consensus-based recommendations for conducing, reporting and reviewing spine research that involves administrative data.

By demystifying methods and improving transparency surrounding analysis of administrative data, we aim to improve the accuracy and trustworthiness of scientific findings that derive from these data sources. Publishing best practice recommendations may help to standardize methods and thus improve the clarity and credibility of research, while educating the public about the strengths and limitations of these approaches.