

Summary of research proposal LROI



Title:

Age-based cut-off point as methodological approach in search for differences in revision for fixation type: cemented versus uncemented total hip arthroplasty

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Abstract:

The optimal method of fixation (with or without the use of cement) for primary total hip arthroplasty (THA) remains unknown. When looking at implant survival, as measured by the revision rate, the existing literature is inconclusive. Ideally, the difference in revision rate would be tested in a randomised controlled trial (RCT). Daily practice shows that this study design is impractical due to the relatively long time until revisions occur. RCTs on this subject are difficult to conduct and therefore rare. The majority of published studies are retrospective, non-randomised comparisons. A large clinical practice variation in hip prosthesis fixation is reported in the Dutch Arthroplasty Register. Some orthopaedic surgeons and hospitals use an age-based cut-off in the choice for the fixation type of THA. This age-based cut-off point offers the opportunity to use a novel and pragmatic research design, such as a regression discontinuity design. If its conditions are met, conclusions on the causal pathway can be made from observational data. Therefore, the goal of this study is to determine whether the conditions for this new study design are met. This may open up opportunities for future healthcare evaluation studies in real world data form registries

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