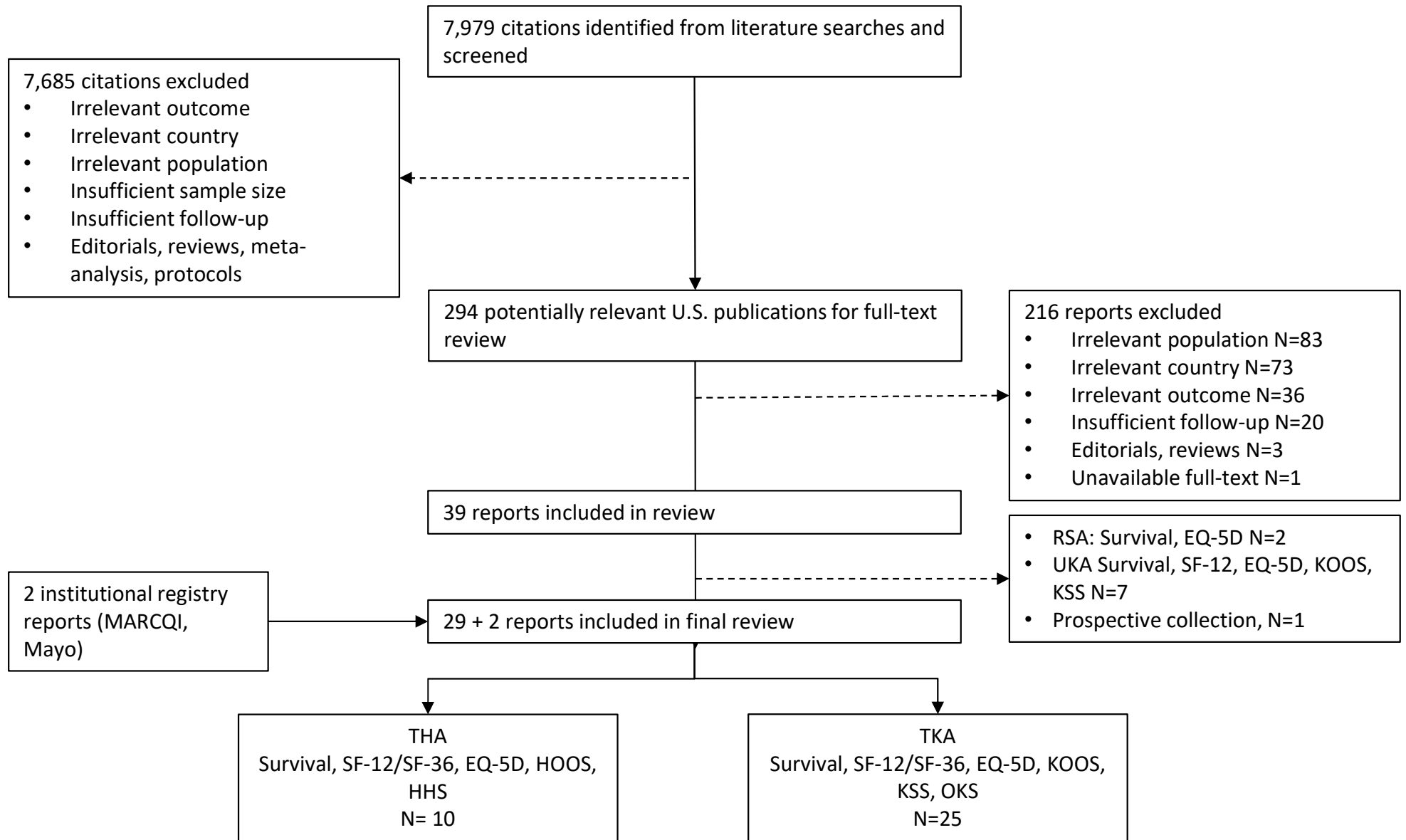


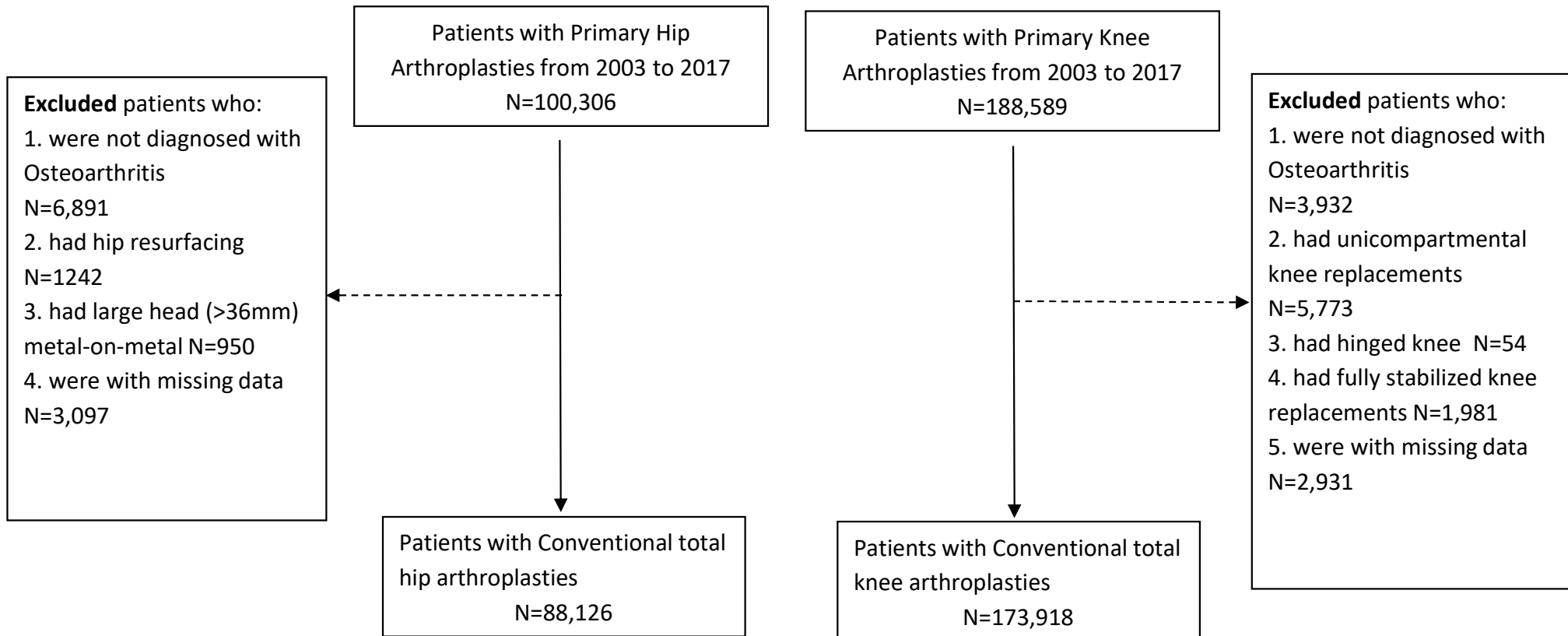
# Supplementary Figure 1: Flow chart: Literature review



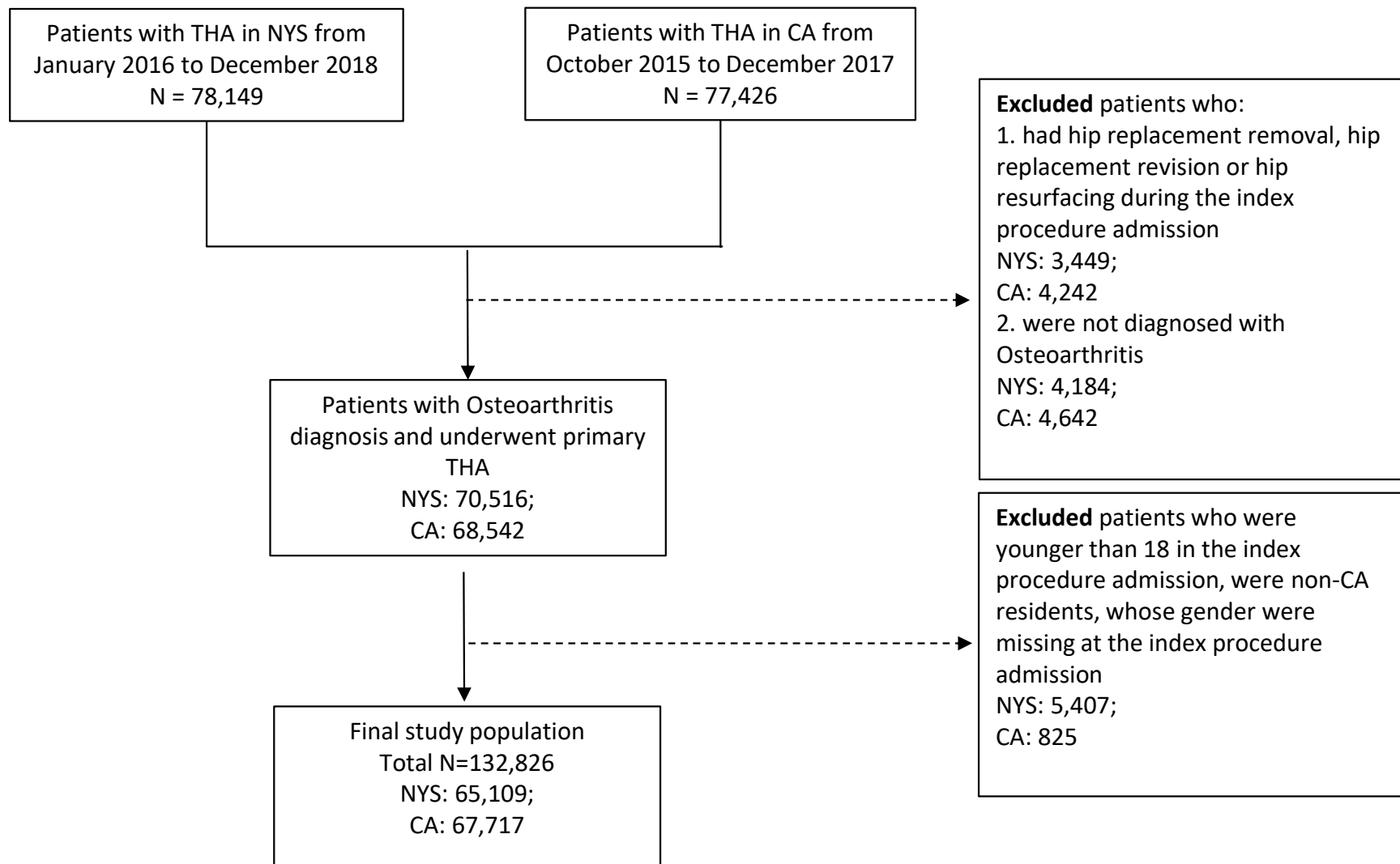
Note: 3 studies and 2 institutional reports had both THA And TKA estimates and are counted in the both THA and TKA boxes.

Abbreviations: MARCQI, Michigan Arthroplasty Registry Collaborative Quality Initiative; RSA, Resurfacing Hip Arthroplasty; and UKA, Unicondylar Knee Arthroplasty.

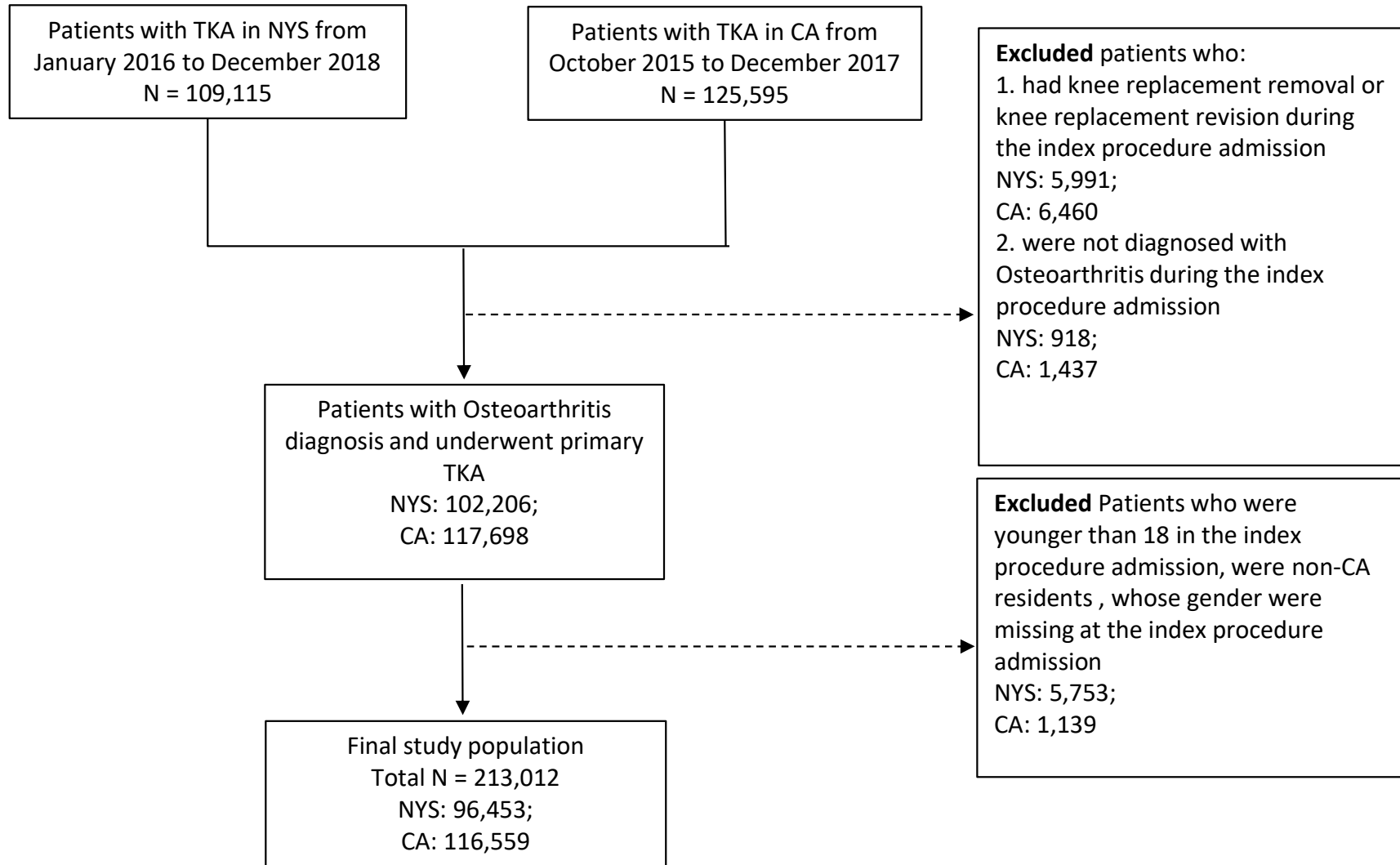
## Supplementary Figure 2: Flow chart: Kaiser Permanente registry data patient selection for hip and knee arthroplasty



# Supplementary Figure 3: Flow chart: New York and California statewide claims data patient selection for hip arthroplasty



# Supplementary Figure 4: Flow chart: New York and California statewide claims data patient selection for knee arthroplasty



Systematic Review-registratie bij <https://www.crd.york.ac.uk/prospero/>

Reguliere referenties - totaal d.d. 17-1-2020: 10.156 referenties [totaal incl. duplicaten: 28.956], afkomstig uit:

- PubMed: 7.857
- MEDLINE (OVID): 7.842 - 3 uniek
- Embase: 6.238 - 1.394 uniek
- Emcare: 4.256 - 138 uniek
- Web of Science: 2.253 - 665 uniek
- COCHRANE Library: 510 - 99 uniek

Excl. meeting abstract referenties.

Databases:

**PubMed**

<http://www.ncbi.nlm.nih.gov/pubmed?otool=leiden>

**14-1-2020**

((("Hip Prosthesis"[majr] OR "Arthroplasty, Replacement, Hip"[majr] OR "Hip prosthesis"[ti] OR "Hip prostheses"[ti] OR "Hip Replacement"[ti] OR "Hip Replacements"[ti] OR "Hip Arthroplasty"[ti] OR "Hip Arthroplasties"[ti] OR "Hip joint prosthesis"[ti] OR "Hip joint prostheses"[ti] OR "Hip joint Replacement"[ti] OR "Hip joint Replacements"[ti] OR "Hip joint Arthroplasty"[ti] OR "Hip joint Arthroplasties"[ti] OR "total hip"[ti] OR "total hips"[ti] OR "THR"[ti] OR "THA"[ti] OR "Knee Prosthesis"[majr] OR "Arthroplasty, Replacement, Knee"[majr] OR "Knee prosthesis"[ti] OR "Knee prostheses"[ti] OR "Knee Replacement"[ti] OR "Knee Replacements"[ti] OR "Knee Arthroplasty"[ti] OR "Knee Arthroplasties"[ti] OR "Knee joint prosthesis"[ti] OR "Knee joint prostheses"[ti] OR "Knee joint Replacement"[ti] OR "Knee joint Replacements"[ti] OR "Knee joint Arthroplasty"[ti] OR "Knee joint Arthroplasties"[ti] OR "total Knee"[ti] OR "total Knees"[ti] OR "TKR"[ti] OR "TKA"[ti] OR ("knee"[ti] OR "knees"[ti] OR "hip"[ti] OR "hips"[ti]) AND ("prosthesis"[ti] OR "prostheses"[ti] OR "Replacement"[ti] OR "Replacements"[ti] OR "Arthroplasty"[ti] OR "Arthroplasties"[ti])) OR "Joint Prosthesis"[majr:noexp] OR "Arthroplasty, Replacement"[majr:noexp] OR "Joint prosthesis"[ti] OR "Joint prostheses"[ti] OR "Joint Replacement"[ti] OR "Joint Replacements"[ti] OR "Joint Arthroplasty"[ti] OR "Joint Arthroplasties"[ti]) AND ("Patient Reported Outcome Measures"[mesh] OR "Patient Reported Outcome Measures"[tiab] OR "Patient Reported Outcome Measure"[tiab] OR "PROM"[tiab] OR "PROMS"[tiab] OR "Mortality"[mesh] OR "mortality"[Subheading] OR "Survival Analysis"[mesh] OR "Survival Rate"[mesh] OR "Disease-Free Survival"[mesh] OR "Progression-Free Survival"[mesh] OR "Kaplan-Meier Estimate"[mesh] OR "Prosthesis Failure"[mesh] OR "mortality"[tiab] OR "Survival"[tiab] OR "Kaplan-Meier"[tiab] OR "Failure"[tiab] OR "Postoperative Complications"[mesh] OR "Intraoperative Complications"[mesh] OR postoperativ\*[tiab] OR intraoperativ\*[tiab] OR "complication"[tiab] OR "complications"[tiab] OR "Joint

Dislocations"[mesh] OR dislocat\*[tiab] OR "Fractures, Bone"[mesh] OR fractur\*[tiab]) AND ("Registries"[Mesh] OR "Registries"[tiab] OR "Registry"[tiab] OR "register"[tiab] OR "registers"[tiab]) NOT ("Case Reports"[ptyp] OR "case report"[ti] OR "Review"[ptyp] OR "review"[ti] OR "editorial"[ptyp] OR "comment"[ptyp] OR "editorial"[ti] OR "comment"[ti])) OR (("Hip Prosthesis"[majr] OR "Arthroplasty, Replacement, Hip"[majr] OR "Hip prosthesis"[ti] OR "Hip prostheses"[ti] OR "Hip Replacement"[ti] OR "Hip Replacements"[ti] OR "Hip Arthroplasty"[ti] OR "Hip Arthroplasties"[ti] OR "Hip joint prosthesis"[ti] OR "Hip joint prostheses"[ti] OR "Hip joint Replacement"[ti] OR "Hip joint Replacements"[ti] OR "Hip joint Arthroplasty"[ti] OR "Hip joint Arthroplasties"[ti] OR "total hip"[ti] OR "total hips"[ti] OR "THR"[ti] OR "THA"[ti] OR "Knee Prosthesis"[majr] OR "Arthroplasty, Replacement, Knee"[majr] OR "Knee prosthesis"[ti] OR "Knee prostheses"[ti] OR "Knee Replacement"[ti] OR "Knee Replacements"[ti] OR "Knee Arthroplasty"[ti] OR "Knee Arthroplasties"[ti] OR "Knee joint prosthesis"[ti] OR "Knee joint prostheses"[ti] OR "Knee joint Replacement"[ti] OR "Knee joint Replacements"[ti] OR "Knee joint Arthroplasty"[ti] OR "Knee joint Arthroplasties"[ti] OR "total Knee"[ti] OR "total Knees"[ti] OR "TKR"[ti] OR "TKA"[ti] OR ("knee"[ti] OR "knees"[ti] OR "hip"[ti] OR "hips"[ti]) AND ("prosthesis"[ti] OR "prostheses"[ti] OR "Replacement"[ti] OR "Replacements"[ti] OR "Arthroplasty"[ti] OR "Arthroplasties"[ti])) AND ("Patient Reported Outcome Measures"[mesh] OR "Patient Reported Outcome Measures"[tiab] OR "Patient Reported Outcome Measure"[tiab] OR "PROM"[tiab] OR "PROMS"[tiab] OR "Mortality"[mesh] OR "mortality"[Subheading] OR "Survival Analysis"[mesh] OR "Survival Rate"[mesh] OR "Disease-Free Survival"[mesh] OR "Progression-Free Survival"[mesh] OR "Kaplan-Meier Estimate"[mesh] OR "Prosthesis Failure"[mesh] OR "mortality"[tiab] OR "Survival"[tiab] OR "Kaplan-Meier"[tiab] OR "Failure"[tiab] OR "Postoperative Complications"[mesh] OR "Intraoperative Complications"[mesh] OR postoperativ\*[tiab] OR intraoperativ\*[tiab] OR "complication"[tiab] OR "complications"[tiab] OR "Joint Dislocations"[mesh] OR dislocat\*[tiab] OR "Fractures, Bone"[mesh] OR fractur\*[tiab]) AND ("Prospective Studies"[Mesh] OR Prospectiv\*[tiab]) NOT ("Case Reports"[ptyp] OR "case report"[ti] OR "Review"[ptyp] OR "review"[ti] OR "editorial"[ptyp] OR "comment"[ptyp] OR "editorial"[ti] OR "comment"[ti]))))

### MEDLINE via OVID

<http://gateway.ovid.com/ovidweb.cgi?T=JS&MODE=ovid&NEWS=n&PAGE=main&D=medall>

((exp \*"Hip Prosthesis"/ OR exp \*"Arthroplasty, Replacement, Hip"/ OR "Hip prosthesis".ti OR "Hip prostheses".ti OR "Hip Replacement".ti OR "Hip Replacements".ti OR "Hip Arthroplasty".ti OR "Hip Arthroplasties".ti OR "Hip joint prosthesis".ti OR "Hip joint prostheses".ti OR "Hip joint Replacement".ti OR "Hip joint Replacements".ti OR "Hip joint Arthroplasty".ti OR "Hip joint Arthroplasties".ti OR "total hip".ti OR "total hips".ti OR "THR".ti OR "THA".ti OR exp \*"Knee Prosthesis"/ OR exp \*"Arthroplasty, Replacement, Knee"/ OR "Knee prosthesis".ti OR "Knee prostheses".ti OR "Knee Replacement".ti OR "Knee Replacements".ti OR "Knee Arthroplasty".ti OR "Knee Arthroplasties".ti OR "Knee joint prosthesis".ti OR "Knee joint prostheses".ti OR

"Knee joint Replacement".ti OR "Knee joint Replacements".ti OR "Knee joint Arthroplasty".ti OR "Knee joint Arthroplasties".ti OR "total Knee".ti OR "total Knees".ti OR "TKR".ti OR "TKA".ti OR (("knee".ti OR "knees".ti OR "hip".ti OR "hips".ti) AND ("prosthesis".ti OR "prostheses".ti OR "Replacement".ti OR "Replacements".ti OR "Arthroplasty".ti OR "Arthroplasties".ti)) OR \*"Joint Prosthesis"/ OR \*"Arthroplasty, Replacement"/ OR "Joint prosthesis".ti OR "Joint prostheses".ti OR "Joint Replacement".ti OR "Joint Replacements".ti OR "Joint Arthroplasty".ti OR "Joint Arthroplasties".ti) AND (exp "Patient Reported Outcome Measures"/ OR "Patient Reported Outcome Measures".ti,ab OR "Patient Reported Outcome Measure".ti,ab OR "PROM".ti,ab OR "PROMS".ti,ab OR exp "Mortality"/ OR "mortality".fs OR exp "Survival Analysis"/ OR exp "Survival Rate"/ OR exp "Disease-Free Survival"/ OR exp "Progression-Free Survival"/ OR exp "Kaplan-Meier Estimate"/ OR exp "Prosthesis Failure"/ OR "mortality".ti,ab OR "Survival".ti,ab OR "Kaplan-Meier".ti,ab OR "Failure".ti,ab OR exp "Postoperative Complications"/ OR exp "Intraoperative Complications"/ OR postoperativ\*.ti,ab OR intraoperativ\*.ti,ab OR "complication".ti,ab OR "complications".ti,ab OR exp "Joint Dislocations"/ OR dislocat\*.ti,ab OR exp "Fractures, Bone"/ OR fractur\*.ti,ab) AND (exp "Registries"/ OR "Registries".ti,ab OR "Registry".ti,ab OR "register".ti,ab OR "registers".ti,ab) NOT ("Case Reports"/ OR "case report".ti OR "Review"/ OR "review".ti OR "editorial"/ OR "comment"/ OR "editorial".ti OR "comment".ti)) **OR** ((exp \*"Hip Prosthesis"/ OR exp \*"Arthroplasty, Replacement, Hip"/ OR "Hip prosthesis".ti OR "Hip prostheses".ti OR "Hip Replacement".ti OR "Hip Replacements".ti OR "Hip Arthroplasty".ti OR "Hip Arthroplasties".ti OR "Hip joint prosthesis".ti OR "Hip joint prostheses".ti OR "Hip joint Replacement".ti OR "Hip joint Replacements".ti OR "Hip joint Arthroplasty".ti OR "Hip joint Arthroplasties".ti OR "total hip".ti OR "total hips".ti OR "THR".ti OR "THA".ti OR exp \*"Knee Prosthesis"/ OR exp \*"Arthroplasty, Replacement, Knee"/ OR "Knee prosthesis".ti OR "Knee prostheses".ti OR "Knee Replacement".ti OR "Knee Replacements".ti OR "Knee Arthroplasty".ti OR "Knee Arthroplasties".ti OR "Knee joint prosthesis".ti OR "Knee joint prostheses".ti OR "Knee joint Replacement".ti OR "Knee joint Replacements".ti OR "Knee joint Arthroplasty".ti OR "Knee joint Arthroplasties".ti OR "total Knee".ti OR "total Knees".ti OR "TKR".ti OR "TKA".ti OR (("knee".ti OR "knees".ti OR "hip".ti OR "hips".ti) AND ("prosthesis".ti OR "prostheses".ti OR "Replacement".ti OR "Replacements".ti OR "Arthroplasty".ti OR "Arthroplasties".ti))) AND (exp "Patient Reported Outcome Measures"/ OR "Patient Reported Outcome Measures".ti,ab OR "Patient Reported Outcome Measure".ti,ab OR "PROM".ti,ab OR "PROMS".ti,ab OR exp "Mortality"/ OR "mortality".fs OR exp "Survival Analysis"/ OR exp "Survival Rate"/ OR exp "Disease-Free Survival"/ OR exp "Progression-Free Survival"/ OR exp "Kaplan-Meier Estimate"/ OR exp "Prosthesis Failure"/ OR "mortality".ti,ab OR "Survival".ti,ab OR "Kaplan-Meier".ti,ab OR "Failure".ti,ab OR exp "Postoperative Complications"/ OR exp "Intraoperative Complications"/ OR postoperativ\*.ti,ab OR intraoperativ\*.ti,ab OR "complication".ti,ab OR "complications".ti,ab OR exp "Joint Dislocations"/ OR dislocat\*.ti,ab OR exp "Fractures, Bone"/ OR fractur\*.ti,ab) AND (exp "Prospective Studies"/ OR Prospectiv\*.ti,ab) NOT ("Case Reports"/ OR "case report".ti OR "Review"/ OR "review".ti OR "editorial"/ OR "comment"/ OR "editorial".ti OR "comment".ti)))

## Embase

<http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=main&MODE=ovid&D=oomezd>

((exp \*Hip Prosthesis"/ OR exp \*Hip Arthroplasty"/ OR exp \*Hip Replacement"/ OR "Hip prosthesis".ti OR "Hip prostheses".ti OR "Hip Replacement".ti OR "Hip Replacements".ti OR "Hip Arthroplasty".ti OR "Hip Arthroplasties".ti OR "Hip joint prosthesis".ti OR "Hip joint prostheses".ti OR "Hip joint Replacement".ti OR "Hip joint Replacements".ti OR "Hip joint Arthroplasty".ti OR "Hip joint Arthroplasties".ti OR "total hip".ti OR "total hips".ti OR "THR".ti OR "THA".ti OR exp \*Knee Prosthesis"/ OR exp \*Knee Arthroplasty"/ OR exp \*Hip Replacement"/ OR "Knee prosthesis".ti OR "Knee prostheses".ti OR "Knee Replacement".ti OR "Knee Replacements".ti OR "Knee Arthroplasty".ti OR "Knee Arthroplasties".ti OR "Knee joint prosthesis".ti OR "Knee joint prostheses".ti OR "Knee joint Replacement".ti OR "Knee joint Replacements".ti OR "Knee joint Arthroplasty".ti OR "Knee joint Arthroplasties".ti OR "total Knee".ti OR "total Knees".ti OR "TKR".ti OR "TKA".ti OR ("knee".ti OR "knees".ti OR "hip".ti OR "hips".ti) AND ("prosthesis".ti OR "prostheses".ti OR "Replacement".ti OR "Replacements".ti OR "Arthroplasty".ti OR "Arthroplasties".ti)) OR \*Joint Prosthesis"/ OR \*Arthroplasty"/ OR "Joint prosthesis".ti OR "Joint prostheses".ti OR "Joint Replacement".ti OR "Joint Replacements".ti OR "Joint Arthroplasty".ti OR "Joint Arthroplasties".ti) AND (exp \*Patient-Reported Outcome"/ OR "Patient Reported Outcome Measures".ti,ab OR "Patient Reported Outcome Measure".ti,ab OR "PROM".ti,ab OR "PROMS".ti,ab OR exp \*Mortality"/ OR exp \*Survival Analysis"/ OR exp \*Survival Rate"/ OR exp \*Disease Free Survival"/ OR exp \*Survival"/ OR exp \*Progression Free Survival"/ OR exp \*Kaplan Meier method"/ OR exp \*Prosthesis Complication"/ OR "mortality".ti,ab OR "Survival".ti,ab OR "Kaplan-Meier".ti,ab OR "Failure".ti,ab OR exp \*Postoperative Complication"/ OR exp \*Peroperative Complication"/ OR postoperativ\*.ti,ab OR intraoperativ\*.ti,ab OR "complication".ti,ab OR "complications".ti,ab OR exp \*Joint Dislocation"/ OR dislocat\*.ti,ab OR exp \*Fracture"/ OR fractur\*.ti,ab) AND (exp "Register"/ OR "Registries".ti,ab OR "Registry".ti,ab OR "register".ti,ab OR "registers".ti,ab) NOT ("Case Report"/ OR "case report".ti OR exp "Review"/ OR "review".ti OR "editorial"/ OR "editorial".ti OR "comment".ti)) **OR** ((exp \*Hip Prosthesis"/ OR exp \*Hip Arthroplasty"/ OR exp \*Hip Replacement"/ OR "Hip prosthesis".ti OR "Hip prostheses".ti OR "Hip Replacement".ti OR "Hip Replacements".ti OR "Hip Arthroplasty".ti OR "Hip Arthroplasties".ti OR "Hip joint prosthesis".ti OR "Hip joint prostheses".ti OR "Hip joint Replacement".ti OR "Hip joint Replacements".ti OR "Hip joint Arthroplasty".ti OR "Hip joint Arthroplasties".ti OR "total hip".ti OR "total hips".ti OR "THR".ti OR "THA".ti OR exp \*Knee Prosthesis"/ OR exp \*Knee Arthroplasty"/ OR exp \*Hip Replacement"/ OR "Knee prosthesis".ti OR "Knee prostheses".ti OR "Knee Replacement".ti OR "Knee Replacements".ti OR "Knee Arthroplasty".ti OR "Knee Arthroplasties".ti OR "Knee joint prosthesis".ti OR "Knee joint prostheses".ti OR "Knee joint Replacement".ti OR "Knee joint Replacements".ti OR "Knee joint Arthroplasty".ti OR "Knee joint Arthroplasties".ti OR "total Knee".ti OR "total Knees".ti OR "TKR".ti OR "TKA".ti OR ("knee".ti OR "knees".ti OR "hip".ti OR "hips".ti) AND ("prosthesis".ti OR "prostheses".ti OR "Replacement".ti OR "Replacements".ti OR "Arthroplasty".ti OR "Arthroplasties".ti)) AND (exp \*Patient-Reported Outcome"/ OR



"Patient Reported Outcome Measures".ti,ab OR "Patient Reported Outcome Measure".ti,ab OR "PROM".ti,ab OR "PROMS".ti,ab OR exp \*"Mortality"/ OR exp \*"Survival Analysis"/ OR exp \*"Survival Rate"/ OR exp \*"Disease Free Survival"/ OR exp \*"Survival"/ OR exp \*"Progression Free Survival"/ OR exp \*"Kaplan Meier method"/ OR exp \*"Prosthesis Complication"/ OR "mortality".ti,ab OR "Survival".ti,ab OR "Kaplan-Meier".ti,ab OR "Failure".ti,ab OR exp \*"Postoperative Complication"/ OR exp \*"Peroperative Complication"/ OR postoperativ\*.ti,ab OR intraoperativ\*.ti,ab OR "complication".ti,ab OR "complications".ti,ab OR exp \*"Joint Dislocation"/ OR dislocat\*.ti,ab OR exp \*"Fracture"/ OR fractur\*.ti,ab) AND (exp "Prospective Study"/ OR Prospectiv\*.ti,ab) NOT ("Case Report"/ OR "case report".ti OR "Review"/ OR "review".ti OR "editorial"/ OR "editorial".ti OR "comment".ti)) NOT (conference review or conference abstract).pt

## Web of Science

<http://isiknowledge.com/wos>

((ti=("Hip Prosthesis" OR "Hip Arthroplasty" OR "Hip Replacement" OR "Hip prosthesis" OR "Hip prostheses" OR "Hip Replacement" OR "Hip Replacements" OR "Hip Arthroplasty" OR "Hip Arthroplasties" OR "Hip joint prosthesis" OR "Hip joint prostheses" OR "Hip joint Replacement" OR "Hip joint Replacements" OR "Hip joint Arthroplasty" OR "Hip joint Arthroplasties" OR "total hip" OR "total hips" OR "THR" OR "THA" OR "Knee Prosthesis" OR "Knee Arthroplasty" OR "Hip Replacement" OR "Knee prosthesis" OR "Knee prostheses" OR "Knee Replacement" OR "Knee Replacements" OR "Knee Arthroplasty" OR "Knee Arthroplasties" OR "Knee joint prosthesis" OR "Knee joint prostheses" OR "Knee joint Replacement" OR "Knee joint Replacements" OR "Knee joint Arthroplasty" OR "Knee joint Arthroplasties" OR "total Knee" OR "total Knees" OR "TKR" OR "TKA" OR (("knee" OR "knees" OR "hip" OR "hips") AND ("prosthesis" OR "prostheses" OR "Replacement" OR "Replacements" OR "Arthroplasty" OR "Arthroplasties"))) OR \*"Joint Prosthesis" OR \*"Arthroplasty" OR "Joint prosthesis" OR "Joint prostheses" OR "Joint Replacement" OR "Joint Replacements" OR "Joint Arthroplasty" OR "Joint Arthroplasties") AND ts=("Patient-Reported Outcome" OR "Patient Reported Outcome Measures" OR "Patient Reported Outcome Measure" OR "PROM" OR "PROMS" OR "Mortality" OR "Survival Analysis" OR "Survival Rate" OR "Disease Free Survival" OR "Survival" OR "Progression Free Survival" OR "Kaplan Meier method" OR "Prosthesis Complication" OR "mortality" OR "Survival" OR "Kaplan-Meier" OR "Failure" OR "Postoperative Complication" OR "Peroperative Complication" OR postoperativ\* OR intraoperativ\* OR "complication" OR "complications" OR "Joint Dislocation" OR dislocat\* OR "Fracture" OR fractur\*) AND ts=("Register" OR "Registries" OR "Registry" OR "register" OR "registers") NOT ti=("Case Report" OR "case report" OR "Review" OR "review" OR "editorial" OR "editorial" OR "comment")) **OR** (ti=("Hip Prosthesis" OR "Hip Arthroplasty" OR "Hip Replacement" OR "Hip prosthesis" OR "Hip prostheses" OR "Hip Replacement" OR "Hip Replacements" OR "Hip Arthroplasty" OR "Hip Arthroplasties" OR "Hip joint prosthesis" OR "Hip joint prostheses" OR "Hip joint Replacement" OR "Hip joint Replacements" OR "Hip joint Arthroplasty" OR "Hip joint Arthroplasties" OR "total hip"

OR "total hips" OR "THR" OR "THA" OR "Knee Prosthesis" OR "Knee Arthroplasty" OR "Hip Replacement" OR "Knee prosthesis" OR "Knee prostheses" OR "Knee Replacement" OR "Knee Replacements" OR "Knee Arthroplasty" OR "Knee Arthroplasties" OR "Knee joint prosthesis" OR "Knee joint prostheses" OR "Knee joint Replacement" OR "Knee joint Replacements" OR "Knee joint Arthroplasty" OR "Knee joint Arthroplasties" OR "total Knee" OR "total Knees" OR "TKR" OR "TKA" OR (("knee" OR "knees" OR "hip" OR "hips") AND ("prosthesis" OR "prostheses" OR "Replacement" OR "Replacements" OR "Arthroplasty" OR "Arthroplasties")) AND ti=("Patient-Reported Outcome" OR "Patient Reported Outcome Measures" OR "Patient Reported Outcome Measure" OR "PROM" OR "PROMS" OR "Mortality" OR "Survival Analysis" OR "Survival Rate" OR "Disease Free Survival" OR "Survival" OR "Progression Free Survival" OR "Kaplan Meier method" OR "Prosthesis Complication" OR "mortality" OR "Survival" OR "Kaplan-Meier" OR "Failure" OR "Postoperative Complication" OR "Peroperative Complication" OR postoperativ\* OR intraoperativ\* OR "complication" OR "complications" OR "Joint Dislocation" OR dislocat\* OR "Fracture" OR fractur\*) AND ts=("Prospective Study" OR Prospectiv\*) NOT ti=("Case Report" OR "case report" OR "Review" OR "review" OR "editorial" OR "editorial" OR "comment")) NOT dt=(meeting abstract)

NOT ti=("veterinary" OR "rabbit" OR "rabbits" OR "animal" OR "animals" OR "mouse" OR "mice" OR "rodent" OR "rodents" OR "rat" OR "rats" OR "pig" OR "pigs" OR "porcine" OR "horse" OR "horses" OR "equine" OR "cow" OR "cows" OR "bovine" OR "goat" OR "goats" OR "sheep" OR "ovine" OR "canine" OR "dog" OR "dogs" OR "feline" OR "cat" OR "cats"))

## Cochrane

<https://www.cochranelibrary.com/advanced-search/search-manager>

((("Hip Prosthesis" OR "Hip Arthroplasty" OR "Hip Replacement" OR "Hip prosthesis" OR "Hip prostheses" OR "Hip Replacement" OR "Hip Replacements" OR "Hip Arthroplasty" OR "Hip Arthroplasties" OR "Hip joint prosthesis" OR "Hip joint prostheses" OR "Hip joint Replacement" OR "Hip joint Replacements" OR "Hip joint Arthroplasty" OR "Hip joint Arthroplasties" OR "total hip" OR "total hips" OR "THR" OR "THA" OR "Knee Prosthesis" OR "Knee Arthroplasty" OR "Hip Replacement" OR "Knee prosthesis" OR "Knee prostheses" OR "Knee Replacement" OR "Knee Replacements" OR "Knee Arthroplasty" OR "Knee Arthroplasties" OR "Knee joint prosthesis" OR "Knee joint prostheses" OR "Knee joint Replacement" OR "Knee joint Replacements" OR "Knee joint Arthroplasty" OR "Knee joint Arthroplasties" OR "total Knee" OR "total Knees" OR "TKR" OR "TKA" OR (("knee" OR "knees" OR "hip" OR "hips") AND ("prosthesis" OR "prostheses" OR "Replacement" OR "Replacements" OR "Arthroplasty" OR "Arthroplasties"))) OR \*"Joint Prosthesis" OR \*"Arthroplasty" OR "Joint prosthesis" OR "Joint prostheses" OR "Joint Replacement" OR "Joint Replacements" OR "Joint Arthroplasty" OR "Joint Arthroplasties"):ti AND ("Patient-Reported Outcome" OR "Patient Reported Outcome Measures" OR "Patient Reported Outcome Measure" OR "PROM" OR "PROMS" OR "Mortality" OR "Survival Analysis" OR "Survival Rate" OR "Disease Free Survival" OR "Survival" OR "Progression Free Survival" OR "Kaplan Meier method" OR "Prosthesis Complication" OR "mortality" OR "Survival" OR "Kaplan-Meier" OR "Failure" OR "Postoperative Complication" OR

"Peroperative Complication" OR postoperativ\* OR intraoperativ\* OR "complication" OR "complications" OR "Joint Dislocation" OR dislocat\* OR "Fracture" OR fractur\*):ti,ab,kw AND ("Register" OR "Registries" OR "Registry" OR "register" OR "registers"):ti,ab,kw) **OR** (("Hip Prosthesis" OR "Hip Arthroplasty" OR "Hip Replacement" OR "Hip prosthesis" OR "Hip prostheses" OR "Hip Replacement" OR "Hip Replacements" OR "Hip Arthroplasty" OR "Hip Arthroplasties" OR "Hip joint prosthesis" OR "Hip joint prostheses" OR "Hip joint Replacement" OR "Hip joint Replacements" OR "Hip joint Arthroplasty" OR "Hip joint Arthroplasties" OR "total hip" OR "total hips" OR "THR" OR "THA" OR "Knee Prosthesis" OR "Knee Arthroplasty" OR "Hip Replacement" OR "Knee prosthesis" OR "Knee prostheses" OR "Knee Replacement" OR "Knee Replacements" OR "Knee Arthroplasty" OR "Knee Arthroplasties" OR "Knee joint prosthesis" OR "Knee joint prostheses" OR "Knee joint Replacement" OR "Knee joint Replacements" OR "Knee joint Arthroplasty" OR "Knee joint Arthroplasties" OR "total Knee" OR "total Knees" OR "TKR" OR "TKA" OR (("knee" OR "knees" OR "hip" OR "hips") AND ("prosthesis" OR "prostheses" OR "Replacement" OR "Replacements" OR "Arthroplasty" OR "Arthroplasties"))):ti AND ("Patient-Reported Outcome" OR "Patient Reported Outcome Measures" OR "Patient Reported Outcome Measure" OR "PROM" OR "PROMS" OR "Mortality" OR "Survival Analysis" OR "Survival Rate" OR "Disease Free Survival" OR "Survival" OR "Progression Free Survival" OR "Kaplan Meier method" OR "Prosthesis Complication" OR "mortality" OR "Survival" OR "Kaplan-Meier" OR "Failure" OR "Postoperative Complication" OR "Peroperative Complication" OR postoperativ\* OR intraoperativ\* OR "complication" OR "complications" OR "Joint Dislocation" OR dislocat\* OR "Fracture" OR fractur\*):ti AND ("Prospective Study" OR Prospectiv\*):ti,ab,kw))

NOT dt=(meeting abstract)

## APPENDIX 2: PROMs and 2-year Revision Rates (Literature review)

**Table 1: THA 2-year Revision Rates**

Source	Author(s)	Year	Baseline N	Post 2-years N	Revision	95% CI	Aseptic	95%CI	Septic	95% CI
Hospital Based Registry (author correspondence)	Mayo Clinic	2000-2019	20616	20616	2.30%	2.1-2.5%				
Hospital Based Registry (annual report)	MARCQI	2012-2018	82835	46783	1.96%	1.86-2.07%				
Literature	Amanatullah et al., 2011	1999-2001	357	313	2.20%	0.7-3.8%	1.68%	0.3-3.0%	0.56%	0-1.3%
Literature	Kindsfater et al., 2017	2000-2007	896		1.10%	0.6-2.2%				
Literature <i>65+ only</i>	Sodhi et al., 2018	Unclear, published 2018	255	251	2%	0-3.1%	0%		1.20%	0.0-2.5%
Hospital Based Registry (annual report)	AJRR	2012-2018	486772							

*Abbreviations: MARCQI, Michigan Arthroplasty Registry Collaborative Quality Initiative; AJRR, American Joint Replacement Registry*

**Table 2: THA 2-year PROMs**

Source	Author(s)	Year	Baseline N	Baseline Mean	Baseline SD	Post 2-years N	Post Mean	Post SD	Change Mean	Change SD
<b>THA HOOS - Pain</b>										
Literature	Lyman et al., 2018	2007-2012	2323	49	17	2323	93	12	44	19
<b>THA HOOS - Symptoms</b>										
Literature	Lyman et al., 2018	2007-2012	2323	54	18	2323	92	12	38	20
<b>THA HOOS - ADL</b>										
Literature	Lyman et al., 2018	2007-2012	2323	50	18	2323	90	14	39	20

<b>THA HOOS - QoL</b>										
Literature	Lyman et al., 2018	2007-2012	2323	27	18	2323	83	20	56	25
<b>THA HHS - Overall</b>										
Literature	Restrepo et al., 2010	2005-2007	100	53.4		100	97.445		44.035	
Literature	Sodhi et al., 2018	published 2018	250			250	91			
Literature	Kindsfater et al., 2017	2000-2007	854	45.3	12.75	493	94.7	8.63	48.05	13.7
<b>THA EQ-5D</b>										
Literature	Konopka et al., 2018	2007-2011	5353	0.63	0.19	3514	0.88	0.14	0.25	0.2
Literature	McLawhorn et al., 2017	2007-2009	2733	0.64	0.209	2733	0.89	0.157	0.24	0.209
<b>THA EQ-VAS</b>										
Literature	McLawhorn et al., 2017	2007-2009	2733	74.84	17.25	2733	82.73	14.12	7.83	17.2
<b>THA SF-36</b>										
<b>Physical</b>										
Literature	Restrepo et al., 2010	2005-2007	100	38.33		100	49.37		11.05	
Literature	Kindsfater et al., 2017	2000-2007	809	27.3	7.27	486	44.7	10.72	16.52	11.5
<b>THA SF-36 Mental</b>										
Literature	Restrepo et al., 2010	2005-2007	100	50.73		100	56.52		5.79	
Literature	Kindsfater et al., 2012	2000-2007	809	50.6	11.4	486	55.2	8.13	3.83	10.86
<b>THA SF-12 Physical</b>										
Literature	Choi et al., 2012	2006-2008	194	27.8	7.8	194	44.9	0.82	16.3	0.91
Literature	Sodhi et al., 2018	published 2018	250			250	48			
<b>THA SF-12 Mental</b>										
Literature	Choi et al., 2012	2006-2008	194	49.4	11.5	194	54.2	0.67	4.7	0.86

**Table 3: TKA 2-year Revision Rates**

Source	Author(s)	Year	Baseline N	Post 2-years N	Revision	95% CI	Aseptic	95% CI	Septic	95% CI
Literature	Meding et al., 2013	1973-2012	16340	16058	0.6%	0.48-0.76%	0.29	0.21-0.4		
Literature	Emerson et al., 2016	2004-2013	424		0.9%		0.30%	0-0.9%	0.60%	0-1.4%
Literature	Emerson et al., 2016	2004-2013	930		1.2%		0.10%	0-0.4%		
Literature	Schroer et al., 2014	2010-2012	957	627	2.2%	1.3-3.5%				
Literature	Roth et al., 2013	published in 2013	307	293	1.6%	0.2-3.0%			0.30%	0-1.0%
Registry	Buller et al., 2019	2007-2016	10,014	9709	3.0%	2.7-3.4%	1.70%		1.40%	
Literature	Lozano Caldron et al., 2013	published in 2013	844		1.7%	0.8-2.5%				
Literature	Charette et al., 2019	2013-2017	4259	4135	2.9%	2.4-3.4%	0.40%	0.2-0.6%	1.10%	0.8-1.4%
Literature	Kindsfater et al., 2015	2005-2007	422	304	1.1%	0.4-2.9%	0.30%	0-0.7%	0	
Literature	Kindsfater et al., 2015	2005-2007	402	297	1.1%	0.4-3.0%	0.30%	0-0.9%	0.50%	0-1.3%
Literature	Pelt et al., 2013	2001-2013	111	110	0.9%		2.72%	1.0-7.0	1.82	
Literature	Pelt et al., 2013	2001-2013	193	188	2.6%		3.72%	1.0-5.0	1.595	
Hospital- Based Registry	Pitta et al., 2018	2007-2012	18065	17648	2.2%	2.0-2.5%	0.48%		0.57	
Hospital- Based Registry	MARCQI	2012-2018	130234	81827	1.79%	1.71-1.87%				
Hospital- Based Registry	Mayo Clinic	2000-2019	22864		1.8%	1.6-2.0%				
Hospital- Based Registry (Annual Report)	AJRR	2012-2018	591,773		0.9%	0.6-1.0%				

*Abbreviations: MARCQI, Michigan Arthroplasty Registry Collaborative Quality Initiative; AJRR, American Joint Replacement Registry*

**Table 4: TKA 2-year PROMs**

Source	Author(s)	Year	Baseline N	Baseline Mean	Baseline SD	Post 2-years N	Post Mean	Post SD	Change Mean	Change SD
<b>TKA KOOS - Pain</b>										
Literature	Lyman et al., 2018	2007-2012	3815	51	17	3230	88	15	37	20
<b>TKA KOOS - Symptoms</b>										
Literature	Lyman et al., 2018	2007-2012	3815	55	18	3230	83	15	28	22
<b>TKA KOOS - ADL</b>										
Literature	Lyman et al., 2018	2007-2012	3815	55	17	3230	85	16	30	19
<b>TKA KOOS - QoL</b>										
Literature	Lyman et al., 2018	2007-2012	3815	28	17	3230	72	24	44	26
<b>TKA KOOS - Sport</b>										
Literature	Lyman et al., 2018	2007-2012	3815	52		3230	80	14	28	17
<b>TKA KSS - Pain</b>										
Literature	Lee et al., 2012	2000-2004				1193	93			
Literature	Emerson et al., 2016	2004-2013				1354	92.3	12.4		
Literature	Schroer et al., 2014	2004-2009	627	45.9	16	627	92	11.5	46.1	
Literature	Roth et al., 2013	Unclear, published in 2013	307	39.14	13.74	307	92.85	8.90	53.71	
Literature	Scott et al., 2017	2008-2010	113	51.01		111	95.16		44.15	
Literature	Lozano Caldron et al., 2013	Unclear, published in 2013	740	10.51			93.48		36.23	
Literature	Schroer et al., 2016	2010-2012	691	47	15.2	691	92.4	10.9	45.4	17.1
<b>TKA KSS - Function</b>										
Literature	Cherian et al., 2015	2005-2007	103	57.7	18	103	90.22	15.67		
Literature	Cherian et al., 2015	2005-2007	169	50.68	16.67	169	81.21	20		
Literature	Schroer et al., 2014	2004-2009	627	45.5	18.3	627	73.8	26.3	28.3	
Literature	Roth et al., 2013	Unclear, published in 2013	307	54.79	16.73	307	86.11	17.65	28.3	
Literature	Nam et al., 2019	2014-2016	147	41.10	15.24	141	77.16	17.62	36.57	22.75
Literature	Scott et al., 2017	2008-2010	113	52.72		111	84.57		31.9	
Literature	Lozano Caldron et al., 2013	Unclear, published in 2013	740	54.14			86.61		32.47	
Literature	Fokin et al., 2014	2008-2011	100	56.24	9.29	100	97.93	6.17	41.69	
Literature	Lakra et al., 2019	2006-2014	242	45	21.2	242	63.3	26	18.3	

Literature	Mesko et al., 2013	2003-2009	81	52.2		81	91			
Literature	Schroer et al., 2016	2010-2012	691	44.4	18.1	691	74.5	24	29	23
<b>TKA OKS</b>										
Literature	Nam et al., 2019	2014-2016	147	22.47	7.38	141	40.35	8.25	18.59	9.54
Literature	Schroer et al., 2016	2010-2012	691	35.9	7.6	691	18.7	6.6	-17.2	8.1
<b>TKA EQ-5D</b>										
Literature	Steinhaus et al., 2019	2007-2009	2472	0.69	0.15	2472	0.84	0.15	0.16	0.2
Literature	Konopka et al., 2018	2007-2011	5282	0.68	0.17	3379	0.84	0.15	0.17	0.19
<b>TKA EQ-VAS</b>										
Literature	Steinhaus et al., 2019	2007-2009	2472	76.18	15.91	2472	80.07	14.92	3.78	16.41
<b>TKA SF-12 Physical</b>										
Literature	Choi et al., 2012	2006-2008	155	29.4	7.8	155	41.9	0.92	13.4	1.02
Literature	Fokin et al., 2014	2008-2011	100	31.27	10.31	100	45.94	11.63	14.67	
Literature	Lakra et al., 2019	2006-2014	242	30.3	8.1	242	40.4	12.1	10.1	
Literature	Noticewala et al., 2012	unclear-2009	128	30.24	8.3	128	40.25	11.88	10.01	
<b>TKA SF-12 Mental</b>										
Literature	Choi et al., 2012	2006-2008	155	49.7	11.5	155	51.6	0.76	0.93	0.98
Literature	Fokin et al., 2014	2008-2011	100	53.26	11.95	100	52.8	11.41	-0.46	
Literature	Lakra et al., 2019	2006-2014	242	50.1	11.3	242	51.8	11.8	1.7	
Literature	Noticewala et al., 2012	unclear-2009	128	49.97	11.32	128	50.65	10.13	0.68	
<b>TKA SF-36 Physical</b>										
Literature	Lozano Calderon et al., 2012	published in 2012	629	32.81	7.69	629	47.42	8.85	14.61	
Literature	Roth et al., 2013	published in 2013	307	33.13	7.05	307	47.54	8.05	14.41	
Literature	Scott et al., 2017	2008-2010	111	32.51		111	44.97		12.46	
Literature	Cherian et al., 2015	2005-2007	103	34.26	8.02	103	48.87	8.69		
Literature	Cherian et al., 2015	2005-2007	169	32.08	7.52	169	46.53	9.02		
Literature	Harwin et al., 2013	2005-2008	281	33			46		13	
<b>TKA SF-36 Mental</b>										
Literature	Roth et al., 2013	published in 2013	307	53.31	10.4	307	55.8	8.05	2.49	
Literature	Scott et al., 2017	2008-2010	111	51.14		111	53.27		2.13	
Literature	Harwin et al., 2013	2005-2008	281	52			56		4	
Literature	Pitta et al., 2019	2007-2012	3693	52.6	11.4	3693	54.8	8.5	2.2	
Literature	Cherian et al., 2015	2005-2007	103	54.72	11.01	103	57.02	6.24		
Literature	Cherian et al., 2015	2005-2007	169	51.6	11.66	169	54.89	8.54		



## Appendix 3 – Forest Plots (Meta Analysis)

### 1 Meta Analysis Methods

All meta analyses were done via random-effects models using the maximum likelihood method. For studies with the post SD missing, a pooled SD was imputed using all studies with an available post SD (Furukawa et al., 2006):

$$SD_{Pooled} = \sqrt{\frac{\sum(n_i - 1)SD_i^2}{\sum(n_i - 1)}},$$

where  $n_i$  is the post 2-year sample size for study  $i$ . Revision outcomes were treated as binary and the normal approximation to the binomial distribution was used to calculate the SD:

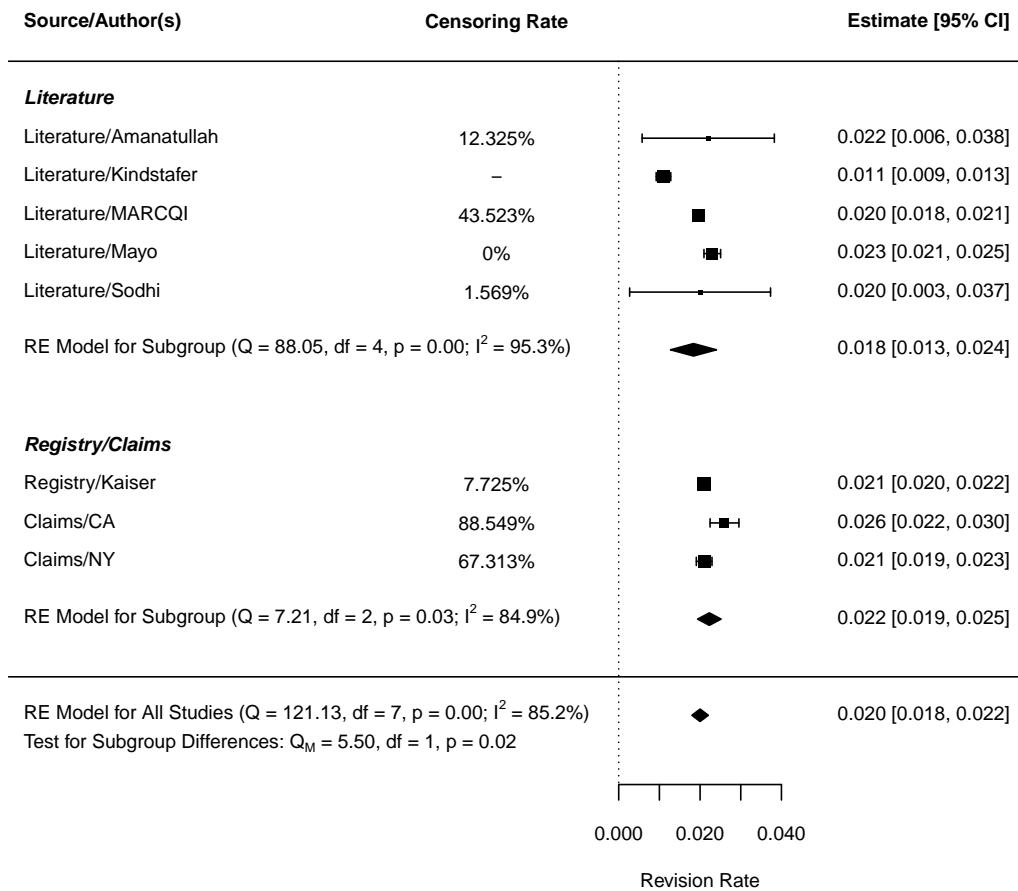
$$SD = \sqrt{\frac{\text{revision} \times (1 - \text{revision})}{n}}.$$

For studies with the post 2-year sample size  $n_i$  missing, a pooled SD was imputed using the method described above. For THA and TKA revisions, subgroup random-effects models were also fitted stratifying the studies by data source (literature vs. registry/claims).

## 2 THA

### 2.1 THA Overall Revision

Mean: 2.001%; SE = 0.001; 95% CI: (1.799%, 2.202%); 99% CI: (1.736%, 2.266%)

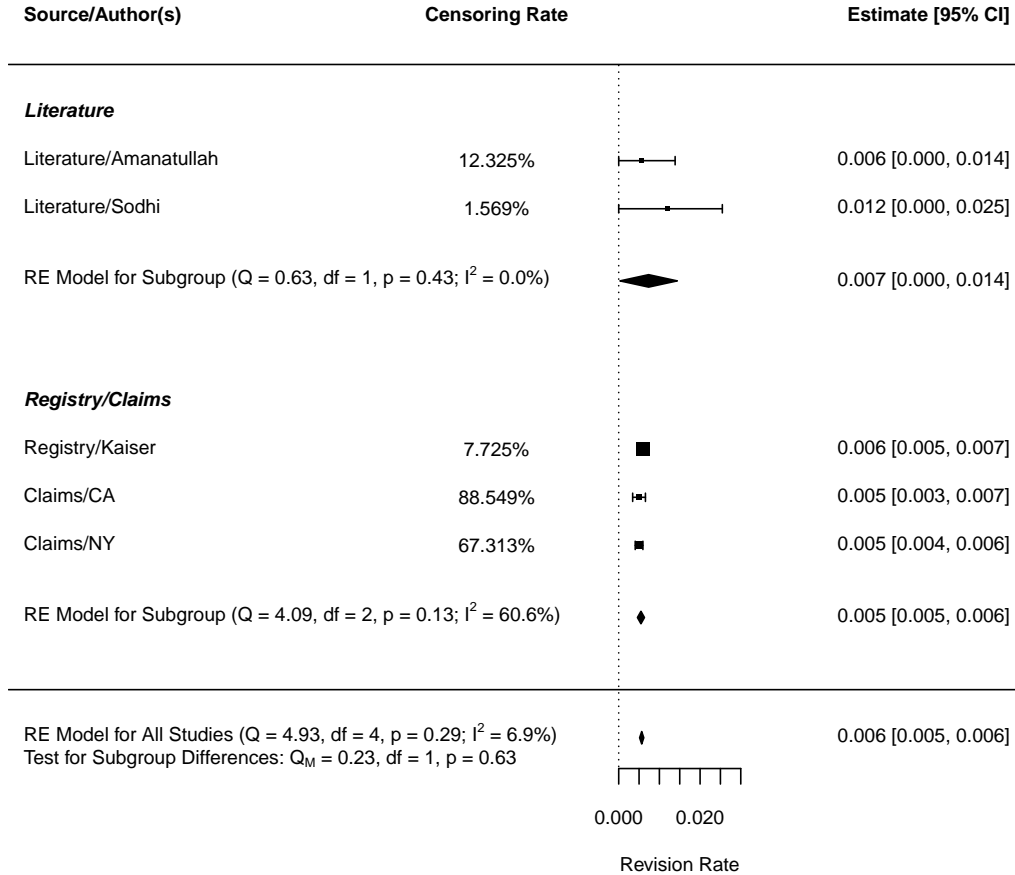


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	0.0194	0.0011	17.1009	0.0000	0.0172	0.0217	110.6746	0.0000	0.0000	85.5596	6.9250
2	0.0202	0.0013	15.8383	0.0000	0.0177	0.0227	121.0232	0.0000	0.0000	85.5108	6.9017
3	0.0201	0.0018	11.2815	0.0000	0.0166	0.0236	121.0615	0.0000	0.0000	95.8013	23.8171
4	0.0212	0.0005	45.7311	0.0000	0.0203	0.0221	16.1236	0.0131	0.0000	26.5779	1.3620
5	0.0202	0.0018	11.3139	0.0000	0.0167	0.0237	121.1325	0.0000	0.0000	95.8244	23.9488
6	0.0198	0.0012	17.1934	0.0000	0.0176	0.0221	119.4242	0.0000	0.0000	85.6709	6.9788
7	0.0192	0.0011	17.3938	0.0000	0.0170	0.0213	108.9251	0.0000	0.0000	86.6284	7.4785
8	0.0201	0.0020	9.8591	0.0000	0.0161	0.0241	111.3810	0.0000	0.0000	93.9434	16.5110

## 2.2 THA Septic Revision

Mean: 0.565%; SE = 0.0003; 95% CI: (0.514%, 0.616%); 99% CI: (0.498%, 0.632%)

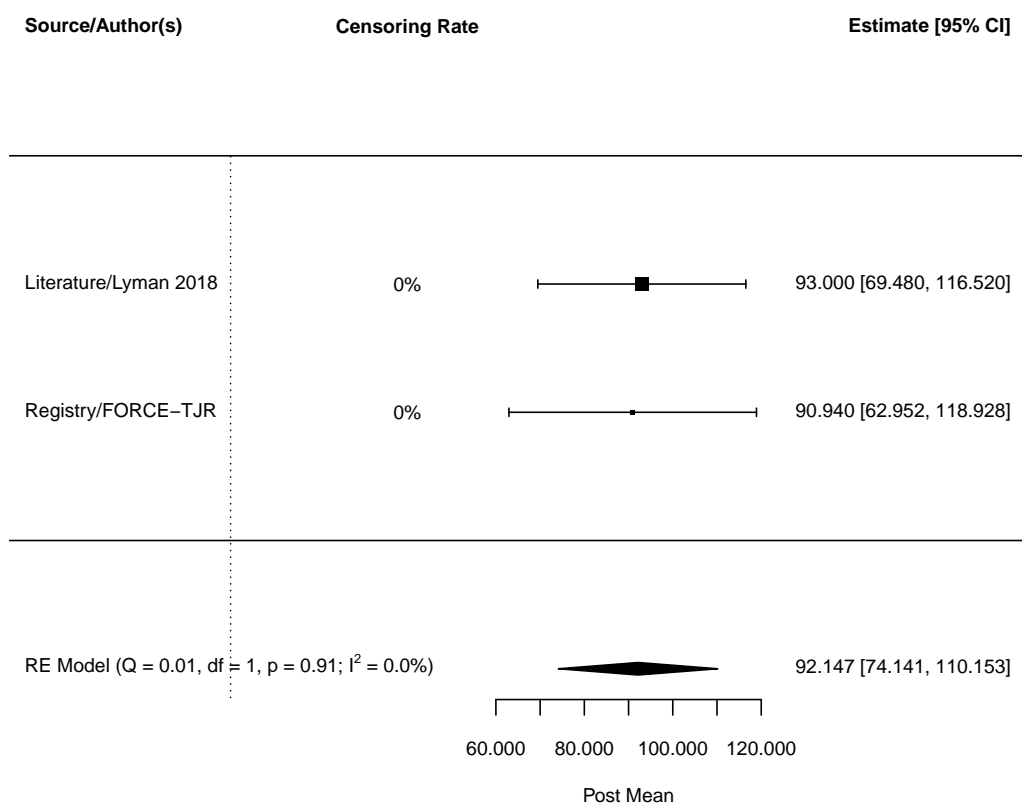


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	0.0057	0.0003	21.6286	0.0000	0.0051	0.0062	4.9262	0.1773	0.0000	8.9328	1.0981
2	0.0056	0.0003	21.4125	0.0000	0.0051	0.0062	4.0875	0.2522	0.0000	9.6056	1.1063
3	0.0059	0.0003	23.0746	0.0000	0.0054	0.0064	2.1913	0.5337	0.0000	0.0000	1.0000
4	0.0057	0.0003	22.6914	0.0000	0.0053	0.0062	4.0808	0.2529	0.0000	2.9712	1.0306
5	0.0050	0.0004	12.2339	0.0000	0.0042	0.0058	1.0520	0.7887	0.0000	0.0000	1.0000

## 2.3 THA HOOS - Pain

Mean: 92.147; SE = 9.187; 95% CI: (74.141, 110.153); 99% CI: (68.483, 115.811)

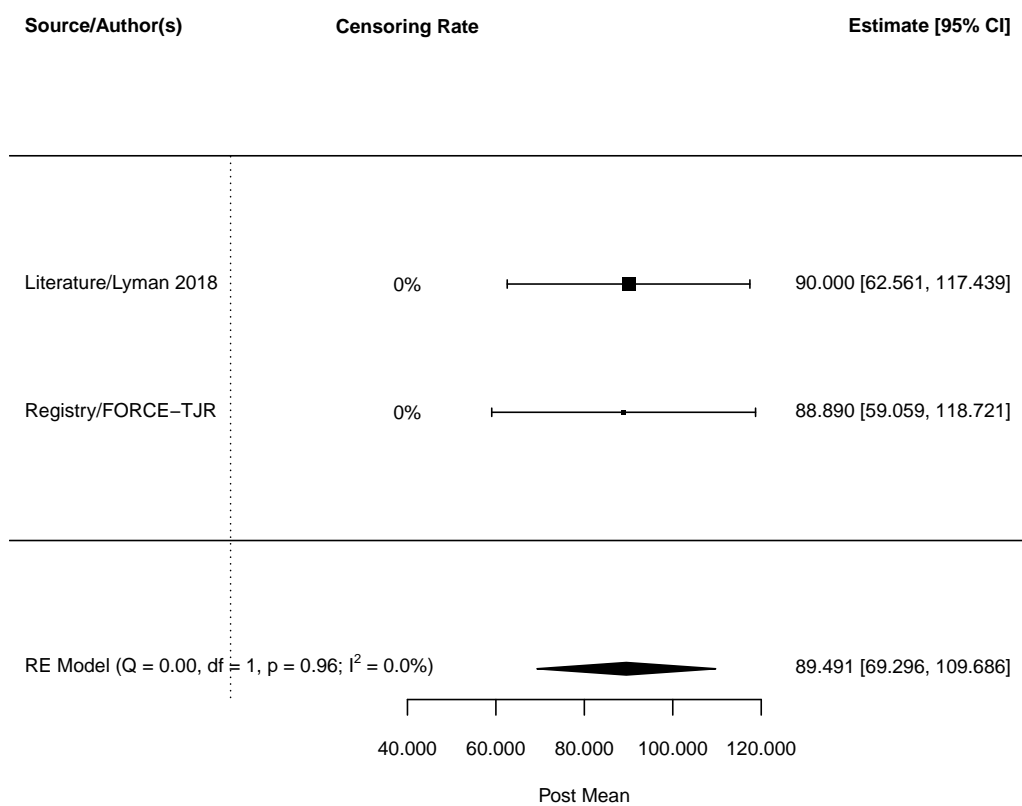


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	90.9400	14.2800	6.3683	0.0000	62.9517	118.9283	0.0000	1.0000	0.0000	0.0000	1.0000
2	93.0000	12.0000	7.7500	0.0000	69.4804	116.5196	0.0000	1.0000	0.0000	0.0000	1.0000

## 2.4 THA HOOS - ADL

Mean: 89.491; SE = 10.304; 95% CI: (69.296, 109.686); 99% CI: (62.950, 116.032)

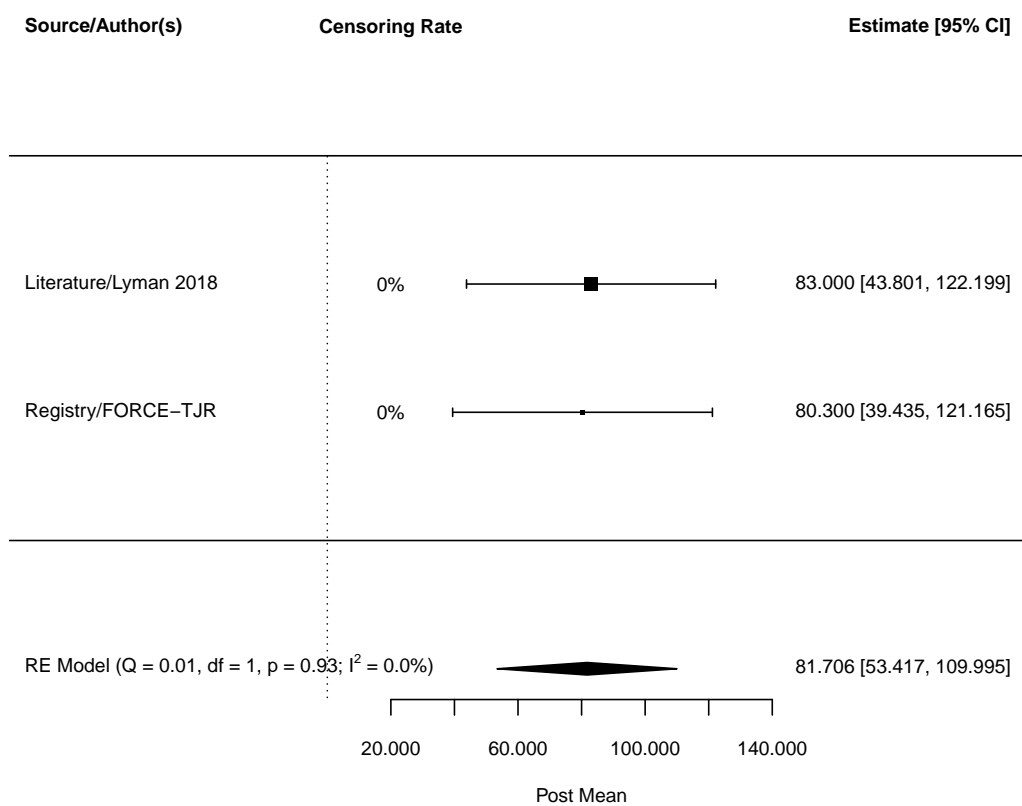


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	88.8900	15.2200	5.8403	0.0000	59.0593	118.7207	0.0000	1.0000	0.0000	0.0000	1.0000
2	90.0000	14.0000	6.4286	0.0000	62.5605	117.4395	0.0000	1.0000	0.0000	0.0000	1.0000

## 2.5 THA HOOS - QoL

Mean: 81.706; SE = 14.433; 95% CI: (53.417, 109.995); 99% CI: (44.528, 118.884)

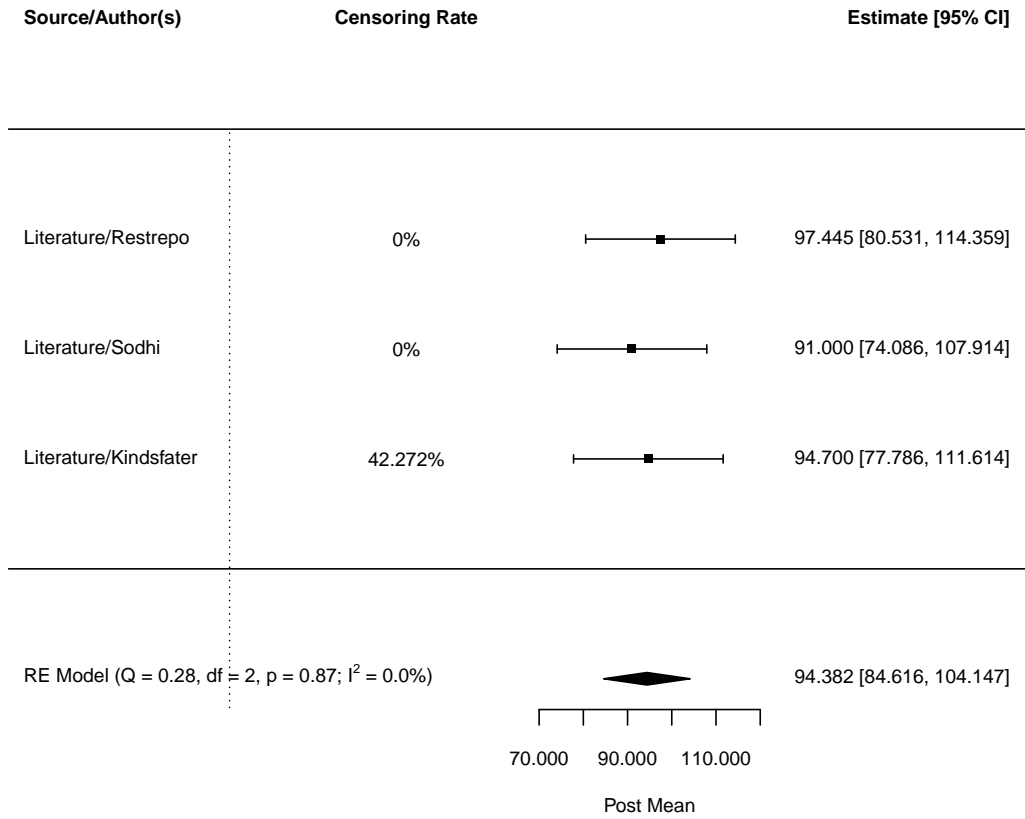


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	80.3000	20.8500	3.8513	0.0001	39.4348	121.1652	0.0000	1.0000	0.0000	0.0000	1.0000
2	83.0000	20.0000	4.1500	0.0000	43.8007	122.1993	0.0000	1.0000	0.0000	0.0000	1.0000

## 2.6 THA HHS - Overall

Mean: 94.382; SE = 4.983; 95% CI: (84.616, 104.147); 99% CI: (81.548, 107.216)



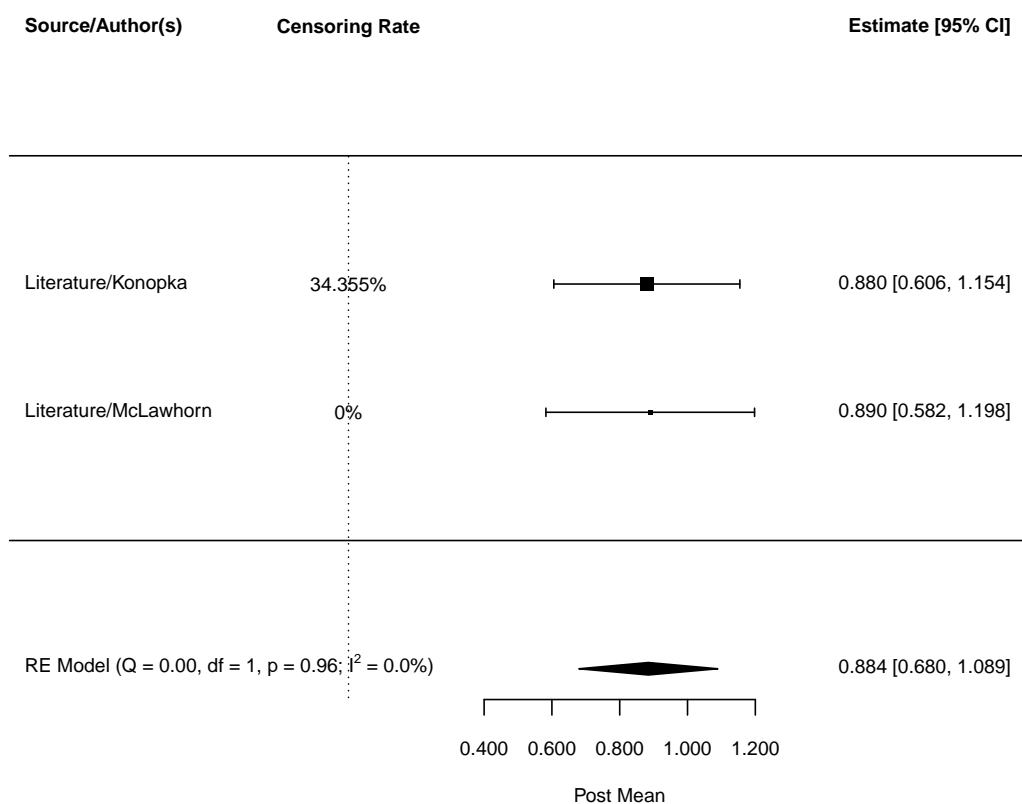
### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	92.8500	6.1023	15.2155	0.0000	80.8896	104.8104	0.0919	0.7618	0.0000	0.0000	1.0000
2	96.0725	6.1023	15.7436	0.0000	84.1121	108.0329	0.0506	0.8220	0.0000	0.0000	1.0000
3	94.2225	6.1023	15.4404	0.0000	82.2621	106.1829	0.2789	0.5974	0.0000	0.0000	1.0000



## 2.7 THA EQ-5D

Mean: 0.884; SE = 0.104; 95% CI: (0.680, 1.089); 99% CI: (0.615, 1.154)

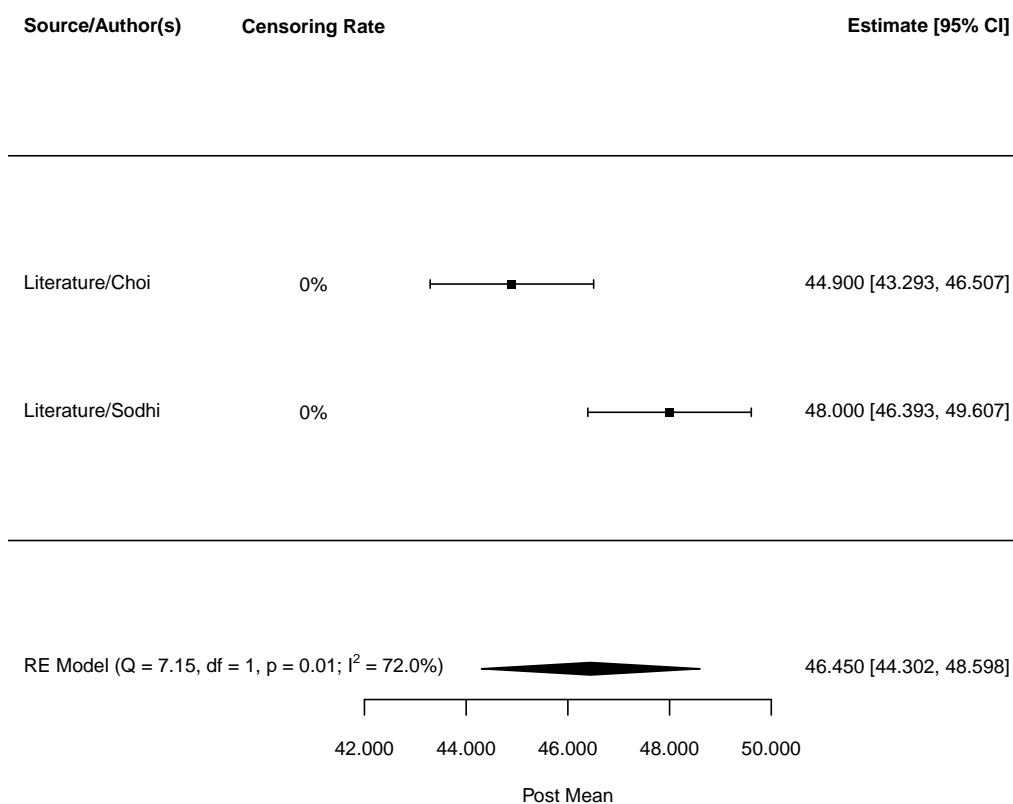


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	0.8900	0.1570	5.6688	0.0000	0.5823	1.1977	0.0000	1.0000	0.0000	0.0000	1.0000
2	0.8800	0.1400	6.2857	0.0000	0.6056	1.1544	0.0000	1.0000	0.0000	0.0000	1.0000

## 2.8 THA SF-12 Physical

Mean: 46.450; SE = 1.096; 95% CI: (44.302, 48.598); 99% CI: (43.627, 49.273)

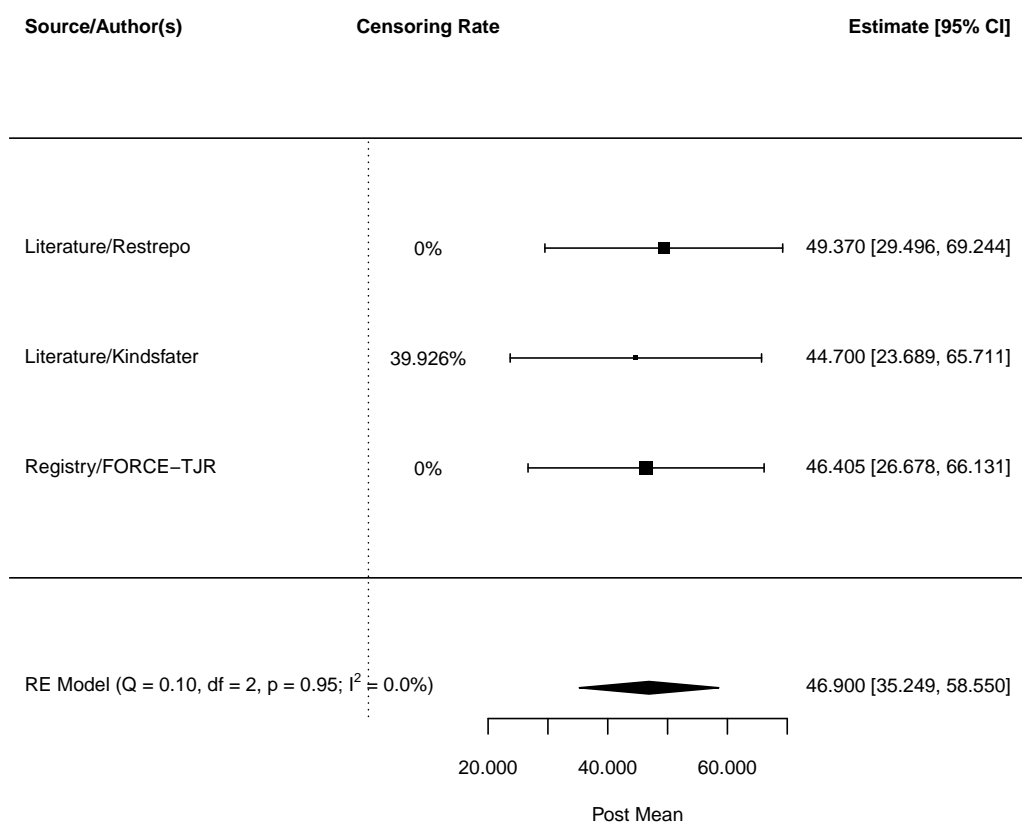


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	48.0000	0.8200	58.5366	0.0000	46.3928	49.6072	0.0000	1.0000	0.0000	0.0000	1.0000
2	44.9000	0.8200	54.7561	0.0000	43.2928	46.5072	0.0000	1.0000	0.0000	0.0000	1.0000

## 2.9 THA SF-36 Physical

Mean: 46.900; SE = 5.944; 95% CI: (35.249, 58.550); 99% CI: (31.588, 62.211)

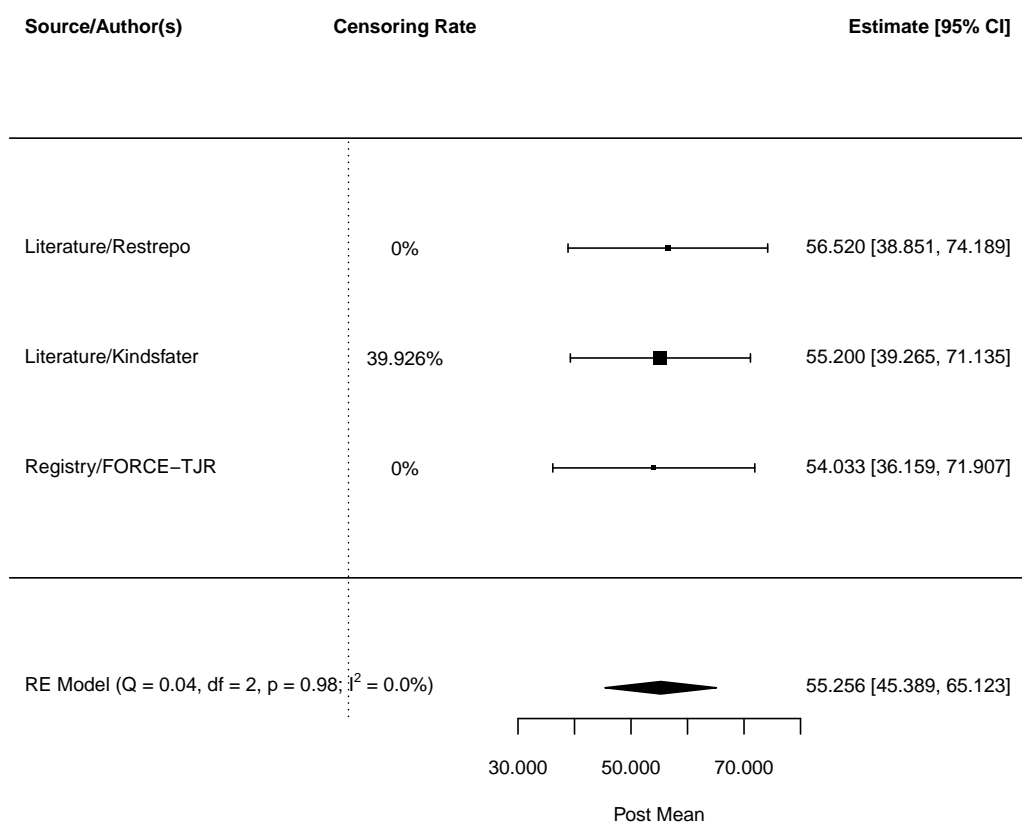


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	45.6060	7.3376	6.2154	0.0000	31.2246	59.9874	0.0134	0.9077	0.0000	0.0000	1.0000
2	47.8763	7.1432	6.7023	0.0000	33.8758	61.8768	0.0431	0.8356	0.0000	0.0000	1.0000
3	47.1648	7.3665	6.4026	0.0000	32.7267	61.6028	0.1002	0.7516	0.0000	0.0000	1.0000

## 2.10 THA SF-36 Mental

Mean: 55.256; SE = 5.034; 95% CI: (45.389, 65.123); 99% CI: (42.289, 68.223)



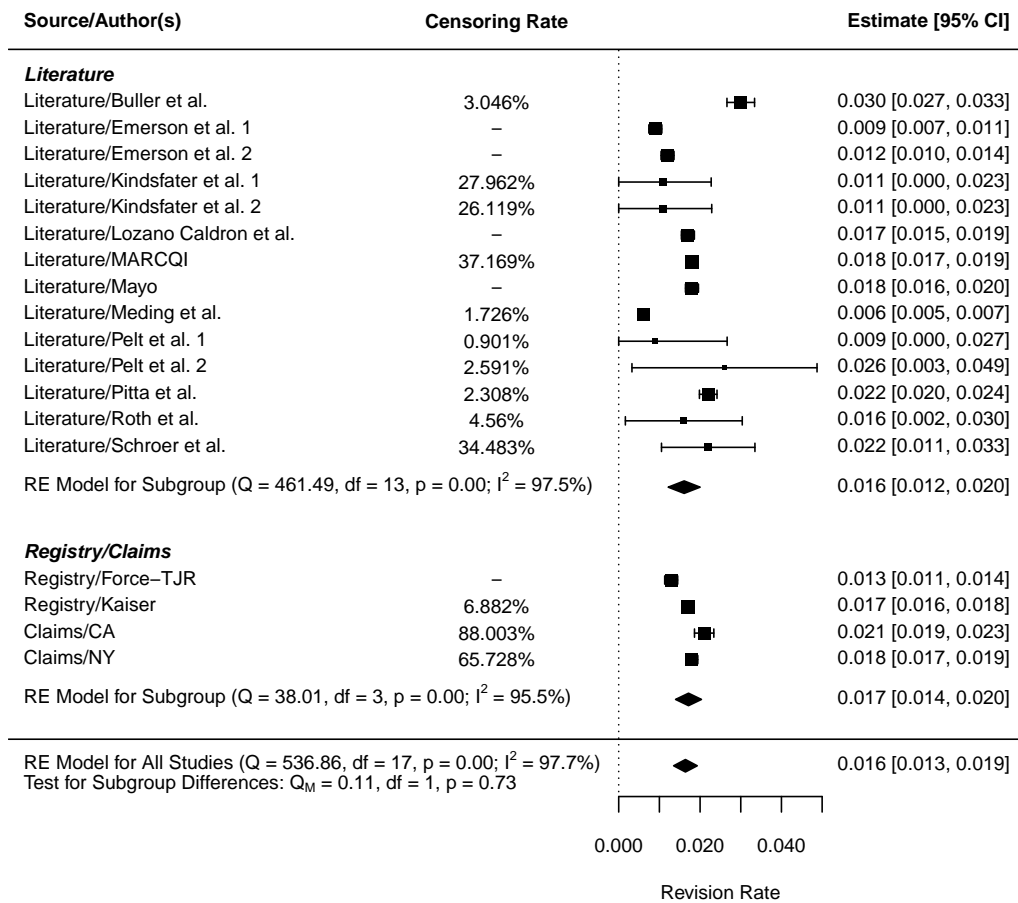
### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	54.6833	6.0686	9.0108	0.0000	42.7890	66.5776	0.0091	0.9239	0.0000	0.0000	1.0000
2	55.2909	6.4112	8.6241	0.0000	42.7252	67.8567	0.0376	0.8462	0.0000	0.0000	1.0000
3	55.7921	6.0375	9.2410	0.0000	43.9588	67.6253	0.0118	0.9134	0.0000	0.0000	1.0000

### 3 TKA

#### 3.1 TKA Overall Revision

Mean: 1.640%; SE = 0.001; 95% CI: (1.350%, 1.931%); 99% CI: (1.258%, 2.022%)

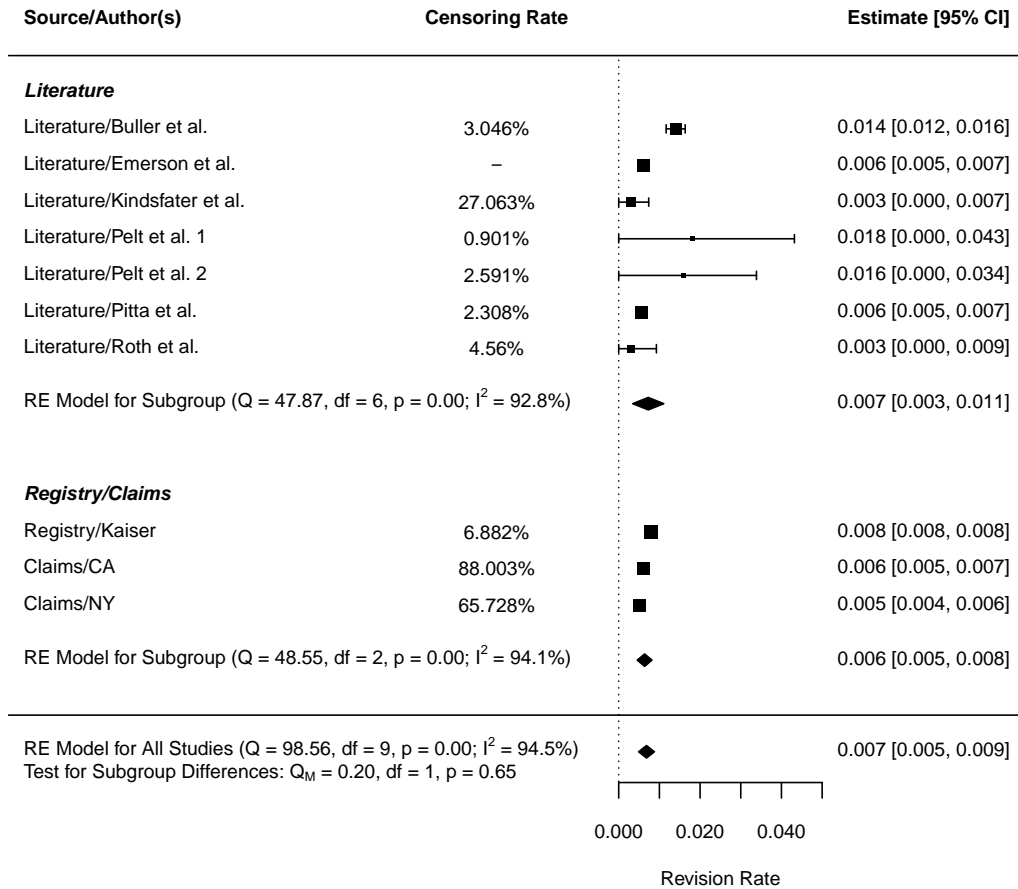


### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	0.0172	0.0014	12.5780	0.0000	0.0145	0.0199	257.1081	0.0000	0.0000	96.7888	31.1411
2	0.0170	0.0015	11.4119	0.0000	0.0141	0.0199	465.1125	0.0000	0.0000	97.4737	39.5832
3	0.0167	0.0016	10.7720	0.0000	0.0137	0.0198	514.9844	0.0000	0.0000	97.7088	43.6455
4	0.0162	0.0015	10.6521	0.0000	0.0132	0.0192	535.6974	0.0000	0.0000	97.8587	46.7012
5	0.0164	0.0015	10.7339	0.0000	0.0134	0.0194	536.8541	0.0000	0.0000	97.9023	47.6703
6	0.0154	0.0013	12.2142	0.0000	0.0130	0.0179	467.8047	0.0000	0.0000	96.6073	29.4752
7	0.0164	0.0016	10.3024	0.0000	0.0132	0.0195	534.1474	0.0000	0.0000	97.8170	45.8077
8	0.0166	0.0015	10.9061	0.0000	0.0136	0.0196	536.2383	0.0000	0.0000	97.8602	46.7334
9	0.0166	0.0015	10.9071	0.0000	0.0136	0.0196	536.2525	0.0000	0.0000	97.8602	46.7334
10	0.0166	0.0015	11.0020	0.0000	0.0136	0.0195	536.3022	0.0000	0.0000	97.8428	46.3563
11	0.0163	0.0015	10.7794	0.0000	0.0133	0.0192	536.0678	0.0000	0.0000	97.8740	47.0373
12	0.0160	0.0015	10.4289	0.0000	0.0130	0.0190	503.3180	0.0000	0.0000	97.7203	43.8659
13	0.0163	0.0016	10.2765	0.0000	0.0132	0.0194	526.2526	0.0000	0.0000	97.7680	44.8025
14	0.0161	0.0016	10.3601	0.0000	0.0130	0.0191	517.2699	0.0000	0.0000	97.7943	45.3366
15	0.0164	0.0016	10.2911	0.0000	0.0132	0.0195	511.9520	0.0000	0.0000	97.1052	34.5451
16	0.0163	0.0016	10.2713	0.0000	0.0132	0.0194	509.8807	0.0000	0.0000	97.4688	39.5062
17	0.0163	0.0016	10.2791	0.0000	0.0132	0.0194	528.3865	0.0000	0.0000	97.8055	45.5683
18	0.0167	0.0016	10.6400	0.0000	0.0136	0.0197	524.3337	0.0000	0.0000	97.7504	44.4515

### 3.2 TKA Septic Revision

Mean: 0.684%; SE = 0.001; 95% CI: (0.489%, 0.879%); 99% CI: (0.427%, 0.940%)



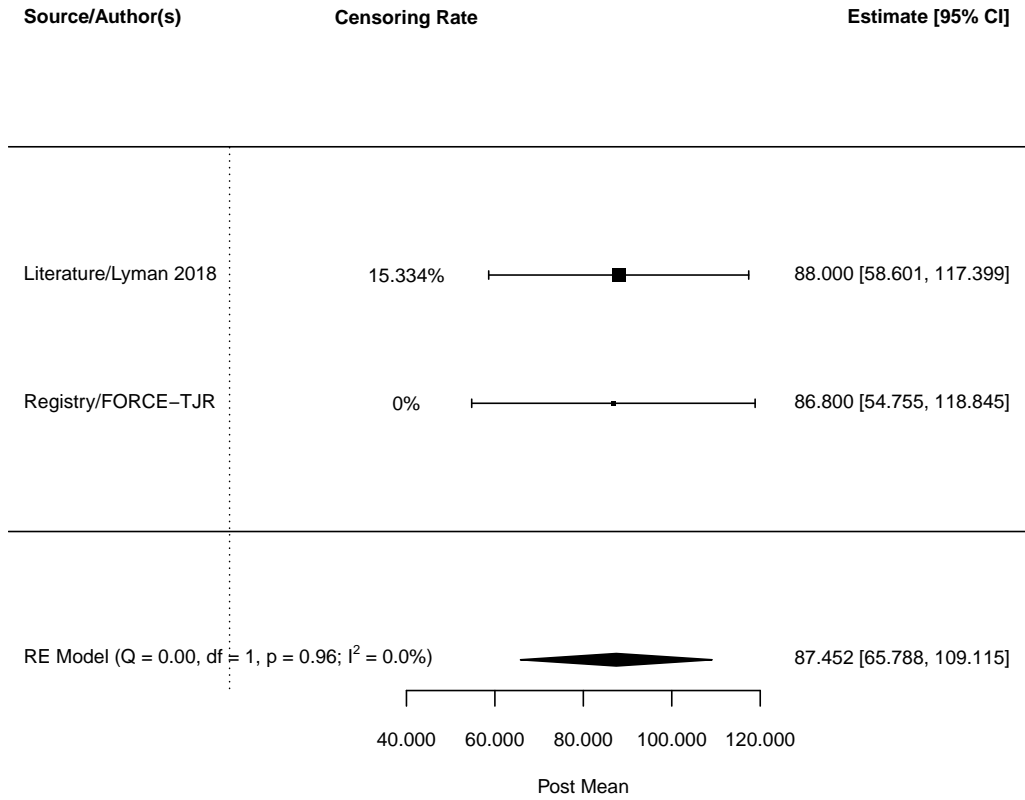
### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	0.0070	0.0012	6.0433	0.0000	0.0047	0.0092	94.9307	0.0000	0.0000	95.0080	20.0322
2	0.0070	0.0009	7.7848	0.0000	0.0053	0.0088	96.9568	0.0000	0.0000	93.5616	15.5318
3	0.0060	0.0005	11.7085	0.0000	0.0050	0.0070	63.8521	0.0000	0.0000	76.8333	4.3165
4	0.0071	0.0008	8.4513	0.0000	0.0055	0.0088	95.2598	0.0000	0.0000	92.2755	12.9458
5	0.0068	0.0011	6.2708	0.0000	0.0046	0.0089	97.7958	0.0000	0.0000	95.8601	24.1549
6	0.0067	0.0011	6.4021	0.0000	0.0047	0.0088	97.6117	0.0000	0.0000	95.5913	22.6822
7	0.0070	0.0011	6.1710	0.0000	0.0048	0.0093	92.4244	0.0000	0.0000	94.8336	19.3558
8	0.0071	0.0011	6.6031	0.0000	0.0050	0.0093	64.6796	0.0000	0.0000	92.7652	13.8221
9	0.0070	0.0012	6.0600	0.0000	0.0047	0.0092	95.8374	0.0000	0.0000	95.1974	20.8221
10	0.0066	0.0012	5.6514	0.0000	0.0043	0.0090	56.2957	0.0000	0.0000	92.4034	13.1638



### 3.3 TKA KOOS - Pain

Mean: 87.452; SE = 11.053; 95% CI: (65.788, 109.115); 99% CI: (58.981, 115.922)

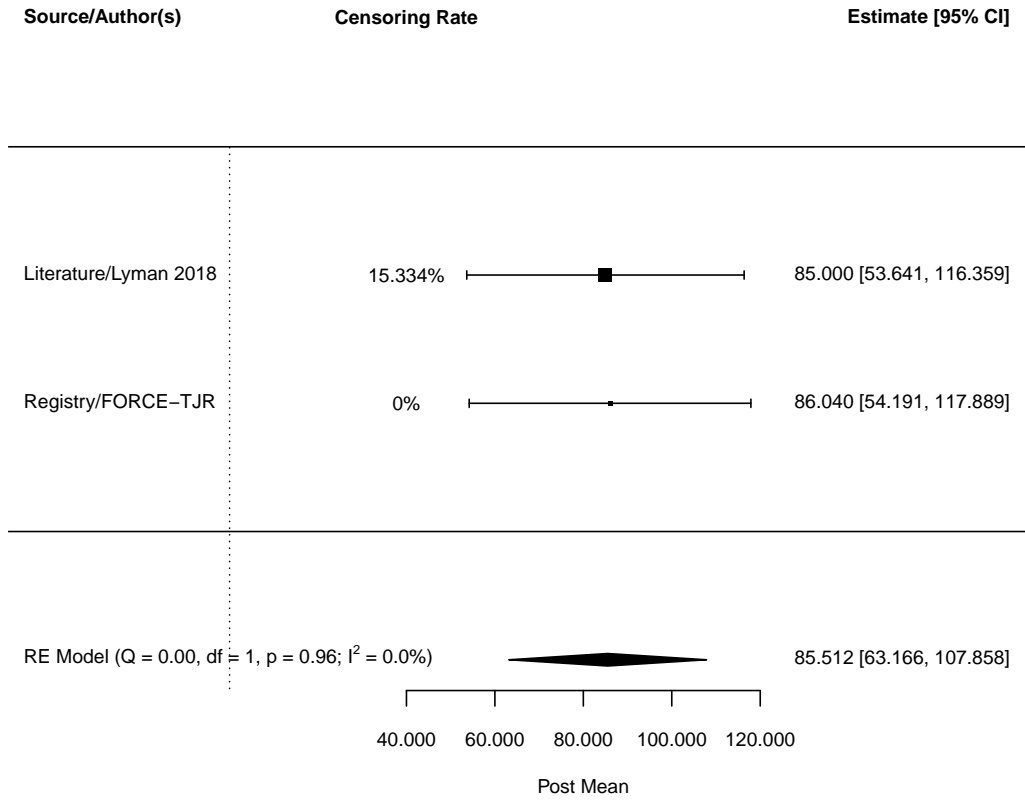


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	86.8000	16.3500	5.3089	0.0000	54.7546	118.8454	0.0000	1.0000	0.0000	0.0000	1.0000
2	88.0000	15.0000	5.8667	0.0000	58.6005	117.3995	0.0000	1.0000	0.0000	0.0000	1.0000

### 3.4 TKA KOOS - ADL

Mean: 85.512; SE = 11.401; 95% CI: (63.166, 107.858); 99% CI: (56.145, 114.879)

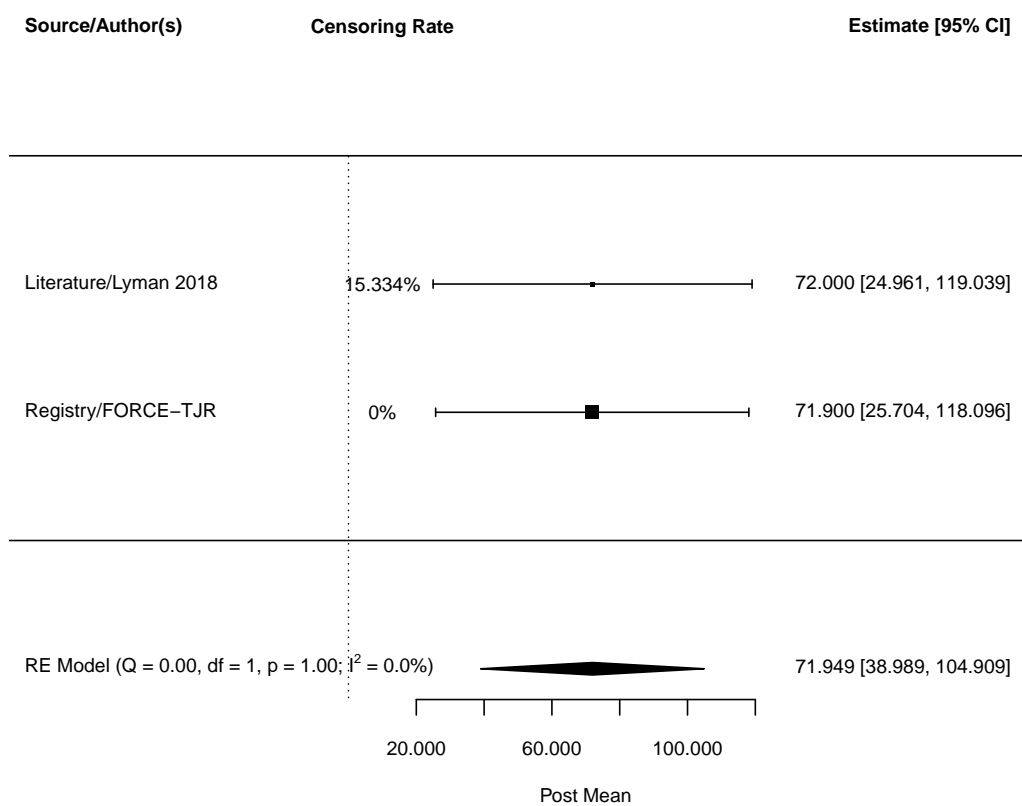


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	86.0400	16.2500	5.2948	0.0000	54.1906	117.8894	0.0000	1.0000	0.0000	0.0000	1.0000
2	85.0000	16.0000	5.3125	0.0000	53.6406	116.3594	0.0000	1.0000	0.0000	0.0000	1.0000

### 3.5 TKA KOOS - QoL

Mean: 71.949; SE = 16.816; 95% CI: (38.989, 104.909); 99% CI: (28.633, 115.265)

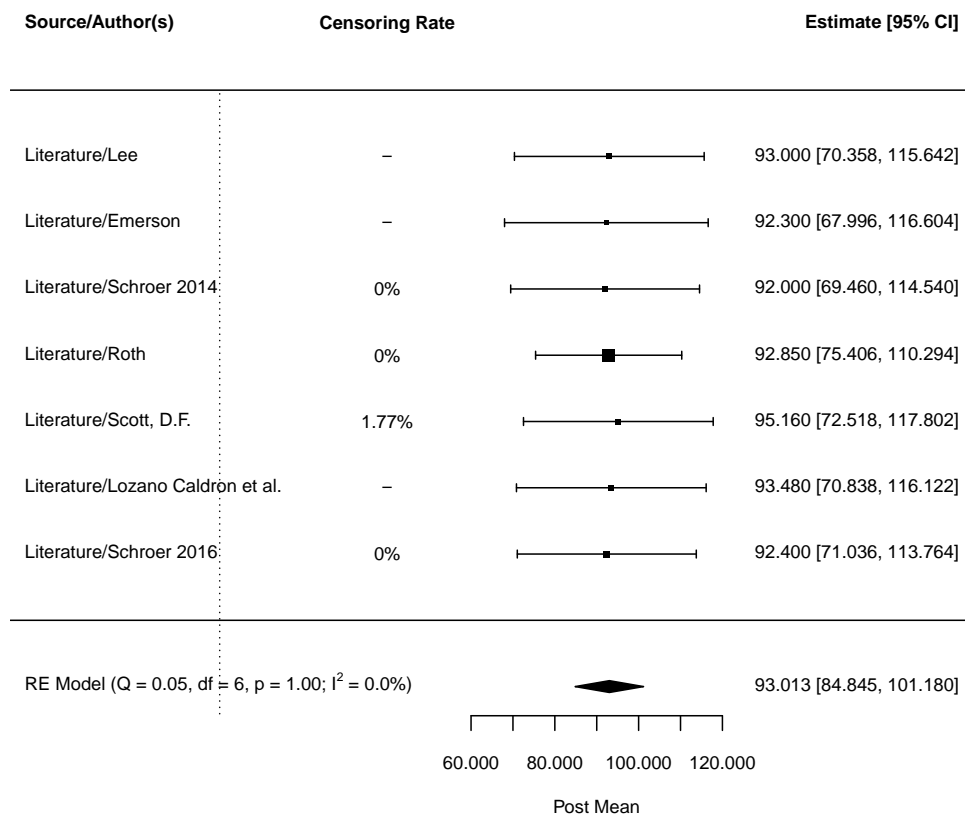


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	71.9000	23.5700	3.0505	0.0023	25.7036	118.0964	0.0000	1.0000	0.0000	0.0000	1.0000
2	72.0000	24.0000	3.0000	0.0027	24.9609	119.0391	0.0000	1.0000	0.0000	0.0000	1.0000

### 3.6 TKA KSS - Pain

Mean: 93.013; SE = 4.167; 95% CI: (84.845, 101.180); 99% CI: (82.279, 103.747)

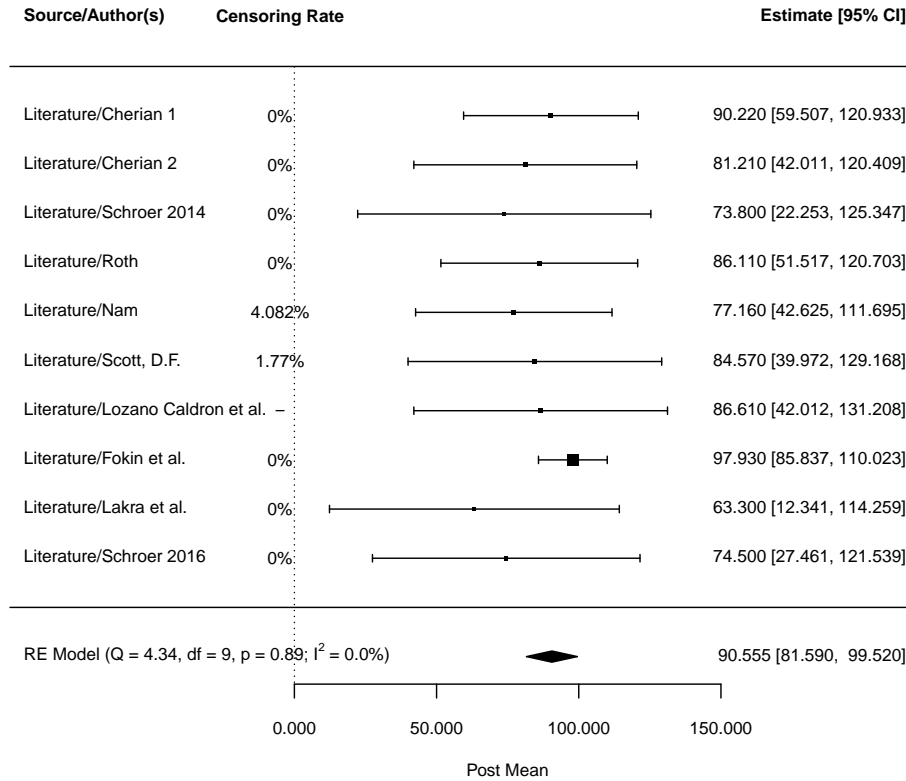


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	93.0144	4.4680	20.8179	0.0000	84.2573	101.7716	0.0507	1.0000	0.0000	0.0000	1.0000
2	93.1033	4.4245	21.0425	0.0000	84.4314	101.7752	0.0470	1.0000	0.0000	0.0000	1.0000
3	93.1656	4.4711	20.8374	0.0000	84.4025	101.9288	0.0418	1.0000	0.0000	0.0000	1.0000
4	93.0582	4.7161	19.7320	0.0000	83.8148	102.3016	0.0503	1.0000	0.0000	0.0000	1.0000
5	92.6913	4.4680	20.7455	0.0000	83.9342	101.4485	0.0110	1.0000	0.0000	0.0000	1.0000
6	92.9426	4.4680	20.8018	0.0000	84.1855	101.6998	0.0489	1.0000	0.0000	0.0000	1.0000
7	93.1174	4.5098	20.6478	0.0000	84.2784	101.9565	0.0470	1.0000	0.0000	0.0000	1.0000

### 3.7 TKA KSS - Function

Mean: 90.555; SE = 4.574; 95% CI: (81.590, 99.520); 99% CI: (78.773, 102.337)

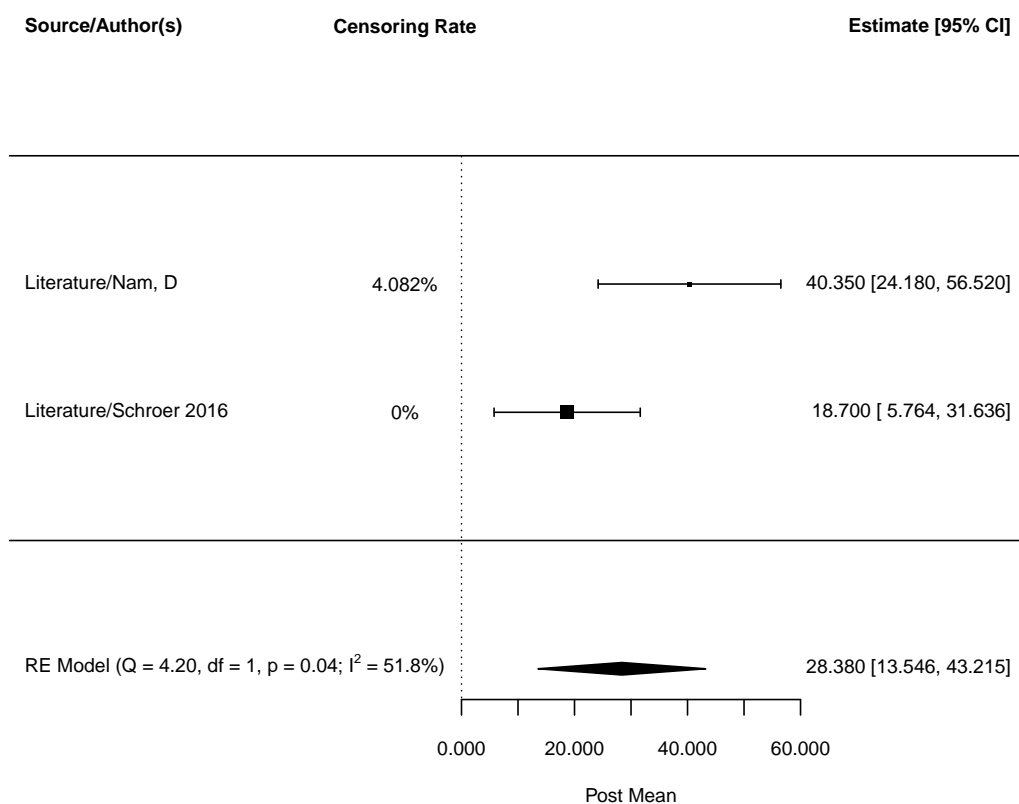


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	90.5861	4.7824	18.9416	0.0000	81.2128	99.9594	4.3398	0.8252	0.0000	0.0000	1.0000
2	91.0707	4.6986	19.3823	0.0000	81.8615	100.2798	4.1100	0.8471	0.0000	0.0000	1.0000
3	91.0775	4.6449	19.6081	0.0000	81.9737	100.1813	3.9218	0.8641	0.0000	0.0000	1.0000
4	90.8749	4.7359	19.1885	0.0000	81.5927	100.1571	4.2724	0.8318	0.0000	0.0000	1.0000
5	91.5228	4.7365	19.3229	0.0000	82.2395	100.8062	3.7207	0.8814	0.0000	0.0000	1.0000
6	90.8069	4.6694	19.4471	0.0000	81.6550	99.9588	4.2683	0.8321	0.0000	0.0000	1.0000
7	90.7210	4.6694	19.4287	0.0000	81.5691	99.8729	4.3090	0.8282	0.0000	0.0000	1.0000
8	81.5556	6.8156	11.9660	0.0000	68.1973	94.9139	1.1681	0.9969	0.0000	0.0000	1.0000
9	91.4254	4.6466	19.6758	0.0000	82.3182	100.5325	3.2064	0.9207	0.0000	0.0000	1.0000
10	91.1600	4.6595	19.5643	0.0000	82.0276	100.2925	3.8760	0.8681	0.0000	0.0000	1.0000

### 3.8 TKA OKS

Mean: 28.380; SE = 7.569; 95% CI: (13.546, 43.215); 99% CI: (8.884, 47.877)

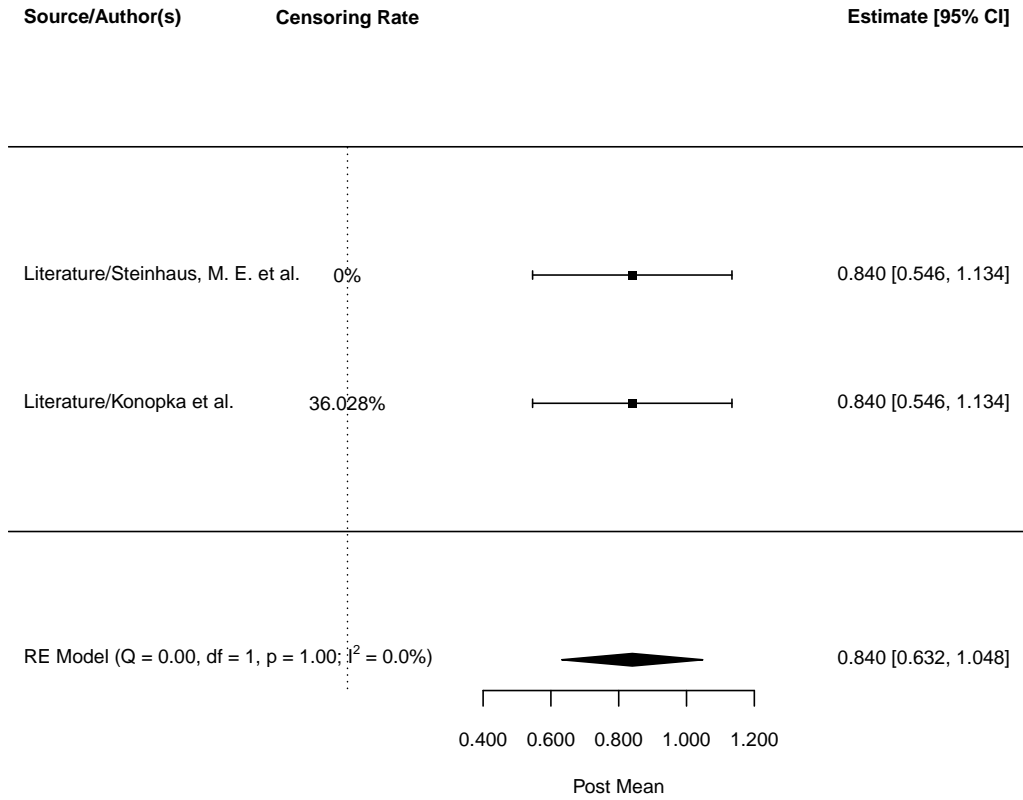


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	18.7000	6.6000	2.8333	0.0046	5.7642	31.6358	0.0000	1.0000	0.0000	0.0000	1.0000
2	40.3500	8.2500	4.8909	0.0000	24.1803	56.5197	0.0000	1.0000	0.0000	0.0000	1.0000

### 3.9 TKA EQ-5D

Mean: 0.840; SE = 0.106; 95% CI: (0.632, 1.048); 99% CI: (0.567, 1.113)

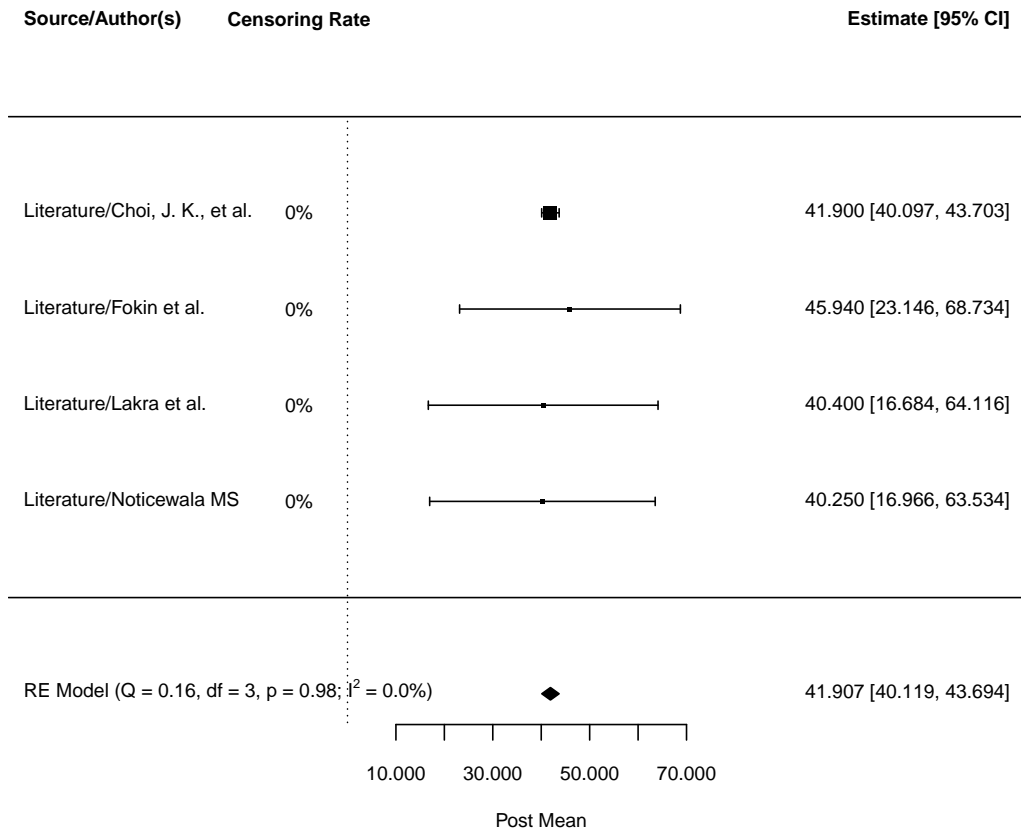


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	0.8400	0.1500	5.6000	0.0000	0.5460	1.1340	0.0000	1.0000	0.0000	0.0000	1.0000
2	0.8400	0.1500	5.6000	0.0000	0.5460	1.1340	0.0000	1.0000	0.0000	0.0000	1.0000

### 3.10 TKA SF-12 Physical

Mean: 41.907; SE = 0.912; 95% CI: (40.119, 43.694); 99% CI: (39.558, 44.255)



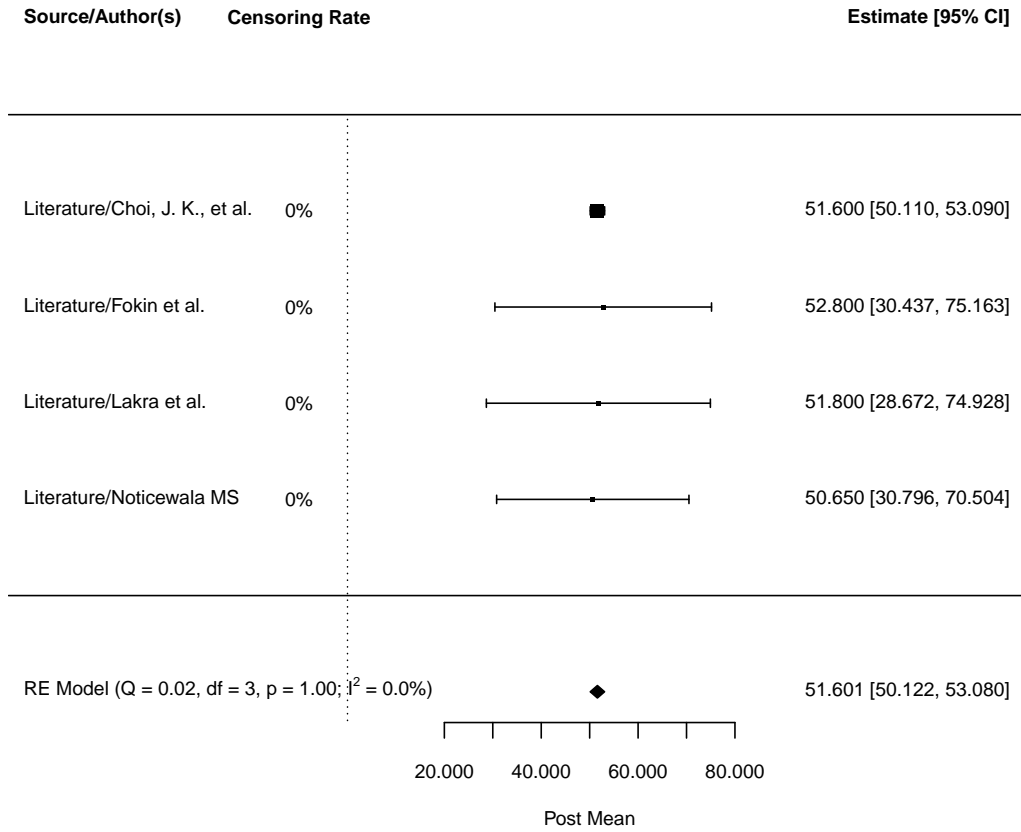
#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	42.2723	6.8505	6.1707	0.0000	28.8456	55.6989	0.1524	0.9266	0.0000	0.0000	1.0000
2	41.8816	0.9146	45.7908	0.0000	40.0890	43.6743	0.0343	0.9830	0.0000	0.0000	1.0000
3	41.9152	0.9144	45.8383	0.0000	40.1230	43.7074	0.1397	0.9325	0.0000	0.0000	1.0000
4	41.9164	0.9145	45.8347	0.0000	40.1240	43.7088	0.1357	0.9344	0.0000	0.0000	1.0000



### 3.11 TKA SF-12 Mental

Mean: 51.601; SE = 0.755; 95% CI: (50.122, 53.080); 99% CI: (49.657, 53.545)

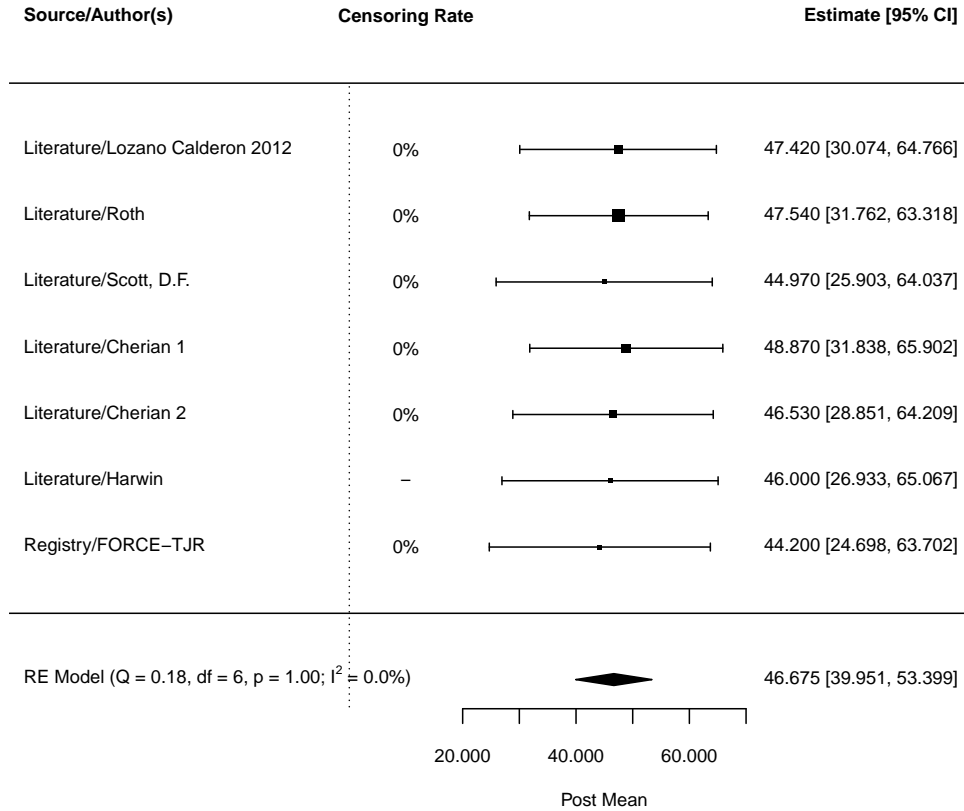


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	51.6567	6.3747	8.1034	0.0000	39.1625	64.1510	0.0201	0.9900	0.0000	0.0000	1.0000
2	51.5955	0.7563	68.2199	0.0000	50.1132	53.0779	0.0090	0.9955	0.0000	0.0000	1.0000
3	51.6000	0.7562	68.2355	0.0000	50.1178	53.0821	0.0199	0.9901	0.0000	0.0000	1.0000
4	51.6061	0.7568	68.1936	0.0000	50.1229	53.0893	0.0113	0.9944	0.0000	0.0000	1.0000

### 3.12 TKA SF-36 Physical

Mean: 46.675; SE = 3.431; 95% CI: (39.951, 53.399); 99% CI: (37.838, 55.512)

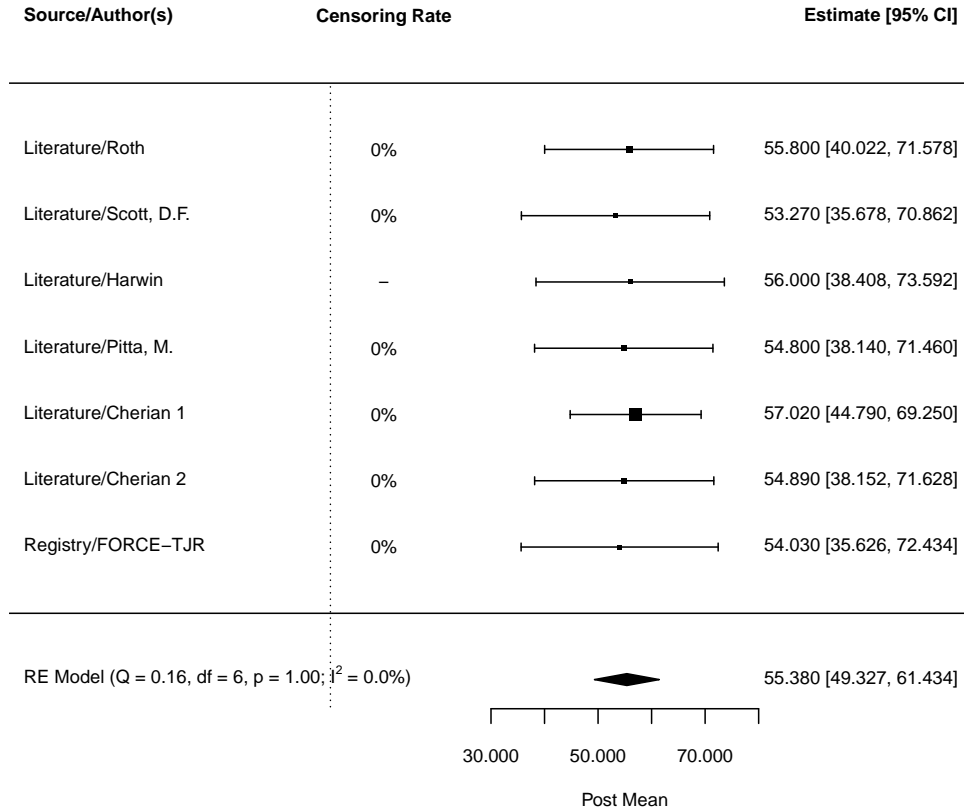


#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	46.5432	3.7216	12.5061	0.0000	39.2489	53.8375	0.1718	0.9994	0.0000	0.0000	1.0000
2	46.4830	3.7922	12.2574	0.0000	39.0503	53.9156	0.1660	0.9994	0.0000	0.0000	1.0000
3	46.9171	3.6662	12.7973	0.0000	39.7315	54.1027	0.1450	0.9996	0.0000	0.0000	1.0000
4	46.2697	3.7339	12.3917	0.0000	38.9513	53.5880	0.1045	0.9998	0.0000	0.0000	1.0000
5	46.6995	3.7094	12.5895	0.0000	39.4292	53.9698	0.1798	0.9993	0.0000	0.0000	1.0000
6	46.7708	3.6662	12.7574	0.0000	39.5852	53.9564	0.1746	0.9994	0.0000	0.0000	1.0000
7	47.0089	3.6547	12.8624	0.0000	39.8457	54.1720	0.1099	0.9998	0.0000	0.0000	1.0000

### 3.13 TKA SF-36 Mental

Mean: 55.380; SE = 3.089; 95% CI: (49.327, 61.434); 99% CI: (47.425, 63.336)



#### Leave-One-Out Diagnostics:

	estimate	se	zval	pval	ci.lb	ci.ub	Q	Qp	tau2	I2	H2
1	55.3080	3.3445	16.5372	0.0000	48.7530	61.8631	0.1573	0.9995	0.0000	0.0000	1.0000
2	55.6639	3.2894	16.9222	0.0000	49.2168	62.1110	0.0977	0.9998	0.0000	0.0000	1.0000
3	55.2972	3.2894	16.8107	0.0000	48.8501	61.7443	0.1550	0.9995	0.0000	0.0000	1.0000
4	55.4687	3.3151	16.7321	0.0000	48.9713	61.9662	0.1551	0.9995	0.0000	0.0000	1.0000
5	54.8485	3.5544	15.4310	0.0000	47.8819	61.8151	0.0690	0.9999	0.0000	0.0000	1.0000
6	55.4543	3.3128	16.7396	0.0000	48.9614	61.9471	0.1567	0.9995	0.0000	0.0000	1.0000
7	55.5443	3.2705	16.9834	0.0000	49.1342	61.9543	0.1373	0.9996	0.0000	0.0000	1.0000

## References

Furukawa, T. A., Barbui, C., Cipriani, A., Brambilla, P., and Watanabe, N. (2006). Imputing missing standard deviations in meta-analyses can provide accurate results. *Journal of clinical epidemiology*, 59(1):7–10.