

Associate professor Antti Malmivaara, MD, PhD (Finland)

Dr. Malmivaara has undertaken cost-effectiveness research alongside randomized controlled trials (RCTs) since the beginning of 1990's, and Cochrane systematic reviews (SRs) since mid-1990's. His study published in NEJM 1995 showed better cost-effectiveness of ordinary activity over bed rest or exercise in acute low back pain, and has led to a change in national and international guidelines since 1996. Other RCTs and SRs have included effectiveness and cost-effectiveness of rehabilitation, of lifestyle interventions and of orthopaedic surgery for back pain and for other musculoskeletal disorders. The studies have been published in specialty journals and in general medical journals like the NEJM, Lancet, JAMA, Annals of Medicine and BMJ. Within Cochrane Collaboration, he has developed methods for RCTs, SRs and meta-analyses, and worked in the Editorial board of Cochrane Back and Neck.

As the Chief Physician at the Finnish Office for Health Technology Assessment (2003 to 2009) he published cost-effectiveness studies on musculoskeletal disorders, rehabilitation, orthopaedic surgery, vascular surgery, cardiology, ophthalmology, emergency medicine and bariatric surgery. The topics have varied from assessment of effectiveness and harms of emerging new technology, to issues of cost-effectiveness, patients' perception (a systematic review of qualitative studies), ethical issues and national scenarios.

He has been the chairman for the Finnish Current Care Guidelines (FCCG) for Low Back Disorders from 1996, and a team member in the latest update of 2015. He has been the editor and a team member from 1998 also in other FCCG's: neck pain, knee and hip arthrosis, upper extremity disorders, spinal cord injury, brain injury, and osteoporosis. FCCG uses evidence based medicine approach with transparent methodological and process criteria. He has participated in writing the FCCG handbook and its updates.

As the Chief Physician at the Centre for Health and Social Economics (from 2009) he has assessed effectiveness and costs throughout the treatment chain (from acute care to successive care and rehabilitation) utilizing national registers with comprehensive patient level follow-up. The research based on the PERFECT (PERformance, Effectiveness, and Costs of Treatment chains) project has involved stroke, acute myocardial infarction, hip fracture, very low birth weight babies, and hip and knee arthroplasties. In the EuroHOPE project, he has led the Stroke project comparing effectiveness of stroke care in six European countries. He has led the extension of the PERFECT project to lumbar spine surgery and cervical spine surgery, and to the memory disorders.

From 2013 he has published articles related to advancement of real-world value for patients: Real-effectiveness medicine (2013), On decreasing inequality in a cost-effective way (2014), criteria for observational effectiveness studies: Benchmarking Controlled Trial (BCT) (2015), assessing of impact of health care system level features and interventions: System Impact Research (2016), practical criteria for assessment of validity of the observational effectiveness study (2016), and on criteria for choosing either RCT or BCT when assessing impact of clinical interventions: the Clinical Impact Research (2016).