Supplementary table 1: Sample overview

Supplementary Table 1: Sample overview *presenting trial title, patient population, experimental and comparison interventions, total sample size, number of groups, primary outcome measures employed, timepoint of primary and longest follow-up, and study design as described by the authors. Primary outcomes only listed where declared by the authors; otherwise, all reported outcomes are listed. These instances are marked (*) in the table. CBT, Cognitive behavioural therapy; NR, not reported; NRS, numeric rating scale; OA, osteoarthritis, RA, rheumatoid arthritis.*

Author, year	**Publication title**	**Population:** pain descriptor, mean symptom duration, and standard deviation (if not otherwise specified)	**Intervention(s) assessed**	**total sample size**	**number of groups**	**comparator(s)**	**outcomes measures employed** (for primary analysis*)	**Follow-up:** primary timepoint (if reported) & longest follow-up after randomization, in weeks	**Study design** (as described by authors)
Pharmacological interventions (incl. injections)									
Bayer et al., 2019	Results and lessons learnt from a randomized controlled trial: prophylactic treatment of vestibular migraine with metoprolol (PROVEMIG)	Headaches, duration not reported	metoprolol	130	2	Placebo or sham intervention	self-reported number of vertigo attacks per 30 days documented by means of a paper-based daily symptom diary	16-24; 36	phase III, prospective, two-arm, parallel-group, multi-centre, double-blind, randomized placebo-controlled pragmatic superiority trial
Chesterton et al., 2018	The clinical and cost-effectiveness of corticosteroid injection versus night splints for carpal tunnel syndrome (INSTINCTS trial): an open-label, parallel group, randomised controlled trial	Neuropathic pain, Capral Tunnel Syndrome, 85% first diagnosis of CTS, duration per group: <3 months (16% & 14%); 3–6 months (32% & 28%); 6 months to 1 year (19% & 23%); >1 year (29%; 33%); Missing (3% & 2%)	1) corticosteroid injections 2) night splints	234	2	Another active specific therapy (comparative effectiveness)	Symptom severity and limitations in hand function as assessed by the Boston CTS questionnaire	6; 104	randomised, open-label, pragmatic trial
Cohen et al., 2018	Fluoroscopically Guided vs Landmark-Guided Sacroiliac Joint Injections: A Randomized Controlled Study	back or neck pain, 4.6 years ± 5.4	1) fluoroscopically guided injections into the joint capsule 2) “blind” injections to the point of maximum tenderness using sham radiographs	125	2	Another active specific therapy (comparative effectiveness)	average pain intensity (NRS)	4; 12	patient- and evaluator-blinded randomized comparative effectiveness study
Emery et al., 2020	Pragmatic randomised controlled trial of very early etanercept and MTX versus MTX with delayed etanercept in RA: the VEDERA trial	Arthritis (early RA), 0.4 years median duration (IQR 0.25 - 0.6)	1) first-line etanercept + methotrexate (eTn+MTX) 2) treat-to-target MTX (MTX-TT)	120	2	Another active specific therapy (comparative effectiveness)	proportion who at week 48 achieved remission as pre-defined and measured via physiological marker (DAS28-ESR ≤0.6).	48; 96	a single-centre, phase IV, open-label, two-arm, randomised controlled trial

Friedman et al., 2018	A Randomized, Double-Blind, Placebo-Controlled Trial of Naproxen With or Without Orphenadrine or Methocarbamol for Acute Low Back Pain	back or neck pain, duration ranging 24 - 120 hours	1) naproxen + orphenadrine 2) naproxen + methocarbamol 3) placebo	240	3	Another active specific therapy (comparative effectiveness) & Placebo or sham intervention	improvement in disability index (RMDQ)	1; 12	randomized, double-blind, comparative effectiveness trial
Krebs et al., 2018	Effect of Opioid vs Nonopioid Medications on Pain-Related Function in Patients with Chronic Back Pain or Hip or Knee Osteoarthritis Pain - The SPACE Randomized Clinical Trial	back or neck pain, Arthritis (RA and OA), OA-related lower extremity pain, > 6 months	1) Opioid Prescribing Strategy 2) Nonopioid Prescribing Strategy	240	2	Another active specific therapy (comparative effectiveness)	Pain-related function via Brief Pain Inventory (BPI) interference scale	52; 52	Pragmatic, 12-month, randomized trial with masked outcome assessment
Roddy et al., 2019	Open-label randomised pragmatic trial (CONTACT) comparing naproxen and low-dose colchicine for the treatment of gout flares in primary care	peripheral joint pain, approx. 6 years since diagnosis ± 15	1) naproxen 750 mg immediately then 250 mg every 8 hours for 7 days 2) low-dose colchicine 500 mcg three times per day for 4 days	399	2	Another active specific therapy (comparative effectiveness)	pain intensity (NRS)	1; 4	randomised, multicentre, open-label, pragmatic clinical trial.
Rothrock et al., 2019	FORWARD Study: Evaluating the Comparative Effectiveness of OnabotulinumtoxinA and Topiramate for Headache Prevention in Adults with Chronic Migraine	Headaches, 'chronic' duration	1) onabotulinumtoxin A 155 U every 12 weeks for 3 cycles 2) topiramate "immediate release" 50-100 mg/day to week 36	282	2	Another active specific therapy (comparative effectiveness)	Proportion of patients with ≥50% decrease in headache days in specified 4-week period	29-32 (4 week period); 36 (48 in some cases which crossed over)	multicenter, randomized, parallel-group, post-authorization, open-label, prospective study
Semprini et al., 2019	Kanuka honey versus aciclovir for the topical treatment of herpes simplex labialis: a randomised controlled trial	Neuropathic pain, within 72 hours of onset	1) New Zealand medical grade kanuka honey 2) topical aciclovir	952	2	Another active specific therapy (comparative effectiveness)	Healing time from randomisation to normal skin	1 day; 2 weeks	prospective parallel randomised controlled open-label superiority trial
Sparv et al., 2018	The Analgesic Effect of Oxygen in Suspected Acute Myocardial Infarction A Substudy of the DETO2X-AMI Trial	abdominal and other visceral pain, median time from symptom onset in minutes: 188.0 (O_2), 210.0 (ambient-air group) (range 115 - 400)	Moderate-flow oxygen supplementation	624	2	no-treatment group	peak level of chest pain during the time span of the intervention; total amount of opiates and sedative agents administered during study period *	flexible timepoint	multicenter, prospective, controlled, registry-based randomized clinical trial
Stouten et al., 2019	Effectiveness of different combinations of DMARDs and glucocorticoid bridging in early rheumatoid arthritis: two-year results of CareRA	Arthritis (RA), 0.4 years median duration (IQR 0.2 - 0.85)	High-risk patients were randomized to 1) COBRA-Classic (Combination therapy for early RA): MTX, sulfasalazine, prednisone step-down from 60mg	379	5	Several different schedules of the index therapy & another active specific therapy (comparative effectiveness)	proportion of patients achieving a predefined score in physiological marker (DAS28-CRP <2.6)	16, 52, 104; 104	prospective investigator-initiated multicenter pragmatic open-label randomised superiority trial

			2) COBRA-Slim: MTX, prednisone step-down from 30 mg 3) COBRA-Avant-Garde: MTX, leflunomide, prednisone step-down from 30 mg. Low-risk patients were randomized to: 4) COBRA-Slim 5) Tight Step Up: MTX without prednisone						
Zhuang et al., 2019	Postoperative intravenous parecoxib sodium followed by oral celecoxib post total knee arthroplasty in osteoarthritis patients (PIPFORCE): a multicentre, double-blind, randomised, placebo- controlled trial	post-medical intervention pain, peripheral joint pain: immediately after surgery but probably in chronic knee pain patients	Parecoxib (40 mg IV) two times per day for the first 3 days post-surgery followed by celecoxib (200 mg orally) two times per day for up to 6 weeks	246	2	Placebo or sham intervention (corresponding pills and same instruction)	cumulative opioid consumption until 2 weeks post operation	2; 12	investigator-initiated, multicentre, double-blind, randomised, placebo-controlled trial
Non-pharmacological interventions									
Adams et al., 2018	Automated symptom and treatment side effect monitoring for improved quality of life among adults with diabetic peripheral neuropathy in primary care: a pragmatic, cluster, randomized, controlled trial	Neuropathic pain, duration not reported	automated monitoring of participants' treatment experiences and feedback to physicians using interactive voice response technology and an electronic health records	1252	2	Treatment / care as usual plus something else (e.g. advice, education, etc.)	Quality of life	32; 32	pragmatic, cluster, randomized, controlled trial
Aragones et al., 2018	Effectiveness of a collaborative care intervention for managing major depression and chronic musculoskeletal pain in primary care: A cluster- randomised controlled trial	pain (not further specified), plus depression, pain 86% for longer than 2 years	a new programme based on the integrated management of chronic musculoskeletal pain and major depression	328	2	Treatment / care as usual	Measures of depression, pain severity and pain interference; depression response and remission rates, and pain response rates	NR; 52	cluster-randomised controlled trial
Beard et al., 2018	Arthroscopic subacromial decompression for subacromial shoulder pain (CSAW): a multicentre, pragmatic, parallel group, placebo-controlled, three-group, randomised surgical trial	peripheral joint pain, > 3 months	arthroscopic subacromial decompression	313	3	Placebo or sham intervention & no-treatment group	Oxford Shoulder Score	24; 52	multicentre, randomised, pragmatic, parallel group, placebo-controlled, three-group trial
Beard et al., 2019	The clinical and cost-effectiveness of total versus partial knee replacement in patients with medial compartment osteoarthritis (TOPKAT): 5-year outcomes of a randomised controlled trial	Arthritis (RA and OA), peripheral joint pain, > 3 months, most > 3 years since diagnosis	1) total knee replacement 2) partial knee replacement	528	2	Another active specific therapy (comparative effectiveness)	Oxford Knee Score	260; 520 (not yet reported)	multicentre, pragmatic randomised controlled trial

Berdal et al., 2018	Structured Goal Planning and Supportive Telephone Follow-up in Rheumatology Care: Results From a Pragmatic, Stepped-Wedge, Cluster-Randomized Trial	Arthritis (RA and OA), Also Systemic Lupus Erythematosus, 19 years ± 13.1	add-on structured goal-planning and supportive telephone follow-up rehabilitation program compared with traditional rehabilitation programs	389	2	Treatment / care as usual	Health-realted Quality of Life (HRQoL) measured by the Patient Generated Index	NR; 52	pragmatic, stepped-wedge, cluster-randomized controlled trial
Bergland et al., 2018	The effect of psychomotor physical therapy on health-related quality of life, pain, coping, self-esteem, and social support	pain (not further specified), duration not reported	Norwegian psychomotor physiotherapy (NPMP), based on a bio-psychosocial model of health	105	2	no-treatment group	HRQoL via SF-36	26; 52	single-blinded pragmatic randomized controlled trial comparing an intervention group with a control group
Blodt et al., 2019	Effectiveness of app-based self-acupressure for women with menstrual pain compared to usual care: a randomized pragmatic trial	abdominal and other visceral pain, duration not reported	app-based self-acupressure	221	2	Treatment / care as usual	Average pain intensity (NRS) on the days with pain during menstruation	6 menstrual cycles; after 6 cycles	2-armed, randomized, pragmatic trial
Cederbom et al., 2019	Effects of a behavioral medicine intervention on pain, health, and behavior among community dwelling older adults: a randomized controlled trial	pain (chronic musculoskeletal pain), 22 years ± 22.5	an intervention based on a behavioral medicine approach in physical therapy (BMPI)	105	2	Treatment / care as usual	pain-related disability and physical function	26; 26	pragmatic randomized controlled trial with a two-group design
Cherkin et al., 2018	Effect of Low Back Pain Risk-Stratification Strategy on Patient Outcomes and Care Processes: the MATCH Randomized Trial in Primary Care	back or neck pain, duration not reported	The STarT Back strategy, a low back pain risk-stratification strategy	1702	2	control clinics received no intervention, patients did not know they were not getting the intervention	LBP-related physical functions in previous week, pain severity in previous week	8; 24	Pragmatic, cluster randomized trial with two parallel arms each with a baseline data collection period
Chung et al., 2019	Electroacupuncture plus on-demand gastrocaine for refractory functional dyspepsia: Pragmatic randomized trial	abdominal and other visceral pain, 9.4 years ± 9.5	Electroacupuncture plus on-demand gastrocaine	132	2	Same rescue medication + waitlist control	binary assessment of adequate relief (responder analysis)	12; 12	pragmatic, randomised, controlled, assessor-blinded and data analyst-blinded, single-centre, superiority trial with two parallel groups.
Côté et al., 2019	Is a government-regulated rehabilitation guideline more effective than general practitioner education or preferred provider rehabilitation in promoting recovery from acute whiplash-associated disorders? A pragmatic randomised controlled trial	back or neck pain, post-injury pain, Whiplash-associated disorder, median 6 days since collision (IQR 5.0)	1) Government- regulated rehabilitation guideline 2) education and activation by general practitioners 3) a preferred-provider insurance-based rehabilitation programme	340	3	Two other active specific therapies (comparative effectiveness)	time to self-reported global recovery	NR; 52	pragmatic randomised controlled trial

Darlow et al., 2019	The Fear Reduction Exercised Early (FREE) approach to management of low back pain in general practice: A pragmatic cluster- randomised controlled trial	back or neck pain, duration in intervention group: 0–1 week (71.2%); 2–5 weeks (15.2%); 6–11 weeks (5.6%); 3–5 months (5.6%); >=6 months (2.4%)	The Fear Reduction Exercised Early (FREE) approach to LBP (restructuring LBP consultations to prioritise early identification and management of barriers to recovery)	226	2	Treatment / care as usual	Disability as measured by the Roland Morris Disability Questionnaire (RMDQ)	26; 26	pragmatic cluster-randomised superiority trial
de-Figueiredo et al., 2020	Apical periodontitis healing and postoperative pain following endodontic treatment with a reciprocating single-file, single-cone approach: A randomized controlled pragmatic clinical trial	tooth pain, duration not reported	Two endodontic therapy approaches: 1) reciprocating single file followed by matching-taper single-cone filling 2) hand file and lateral compaction filling	120	2	Another active specific therapy (comparative effectiveness)	mean periapical index score (PAI) difference between protocols of the apical lesion	assessed throughout 52-week period); 52	randomized pragmatic clinical trial using a two-arm, parallel design
Dissing et al., 2018	Conservative care with or without manipulative therapy in the management of back and/or neck pain in Danish children aged 9–15: a randomised controlled trial nested in a school-based cohort	back or neck pain, duration not reported	1) conservative care (advice, exercises and soft-tissue treatment) 2) conservative care (advice, exercises and soft-tissue treatment) plus manipulative therapy (joint manipulation)	243	2	Another active specific therapy (comparative effectiveness)	Number of recurrences of spinal pain	12-108; 108	A pragmatic parallel observer-blinded RCT nested in a school-based open cohort.
Dziedzic et al., 2018	Implementing core NICE guidelines for osteoarthritis in primary care with a model consultation (MOSAICS): a cluster randomised controlled trial	Arthritis (RA and OA): peripheral joint pain, duration not reported	model osteoarthritis consultation: an enhanced GP consultation, an OA Guidebook, advice on analgesia, up to four follow-up practice nurse consultations to guide patients in self-management for OA with advice on weight management if required, general exercise, and physical activity, with goal-setting as appropriate.	525	2	Treatment / care as usual	SF-12 Physical Component Score	26; 52	two-arm cluster-randomised controlled trial
Eklund et al., 2018	The Nordic Maintenance Care program: Effectiveness of chiropractic maintenance care versus symptom-guided treatment for recurrent and persistent low back pain—A pragmatic randomized controlled trial	back or neck pain, duration not reported	1) chiropractic maintenance care (preventive treatment, i.e. clinician-controlled regular appointments) 2) symptom-guided treatment, i.e. patients making appointments when desired	328	2	Another active specific therapy (comparative effectiveness)	number of days with bothersome LBP during the study period	52 weeks period (not time point); 52	pragmatic, investigator- and assessor- blinded randomized controlled trial with a two arm parallel design
Goertz et al., 2018	Effect of Usual Medical Care Plus Chiropractic Care vs Usual Medical Care Alone on Pain and Disability Among US Service Members With Low Back Pain	back or neck pain, duration (approx.): < 1 month (38%); 1-3 months (10%); > 3 months (51%)	1) Usual medical care + chiropractic care	750	2	Treatment / care as usual	Average pain intensity during the prior week (NRS); disability via RMDQ	6; 12	pragmatic, prospective, multisite, parallel-group comparative effectiveness clinical trial with adaptive allocation

Griffin et al., 2018	Hip arthroscopy versus best conservative care for the treatment of femoroacetabular impingement syndrome (UK FASHIoN): a multicentre randomised controlled trial	peripheral joint pain, 3 years ± 3	1) hip arthroscopy 2)personalised hip therapy (an individualised, supervised, and progressive physiotherapist-led programme of conservative care)	348	2	Another active specific therapy (comparative effectiveness)	hip-related quality of life, as measured by the international Hip Outcome Tool (iHOT-33)	52; 52	pragmatic, multicentre, assessor-blind randomised controlled trial
Griswold et al., 2018	Pragmatically Applied Cervical and Thoracic Nonthrust Manipulation Versus Thrust Manipulation for Patients With Mechanical Neck Pain: A Multicenter Randomized Clinical Trial	back or neck pain, duration approx. 1.4 years ± 2.4	1) Cervical and thoracic non-thrust manipulation (mobilisation) 2) Cervical and thoracic thrust manipulation	103	2	Another active specific therapy (comparative effectiveness)	Neck disability index	point of discharge (flexible timepoint)	multicenter mandomized clinical trial
Jong et al., 2019	Hypnotherapy or transcendental meditation versus progressive muscle relaxation exercises in the treatment of children with primary headaches: a multi-centre, pragmatic, randomised clinical study	Headaches, 2.8 years ± 2.9	1) transcendental meditation 2) hypnotherapy 3) progressive muscle relaxation exercises (active control group	131	3	Two other active specific therapies (comparative effectiveness)	mean frequency of primary headache attacks per 4 weeks; reduction of >50% in the mean frequency of primary headache attacks	NR; 36	pragmatic, randomised controlled clinical trial with three parallel groups
Kortekangas et al., 2018	Three week versus six week immobilisation for stable Weber B type ankle fractures: randomised, multicentre, non-inferiority clinical trial	post-injury pain, 1.7 days ± 1.5	1) conventional six week cast immobilisation 2) three week treatment in a cast 3) three week treatment in a simple orthosis	247	3	Two other active specific therapies (comparative effectiveness)	Olerud-Molander Ankle Score (OMAS)	52; 52	pragmatic, multicentre, randomised, non-inferiortiy trial
Kroenke et al., 2019	Automated Self-management (ASM) vs. ASM-Enhanced Collaborative Care for Chronic Pain and Mood Symptoms: the CAMMPS Randomized Clinical Trial	pain (not further specified), > 10 years in 57.1%	1) Automated Self-management (ASM), consisting of automated monitoring and 9 web-based self-management modules 2) Comprehensive symptom management, combining ASM with collaborative care management by a nurse-physician team	294	2	Another active specific therapy (comparative effectiveness)	Composite pain-anxiety-depression (PAD) z-score of 3 measures: Brief Pain Inventory (BPI), GAD-7 anxiety scale, and PHQ-9 depression scale	NR; 52	randomized comparative effectiveness trial
Laughlin-Tommaso et al., 2019	FIRSTT study: randomized controlled trial of uterine artery embolization vs focused ultrasound surgery	abdominal and other visceral pain, duration not reported	1) Uterine Artery Embolization Procedure 2) Magnetic Resonance–Guided Focused Ultrasound Procedure	83	2	Another active specific therapy (comparative effectiveness)	need for additional disease-related medical intervention	96; 144	randomized controlled trial; women who declined randomization were enrolled in a parallel observational cohort. Comprehensive cohort design used for outcomes analysis.
Mansell et al., 2018	Arthroscopic Surgery or Physical Therapy for Patients with Femoroacetabular Impingement Syndrome	peripheral joint pain, duration not reported	1) arthroscopic hip surgery (next available surgery) 2) physical therapy (12-session supervised clinical rehabilitation programme)	80	2	Another active specific therapy (comparative effectiveness)	Hip Outcome Score (HOS),	104; 104	a single-center, parallel-design randomized controlled trial

McKee et al., 2020	Individual vs. Group Delivery of Acupuncture Therapy for Chronic Musculoskeletal Pain in Urban Primary Care—a Randomized Trial	back or neck pain, Arthritis (RA and OA), > 3 months	1) manual-based acupuncture in 1:1 appointments 2) manual-based acupuncture in a group setting	779	2	Another active specific therapy (comparative effectiveness)	>30% improvement in pain interference measured by Brief Pain Inventory (BPI)	12; 24	randomized, non-blinded comparative effectiveness trial
Mellor et al., 2018	Education plus exercise versus corticosteroid injection use versus a wait and see approach on global outcome and pain from gluteal tendinopathy: prospective, single blinded, randomised clinical trial	peripheral joint pain, median 2 years (IQR 0.7 - 4)	1) a physiotherapy-led education and exercise programme of 14 sessions over eight weeks 2) one corticosteroid injection 3) a wait and see approach	204	3	Another active specific therapy (comparative effectiveness) & Wait & see (but not waitlist)	Global rating of change score; average hip pain intensity over previous week	8 & 52; 52	multicentre, parallel, three group, pragmatic randomised clinical trial
Nicolian et al., 2019	Cost-effectiveness of acupuncture versus standard care for pelvic and low back pain in pregnancy: A randomized controlled trial	back or neck pain, Pelvic girdle pain, 8-10 weeks	standard care + acupuncture (5 sessions by an acupuncturist midwife)	199	2	Treatment / care as usual	percentage of days with daily greatest pain =/< 4/10, self-assessed by numerical rating scale (NRS)	time point of delivery / birth (average approx. 10 weeks from recruitment)	Pragmatic-open-label randomised controlled trial.
Noll et al., 2019	Efficacy of acupressure on quality of recovery after surgery	post-medical intervention pain, hours to days after surgery	1) post-operative care + acupressure therapy 2) normal post-operative care only 3) normal post-operative care + sham acupressure (light touch)	163	3	Treatment / care as usual & Placebo or sham intervention	Quality of Recovery (QoR-15) score	day 3 post-operative; 3 days	single centre, three-group, blind, randomised controlled, pragmatic trial
Northwood et al., 2020	Intensive psychotherapy and case management for Karen refugees with major depression in primary care: a pragmatic randomized control trial	pain (not further specified), duration not reported	a year of psychotherapy and case management	214	2	Treatment / care as usual	Depression and anxiety symptoms (Hopkins Symptom Checklist-25); PTSD symptoms (Posttraumatic Diagnostic Scale); pain (internally developed 5-item Pain Scale); social functioning (internally developed 37-item instrument standardized on refugees) *	NR; 48	pragmatic parallel-group randomized control trial
Nost et al., 2018	Twelve-month effect of chronic pain self-management intervention delivered in an easily accessible primary healthcare service - a randomised controlled trial	pain (not further specified), duration 7–11 months (1.7%); 1–5 years (19.8%); 6–9 years (15.7%); 10 years or more (62.8%)	1) group-based chronic pain self-management course comprising education (incl. CBT strategies for pain management, movement exercises, group discussions and sharing of experiences) 2) a drop-in, low-impact, outdoor physical activity in groups (incl. walking and simple strength exercises)	121	2	Another active specific therapy (comparative effectiveness)	Patient activation assessed using the Patient Activation Measure (PAM-13).	52; 52	open, pragmatic, parallel group randomised controlled trial

O'Brien et al., 2018	Telephone-based weight loss support for patients with knee osteoarthritis: a pragmatic randomised controlled trial	Arthritis (RA and OA), knee pain, 8.2 years ± 9.7	non-disease specific government funded 6-month telephone-based weight management and healthy lifestyle service	120	2	Combined waitlist with option to receive active treatment if recommended by physician	Pain intensity (NRS)	26; 26	two-arm pragmatic parallel group randomised controlled trial, conducted as part of a cohort multiple RCT at a tertiary referral hospital
Palmer et al., 2019	Arthroscopic hip surgery compared with physiotherapy and activity modification for the treatment of symptomatic femoroacetabular impingement: multicentre randomised controlled trial	peripheral joint pain, duration not reported	1) arthroscopic hip surgery 2) goal-based individualised physiotherapy programme, with emphasis on improving core stability and movement control	222	2	Another active specific therapy (comparative effectiveness)	Hip Outcome Score, Activities of Daily Living-subscale (HOS ADL); Change in radiographic index 3 years post- randomisation (not reported here)	32; 156	Two group parallel, assessor blinded, pragmatic randomised controlled trial
Park et al., 2020	Comparative Effectiveness of Chuna Manipulative Therapy for Non-Acute Lower Back Pain: A Multi-Center, Pragmatic, Randomized Controlled Trial	back or neck pain, 6.5 years ± 6.7	Usual care + Chuna manipulative therapy (a Korean style of manipulation)	194	2	Treatment / care as usual plus something else (e.g. advice, education, etc.)	average pain intensity over past week (NRS)	7; 12	parallel, two-armed, multi-centered, assessor blinded, pragmatic, randomized controlled trial
Qi et al., 2018	Acupuncture Combined with Hydrotherapy in Diabetes Patients with Mild Lower-Extremity Arterial Disease: A Prospective, Randomized, Nonblinded Clinical Study	leg pain, 1 year ± 0.2	Per session: 30-min acupuncture + 30-min hydrotherapy exercise (every 2 days for 15 weeks)	126	2	no-treatment group	symptomatic LEAD assessment through ABPI, Edinburgh claudication questionnaire (ECQ) evaluation and leg vascular conductance (LVC) values; laboratory physical status through lower-body flexibility and aerobic walking endurance measures; self-report measures through walking impairment questionnaire (WIQ), EQ-5D, DASS21, and SF-12	21; 21	prospective, randomized, single-center, non-blinded clinical study
Riddle et al., 2019	Pain Coping Skills Training for Patients Who Catastrophize About Pain Prior to Knee Arthroplasty	knee pain, 6 years (IQR 3 - 15)	1) pain coping skills training delivered by physiotherapist (eight 50-minute 1:1 sessions) 2) Arthritis education taught by nurses 3) usual care	402	3	Treatment / care as usual & (Arthritis) education	Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) Pain Scale	52; 52	multicenter, 3-arm, single-blinded, randomized comparative effectiveness trial

Rigoard et al., 2019	Multicolumn spinal cord stimulation for predominant back pain in failed back surgery syndrome patients: a multicenter randomized controlled trial	back or neck pain, post-medical intervention pain, 6.7 years ± 7.2	1) Multicolumn spinal cord stimulation 2) optimal medical management, following guideline and implemented as individualised treatment plan (could include various treatments incl. acupuncture, CBT, physiotherapy, spinal injections/blocks, epidural adhesiolysis, neurotomies)	218	2	Another active specific therapy (comparative effectiveness), 'optimal medical management'	success or failure (success was defined as >=50% reduction in LBP)	26; 104	multicentre, prospective, randomized, open- label, parallel-group, controlled trial
Schneider et al., 2019	Comparative Clinical Effectiveness of Nonsurgical Treatment Methods in Patients with Lumbar Spinal Stenosis A Randomized Clinical Trial	back or neck pain, leg pain, duration of back pain > 6 months in approx 90%, and 62% for leg pain	1) Medical care (medications and/or epidural injections) 2) Group exercise classes 3) Manual therapy/ individualized exercise (spinal mobilization, stretches, and strength training)	259	3	Two other active specific therapies (comparative effectiveness)	Self-reported symptoms (Swiss Spinal Stenosis questionnaire); Physical fucntion using the self-paced walking test	8; 24	3-arm, single-center randomized clinical trial.
Schulz et al., 2019	Spinal manipulative therapy and exercise for older adults with chronic low back pain: a randomized clinical trial	back or neck pain, approx. 13 years ± 15	1) home exercise + spinal manipulative therapy 2) home exercise + supervised rehabilitative exercise 3) home exercise only	241	3	Several other active specific therapies (comparative effectiveness)	Typical level of back pain over the last week (NRS)	short-term (weeks 4 to 12) and long-term profiles (weeks 4 to 52); 52	parallel-group randomized controlled trial
Smith et al., 2018	A Randomized, Pragmatic, Pharmacist-Led Intervention Reduced Opioids Following Orthopedic Surgery	post-medical intervention pain, duration not reported	Pharmacist-led intervention (incl. two brochures on opioid use after surgery and a call from a pharmacist if patients filed an opioid prescription)	561	2	Treatment / care as usual	total dispensing of opioid medications	12 week period; 12	2-arm, randomized, pragmatic clinical trial
Spiegel et al., 2019	Virtual reality for management of pain in hospitalized patients: A randomized comparative effectiveness trial	pain (not further specified), duration not reported	1) access to a library of 21 virtual reality experiences 2) access to specialized television programming to promote health and wellness	140	2	Another active specific therapy (comparative effectiveness)	Pain intensity (NRS)	NR; 3 days	prospective, randomized, comparative effectiveness trial
Verra et al., 2018	Effectiveness of subgroup-specific pain rehabilitation: a randomized controlled trial in patients with chronic back pain	back or neck pain, 9.4 years (range 0.5 - 40.55)	1) 4-week in-house stay at the rehabilitation clinic receiving group therapy incl.: cardiovascular training, relaxation, pain coping training, education, movement analysis, occupational therapy, outdoor activities and qigong/tai chi exercises) 2) above + specific interventions, tailored to the deficits of patients' Multidimensional Pain Inventory-subgroup profile (incl. CBT, paced activity, stress management)	139	2	Another active specific therapy (comparative effectiveness)	Pain-related disability (ODI)	52; 52	single blinded, parallel group, pragmatic randomized controlled trial

Wang et al., 2018a	Effect of a low-intensity, self-management lifestyle intervention on knee pain in community-based young to middle-aged rural women: a cluster randomised controlled trial	peripheral joint pain, duration not reported	A simple 1-year low-intensity self-management lifestyle intervention	525	2	Advice only	Weight gain at 1 year (for the present substudy: knee pain worsening via WOMAC)	52; 104 (not yet published)	1-year pragmatic, cluster randomised controlled trial
Wang et al., 2018b	Effect of tai chi versus aerobic exercise for fibromyalgia: comparative effectiveness randomized controlled trial	diffuse chronic pain (CFS, FM, CRPS), 12 years ± 9	1) Tai Chi (1 weekly session, 12 weeks) 2) Tai Chi (2 weekly sessions, 12 weeks) 3) Tai Chi (1 weekly session, 24 weeks) 4) Tai Chi (2 weekly sessions, 24 weeks) 5) Aerobic exercise (2 weekly sessions, 24 weeks)	226	5	Several other active specific therapies (comparative effectiveness)	Revised Fibromyalgia Impact Questionnaire (FIQR)	24; 52	prospective, randomized, single blind comparative effectiveness trial
Wibault et al., 2018	Structured postoperative physiotherapy in patients with cervical radiculopathy: 6-month outcomes of a randomized clinical trial	back or neck pain, post-medical intervention pain, median duration 1.4 years (IQR 0.75 - 2.5)	Structured Postoperative Physiotherapy	201	2	Treatment / care as usual	Neck disability index	NR; 31 (52 & 104 yet to be published)	prospective, randomised, controlled multi-centre study
Williams et al., 2018	Effectiveness of a healthy lifestyle intervention for chronic low back pain: a randomised controlled trial	back or neck pain, 15.8 years ± 14.2	6-month telephone-based healthy lifestyle coaching service	160	2	waitlist control unaware of which treatment would become available as well as of existence of active group.	average back pain intensity over past week (NRS)	26; 26	2-arm pragmatic parallel group randomized controlled trial, part of a cohort multiple RCT

Supplementary table 2: domain-specific PRECIS-2 ratings

Supplementary table 2: Average ratings per PRECIS-2 domain. *Ratings were made unless the reported information was insufficient. Mean (M) and standard deviations (SD) for n = 57 minus non-rated items. Text for domain specification is quoted from Loudon et al., 2015. Ratings per domain range from 1 (very explanatory) to 5 (very pragmatic) with 3 designating an in-between approach.*

Domain		M	SD	Not rated
Eligibility	*To what extent are the participants in the trial similar to those who would receive this intervention if it was part of usual care?*	3.97	1.1	0
Recruitment	*How much extra effort is made to recruit participants over and above what would be used in the usual care setting to engage with patients?*	3.03	1.6	10
Setting	*How different are the settings of the trial from the usual care setting?*	3.79	1.4	1
Organisation	*How different are the resources, provider expertise, and the organisation of care delivery in the intervention arm of the trial from those avail- able in usual care?*	3.5	1.3	6
Flexibility (delivery)	*How different is the flexibility in how the intervention is delivered and the flexibility anticipated in usual care?*	3.51	1.2	1
Flexibility (adherence)	*How different is the flexibility in how participants are monitored and encouraged to adhere to the intervention from the flexibility anticipated in usual care?*	4.34	1.0	1
Follow-up	*How different is the intensity of measurement and follow-up of participants in the trial from the typical follow-up in usual care?*	3.24	1.3	0
Primary outcome	*To what extent is the trial's primary outcome directly relevant to participants?*	4.46	1.0	0
Primary analysis	*To what extent are all data included in the analysis of the primary outcome?*	4.3	1.3	0

Medline® search strategy

Search string A (population)

1. exp Pain/

2. exp Rheumatic Diseases/

3. Fatigue Syndrome, Chronic/

4. exp Myofascial Pain Syndromes/

5. exp Tendinopathy/

6. exp Arthritis/

7. Bursitis/

8. exp metatarsalgia/ or patellofemoral pain syndrome/ or shoulder impingement syndrome/ or temporomandibular joint disorders/

9. Trigger Points/

10. intervertebral disc degeneration/ or spinal stenosis/

11. exp headache disorders/ or exp headache disorders, primary/ or exp headache disorders, secondary/

12. facial neuralgia/ or exp trigeminal nerve diseases/

13. brachial plexus neuropathies/ or complex regional pain syndromes/ or diabetic neuropathies/ or exp mononeuropathies/ or exp nerve compression syndromes/ or exp neuralgia/ or peripheral nerve injuries/ or exp polyneuropathies/ or radiculopathy/ or small fiber neuropathy/

14. pain*.mp.

15. nocicept*.mp.

16. neuropath*.mp.

17. nociplast*.mp.

18. central sensiti#ation.mp

19. ache*.mp.

20. discomfort.mp.

21. hurt*.mp.

22. cramp*.mp.

23. spasm.mp.

24. Spasm/

25. sprain*.mp.

26. "Sprains and Strains"/

27. sprain*2.tw.

28. tenderness.mp.

29. low back pain.mp.

30. neck pain.mp.

31. shoulder pain.mp.

32. knee pain.mp.

33. radicul*.mp.

34. headache*.mp.

35. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34

Search string B (study design or description)

1. Pragmatic Clinical Trials as Topic/

2. (pragmatic adj3 trial*).mp.

3. (pragmatic adj3 stud*).mp.

4. pragmatic trial*.mp.

5. pragmatic randomized.mp.

6. pragmatic randomised.mp.

7. pragmatic clinical.mp.

8. pragmatic stud*.mp.

9. randomized pragmatic.mp.

10. randomised pragmatic.mp.

11. practical randomized.mp.

12. practical randomised.mp.

13. practical trial*.mp.

14. practical clinical trial*.mp.

15. relative effectiveness.mp.

16. comparative effectiveness.mp.

17. Comparative Effectiveness Research/

18. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17

Combined search:

Search string A (line 35) and Search string B (line 18)

Limits: Human, 2018 – current