Coronary Care Update

November 2025

Welcome to the latest copy of the Coronary Care Update. The aim of this publication is to bring together a range of recently published research and guidance that will help you make evidence-based decisions.

Accessing Articles

The following abstracts are taken from a selection of recently published articles. If the article is available electronically, there will be a blue link in the abstract. Press CTRL and click to open the link. You will need to be registered for NHS Athens (see below) to be able to access the full text. If the full text is not available electronically, we should be able to obtain the document through our document supply services. Please fill in the pre-populated form or contact the library using the details below.

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Please contact Holly if you would like more information, or further evidence searches: holly.cook3@nhs.net.

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New / Changes to NICE Guidance (past and next 6 months)

Drug-eluting stents for treating coronary artery disease: late-stage assessment
Health technology evaluation
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Published: 06 May 2025
https://www.nice.org.uk/guidance/hte26

Venoarterial Extracorporeal membrane oxygenation (VA ECMO) for extracorporeal cardiopulmonary resuscitation (ECPR) in adults in refractory cardiac arrest
In development
Reference number:GID-IPG10431
Expected publication date: 15 October 2025
https://www.nice.org.uk/guidance/indevelopment/gid-ipg10431

Digital platforms to support cardiac rehabilitation: early value assessment
In development
Reference number:GID-HTE10060
Expected publication date: 18 November 2025
https://www.nice.org.uk/guidance/indevelopment/gid-hte10060

Chronic heart failure in adults: diagnosis and management
In development
Reference number:GID-NG10405
Expected publication date: 03 September 2025
https://www.nice.org.uk/guidance/indevelopment/gid-ng10405

Venoarterial extracorporeal membrane oxygenation (VA ECMO) for acute heart failure in adults
In development
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Venoarterial Extracorporeal membrane oxygenation (VA ECMO) for postcardiotomy cardiogenic shock in adults
In development

Reference number:GID-IPG10432
Expected publication date: 15 October 2025
https://www.nice.org.uk/guidance/indevelopment/gid-ipg10432

Digital platforms to support cardiac rehabilitation: early value assessment
In development
Reference number:GID-HTE10060
Expected publication date: 18 November 2025
https://www.nice.org.uk/guidance/indevelopment/gid-hte10060

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Published: 10 July 2025
https://www.nice.org.uk/guidance/ipg806

Leadless cardiac pacemaker implantation for bradyarrhythmias
In development
Reference number:GID-IPG10340
Expected publication date: 13 November 2025
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Alcohol-mediated perivascular renal sympathetic denervation for resistant hypertension
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Reference number:IPG805
Published: 24 June 2025
https://www.nice.org.uk/guidance/ipg805

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Reference number:GID-HTE10027
Expected publication date: 21 August 2025
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Reference number:GID-TA11248
Expected publication date: 03 September 2025
https://www.nice.org.uk/guidance/indevelopment/gid-ta11248

A selection of papers from Medline, Embase and CINHAL (< 6months)

1. Cardiac care at the coalface

Item Type: Journal Article

Publication Date: 2025

Journal: World of Irish Nursing & Midwifery 33(2), pp. 34

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=183882323&profid=ehost

2. High intensity exercise programme in patients with hypertrophic cardiomyopathy: a randomized trial

Item Type: Journal Article

Authors: Basu, Joyee;Nikoletou, Dimitra;Miles, Chris;MacLachlan, Hamish;Parry-Williams, Gemma;Tilby-Jones, Fred;Bulleros, Paulo;Fanton, Zephryn;Baker, Claire;Purcell, Shane;Lech, Carmen;Chapman, Tracy;Sage, Peter;Wahid, Shams;Sheikh, Nabeel;Jayakumar, Shruti;Malhotra, Aneil;Keteepe-Arachi, Tracey;Gray, Belinda;Finocchiaro, Gherardo, et al

Publication Date: 2025

Journal: European Heart Journal 46(19), pp. 1803–1815

Abstract: Background and Aims: The feasibility and impact of high intensity exercise programmes in patients with hypertrophic cardiomyopathy (HCM) are unknown. This study was conducted to determine the feasibility of a high intensity exercise programme and explore safety and efficacy outcomes in patients with HCM.; **Methods:** Participants were randomized to a 12-week supervised exercise programme (n = 40) in addition to

usual care, or usual care alone (n = 40). All participants underwent assessment at baseline and 12 weeks. The exercise group was re-evaluated 6 months post-programme. Feasibility was assessed by (i) recruitment, adherence, and retention rates; (ii) staffing ratios; (iii) logistics; and (iv) acceptability of the intervention. The primary exploratory safety outcome was a composite of arrhythmia-related events. Exploratory secondary outcomes included changes in (i) cardiorespiratory fitness; (ii) cardiovascular risk factors; and (iii) quality of life, anxiety, and depression scores.; **Results:** Overall, 67 (84%) participants completed the study (n = 34 and n = 33 in the exercise and usual care groups, respectively). Reasons for non-adherence included travel, work, and family commitments. Resource provision complied with national cardiac rehabilitation standards. There was no difference between groups for the exploratory safety outcome (P = .99). At 12 weeks, the exercise group had a greater increase in peak oxygen consumption (VO2) +4.1 mL/kg/min, 95% confidence interval (CI) 1.1, 7.1] and VO2 at anaerobic threshold (+2.3 mL/kg/min, 95% CI 0.4, 4.1), lower systolic blood pressure (-7.3 mmHg, 95% CI -11.7, -2.8) and body mass index (-0.8 kg/m2, 95% CI -1.1, -0.4), and greater improvement in hospital anxiety (-3, 95% CI -4.3, -1.7) and depression (-1.7, 95% CI -2.9, -0.5) scores, compared to the usual care group. Most exercise gains dissipated at 6 months.; **Conclusions:** A high intensity exercise programme is feasible in patients with HCM, with apparent cardiovascular and psychological benefits, and no increase in arrhythmias. A large-scale study is required to substantiate findings and assess long-term safety of high intensity exercise in HCM. (© The Author(s) 2025. Published by Oxford University Press on behalf of the European Society of Cardiology.)

Access or request full text: https://libkey.io/10.1093/eurheartj/ehae919

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40037382&profid=ehost

3. "They don't know what it's really like:" qualitative insights into inpatient cardiac nurses' perceived workload

Item Type: Journal Article

Authors: Benjamin, Ellen;Romain, Sarah;Vital, Cidalia;Blake, Connie;Peterson, Cynthia and Chung, Joohyun

Publication Date: 2025

Journal: BMC Nursing 24(1), pp. 1–12

Abstract: Background: Measurements of nursing workload often fail to reflect the complexity of nursing work. Nurses' perceived workload is shaped by many factors, including patient characteristics, personal, social, organizational, and environmental factors. There is a demonstrated interest in developing more comprehensive nurse workload measurement strategies, but little research has employed qualitative methods to investigate the beliefs and experiences of frontline staff. The purpose of this study was to explore inpatient nurses' perceptions of their workload and the factors that impact their percieved workload levels. **Methods:** This was qualitative study using focus groups. Participants were recruited from the cardiac floors of an urban, academic medical center. A total of 17 nurses participated, including nurses from bedside, charge, educator, and nurse manager roles. Focus group transcripts were analyzed by a team of qualitative investigators using conventional content analysis. **Results:** Inpatient nurses' perceived workload is shaped by their work volume, work attributes, and their ability to complete required tasks while providing meaningful, impactful care. The volume of nursing work is comprised of patient-focused, unit-focused, and institutional-focused tasks. Important work attributes include its perceived urgency, difficulty, alignment to the nurse and unit, interference, unpredictability, and individual nursing burden. Overall, participants expressed deep concern over high workloads that compromise holistic nursing care. **Conclusion:** Strategies to more comprehensively measure nurses' perceived workload should account for the breadth and complexity of nursing work. Nurses should advocate for workload measurement systems that more closely reflect their subjective work

experiences. Clinical trial registration number: Not applicable.

Access or request full text: https://libkey.io/10.1186/s12912-025-03723-4

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=187384449&profid=ehost

4. Rehabilitation using virtual gaming for Hospital and hOMe-Based training for the Upper limb in acute and subacute Stroke (RHOMBUS II): results of a feasibility randomised controlled trial

Item Type: Journal Article

Authors: Butcher, Tom;Warland, Alyson;Stewart, Victoria;Aweid, Basaam;Samiyappan, Arul;Kal, Elmar;Ryan, Jennifer;Athanasiou, Dimitrios A.;Baker, Karen;Singla-Buxarrais, Guillem;Anokye, Nana;Pound, Carole;Gowing, Francesca;Norris, Meriel and Kilbride, Cherry

Publication Date: 2025

Journal: BMJ Open 15(1), pp. e089672

Abstract: **Objective:** To investigate the safety, feasibility and acceptability of the Neurofenix platform for upper-limb rehabilitation in acute and subacute stroke.; **Design:** A feasibility randomised controlled trial with a parallel process evaluation.; Setting: Acute Stroke Unit and participants' homes (London, UK).; **Participants:** 24 adults (> 18 years), acute and subacute poststroke, new unilateral weakness, scoring 9-25 on the Motricity Index (elbow and shoulder), with sufficient cognitive and communicative abilities to participate.; Interventions: Participants randomised to the intervention or control group on a 2:1 ratio. The intervention group (n=16) received usual care plus the Neurofenix platform for 7 weeks. The control group (n=8) received usual care only.; **Outcomes:** Safety was assessed through adverse events (AEs), pain, spasticity and fatigue. Feasibility was assessed through training and support requirements and intervention fidelity. Acceptability was assessed through a satisfaction questionnaire. Impairment, activity and participation outcomes were also collected at baseline and 7 weeks to assess their suitability for use in a definitive trial.; **Randomisation:** Computer-generated, allocation sequence concealed by opaque, sealed envelopes.; **Blinding:** Participants and assessors were not blinded; statistician blinded for data processing and analysis.; **Results:** 192 stroke survivors were screened for eligibility, and 24 were recruited and randomised. Intervention group: n=16, mean age 66.5 years; median 9.5 days post stroke.; Control Group: n=8, mean age 64.6 years; median 17.5 days post stroke. Three participants withdrew before the 7-week assessment, n=21 included in the analysis (intervention group n=15; control group n=6). No significant group differences in fatigue, spasticity, pain scores or total number of AEs. The median (IQR) time to train participants was 98 (64) min over 1-3 sessions. Participants trained with the platform for a median (range) of 11 (1-58) hours, equating to 94 min extra per week. The mean satisfaction score was 34.9 out of 40.; **Conclusion:** The Neurofenix platform is safe, feasible and well accepted as an adjunct to usual care in acute and subacute stroke rehabilitation. There was a wide range of engagement with the platform in a cohort of stroke survivors which was varied in age and level of impairment. Recruitment, training and support were manageable and completion of data was good, indicating that a future randomised controlled trial would be feasible.; Trial Registration Number: ISRCTN11440079. (© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ Group.)

Access or request full text: https://libkey.io/10.1136/bmjopen-2024-089672

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39880460&profid=e

host

5. Continuous risk monitoring and management of heart failure: Rationale and design of the ALLEVIATE-HF trial

Item Type: Journal Article

Authors: Butler, Javed;Kahwash, Rami;Khan, Muhammad Shahzeb;Gerritse, Bart;Laechelt, Aimee;Wehking, Jennifer;Sarkar, Shantanu;van Dorn, Brian;Laager, Verla;Patel, Nirav and Zile, Michael R.

Publication Date: 2025

Journal: European Journal of Heart Failure 27(4), pp. 697–706

Abstract: Aims: Early identification and management of worsening heart failure (HF) is necessary to prevent disease progression and hospitalizations. The ALLEVIATE-HF (Algorithm Using LINQ Sensors for Evaluation and Treatment of Heart Failure) trial is a prospective, randomized, controlled, double-blind, multicentre trial that aims to assess the safety and efficacy of using the Reveal LINQ™ insertable cardiac monitor (ICM) in patients with HF to continuously monitor and evaluate HF risk status and guide timely interventions.; **Methods:** The ICM algorithm uses parameters derived from electrocardiogram (atrial fibrillation AF], ventricular rate during AF, heart rate variability, and night heart rate), three-axis accelerometer (patient activity duration), and subcutaneous bioimpedance (fluid volume, respiration rate). The trial will enroll ~760 patients with New York Heart Association class II or III HF with recent hospitalization for HF or needing intravenous diuretics in the outpatient setting or elevated natriuretic peptide levels, who do not have an implanted cardiac implantable electronic device or haemodynamic monitor. Patients are randomized to an observation or an intervention arm, where the latter will receive an intervention pathway with remote nurses implementing individualized pro re nata (PRN or 'as needed') 4-day medication interventions for acute volume management upon high risk. After 13 months of randomized follow-up, all patients enter an unblinded prolonged follow-up phase with PRN interventions upon high risk. The primary hierarchical composite endpoint for the study includes cardiovascular death, HF events, Kansas City Cardiomyopathy Questionnaire score, and 6-min walk test distance.; **Conclusion:** ALLEVIATE-HF will evaluate how ICM-based HF management can impact the outcomes of patients with HF regardless of ejection fraction. (© 2025 The Author(s). European Journal of Heart Failure published by John Wiley & Sons Ltd on behalf of European Society of Cardiology.)

Access or request full text: https://libkey.io/10.1002/ejhf.3595

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39871510&profid=ehost

6. Collaboration on the optimal timing of anticoagulation after ischaemic stroke and atrial fibrillation: a systematic review and prospective individual participant data meta-analysis of randomised controlled trials (CATALYST)

Item Type: Journal Article

Authors: Dehbi, Hakim-Moulay;Fischer, Urs;Åsberg, Signild;Milling, Truman J.;Abend, Stefanie;Ahmed, Norin;Branca, Mattia;Davis, Lisa A.;Engelter, Stefan T.;Freemantle, Nick;Gattringer, Thomas;Ghukasyan Lakic, Tatevik;Hijazi, Ziad;James, Martin;Koga, Masatoshi;Lawrence, Patrick;Lemmens, Robin;Lip, Gregory Y. H.;Massingham, Susan;Nash, Philip S., et al

Publication Date: 2025

Journal: Lancet (London, England) 406(10498), pp. 43–51

Abstract: **Background:** The optimal timing of oral anticoagulation for prevention of early ischaemic stroke recurrence in people with acute ischaemic stroke and atrial fibrillation remains uncertain. We aimed to estimate the effects of starting a direct oral anticoagulant (DOAC) early (≤4 days) versus later (≥5 days) after onset of ischaemic stroke.; **Methods:** For this systematic review and meta-analysis we searched the electronic databases PubMed, Cochrane Central Register of Controlled Trials, and Embase for randomised controlled trials published from inception until March 16, 2025. We included clinical trials if they were pre-registered, randomised, investigated clinical outcomes, and included participants with acute ischaemic stroke and atrial fibrillation who were assigned to either early or later initiation (≤4 days vs ≥5 days) of a DOAC in approved doses. The primary outcome was a composite of recurrent ischaemic stroke, symptomatic intracerebral haemorrhage, or unclassified stroke within 30 days of randomisation. Secondary outcomes included components of the primary composite within 30 days and 90 days. We did a one-stage individual patient data meta-analysis with the use of a generalised linear mixed-effects model, accounting for between-trial differences, to generate treatment effects, which are presented as odds ratios (ORs) and 95% CIs. This study is registered with PROSPERO, CRD42024522634.; **Findings:** We identified four eligible trials: TIMING (NCT02961348), ELAN (NCT03148457), OPTIMAS (NCT03759938), and START (NCT03021928). After excluding participants who opted out of data sharing or were not randomly assigned to DOAC initiation within 4 days or at day 5 or later, we included 5441 participants (mean age 77·7 years SD 10·0], 2472 45·4%] women, median National Institutes of Health Stroke Scale 5 IQR 3-10]) in the individual patient data meta-analysis. We obtained primary outcome data for 5429 participants. The primary outcome occurred in 57 (2·1%) of 2683 participants who started DOAC early versus 83 (3·0%) of 2746 participants who started later (OR 0·70, 95% CI 0·50-0·98, p=0·039). Early DOAC reduced the risk of recurrent ischaemic stroke (45 1·7%] of 2683 vs 70 2·6%] of 2746, OR 0·66, 0·45-0·96, p=0·029). There was no evidence of an increase in symptomatic intracerebral haemorrhage with early DOAC initiation (10 0·4%] of 2683 vs 10 0·4%] of 2746, OR 1·02, 0·43-2·46, p=0·96).; **Interpretation:** For people with acute ischaemic stroke and atrial fibrillation, early DOAC initiation (within 4 days) reduced the risk of the composite outcome of recurrent ischaemic stroke, symptomatic intracerebral haemorrhage, or unclassified stroke within 30 days. These findings support early DOAC initiation in clinical practice.; **Funding:** The CATALYST collaboration was facilitated by a British Heart Foundation grant for OPTIMAS (grant reference number CS/17/6/33361), with support from researchers at the National Institute for Health and Care Research University College London Hospitals Biomedical Research Centre, and a Swiss National Science Foundation grant for ELAN (32003B_197009; 32003B_169975).

Access or request full text: https://libkey.io/10.1016/S0140-6736(25)00439-8

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40570866&profid=ehost

7. Rehabilitation at Home Using Mobile Health for Older Adults Hospitalized for Ischemic Heart Disease: The RESILIENT Randomized Clinical Trial

Item Type: Journal Article

Authors: Dodson, John A.;Adhikari, Samrachana;Schoenthaler, Antoinette;Hochman, Judith S.;Sweeney, Greg;George, Barbara;Marzo, Kevin;Jennings, Lee A.;Kovell, Lara C.;Vorsanger, Matthew;Pena, Stephanie;Meng, Yuchen;Varghese, Ashwini;Johanek, Camila;Rojas, Michelle;McConnell, Riley;Whiteson, Jonathan and Troxel, Andrea B.

Publication Date: 2025

Journal: JAMA Network Open 8(1), pp. e2453499

Abstract: Importance: Among older adults with ischemic heart disease, participation in traditional ambulatory cardiac rehabilitation (CR) remains low. While mobile health CR (mHealth-CR) provides a novel opportunity to deliver care, age-specific impairments to technology use may limit uptake, and efficacy data are currently lacking.; **Objective:** To test whether mHealth-CR improves functional capacity in older adults.; **Design, Setting, and Participants**: The RESILIENT phase 2, multicenter, randomized clinical trial recruited patients aged 65 years or older with ischemic heart disease (defined as a hospital visit for myocardial infarction or coronary revascularization) from 5 academic hospitals in New York, Connecticut, and Massachusetts between January 9, 2020, and April 22, 2024.; Intervention: Participants were randomized 3:1 to mHealth-CR or usual care. mHealth-CR consisted of commercially available software delivered on a tablet computer, coupled with remote monitoring and weekly exercise therapist telephone calls, delivered over a 3-month duration. As RESILIENT was a trial conducted in a routine care setting to inform decision-making, participants in both arms were also allowed to receive traditional CR at their cardiologist's discretion.; **Main Outcomes and Measures:** The primary outcome was change from baseline to 3 months in functional capacity, measured by 6-minute walk distance (6MWD). Secondary outcomes were health status (12-Item Short Form Health Survey SF-12]), residual angina, and impairment in activities of daily living.; **Results:** A total of 400 participants (median age, 71.0 years range, 65.0-91.0 years]; 291 72.8%] male) were randomized to mHealth-CR (n = 298) or usual care (n = 102) and included in the intention-to-treat analysis. Of those, 356 participants (89.0%) returned in person for 6MWD assessment at 3 months. For the primary outcome, there was no adjusted difference in 6MWD between participants receiving mHealth-CR vs usual care (15.6 m; 95% CI, -0.3 to 31.5 m; P = .06). Among subgroups, there was an improvement in 6MWD among women (36.6 m; 95% CI, 8.7-64.4 m). There were no differences in any secondary outcomes between groups (eg, adjusted difference in SF-12 physical component scores at 3 months: -1.9 points; 95% CI, -3.9 to 0.2 points). Based on inverse propensity score weighting, there was no effect of mHealth-CR on 6MWD among those who did not attend traditional CR (25.7 m; 95% CI, -8.7 to 60.2 m).; **Conclusions and Relevance:** In this randomized clinical trial of mHealth-CR vs usual care, mHealth-CR did not significantly increase 6MWD or result in improvements in secondary outcomes. The findings suggest the older adult population may require more age-tailored mHealth strategies to effectively improve outcomes.; Trial Registration: ClinicalTrials.gov Identifier: NCT03978130.

Access or request full text: https://libkey.io/10.1001/jamanetworkopen.2024.53499

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39775808&profid=ehost

8. Fluid status assessment in heart failure patients: pilot validation of the Maastricht Decompensation Questionnaire.

Item Type: Journal Article

Authors: Gingele A.J.;Beckers F.;Boyne J.J. and BrunnerLa Rocca, H. P.

Publication Date: 2025

Journal: Netherlands Heart Journal 33(1), pp. 7–13

Abstract: Background: eHealth products have the potential to enhance heart failure (HF) care by identifying at-risk patients. However, existing risk models perform modestly and require extensive data, limiting their practical application in clinical settings. This study aims to address this gap by validating a more suitable risk model for eHealth integration.
Method(s): We developed the Maastricht Decompensation Questionnaire (MDQ) based on expert opinion to assess HF patients' fluid status using common signs and symptoms. Subsequently, the MDQ was

administered to a cohort of HF outpatients at Maastricht University Medical Centre. Patients with >=10 MDQ points were categorised as 'decompensated', patients with <10 MDQ points as 'not decompensated'. HF nurses, blinded to MDQ scores, served as the gold standard for fluid status assessment. Patients were classified as 'correctly' if MDQ and nurse assessments aligned; otherwise, they were classified as 'incorrectly'. **Result(s):** A total of 103 elderly HF patients were included. The MDQ classified 50 patients as 'decompensated', with 17 of them being correctly classified (34%). Additionally, 53 patients were categorised as 'not decompensated', with 48 of them being correctly classified (90%). The calculated area under the curve was 0.69 (95% confidence interval: 0.57-0.81; p< 0.05). Cronbach's alpha reliability coefficient for the MDQ was 0.85.
Conclusion(s): The MDQ helps identify decompensated HF patients through clinical signs and symptoms. Further trials with larger samples are needed to confirm its validity, reliability and applicability. Tailoring the MDQ to individual patient profiles may improve its accuracy.

Access or request full text: https://libkey.io/10.1007/s12471-024-01921-4

9. Withdrawal of antihypertensive drugs in older people

Item Type: Journal Article

Authors: Gnjidic, Danijela;Langford, Aili V.;Jordan, Vanessa;Sawan, Mouna;Sheppard, James P.;Thompson, Wade;Todd, Adam;Hopper, Ingrid;Hilmer, Sarah N. and Reeve, Emily

Publication Date: 2025

Journal: The Cochrane Database of Systematic Reviews 3, pp. CD012572

Abstract: Background: Hypertension is an important risk factor for subsequent cardiovascular events, including ischaemic and haemorrhagic stroke, myocardial infarction, and heart failure, as well as chronic kidney disease, cognitive decline, and premature death. Overall, the use of antihypertensive medications has led to a reduction in cardiovascular disease, morbidity rates, and mortality rates. However, the use of antihypertensive medications is also associated with harms, especially in older people, including the development of adverse drug reactions and drug-drug interactions, and can contribute to increasing medication-related burden. As such, discontinuation of antihypertensives may be considered appropriate in some older people.; **Objectives:** To evaluate the effects of withdrawal of antihypertensive medications used for hypertension or primary prevention of cardiovascular disease in older adults.; **Search Methods:** For this update, we searched the Cochrane Hypertension Specialised Register, CENTRAL (2022, Issue 9), Ovid MEDLINE, Ovid Embase, the WHO ICTRP, and ClinicalTrials.gov up to October 2022. We also conducted reference checking and citation searches, and contacted study authors to identify any additional studies when appropriate. There were no language restrictions on the searches.; **Selection Criteria:** We included randomised controlled trials (RCTs) of withdrawal versus continuation of antihypertensive medications used for hypertension or primary prevention of cardiovascular disease in older adults (defined as 50 years of age and over). Eligible participants were living in the community, residential aged care facilities, or based in hospital settings. We included trials evaluating the complete withdrawal of all antihypertensive medication, as well as those focusing on a dose reduction of antihypertensive medication.; **Data Collection and Analysis**: We compared the intervention of discontinuing or reducing the dose of antihypertensive medication to continuing antihypertensive medication using mean differences (MD) and 95% confidence intervals (95% CIs) for continuous variables, and Peto odds ratios (ORs) and 95% CI for binary variables. Our primary outcomes were mortality, myocardial infarction, and the development of adverse drug reactions or adverse drug withdrawal reactions. Secondary outcomes included hospitalisation, stroke, blood pressure (systolic and diastolic), falls,

quality of life, and success in withdrawing from antihypertensives. Two review authors independently, and in duplicate, conducted all stages of study selection, data extraction, and quality assessment.; **Main Results:** We identified no new studies in this update. Six RCTs from the original review met the inclusion criteria and were included in the review (1073 participants). Study duration and follow-up ranged from 4 weeks to 56 weeks. Meta-analysis of studies showed that discontinuing antihypertensives, compared to continuing, may result in little to no difference in all-cause mortality (OR 2.08, 95% CI 0.79 to 5.46; P = 0.14, I 2 = 0%; 4 studies, 630 participants; low certainty of evidence), and that the evidence is very uncertain about the effect on myocardial infarction (OR 1.86, 95% CI 0.19 to 17.98; P = 0.59, I 2 = 0%; 2 studies, 447 participants; very low certainty of evidence). Meta-analysis was not possible for the development of adverse drug reactions and withdrawal reactions; the evidence is very uncertain about the effect of antihypertensive discontinuation on the risk of adverse drug reactions (very low certainty of evidence), and the included studies did not assess adverse drug withdrawal reactions specifically. One study reported on hospitalisations; discontinuing antihypertensives may result in little to no difference in hospitalisation (OR 0.83, 95% CI 0.33 to 2.10; P = 0.70; 1 study, 385 participants; low certainty of evidence). Meta-analysis showed that discontinuing antihypertensives may result in little to no difference in stroke (OR 1.44, 95% CI 0.25 to 8.35; P = 0.68, I 2 = 6%; 3 studies, 524 participants; low certainty of evidence). Blood pressure may be higher in the discontinuation group than the continuation group (systolic blood pressure: MD 9.75 mmHg, 95% CI 7.33 to 12.18; P < 0.001, I 2 = 67%; 5 studies, 767 participants; low certainty of evidence; and diastolic blood pressure: MD 3.5 mmHg, 95% CI 1.82 to 5.18; P < 0.001, I 2 = 47%; 5 studies, 768 participants; low certainty of evidence). No studies reported falls. The sources of bias included selective reporting (reporting bias), lack of blinding of outcome assessment (detection bias), incomplete outcome data (attrition bias), and lack of blinding of participants and personnel (performance bias).; **Authors' Conclusions:** The main conclusions from the 2020 review still apply. Discontinuing antihypertensives may result in little to no difference in mortality, hospitalisation, and stroke. The evidence is very uncertain about the effect of discontinuing antihypertensives on myocardial infarction and adverse drug reactions and adverse drug withdrawal reactions. Discontinuing antihypertensives may result in an increase in blood pressure. There was no information about the effect on falls. The evidence was of low to very low certainty, mainly due to small studies and low event rates. These limitations mean that we cannot draw any firm conclusions about the effect of deprescribing antihypertensives on these outcomes. Future research should focus on populations with the greatest uncertainty of the benefit:risk ratio for the use of antihypertensive medications, such as those with frailty, older age groups, and those taking polypharmacy, and measure clinically important outcomes such as adverse drug events, falls, and quality of life.

Access or request full text: https://libkey.io/10.1002/14651858.CD012572.pub3

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40162571&profid=ehost

10. Impact of Noninvasive Ventilation Before and After Cardiac Surgery for Preventing Cardiac and Pulmonary Complications: A Clinical Randomized Trial

Item Type: Journal Article

Authors: Goret, Marion;Pluchon, Kevin;Le Mao, Raphaël;Badra, Ali;Oilleau, Jean-Ferréol;Morvan, Yohann;Beaumont, Marc;Desanglois, Gwenaëlle;Guegan, Marie;Barnier, Aude;Gut-Gobert, Christophe;Tromeur, Cécile;Leroyer, Christophe;Choplain, Jean-Noël;Khalifa, Ahmed;Bezon, Eric and Couturaud, Francis

Publication Date: 2025

Journal: Chest 167(6), pp. 1727–1736

Abstract: Background: The immediate postoperative period after heart surgery poses a substantial risk of life-threatening complications, notably acute pulmonary and cardiac failure. Use of noninvasive ventilation (NIV) may reduce the incidence of pulmonary or heart failure, or both.; **Research Question:** Is the use of NIV before and after cardiac surgery associated with a lower rate of acute pulmonary and heart failure in patients at risk of postoperative complications?; **Study Design and Methods:** We designed a prospective, randomized, monocentric trial comparing preoperative and postoperative NIV in cardiac surgery with standard care. Adult patients classified as being at risk of postoperative cardiac or pulmonary failure were allocated to receive NIV for 5 days before and 5 days after surgery in addition to usual care vs usual care alone. The primary outcome was the composite of predefined and adjudicated cardiorespiratory failure at 1 month after cardiac surgery.; **Results:** Two hundred sixteen patients were included. During the 1-month follow-up period after surgery, the composite outcome occurred in 59 of 107 patients (55.1%) in the NIV group and in 87 of 109 patients (79.8%) in the no NIV group (relative risk, 0.69; 95% CI, 0.57-0.84; P < .001). The benefit persisted at 3 months. No difference between the 2 groups was found in terms of intubation need and length of hospital stay in cardiac and pulmonary surgery ICUs and in cardiac and pulmonary surgery units.; **Interpretation**: Our results indicate that the use of NIV before and after cardiac surgery reduces the rate of cardiopulmonary failure after high-risk cardiac surgery.; Clinical Trial Registry: ClinicalTrials.gov; No.: NCT02302300; URL: www.; Clinicaltrials: gov.

Access or request full text: https://libkey.io/10.1016/j.chest.2025.02.010

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39984118&profid=ehost

11. Feasibility of a Finger Food Menu for Older Adults Post Stroke in Hospital

Item Type: Journal Article

Authors: Heelan, Milly;Prieto, Jacqui;Barnes, Colin John and Green, Sue M.

Publication Date: 2025

Journal: Journal of Human Nutrition and Dietetics : The Official Journal of the British Dietetic Association 38(3), pp. e70061

Abstract: Background: Many people in hospital after a stroke are at risk of reduced food intake, leading to less effective post-stroke recovery. Finger foods (foods that can be easily transferred from the plate to the mouth without cutlery) have the potential to increase food intake and enable mealtime independence. However, the components of a well-designed trial evaluating a finger food menu in a hospital are unclear, with little published evaluation of how to implement a finger food menu in hospitals. This study aimed to implement a finger food menu and to evaluate the feasibility of using it in a stroke rehabilitation ward.; **Methods:** The feasibility study was a prospective, before-and-after intervention study. Thirty-one hospital inpatients from a stroke ward in a National Health Service hospital in the United Kingdom were included. A finger food menu was offered over two lunchtime meals and compared with the standard lunchtime menu. Feasibility was assessed by evaluating recruitment and retention of patients to the study, feasibility of data collection methods, interrater reliability of plate waste estimations using digital photography and assessing change in food intake. Intervention costs were assessed to support a cost-consequence analysis. Barriers and facilitators to implementation were evaluated through qualitative observations.; **Results:** Thirty-one participants were recruited (mean age 80, SD 8.5). Retention to the study was low, with 40% of patient participants not completing the study. Attrition was due to participants moving from the study ward. Dietary intake measures were successful via plate waste photography with good interrater reliability κ = 0.709 (95% CI: 0.64-0.77). A cost-consequence analysis identified food costs and staff costs as key to delivering the finger food menu. The ward context and use of an internal facilitator to support the delivery of the intervention are important factors

to consider.; **Conclusion:** Using finger foods in hospitals for older people after stroke is feasible and warrants a future cluster randomised control trial with minor adaptions to the protocol. (© 2025 The Author(s). Journal of Human Nutrition and Dietetics published by John Wiley & Sons Ltd on behalf of British Dietetic Association.)

Access or request full text: https://libkey.io/10.1111/jhn.70061

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40350895&profid=ehost

12. Termination of Resuscitation Rules for In-Hospital Cardiac Arrest

Item Type: Journal Article

Authors: Holmberg, M. J.;Granfeldt, A.;Moskowitz, A.;Lauridsen, K. G.;Bergum, D.;Christiansen, C. F.;Nolan, J. P. and Andersen, L. W.

Publication Date: 2025

Journal: JAMA Internal Medicine 185(4), pp. 391–397

Abstract: Importance: There are no validated decision rules for terminating resuscitation during in-hospital cardiac arrest. Decision rules may guide termination and prevent inappropriate early termination of resuscitation.; **Objective:** To develop and validate termination of resuscitation rules for in-hospital cardiac arrest.; **Design, Setting, and Participants:** In this prognostic study, potential decision rules were developed using a national in-hospital cardiac arrest registry from Denmark (data from 2017 to 2022) and validated using registries from Sweden (data from 2007 to 2021) and Norway (data from 2021 to 2022). Six variables (age, initial rhythm, witnessed status, monitored status, intensive care unit location, and resuscitation duration) were considered based on their bedside availability. Prognostic metrics were computed for all possible variable combinations. CIs were obtained using bootstrapping. Rules with a false-positive rate below 1% (predicting death in patients who might otherwise survive) and a positive rate of more than 10% (proportion of all cases for whom termination is proposed) were considered appropriate.; **Main Outcomes and Measures:** The primary outcome was 30-day mortality.; **Results:** The cohorts included 9863 Danish, 12 781 Swedish, and 1308 Norwegian patients. The overall median (IQR) age was 74 (66-81) years, 63% were male, and the median (IQR) resuscitation duration was 13 (5-23) minutes. Of 53 864 possible termination rules, 5 were identified as relevant for clinical use. The best performing rule included 4 variables (unwitnessed, unmonitored, initial rhythm of asystole, and resuscitation duration more than or equal to 10 minutes). The rule proposed termination in 110 per 1000 cardiac arrests (positive rate, 11%; 95% CI, 10%-11%) and predicted 30-day mortality incorrectly in 6 per 1000 cases (false-positive rate, 0.6%; 95% CI, 0.3%-0.9%). All 5 rules performed similarly across all 3 cohorts.; **Conclusions and Relevance**: In this prognostic study, 5 termination of resuscitation rules were developed and validated for in-hospital cardiac arrest. The best performing rule had a low false-positive rate and a reasonable positive rate in all national cohorts. These termination of resuscitation rules may aid decision-making during resuscitation.

Access or request full text: https://libkey.io/10.1001/jamainternmed.2024.7814

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39869345&profid=ehost

13. Temporal trends in hospitalisations for venous thromboembolic events in England: a population-level analysis

Item Type: Journal Article

Authors: Hughes, Mark;Russell, Mark D.;Roy, Ritika;Mehta, Daksh;Norton, Sam;Atzeni, Fabiola and Galloway, James B.

Publication Date: 2025

Journal: BMJ Open 15(3), pp. e090301

Abstract: **Objectives:** To describe temporal trends in hospitalisation episodes for venous thromboembolic events (VTEs) in England, and compare hospitalisation rates for pulmonary emboli (PEs) and deep vein thrombosis (DVT).; **Methods:** Retrospective observational study.; **Setting:** Secondary care in England, UK, between April 1998 and March 2022.; **Participants**: Individuals with hospitalisations for VTE recorded in the NHS Digital Hospital Episode Statistics dataset.; **Primary and Secondary Outcomes:** The primary outcome was temporal trends in hospitalisation episodes for PE, DVT and VTE overall between 1 April 1998 and 31 March 2022. Secondary outcomes included the proportion of all-cause hospital admissions that were due to VTE; the proportion of all VTE hospitalisations that were recorded as primary admission diagnoses; the male/female split in hospitalisation episodes for VTE; and temporal changes in hospitalisation rates by age.; **Results:** Between 1998 and 2022, hospitalisations for VTE increased by 62.6%, from 109.5 to 178.1 per 100 000 population. This was driven by a 202% increase in hospitalisations for PE (from 40.4 to 122.2 per 100 000 population). In contrast, hospitalisations for DVT decreased by 19.1% over this period (from 69.1 to 55.9 per 100 000 population). Overall, VTE remained stable as a proportion of all-cause hospital admissions between 1998/1999 and 2019/2020 (0.45% and 0.43%, respectively), before increasing after the onset of the COVID-19 pandemic in England (0.59% in 2020/2021 and 0.51% in 2021/2022).; **Conclusion:** Hospitalisations for VTE increased markedly in England between 1998 and 2022, driven by large increases in hospitalisations for PE. In contrast, hospitalisations for DVT decreased overall, which may reflect the success of primary care DVT management pathways. Our findings suggest that preventative measures are needed to reduce the incidence of hospitalisations for PE. (© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY. Published by BMJ Group.)

Access or request full text: https://libkey.io/10.1136/bmjopen-2024-090301

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40157730&profid=ehost

14. Beyond Guideline-Directed Medical Therapy: Nonpharmacologic Management for Patients With Heart Failure

Item Type: Journal Article

Authors: Ilonze, Onyedika J.;Forman, Daniel E.;LeMond, Lisa;Myers, Jonathan;Hummel, Scott;Vest, Amanda R.;DeFilippis, Ersilia M.;Habib, Eiad and Goodlin, Sarah J.

Publication Date: 2025

Journal: JACC.Heart Failure 13(2), pp. 185–199

Abstract: Heart failure (HF) is a leading cause of cardiovascular morbidity, mortality, and health care expenditure. Guideline-directed medical therapy and device-based therapy in HF are well established. However, the role of nonpharmacologic modalities to improve HF care remains underappreciated, is underused, and requires multimodal approaches to care. Diet, exercise and cardiac rehabilitation, sleep-disordered breathing, mood disorders, and substance use disorders are potential targets to reduce morbidity

and improve function of patients with HF. Addressing these factors may improve symptoms and quality of life, reduce hospitalizations, and improve mortality in heart failure. This state-of-the-art review discusses dietary interventions, exercise programs, and the management of sleep-disordered breathing, mood disorders, and substance use in individuals with heart failure. The authors review the latest data and provide optimal lifestyle recommendations and recommended prescriptions for nonpharmacologic therapies. (Copyright © 2025 American College of Cardiology Foundation. All rights reserved.)

Access or request full text: https://libkey.io/10.1016/j.jchf.2024.08.018

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39453358&profid=ehost

15. Major Adverse Cardiovascular Events and Cause-Specific Mortality After Hospitalisation in COPD

Item Type: Journal Article

Authors: Ioannides, Anne E.;Whittaker, Hannah R. and Quint, Jennifer K.

Publication Date: 2025

Journal: International Journal of Chronic Obstructive Pulmonary Disease 20, pp. 2549–2560

Abstract: **Purpose:** People with chronic obstructive pulmonary disease (COPD) are at elevated risk of cardiovascular events and mortality. We aimed to determine, in a COPD population, the relationship between hospitalization and post-discharge one-year rates of (i) major adverse cardiovascular events (MACE) and (ii) cause-specific mortality.; **Patients and Methods**: We conducted a prospective cohort study on a COPD population, between 01/01/2010 and 31/12/2019, using nationally-representative, routinely collected electronic healthcare records in England (Clinical Practice Research Datalink Aurum primary care data, linked with secondary care Hospital Episode Statistics], and mortality Office of National Statistics] data). The exposure was ≥one hospitalization, and the control group was no hospitalization. Outcomes were one-year rates of (i) non-fatal MACE (acute coronary syndrome, arrhythmia, heart failure, or ischemic stroke) and (ii) cause-specific mortality. Exposures were stratified by hospitalization type (elective and emergency) and cause (all-cause, cardiovascular, respiratory, and non-cardiorespiratory). We implemented adjusted Cox proportional hazard regression models, and sensitivity doubly robust propensity score-adjusted models.; **Results:** Hospitalized COPD patients had significantly higher rates (incidence rate IR, per 1000 person-years]; adjusted hazard ratio {aHR} 95% confidence interval {95% CI}] of MACE in the year following hospitalization, whether elective (IR=33.3; 7.04 6.19-8.07]) or emergency (IR=70.0; 8.85 7.78-10.06]), versus those without hospitalization (IR=3.4). Emergency hospitalization was associated with increased all-cause mortality (IR=146.5; 2.49 2.37-2.61]), regardless of hospitalization cause, compared to those not hospitalized (IR=30.3). Elective hospitalization was also associated with increased all-cause mortality (IR=54.6; 1.32 1.25-1.38]), except for cardiovascular elective hospitalization (1.00 0.89-1.12]). Cause-specific mortality was influenced largely by hospitalization cause.; **Conclusion:** Hospitalized COPD patients experienced increased subsequent one-year MACE and mortality rates, regardless of hospitalization cause or type. Hospitalization for any reason in COPD patients provides an opportunity to provide primary prevention for MACE. (© 2025 Ioannides et al.)

Access or request full text: https://libkey.io/10.2147/COPD.S529171

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40703224&profid=ehost

16. Secondary Prevention After Acute Coronary Syndromes in Women: Tailored Management and Cardiac Rehabilitation.

Item Type: Journal Article

Authors: Iorescu L.V.;Prisacariu I.;Aboueddahab C.;Taheri M.;Jaiswal V.;Avagimyan A.;Ghram A.;Dumitrescu S.I.;Banach M. and Perone, F.

Publication Date: 2025

Journal: Journal of Clinical Medicine 14(10) (pagination), pp. Article Number: 3357. Date of Publication: 01 May 2025

Abstract: Secondary prevention after acute coronary syndromes is the key strategy to reduce the residual cardiovascular disease risk. A tailored assessment is necessary to suggest the best management and treatment for patients. Sex and gender differences should be strongly considered during cardiovascular evaluation and risk estimation. Indeed, women have a worse outcome than men and are less likely to receive appropriate treatment and evidence-based management. Proper lifestyle management, guideline-directed medical therapy, risk factor management, and cardiac rehabilitation should be recommended early after an acute event in women to reduce the high risk of recurrent events and mortality and improve quality of life. Women-focused cardiac rehabilitation and secondary prevention represent a necessary step in the management and treatment of patients to ensure the best evidence-based care after acute coronary syndromes. This review offers a critical, updated, and comprehensive overview of the appropriate strategies for secondary prevention in women after acute coronary syndromes and long-term treatment, with a focus on cardiac rehabilitation programs. Furthermore, gaps in evidence on this topic and practical recommendations will be provided.

Access or request full text: https://libkey.io/10.3390/jcm14103357

17. Expanding team-based care for hypertension and cardiovascular risk management with HEARTS in the Americas.

Item Type: Journal Article

Authors: Irazola V.;Prado C.;Rosende A.;Flood D.;Tsuyuki R.;Ojeda C.N.;Reyes M.V.;Otero J.;Wellmann I.A.;Fajardo I.;Ridley E.;Londono E.;Giraldo G.;Bolastig E.;Dias B.M.;Haeberer N. and Ordunez, P.

Publication Date: 2025

Journal: Revista Panamericana De Salud Publica/Pan American Journal of Public Health 49(pagination), pp. Article Number: e43. Date of Publication: 2025

Abstract: Cardiovascular diseases remain the leading cause of premature morbidity and mortality globally, with hypertension as their main modifiable risk factor. In Latin America and the Caribbean, hypertension affects more than 30% of adults, yet control rates remain alarmingly low. The HEARTS in the Americas Initiative, led by the Pan American Health Organization, promotes a model of team-based care to enhance risk management for hypertension and cardiovascular diseases within primary health care. Team-based care leverages the skills of diverse health professionals, including nurses, pharmacists and community health

workers, to optimize resource allocation, task-sharing and care delivery. Evidence underscores the effectiveness of team-based care in improving blood pressure control, reducing hospitalizations and enhancing quality of life through strategies such as periodic follow up and medication titration. Despite its benefits, implementing team-based care faces cultural and systemic barriers. This special report outlines a policy framework to scale team-based care across the Region of the Americas, ensuring equitable access to high-quality, cost-effective prevention and care for cardiovascular diseases.

Access or request full text: https://libkey.io/10.26633/RPSP.2025.43

18. Cardiac and liver impairment on multiorgan MRI and risk of major adverse cardiovascular and liver events

Item Type: Journal Article

Authors: Jackson, Edward;Dennis, Andrea;Alkhouri, Naim;Samala, Niharika;Vuppalanchi, Raj;Sanyal, Arun J.;Muthiah, Mark;Banerjee, Rajarshi and Banerjee, Amitava

Publication Date: 2025

Journal: Nature Medicine 31(7), pp. 2289–2296

Abstract: Cardiovascular disease and metabolic dysfunction-associated steatotic liver disease are common conditions associated with high mortality and morbidity, yet opportunities for integrated prevention are underinvestigated. We explored the association between impairment in the liver (defined by increased iron-corrected T1 (cT1) time) and/or heart (reduced left ventricular ejection fraction ≤ 50) and risk of experiencing cardiovascular- or liver-related events or all-cause mortality among 28,841 UK Biobank participants who underwent magnetic resonance imaging. Using Cox proportional hazard models, adjusted for age, sex, body mass index, type 2 diabetes and dyslipidaemia, we observed that cardiac impairment was associated with increased incidence of cardiovascular events (hazard ratio (HR) 2.3 (1.9-2.7)) and hospitalization (HR 2.1 (1.8-2.4)). Liver impairment was associated with incident cardiovascular hospitalization (cT1 ≥ 800 ms, HR 1.3 (1.1-1.5)), liver events (cT1 ≥ 875 ms, HR 9.2 (3.2-26) and hospitalization (cT1 ≥ 875 ms, HR 5.5 (3.2-9.3). Associations between cT1 and liver events were maintained in participants with metabolic dysfunction-associated steatotic liver disease (N = 6,223). Reduced left ventricular ejection fraction (≤50) combined with elevated cT1 (≥800 ms) were associated with earlier cardiovascular events (time to event 0.8 versus 2.4 years; $P < 0.05$). Cardiac and liver impairment are independently, or in combination, associated with cardiovascular or liver events, suggesting a dual role for magnetic resonance imaging in integrated prevention pathways. (© 2025. The Author(s).)

Access or request full text: https://libkey.io/10.1038/s41591-025-03654-2

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40335668&profid=ehost

19. Nurses' Practice to Prevent Complications after Ischemic Stroke and Improve Patient Outcomes.

Item Type: Journal Article

Authors: Jassim K.M. and Mohammed, W. K.

Publication Date: 2025

Journal: Medical Forum Monthly 36(1), pp. 57–62

Abstract: Objective: To determine the nurses' practices about the prevention of complications after ischemic stroke.
Study Design: Pre-experimental study Place and Duration of Study: This study was conducted at the AL-Basrah Teaching Hospitals, AL-Basrah Governorate from 16th April 2024 to 30th October 2024.
Method(s): Twenty nurses, both male and female, who cared for stroke patients made up a non-probability sample.
Result(s): The nurses' practices do not appear to have a statistically significant effect on the clinical outcome of stroke patients, none of which are statistically significant (p-values of 0.782).
Conclusion(s): The nurses' practices do not appear to have a statistically significant effect o n the clinical outcome of patients' strokes.

Access or request full text: https://libkey.io/10.60110/medforum.360112

20. Effects of Acute Phase Intensive Exercise Training in Patients With Acute Decompensated Heart Failure

Item Type: Journal Article

Authors: Kamiya, Kentaro;Tanaka, Shinya;Saito, Hiroshi;Yamashita, Masashi;Yonezawa, Ryusuke;Hamazaki, Nobuaki;Matsuzawa, Ryota;Nozaki, Kohei;Endo, Yoshiko;Wakaume, Kazuki;Uchida, Shota;Maekawa, Emi;Matsue, Yuya;Suzuki, Makoto;Inomata, Takayuki and Ako, Junya

Publication Date: 2025

Journal: JACC.Heart Failure 13(6), pp. 912–922

Abstract: Background: Acute decompensated heart failure (ADHF) leads to hospitalizations and functional decline in older adults. Although cardiac rehabilitation (CR) is effective for stable heart failure, its impact on ADHF patients, particularly those without frailty, is unclear.; **Objectives:** The goal of this study was to evaluate the efficacy and safety of early in-hospital CR for patients hospitalized with ADHF who are not frail.; **Methods:** In this multicenter trial (ACTIVE-ADHF Effects of Acute Phase Intensive Exercise Training in Patients with Acute Decompensated Heart Failure]), ADHF patients without physical frailty were randomized 2:1 to undergo either exercise-based CR or standard care. The intervention included early mobilization and structured exercise training. The primary outcome was the change in 6-minute walk distance (6MWD) from baseline to discharge. Secondary outcomes assessed physical and cognitive function, quality of life, and safety.; **Results:** A total of 91 patients were randomized to treatment, with 59 allocated to the intervention group and 32 to the control group. The primary outcome, 6MWD, improved significantly more in the intervention group, with a mean increase of 75.0 ± 7.8 m vs 44.1 ± 10.2 m in the control group, with an effect size of 30.9 ± 13.1 m (95% CI: 4.8-57.0; P = 0.021). The intervention group showed favorable results in secondary efficacy outcomes, including physical and cognitive function, physical activity, and quality of life. Safety outcomes were similar between groups, except for a greater reduction in B-type natriuretic peptide levels at 90 days' postdischarge in the intervention group.; **Conclusions:** In patients with ADHF without physical frailty, in-hospital exercise-based CR led to significant improvements in 6MWD at 2 weeks after randomization without compromising safety.

(ACTIVE-ADHF Effects of Acute Phase Intensive Exercise Training in Patients with Acute Decompensated Heart Failure]; UMIN000020919).

Access or request full text: https://libkey.io/10.1016/j.jchf.2024.11.006

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39846909&profid=ehost

21. Risks of major arterial and venous thrombotic diseases after hospitalisation for influenza, pneumonia, and COVID-19: A population-wide cohort in 2.6 million people in Wales

Item Type: Journal Article

Authors: Keene, Spencer;Abbasizanjani, Hoda;Torabi, Fatemeh;Knight, Rochelle;Walker, Venexia;Raffetti, Elena;Cezard, Genevieve;Ip, Samantha;Sampri, Alexia;Bolton, Thomas;Denholm, Rachel;Khunti, Kamlesh;Akbari, Ashley;Quint, Jennifer;Denaxas, Spiros;Sudlow, Cathie;Di Angelantonio, Emanuele;Sterne, Jonathan A. C.;Wood, Angela and Whiteley, William N.

Publication Date: 2025

Journal: Thrombosis Research 245, pp. 109213

Abstract: Objective: Pneumonia, influenza, COVID-19, and other common infections might increase the risk of thrombotic events acutely through an interaction between inflammation and the thrombotic system. The long-term risks of arterial and venous thrombotic events following hospitalisation for COVID-19 and hospitalisation for pneumonia or influenza are unclear.; **Materials and Methods:** In a population-wide cohort of linked Welsh health data of adults, we calculated the incidence of arterial and venous thrombosis after hospitalisation for COVID-19 (2020-2021). We then compared this post-hospitalisation incidence with the incidence prior to COVID-19 hospitalisation in the same individuals, and with the incidence in individuals who were never hospitalised for COVID-19. We then repeated this analysis for hospitalisation for pneumonia or influenza in a separate cohort (2016-2019). We estimated adjusted hazard ratios (aHRs) in separate time periods starting from the date of the first infection that resulted in hospitalisation (day 0, 1 to 7 days, 2 to 4 weeks, 5 to 16 weeks, and 17 to 75 weeks) using time-varying Cox regression. Confounders included age, sex, smoking status, obesity, deprivation (fifths of Welsh Index of Multiple Deprivation), rural or urban setting, care home attendance, Elixhauser comorbidity index, surgery in the last year, medications (e.g. lipid-lowering and antiplatelet/anticoagulant use), hypertension and/or hypertensive medication use, and past medical history of chronic kidney disease, diabetes, chronic obstructive pulmonary disease, dementia, cancer, or any CVD.; **Results:** For the first arterial thrombosis, the aHRs were 3.80 (95 % CI: 2.50-5.77) between days 1-7, 5.24 (4.21-6.51) between weeks 2-4, 2.12 (1.72-2.60) between weeks 5-16, and 1.60 (1.38-1.86) between weeks 17-75 after hospitalisation for COVID-19. The corresponding aHRs after hospitalisation for pneumonia/influenza were: 5.42 (4.35-6.75), 3.87 (3.32-4.49), 1.96 (1.74-2.21), and 1.41 (1.30-1.53). For first venous thrombosis, aHRs were 7.47 (3.56-15.7) between days 1-7, 22.6 (17.5-29.1) between weeks 2-4, 6.58 (4.98-8.68) between weeks 5-16, and 2.25 (1.67-3.02) between weeks 17-75 after hospitalisation for COVID-19. The corresponding aHRs after hospitalisation for pneumonia/influenza were: 15.1 (10.3-22.0), 11.8 (9.23-15.1), 5.80 (4.75-7.08), and 1.89 (1.57-2.29). Excess risk was highest in individuals aged ≥60 years, in whom we estimated 2,700 and 2,320 additional arterial and 1,270 and 840 additional venous events after 100,000 hospitalisations for COVID-19 and pneumonia/influenza, respectively.; **Conclusions:** Both hospitalisation for COVID-19 and pneumonia/influenza increase the risk of arterial and venous thrombosis. Preventative healthcare policies are needed for cardiovascular risk factor management, vaccination, and anticoagulation in high-risk patients with hospitalised or severe infections. (Copyright © 2024 The Authors. Published by Elsevier Ltd.. All rights reserved.)

Access or request full text: https://libkey.io/10.1016/j.thromres.2024.109213

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39608301&profid=ehost

22. Associations of cognitive decline with outcomes of cardiovascular rehabilitation in patients with cardiovascular disease

Item Type: Journal Article

Authors: Koseki, Shoko;Nozaki, Kohei;Hamazaki, Nobuaki;Yamashita, Masashi;Kamiya, Kentaro;Uchida, Shota;Noda, Takumi;Ueno, Kensuke;Ogura, Ken;Miki, Takashi;Maekawa, Emi;Yamaoka-Tojo, Minako;Matsunaga, Atsuhiko and Ako, Junya

Publication Date: 2025

Journal: Journal of Cardiology 85(5), pp. 411–417

Abstract: **Background:** Patients with cardiovascular disease (CVD) are often contending with various comorbidities including cognitive decline. Cognitive decline is a risk marker for adverse outcomes in these patients. On the other hand, cardiovascular rehabilitation (CVR) improves clinical outcomes. However, it remains uncertain whether CVR is associated with favorable outcomes in patients with CVD and cognitive decline. Therefore, the present study aimed to investigate whether CVR is associated with favorable outcomes in patients with CVD and cognitive decline.; **Methods:** We reviewed 4232 patients admitted for CVD. Cognitive function was assessed using the Mini-Cog at hospital discharge, and a score of <3 was defined as cognitive decline. We measured the 6-min walking distance (6MWD) at discharge and 5 months after CVR prescription for participants in outpatient CVR. The primary outcome was change in exercise tolerance (Δ6MWD), and the secondary outcome was composite events (all-cause death and/or re-admission due to CVD). We compared Δ6MWD between patients with and without cognitive decline and examined the association between outpatient CVR participation and composite events.; **Results:** Of all patients, 768 had cognitive decline. There was no significant difference in Δ6MWD between the cognitive decline and non-cognitive decline groups, even after adjusting for confounders estimated mean difference: 2.20 m; 95 % confidence interval (CI): -0.60-5.00 m]. Additionally, participation in outpatient CVR was associated with lower rate of composite events, regardless of cognitive decline adjusted hazard ratio (aHR): 0.589; 95 % CI: 0.552-0.627 in the cognitive decline group and aHR: 0.767; 95 % CI: 0.742-0.793 in the non-cognitive decline group]. An interaction was observed based on the presence of cognitive decline (p = 0.011).; **Conclusion:** Regardless of cognitive decline, participation in outpatient CVR was associated with increased exercise tolerance. Furthermore, outpatient CVR was linked to reduced composite events in both, with particularly potent association in cognitively impaired patients.

Access or request full text: https://libkey.io/10.1016/j.jjcc.2024.12.001

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39710063&profid=ehost

23. The importance of respectful language to enhance care. A statement of the Association of Cardiovascular Nurses & Allied Professions (ACNAP) of the ESC, the ESC patient forum and the ESC advocacy committee Free

Item Type: Journal Article

Authors: Lee, Geraldine;Barisone, Michela;Dendale, Paul;Jennings, Catriona;Jones, Hwyel;Kindermans, Hanne;Kyriakou, Martha;Moons, Philip;Scheenaerts, Bart and Gibson, Irene

Publication Date: 2025

Journal: European Journal of Cardiovascular Nursing 24(3), pp. 344–351

Abstract: The use of respectful communication is essential to establishing a good therapeutic relationship between the healthcare professional (HCP) and the patient. Negative language can adversely affect interactions between the public and HCPs. Person-centred care is advocated in cardiovascular care, but there is lack of information regarding on how communication and respectful language can be applied. The aim of this statement is to explore the concept of respectful language in the delivery of person-centred cardiovascular care and present a working definition of respectful language in the context of healthcare and HCPs. This paper outlines of the role of communication in the delivery of cardiovascular care with critical analysis of the relevant literature. Factors influencing respectful language including ethnicity and culture and the move from the term 'patient' to 'person' are explored. Digital technologies (such as remote monitoring) now play a key role in delivering healthcare and HCPs need to be mindful on how it affects communication. Another important consideration is artificial intelligence and its potential impact on respectful language. Many healthcare providers and organizations have developed plain language documents, and non-technical lay summaries are available for evidence-based guidelines and research. This paper offers suggestions for ensuring best practice in the use of respectful language. Undoubtedly, respectful language is central to delivering person centred care. Every individual HCP involved in providing cardiovascular care can make some changes to their communication. Further education and training in the use of respectful language is needed along with evidence highlighting patient-reported outcomes and experience.

Access or request full text: https://libkey.io/10.1093/eurjcn/zvaf020

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=186167308&profid=ehost

24. The Nurses' Role in the Cardiac Rehabilitation Team: Data From the Perfect-CR Study

Item Type: Journal Article

Authors: Lidin, Matthias;Michelsen, Halldora Ögmundsdottir;Hag, Emma;Stomby, Andreas;Schlyter, Mona;Bäck, Maria;Hagström, Emil and Leosdottir, Margret

Publication Date: Jul ,2025a

Journal: Journal of Cardiovascular Nursing 40(4), pp. 386–394

Abstract: Background: Nurses constitute a central profession in the cardiac rehabilitation (CR) team delivering comprehensive CR to individuals with cardiovascular disease. We aimed to identify specific components reflecting the nurses' role in the CR team associated with attainment of risk factor targets post myocardial infarction. **Methods:** Center-level data (n = 78) was used from the Perfect-CR study, in which structure and processes applied at CR centers in Sweden (including details on the nurses' role) were surveyed. Patient-level data (n = 6755) was retrieved from the SWEDEHEART registry. Associations between structure/processes and target achievement for systolic blood pressure (BP) (<140 mm Hg) and low-density lipoprotein cholesterol (LDL-C, <1.8 mmol/L) at 1 year post myocardial infarction were assessed using logistic regression. **Results:** Structure and processes reflecting nurses' autonomy and role in the CR team associated with patients achieving systolic BP and/or LDL-C targets included the following: nurses having treatment

algorithms to adjust BP medication (odds ratio 95% confidence interval]: systolic BP, 1.22 1.05–1.42]; LDL-C, 1.17 1.03–1.34]) and lipid-lowering medication (systolic BP, 1.14 1.00–1.29]; LDL-C, 1.17 1.05–1.30]), patients having the same nurse throughout follow-up (systolic BP, 1.07 1.03–1.11]; LDL-C, 1.10 1.06–1.14]), number of follow-up hours with a nurse (systolic BP, 1.13 1.07–1.19]), having regular case rounds to discuss patient cases during follow-up (LDL-C, 1.22 1.09–1.35]), and nurses having training in counseling methods (systolic BP, 1.06 1.03–1.10]). **Conclusion:** Components reflecting CR nurses' autonomy and role in the team are of importance for patients attaining risk factor targets post myocardial infarction. The results could provide guidance for optimizing nurses' competence and responsibilities within the CR team to improve patient care.

Access or request full text: https://libkey.io/10.1097/JCN.0000000000001113

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=185812028&profid=ehost

25. Development and Validation of the CHD-PEBBS: A Scale to Assess Perceived Exercise Benefits and Barriers in Coronary Heart Disease Patients.

Item Type: Journal Article

Authors: Liu Y.;Feng L.;Wang L.;Li H.;Tu H.;Li X.;Zhang X.;Zhang L.;Yang M.;Sun X.;Huang T. and Xiong, Y.

Publication Date: 2025

Journal: Patient Preference and Adherence 19, pp. 2147–2159

Abstract: Background: The level of perceived exercise benefits and barriers is one of the key influencing factors of cardiac exercise rehabilitation (CER). There is a lack of validated tools to assess coronary heart disease (CHD) patients' exercise perception.
Purpose(s): The aim of this study is to develop a scale assessing CHD patients' perceived exercise benefits and barriers (CHD-PEBBS) and test its reliability and validity.
Method(s): A total of 205 CHD patients were recruited for a cross-sectional survey. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used to extract factors, delete items and evaluate construct validity. The Cronbach's alpha coefficient and test-retest reliability were used to test the reliability of the scale.
Result(s): Based on the health belief model, this study developed a perceived benefits and barriers framework. CFA showed that the fit indices (such as chi^2/df=2.281, CFI=0.93, RMSEA=0.079) were all acceptable A total of 6 factors were extracted through EFA, with a cumulative variance contribution rate of 75.52%. The perceived benefits subscale included 3 dimensions: "improving physiological indicators", "improving quality of life" and "improving physiological function" with a total of 12 items. The perceived barriers subscale also included 3 dimensions: "lacking of exercise support", "worrying about adverse consequences" and "poor exercise experience or perception" with a total of 10 items. The Cronbach's alpha coefficient of the scale was 0.917, and the test-retest reliability was 0.941.
Conclusion(s): The CHD-PEBBS shows good reliability and validity, which may be used to evaluate the CER perception level of CHD patients, offering precise targets and pathways for exercise rehabilitation interventions in nursing.

Access or request full text: https://libkey.io/10.2147/PPA.S524436

26. The Effect of Internet-Based Cardiac Rehabilitation on Anxiety, Depression, and Quality of Life Among Patients With Ischemic Heart Disease: A Systematic Review and Meta-analysis of Randomized Control Trials

Item Type: Journal Article

Authors: Maithreepala, Sujeewa Dilhani;Chao, Hsin-Yu;Chen, Hsing-Mei;Pimsen, Apiradee and Shu, Bih-Ching

Publication Date: 2025

Journal: The Journal of Cardiovascular Nursing 40(5), pp. 461–474

Abstract: Competing Interests: The authors have no conflicts of interest to disclose.; **Background:** Internet-based cardiac rehabilitation (IBCR) is an innovative, alternative platform used in current practice for the secondary prevention of ischemic heart disease (IHD). The impact of IBCR on anxiety, depression, and quality of life (QoL) in patients with IHD remains inconclusive.; **Objective:** To explore the effect of IBCR on anxiety, depression, and QoL among patients with IHD.; **Methods:** Five databases (Embase, CINAHL, Medline, Cochrane, and Web of Science) and additional resources were searched to identify studies published between January 2014 and March 2024. Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines and the Critical Appraisal Skills Program checklist were used. Two reviewers independently assessed study quality, eligibility, and data extraction. RevMan (version 5.3) software was used for the meta-analysis. The protocol was registered in PROSPERO (CRD42023387666).; **Results**: Thirteen randomized controlled trials were included across 9 countries. A total of 2256 participants, with a mean age ranging from 55 to 63 years, the majority being men (73%), were identified. IBCR did not significantly reduce anxiety (P = .22) or depression (P = .44) or increase QoL (P = .21) compared with usual care. Intervention was delivered mainly via smartphones. Physical activities and risk factor management were mostly used, and behavioral changes less likely occurred. Hospital Anxiety and Depression Scale was mostly used.; **Conclusions**: IBCR was comparable to the effects of usual care in cardiac rehabilitation. Theory-driven interventions with larger and diverse sample sizes, and longer durations across different regions, are recommended for reliable findings.

Access or request full text: https://libkey.io/10.1097/JCN.0000000000001136

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40779296&profid=ehost

27. Using a Markov Model and Real-World Evidence to Identify the Most Cost-Effective Cholesterol Treatment Escalation Threshold for the Secondary Prevention of Cardiovascular Disease

Item Type: Journal Article

Authors: Mariani, Alfredo;Mohiuddin, Syed;Muller, Patrick;Samarasekera, Eleanor;Swain, Sharon A.;Mills, Joseph;Patel, Riyaz;Preiss, David;Shantsila, Eduard;Downing, Beatrice C.;Lonergan, Michael;Rowark, Shaun;Welton, Nicky J.;Williams, Rachael and Wonderling, David

Publication Date: 2025

Journal: Applied Health Economics and Health Policy
Abstract: **Background:** Despite the decreased risk of cardiovascular disease (CVD) with statins, there remains an unfulfilled clinical need to prevent CVD events and premature mortality through further

cholesterol-modifying interventions. In people with established CVD taking a statin, lipid therapy escalation to reduce low-density lipoprotein cholesterol (LDL-C) or non-high-density lipoprotein cholesterol (non-HDL-C) levels may lower the risk of CVD hospital admissions and improve survival. However, the cost-effectiveness of different cholesterol treatment escalation thresholds is uncertain.; **Objective:** This study aimed to identify the most cost-effective cholesterol threshold for escalating lipid therapy in people with established CVD who are taking a statin, to support the 2023 update of the NICE guideline on CVD in England.; **Methods:** A cohort Markov model with a yearly cycle length was developed to compare the lifetime costs and quality-adjusted life years (QALYs) of various LDL-C treatment escalation thresholds (0-4.0 mmol/L), using a combination of treatment effects from an original network meta-analysis of randomised controlled trials (RCTs), real-world data for estimating baseline cholesterol levels and CVD event rates from a published meta-analysis of statin RCTs. The model used the following CVD events: ischaemic stroke; transient ischaemic attack; peripheral artery disease; myocardial infarction; unstable angina; coronary revascularisation; and mortality. The model also used evidence-based estimates of resource use and costs, and published quality of life data. Baseline LDL-C levels and CVD hospital admission rates were estimated through a bespoke analysis of the English primary care data from Clinical Practice Research Datalink (CPRD), linked to Hospital Episode Statistics Admitted Patient Care (HES) and Office for National Statistics (ONS) death registrations.; **Results:** Data from 590,917 adult individuals (61.7% men) with CVD on a statin in primary care between 1 January 2013 and 28 February 2020 were included in the CPRD-HES-ONS analysis. The most cost-effective threshold for lipid therapy escalation was an LDL-C of 2.2 mmol/L (or equivalent non-HDL-C of 2.9 mmol/L) at NICE's lower cost per QALY of £20,000. An LDL-C of 2.0 mmol/L (or equivalent non-HDL-C of 2.6 mmol/L) was the most cost-effective treatment escalation threshold in a significant proportion (38%) of probabilistic simulations and produced more health. At this threshold, the model predicted that 42% of people with CVD would require combination therapy with ezetimibe while 19% would require an injectable drug such as inclisiran. At NICE's upper cost per QALY of £30,000, the most cost-effective LDL-C treatment escalation threshold was 1.7 mmol/L (or equivalent non-HDL-C of 2.2 mmol/L).; **Conclusions:** The results demonstrate the importance of establishing evidence of cost-effectiveness for cholesterol treatment escalation thresholds. The study's findings support the updated NICE guideline recommending a threshold of 2.0 mmol/L LDL-C (or equivalent non-HDL-C of 2.6 mmol/L) for secondary prevention of CVD. (© 2025. Crown.)

Access or request full text: https://libkey.io/10.1007/s40258-025-00977-6

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40411656&profid=ehost

28. Prognostic Models of Mortality Following First-Ever Acute Ischemic Stroke: A Population-Based Retrospective Cohort Study.

Item Type: Journal Article

Authors: Mohammed M.;Zainal H.;Ong S.C.;Tangiisuran B.;Aziz F.A.;Sidek N.N.;Sha'aban A.;Ibrahim U.I.;Muhammad S.;Looi I. and Aziz, Z. A.

Publication Date: 2025

Journal: Health Science Reports 8(2) (pagination), pp. Article Number: e70445. Date of Publication: 01 Feb 2025

Abstract: Background and Aims: There is a lack of population-based studies focusing on guideline-based prognostic models for stroke. This study aimed to develop and validate a prognostic model that predicts mortality following a first-ever acute ischemic stroke.
Method(s): The study included 899 adult patients (>= 18 years) with confirmed diagnosis of first-ever acute ischemic stroke enrolled in the Malaysian National Stroke Registry (NSR) from January 2009 to December 2019.

The primary outcome was mortality within 90 days post-stroke (266 events [29.6%]). The prognostic model was developed using logistic regression (75%, n = 674) and internally validated (25%, n = 225). Model performance was assessed using discrimination (area under the curve (AUC]) and calibration (Hosmer-Lemeshow test [HL]).
Result(s): The final model includes factors associated with increased risk of mortality, such as age (adjusted odds ratio, aOR 1.06 [95% confidence interval, CI 1.03, 1.10; p ^{2} p = 0.63]).
Conclusion(s): The study developed a validated prognostic model that excellently predicts mortality after a first-ever acute ischemic stroke with potential clinical utility in acute stroke care decision-making. The predictors could be valuable for creating risk calculators and aiding healthcare providers and patients in making well-informed clinical decisions during the stroke care process.

Access or request full text: https://libkey.io/10.1002/hsr2.70445

29. The impact of different perspectives on the cost-effectiveness of remote patient monitoring for patients with heart failure in different European countries

Item Type: Journal Article

Authors: Mokri, H.;van Baal, P. and Rutten-van Mölken, M.

Publication Date: 2025

Journal: The European Journal of Health Economics : HEPAC : Health Economics in Prevention and Care 26(1), pp. 71–85

Abstract: **Background and Objective:** Heart failure (HF) is a complex clinical syndrome with high mortality and hospitalization rates. Non-invasive remote patient monitoring (RPM) interventions have the potential to prevent disease worsening. However, the long-term cost-effectiveness of RPM remains unclear. This study aimed to assess the cost-effectiveness of RPM in the Netherlands (NL), the United Kingdom (UK), and Germany (DE) highlighting the differences between cost-effectiveness from a societal and healthcare perspective.; **Methods:** We developed a Markov model with a lifetime horizon to assess the cost-effectiveness of RPM compared with usual care. We included HF-related hospitalization and non-hospitalization costs, intervention costs, other medical costs, informal care costs, and costs of non-medical consumption. A probabilistic sensitivity analysis and scenario analyses were performed.; **Results:** RPM led to reductions in HF-related hospitalization costs, but total lifetime costs were higher in all three countries compared to usual care. The estimated incremental cost-effectiveness ratios (ICERs), from a societal perspective, were €27,921, €32,263, and €35,258 in NL, UK, and DE respectively. The lower ICER in the Netherlands was mainly explained by lower costs of non-medical consumption and HF-related costs outside of the hospital. ICERs, from a healthcare perspective, were €12,977, €11,432, and €11,546 in NL, the UK, and DE, respectively. The ICER was most sensitive to the effectiveness of RPM and utility values.; **Conclusions:** This study demonstrates that RPM for HF can be cost-effective from both healthcare and societal perspective. Including costs of living longer, such as informal care and non-medical consumption during life years gained, increased the ICER. (© 2024. The Author(s).)

Access or request full text: https://libkey.io/10.1007/s10198-024-01690-2

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=38700736&profid=ehost

30. Risk of Atherosclerotic Cardiovascular Disease After Chronic Obstructive Pulmonary Disease Hospitalization among Primary and Secondary Prevention Older Adults

Item Type: Journal Article

Authors: Mosher, Christopher L.;Osazuwa-Peters, Oyomoare;Nanna, Michael G.;MacIntyre, Neil R.;Que, Loretta G.;Palmer, Scott M.;Jones, W. S. and O'Brien, Emily,C.

Publication Date: 2025

Journal: Journal of the American Heart Association 14(2), pp. e035010

Abstract: Background: Meta-analyses have suggested that the risk of cardiovascular disease events is significantly higher after a chronic obstructive pulmonary disease (COPD) exacerbation, but the populations at highest risk have not been well characterized to date.; **Methods and Results:** The authors analyzed the risk of atherosclerotic cardiovascular disease (ASCVD) hospitalizations after COPD hospitalization compared with before COPD hospitalization and patient factors associated with ASCVD hospitalizations after COPD hospitalization among 2 high-risk patient cohorts. The primary outcome was risk of an ASCVD hospitalization composite outcome (myocardial infarction, coronary artery bypass graft, percutaneous coronary intervention, stroke, transient ischemic accident) after COPD hospitalization relative to before COPD hospitalization. Additional analyses evaluated for risk factors associated with the composite ASCVD hospitalization outcome. In the high-risk primary prevention cohort, the hazard ratio (HR) estimate following adjustment for the composite ASCVD hospitalization outcome after COPD hospitalization versus before COPD hospitalization for 30 days was 0.74 (95% CI, 0.66-0.82; P ≤0.0001); for 90 days, 0.69 (95% CI, 0.64-0.75; P ≤0.0001); and for 1 year, 0.78 (95% CI, 0.73-0.82; P ≤0.0001). In the secondary prevention cohort, the HR for 30-day hospitalization was 1.15 (95% CI, 1.05-1.26; P =0.0036); 90-day hospitalization, 1.08 (95% CI, 1.01-1.15; P =0.0178); and 1-year hospitalization, 1.07 (95% CI, 1.02-1.11; P =0.0026). Among the 19 characteristics evaluated, hyperlipidemia and history of acute ASCVD event were associated with the highest risk of ASCVD events 1 year after COPD hospitalization in the high-risk primary and secondary prevention cohorts.; **Conclusions:** The risk of ASCVD hospitalization was higher in patients with established ASCVD and lower among high-risk patients without established ASCVD after-COPD hospitalization relative to before hospitalization. We identified multiple risk factors for ASCVD hospitalization after COPD hospitalization.

Access or request full text: https://libkey.io/10.1161/JAHA.124.035010

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39791395&profid=ehost

31. Personalized Visual Perceptual Learning Digital Therapy for Visual Field Defects Following Stroke: A Randomized Clinical Trial

Item Type: Journal Article

Authors: Namgung, Eun;Kim, Bum Joon;Kwon, Jee Hyun;Han, Moon-Ku;Kim, Hahn Young;Jung, Jin-Man;Kim, Jae Guk;Park, Kwang-Yeol;Koo, Jaseong;Hong, Keun-Sik;Yu, Kyung-Ho;Cho, A-H;Chang, Jun Young;Kwon, Sun U.;Lee, Byung Joo;Choi, Ha-Gyun;Cho, Moonju;Kim, Gyeong-Moon and Kang, Dong-Wha

Publication Date: 2025

Journal: JAMA Network Open 8(5), pp. e2511068

Abstract: Importance: Effective treatments for restoring visual field defects (VFDs) in patients with stroke necessitate validation through randomized clinical trials.; **Objective:** To evaluate the efficacy and safety of a personalized digital therapeutic based on visual perceptual learning for treating poststroke VFDs.; **Design, Setting, and Participants**: A multicenter randomized clinical trial was conducted from October 19, 2022, to November 8, 2023, at 12 hospitals in South Korea. The study included poststroke outpatients 19 years or older with persistent VFDs (>3 months after stroke) and neuroimaging-confirmed stroke lesions in the visual pathway.; Intervention: The training group underwent personalized visual discrimination tasks (orientation and rotation) using a mobile virtual reality headset 5 days a week for 12 weeks, with 360 trials per day. The control group received no intervention.; **Main Outcome and Measures:** The primary outcome was improved visual areas (defined as sensitivity increased by ≥6 decibels dB] during 12 weeks) assessed using Humphrey visual field tests at baseline and 12 weeks.; **Results:** Of 93 enrolled stroke outpatients with VFDs, 82 were included in the final analysis (41 in the intervention group and 41 in the control group; median IQR] age, 52 42-65] years; 57 male 69.5%]). As primary measures, the training group, with a high adherence rate, showed significantly greater improvement (sensitivity increased by ≥6 dB) in the whole field (median difference, 72 95% CI, 36-108] degrees squared; P = .003; mean SD], 194.1 197.3] vs 82.5 95.0] degrees squared) and defective hemifield (median difference, 72 95% CI, 36-108] degrees squared; P = .002; mean SD], 158.9 159.0] vs 72.0 91.4] degrees squared) compared with the control group. As secondary measures, mean (SD) Humphrey visual field test scores improved after 12 weeks in the training group (whole field: 0.72 1.55] dB; P = .005; defective hemifield: 1.20 2.08] dB; P < .001) but not in the control group (whole field: 0.03 1.30] dB; P = .88; defective hemifield: 0.06 1.85] dB; P = .84).; **Conclusions and Relevance**: In this randomized clinical trial of a digital therapeutic for chronic poststroke VFDs, the visual perceptual learning-based training demonstrated significant improvements in the whole field and defective hemifield.; Trial Registration: ClinicalTrials.gov Identifier: NCT05525949.

Access or request full text: https://libkey.io/10.1001/jamanetworkopen.2025.11068

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40388168&profid=ehost

32. Effectiveness of early vocational rehabilitation versus usual care to support RETurn to work after stroKE: A pragmatic, parallel-arm multicenter, randomized controlled trial

Item Type: Journal Article

Authors: Radford, K. A.;Wright-Hughes, A.;Thompson, E.;Clarke, D. J.;Phillips, J.;Holmes, J.;Powers, K.;Trusson, D.;Craven, K.;Watkins, C.;Bowen, A.;McKevitt, C.;Stevens, J.;Murray, J. D.;O'Connor, R. J.;Pyne, S.;Risebro, H.;Cameron, R.;Sach, T. H.;Day, F., et al

Publication Date: 2025

Journal: International Journal of Stroke : Official Journal of the International Stroke Society 20(4), pp. 471–485

Abstract Background: Return-to-work is a major goal achieved by fewer than 50% stroke survivors. Evidence on how to support return-to-work is lacking.; **Aims:** This study aimed to evaluate the clinical effectiveness of Early Stroke Specialist Vocational Rehabilitation (ESSVR) plus usual care (UC) (i.e. usual NHS rehabilitation) versus UC alone for helping people return-to-work after stroke.; **Methods:** This pragmatic, multicentre, individually randomized controlled trial with embedded economic and process evaluations compared ESSVR with UC in 21 NHS stroke services across England and Wales. Eligible participants were aged ⩾ 18 years, in work at stroke onset, hospitalized with new stroke and within 12 weeks of stroke. People not intending to return-to-work were excluded. Participants were randomized (5:4) to individually tailored ESSVR delivered by stroke specialist occupational therapists for up to 12 months or usual National Health Service rehabilitation. Primary outcome was self-reported return-to-work for ⩾ 2 h per week at 12 months. Primary and safety

analyses were done in the intention-to-treat population.; **Results:** Between 1 June 2018, and 7 March 2022, 583 participants (M age 54.1 years (SD 11.0), 69% male) were randomized to ESSVR (n = 324) or UC (n = 259). Primary outcome data were available for 454 (77.9%) participants. Intention-to-treat analysis showed no evidence of a difference in the proportion of participants returned-to-work at 12 months (165/257 (64.2%) ESSVR vs 117/197 (59.4%) UC; adjusted odds ratio 1.12 (95% CI: 0.75-1.68), p = 0.5678). There was some indication that older participants and those with more post-stroke impairment were more likely to benefit from ESSVR (interaction p = 0.0239 and p = 0.0959, respectively).; **Conclusion:** To our knowledge, this is the largest trial of a stroke vocational rehabilitation (VR) intervention ever conducted. We found no evidence that ESSVR conferred any benefits over UC in improving return-to-work rates 12 months post-stroke. Return-to-work (for at least 2 h per week) rates were higher than in previous studies (64.2% ESSVR vs 59.4% UC) at 12 months and more than double that observed in our feasibility trial (26%). Interpretation of findings was limited by a predominantly mild-moderate sample of participants and the COVID-19 pandemic. The pandemic impacted the trial, ESSVR and UC delivery, altering the work environment and employer behavior. These changes influenced our primary outcome and the meaning of work in people's lives; all pivotal to the context of ESSVR delivery and its mechanisms of action.Data access:Data available on reasonable request.; Registration: ISRCTN12464275.

Access or request full text: https://libkey.io/10.1177/17474930241306693

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39614629&profid=ehost

33. Exercise-based cardiac rehabilitation for patients undergoing coronary artery operation: a systematic review and meta-analysis based on current randomized controlled trials

Item Type: Journal Article

Authors: Shi, Yan;Xu, Huiqing and Dong, Jige

Publication Date: 2025

Journal: International Journal of Surgery (London, England) 111(3), pp. 2708–2721

Abstract: Background: Currently, exercise-based cardiac rehabilitation (CR) has been receiving increasing interest for its potentially beneficial effects on the health related quality of life (HRQoL) and outcomes of patients with coronary heart disease (CHD). The aim of this study was to evaluate the effect of exercise-based CR on patients after coronary artery bypass graft (CABG) and percutaneous coronary interventions (PCI).; **Methods:** We searched PubMed, Embase, Cochrane Library, and Web of Science from inception to 1 December 2023 for relevant studies that evaluated the effect of exercise-based CR on patients after CABG and PCI. Our primary outcomes included mortality, complications, hospital admissions, and HRQoL between patients receiving exercise-based CR and usual care. All statistical analyses were performed using the standard statistical procedures provided in Review Manager 5.2 and Stata 12.0.; **Results:** We finally indicated and included 25 randomized controlled trials (RCTs) with 4106 participants for the present analysis. Our pooled results indicated that, compared to usual care, exercise-based CR did not increase the all-cause (relative risk, RR: 0.84; 95% confidence interval, CI: 0.54-1.31) and cardiovascular (RR: 0.98; 95% CI: 0.38-2.54) mortality for patients after coronary artery operation. Similarly, exercise-based CR had an equal effect on coronary artery complications for patients after coronary artery surgery, including CABG (RR: 0.60; 95% CI: 0.32 – 1.15) and PCI (RR: 0.92; 95% CI: 0.55-1.54). It was indicated that exercise-based CR significantly reduced the incidence of myocardial infarction (MI) by half with an RR of 0.50 (95% CI: 0.28-0.90). In addition, exercise-based CR also significantly reduced all-cause hospital admissions with an RR of 0.74 (95% CI: 0.62-0.88). Compared to usual care, exercise-based CR obviously improved HRQoL of patients after coronary artery operation evaluated with SF-36 summary scores (standardized mean difference, SMD: 0.24; 95% CI: 0.11-0.38)

and SF-36 8 domains (SMD: 0.35; 95% CI: 0.24-0.46).; **Conclusions:** Our analysis indicated that exercise-based CR had a significant effect on the improvement of HRQoL in patients after coronary artery surgeries without increasing mortality or the incidence of re-intervention with operations. (Copyright © 2025 The Author(s). Published by Wolters Kluwer Health, Inc.)

Access or request full text: https://libkey.io/10.1097/JS9.0000000000002268

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39903572&profid=ehost

34. Burden of Treatment in Patients With Heart Failure

Item Type: Journal Article

Authors: Smith, Jamie L.;Killian, Jill M.;Shippee, Nathan;Eton, David T.;Montori, Victor M.;Strand, Jacob and Dunlay, Shannon M.

Publication Date: 2025

Journal: Journal of the American Heart Association 14(10), pp. e039695

Abstract: Background: Heart failure self-care can contribute to a high daily workload and treatment burden. The goal of this cohort study was to assess the characteristics and outcomes associated with burden of treatment (BoT).; **Methods:** Surveys comprising validated instruments to measure BoT and other constructs were mailed to patients with heart failure in Southeastern Minnesota. Participants were divided into tertiles by BoT scores. Associations of clinical variables with BoT were examined using multinomial logistic regression. Associations of BoT with mortality and hospitalizations were examined using Cox proportional hazard regression and Andersen-Gill models, respectively.; **Results:** A total of 609 participants (mean age 76.3 years, 60.3% men, 55.2% urban, 64.3% preserved ejection fraction) completed surveys. Higher BoT was associated with worse health status, more depressive symptoms, lower resilience, less social support, lower medication adherence, and worse health literacy. Mean±SD follow-up was 14.4 (4.1) months. Estimated 1-year mortality (8.3% 95% CI, 4.3%-12.1%], 11.0% 95% CI, 6.5%-15.2%], 16.0% 95% CI, 10.8%-21.0%]) and 1-year mean cumulative hospitalizations (0.57 95% CI, 0.45-0.72], 0.83 95% CI, 0.66-1.05], 1.15 95% CI, 0.93-1.42]) increased across patients reporting low, medium, and high BoT, respectively. Adjustment for health status eliminated any significant association of BoT with risks of death and hospitalization (adjusted hazard ratio HR], 1.10 95% CI, 0.58-2.07] and 1.09 95% CI, 0.74-1.61], respectively, highest versus lowest BoT tertile).; **Conclusions:** BoT in heart failure varies by clinical and psychosocial factors. Higher BoT identifies patients at increased risk of adverse health outcomes due to their worse health status. These findings can serve as a foundation for interventions to minimize workload and improve quality of life.

Access or request full text: https://libkey.io/10.1161/JAHA.124.039695

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40371634&profid=ehost

35. Hospital-Physician Integration and Cardiac Rehabilitation Following Major Cardiovascular Events

Item Type: Journal Article

Authors: Thai, Ngoc H.;Post, Brady;Young, Gary and Noor-E-Alam, Md

Publication Date: 2025

Journal: JAMA Network Open 8(3), pp. e2462580

Abstract: Importance: Cardiac rehabilitation (CR) is a medically supervised program designed to improve heart health after a cardiac event. Despite its demonstrated clinical benefits, CR participation among eligible patients remains poor due to low referral rates and individual barriers to care.; **Objectives:** To evaluate CR participation by patients who receive care from hospital-integrated physicians compared with independent physicians, and subsequently, to examine CR and recurrent cardiac hospitalizations.; **Design, Setting, and Participants:** This retrospective cohort study evaluated Medicare Part A and Part B claims data from calendar years 2016 to 2019. All analyses were conducted between January 1 and April 30, 2024. Patients were included if they had a qualifying event for CR between 2017 and 2018, and qualifying events were identified using diagnosis codes on inpatient claims and procedure codes on outpatient and carrier claims. Eligible patients also had to continuously enroll in fee-for-service Medicare for 12 months or more before and after the index event. Physicians' integration status and patients' CR participation were determined during the 12-month follow-up period. The study covariates were ascertained during the 12 months before the index event.; Exposure: Hospital-integration status of the treating physician during follow-up.; **Main Outcomes and Measures:** Postindex CR participation was determined by qualifying procedure codes on outpatient and carrier claims.; Results: The study consisted of 28 596 Medicare patients eligible for CR. Their mean (SD) age was 74.0 (9.6) years; 16 839 (58.9%) were male. A total of 9037 patients (31.6%) were treated by a hospital-integrated physician, of which 2995 (33.1%) received CR during follow-up. Logistic regression via propensity score weighting showed that having a hospital-integrated physician was associated with an 11% increase in the odds of receiving CR (odds ratio OR], 1.11; 95% CI, 1.05-1.18). Additionally, CR participation was associated with a 14% decrease in the odds of recurrent cardiovascular-related hospitalizations (OR, 0.86; 95% CI, 0.81-0.91).; **Conclusions and Relevance:** The findings of this cohort study suggest that hospital integration has the potential to facilitate greater CR participation and improve heart care. Several factors may help explain this positive association, including enhanced care coordination and value-based payment policies. Further research is needed to assess the association of integration with other appropriate high-quality care activities.

Access or request full text: https://libkey.io/10.1001/jamanetworkopen.2024.62580

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40029658&profid=ehost

36. Safety and efficacy of home-based walking exercise for peripheral artery disease

Item Type: Journal Article

Authors: Thangada, Neela D.;Zhang, Dongxue;Zhao, Lihui;Tian, Lu and McDermott, Mary M.

Publication Date: 2025

Journal: Journal of Vascular Surgery 81(2), pp. 441

Abstract: Objective: Home-based walking exercise is first-line therapy for peripheral artery disease (PAD), but benefits of home-based walking exercise are variable. This study evaluated whether specific clinical characteristics were associated with greater improvement after home-based walking exercise or with higher rates of serious adverse events (SAEs).; **Methods:** Data were combined from two randomized clinical trials comparing home-based walking exercise with control in PAD. The home-based exercise interventions used behavioral interventions to help participants adhere to exercise. The primary outcome was the proportion of

PAD participants who improved 6-minute walk (6MW) by at least 20 meters. Serious adverse events consisted of overnight hospitalizations or death that occurred during the randomized clinical trial.; **Results:** Of 376 participants with PAD (69.6 years; 54.5% Black; 49.5% women), 217 were randomized to exercise and 159 to control. Home-based exercise improved 6MW by at least 20 meters in 100 participants (54.9%), compared with 37 (28.0%) in control (odds ratio, 3.13; 95% confidence interval, 1.94-5.06; P < .001). Age, sex, race, comorbidities, baseline 6MW, and income did not significantly alter the effect of home-based exercise on improved 6MW. SAEs occurred in 28.1% and 23.3% of participants randomized to exercise and control, respectively (P = .29). There were statistically significant interactions, indicating that home-based exercise increased SAE rates, compared with control, in Black compared with non-Black participants (P interaction < .001), in those with vs without coronary artery disease (CAD) (P interaction < .001), and in people with vs without history of heart failure (P interaction = .005).; **Conclusions:** Among people with PAD, home-based exercise improved 6MW by at least 20 meters in 54.9% of people. Older age, female sex, Black race, and specific comorbidities were not associated with lower rates of attaining meaningful improvement in 6MW following home-based exercise. Further study is needed to establish whether certain patient characteristics, such as history of coronary artery disease, may affect SAE rates in patients with PAD participating in home-based exercise.

Access or request full text: https://libkey.io/10.1016/j.jvs.2024.10.013

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39423932&profid=ehost

37. Physical rehabilitation approaches for the recovery of function and mobility following stroke

Item Type: Journal Article

Authors: Todhunter-Brown, Alex;Sellers, Ceri E.;Baer, Gillian D.;Choo, Pei Ling;Cowie, Julie;Cheyne, Joshua D.;Langhorne, Peter;Brown, Julie;Morris, Jacqui and Campbell, Pauline

Publication Date: 2025

Journal: The Cochrane Database of Systematic Reviews 2, pp. CD001920

Abstract: Background: Various approaches to physical rehabilitation to improve function and mobility are used after stroke. There is considerable controversy around the relative effectiveness of approaches, and little known about optimal delivery and dose. Some physiotherapists base their treatments on a single approach; others use components from several different approaches.; **Objectives:** Primary objective: To determine whether physical rehabilitation is effective for recovery of function and mobility in people with stroke, and to assess if any one physical rehabilitation approach is more effective than any other approach.; **Secondary Objective:** To explore factors that may impact the effectiveness of physical rehabilitation approaches, including time after stroke, geographical location of study, intervention dose/duration, intervention provider, and treatment components. Stakeholder involvement: Key aims were to clarify the focus of the review, inform decisions about subgroup analyses, and co-produce statements relating to key implications.; Search **Methods:** For this update, we searched the Cochrane Stroke Trials Register (last searched November 2022), CENTRAL (2022, Issue 10), MEDLINE (1966 to November 2022), Embase (1980 to November 2022), AMED (1985 to November 2022), CINAHL (1982 to November 2022), and the Chinese Biomedical Literature Database (to November 2022).; Selection Criteria: Inclusion criteria: Randomised controlled trials (RCTs) of physical rehabilitation approaches aimed at promoting the recovery of function or mobility in adult participants with a clinical diagnosis of stroke.; Exclusion Criteria: RCTs of upper limb function or single treatment components.; **Primary Outcomes:** measures of independence in activities of daily living (IADL) and motor function.; **Secondary Outcomes:** balance, gait velocity, and length of stay.; **Data Collection and Analysis:** Two

independent authors selected studies according to pre-defined eligibility criteria, extracted data, and assessed the risk of bias in the included studies. We used GRADE to assess the certainty of evidence.; Main **Results:** In this review update, we included 267 studies (21,838 participants). Studies were conducted in 36 countries, with half (133/267) in China. Generally, studies were heterogeneous, and often poorly reported. We judged only 14 studies in meta-analyses as at low risk of bias for all domains and, on average, we considered 33% of studies in analyses of primary outcomes at high risk of bias. Is physical rehabilitation more effective than no (or minimal) physical rehabilitation? Compared to no physical rehabilitation, physical rehabilitation may improve IADL (standardised mean difference (SMD) 1.32, 95% confidence interval (CI) 1.08 to 1.56; 52 studies, 5403 participants; low-certainty evidence) and motor function (SMD 1.01, 95% CI 0.80 to 1.22; 50 studies, 5669 participants; low-certainty evidence). There was evidence of long-term benefits for these outcomes. Physical rehabilitation may improve balance (MD 4.54, 95% CI 1.36 to 7.72; 9 studies, 452 participants; low-certainty evidence) and likely improves gait velocity (SMD 0.23, 95% CI 0.05 to 0.42; 18 studies, 1131 participants; moderate-certainty evidence), but with no evidence of long-term benefits. Is physical rehabilitation more effective than attention control? The evidence is very uncertain about the effects of physical rehabilitation, as compared to attention control, on IADL (SMD 0.91, 95% CI 0.06 to 1.75; 2 studies, 106 participants), motor function (SMD 0.13, 95% CI -0.13 to 0.38; 5 studies, 237 participants), and balance (MD 6.61, 95% CI -0.45 to 13.66; 4 studies, 240 participants). Physical rehabilitation likely improves gait speed when compared to attention control (SMD 0.34, 95% CI 0.14 to 0.54; 7 studies, 405 participants; moderate-certainty evidence). Does additional physical rehabilitation improve outcomes? Additional physical rehabilitation may improve IADL (SMD 1.26, 95% CI 0.82 to 1.71; 21 studies, 1972 participants; low-certainty evidence) and motor function (SMD 0.69, 95% CI 0.46 to 0.92; 22 studies, 1965 participants; low-certainty evidence). Very few studies assessed these outcomes at long-term follow-up. Additional physical rehabilitation may improve balance (MD 5.74, 95% CI 3.78 to 7.71; 15 studies, 795 participants; low-certainty evidence) and gait velocity (SMD 0.59, 95% CI 0.26 to 0.91; 19 studies, 1004 participants; low-certainty evidence). Very few studies assessed these outcomes at long-term follow-up. Is any one approach to physical rehabilitation more effective than any other approach? Compared to other approaches, those that focus on functional task training may improve IADL (SMD 0.58, 95% CI 0.29 to 0.87; 22 studies, 1535 participants; low-certainty evidence) and motor function (SMD 0.72, 95% CI 0.21 to 1.22; 20 studies, 1671 participants; very low-certainty evidence) but the evidence in the latter is very uncertain. The benefit was sustained long-term. The evidence is very uncertain about the effect of functional task training on balance (MD 2.16, 95% CI -0.24 to 4.55) and gait velocity (SMD 0.28, 95% CI -0.01 to 0.56). Compared to other approaches, neurophysiological approaches may be less effective than other approaches in improving IADL (SMD -0.34, 95% CI -0.63 to -0.06; 14 studies, 737 participants; low-certainty evidence), and there may be no difference in improving motor function (SMD -0.60, 95% CI -1.32 to 0.12; 13 studies, 663 participants; low-certainty evidence), balance (MD -0.60, 95% CI -5.90 to 6.03; 9 studies, 292 participants; low-certainty evidence), and gait velocity (SMD -0.17, 95% CI -0.62 to 0.27; 16 studies, 630 participants; very low-certainty evidence), but the evidence is very uncertain about the effect on gait velocity. For all comparisons, the evidence is very uncertain about the effects of physical rehabilitation on adverse events and length of hospital stay.; **Authors' Conclusions:** Physical rehabilitation, using a mix of different treatment components, likely improves recovery of function and mobility after stroke. Additional physical rehabilitation, delivered as an adjunct to 'usual' rehabilitation, may provide added benefits. Physical rehabilitation approaches that focus on functional task training may be useful. Neurophysiological approaches to physical rehabilitation may be no different from, or less effective than, other physical rehabilitation approaches. Certainty in this evidence is limited due to substantial heterogeneity, with mainly small studies and important differences between study populations and interventions. We feel it is unlikely that any studies published since November 2022 would alter our conclusions. Given the size of this review, future updates warrant consensus discussion amongst stakeholders to ensure the most relevant questions are explored for optimal decision-making.

Access or request full text: https://libkey.io/10.1002/14651858.CD001920.pub4

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39932103&profid=ehost

38. Classifying Patient Characteristics and Determining a Predictor in Acute Stroke Patients: Application of Latent Class Analysis in Rehabilitation Practice.

Item Type: Journal Article

Authors: Uchida J.;Yamada M.;Nagayama H.;Tomori K.;Ikeda K. and Yamauchi, K.

Publication Date: 2025

Journal: Journal of Clinical Medicine 14(15) (pagination), pp. Article Number: 5466. Date of Publication: 01 Aug 2025

Abstract: Background/Objectives: Predicting comprehensive patient characteristics is essential for optimal individualized rehabilitation plans for acute stroke patients. However, current models primarily predict single outcomes. This study aimed to assess the applicability of latent class analysis (LCA) in rehabilitation practice by identifying comprehensive characteristics and associated predictors in acute stroke patients.
Method(s): We conducted a retrospective observational study using the Japan Association of Rehabilitation Database, including 10,270 stroke patients admitted to 37 acute-care hospitals between January 2005 and March 2016. Patients were classified using LCA based on outcomes at discharge, including Functional Independence Measure (FIM), National Institutes of Health Stroke Scale (NIHSS) subscales for upper-extremity function, length of hospitalization, and discharge destination. Predictor variables at admission included age, FIM scores, NIHSS subscales for upper-extremity function, stroke type, and daily rehabilitation volume.
Result(s): 6881 patients were classified into nine distinct classes (class size: 4-29%). Class 1, representing the mildest cases, was noted for independent ambulation and good upper limb function. Class 2 comprised those with the most severe clinical outcome. Other classes exhibited a gradient of severity, commonly encountered in clinical practice. For instance, Class 7 included right-sided paralysis with preserved motor activities of daily living (ADLs) and modified dependence in cognitive functions, such as communication. All predictors at admission were significantly associated with class membership at discharge ($p < 0.001$).
Conclusion(s): LCA effectively identified unique clinical subgroups among acute stroke patients and demonstrated that key admission variables could predict class membership. This approach offers a promising insight into targeted, personalized rehabilitation practice for acute stroke patients.

Access or request full text: https://libkey.io/10.3390/jcm14155466

39. The effect of listening to the voice recording of relatives on chest pain, anxiety and depression in patients hospitalized in the coronary intensive care unit: A randomized controlled trial

Item Type: Journal Article

Authors: Uğurlu, Yasemin Kalkan and Alemdar, Dilek Küçük

Publication Date: 2025

Journal: Nursing in Critical Care 30(3), pp. e13199

Abstract: Background: After acute myocardial infarction, the prevalence of anxiety and depression is quite high in patients because of severe chest pain, distance from relatives, unfamiliar environment and orientation problems.; **Aim:** To assess the effect of listening to the voice recordings of relatives of patients with acute myocardial infarction who were treated in the coronary intensive care unit (ICU) on chest pain, anxiety and depression parameters of the patients.; **Study Design**: In the study, which was conducted as a randomized controlled trial, voice recordings of the family members of the patients were created and played to the patients through a music pillow. The study was carried out with 60 patients, 30 experimental and 30 control groups. Three tests were applied to the patients 15 min before, and 15 and 30 min after the application. The data of the study were collected using the Patient Introduction Form, Hospital Anxiety Depression Scale, Visual Analogue Scale and Patient Follow-up Form.; **Results:** It was found that there was a significant decrease in the anxiety level of the patients in the intervention group after listening to the audio recording (p .05).; **Conclusions:** In the ICUs of patients with acute myocardial infarction, it may be recommended to play audio recordings of their relatives to reduce the severity of anxiety.; **Relevance to Clinical Practice:** In the intensive care setting, the use of voice recordings of relatives can be used as an effective, non-pharmacological intervention to reduce anxiety in patients with acute myocardial infarction. This approach may potentially improve overall recovery by reducing patient anxiety in the intensive care setting. (© 2024 The Author(s). Nursing in Critical Care published by John Wiley & Sons Ltd on behalf of British Association of Critical Care Nurses.)

Access or request full text: https://libkey.io/10.1111/nicc.13199

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39474687&profid=ehost

40. Differences in In-Hospital and Post-Discharge Ischemic Stroke Care According to Prestroke Functional Status

Item Type: Journal Article

Authors: Wechsler, Paul M.;Mistry, Eva A.;Sucharew, Heidi;Robinson, David J.;Stanton, Robert;de Los Rios La Rosa, Felipe;Mackey, Jason;Ferioli, Simona;Demel, Stacie L.;Coleman, Elisheva R.;Jasne, Adam;Slavin, Sabreena;Walsh, Kyle B.;Star, Michael;Haverbusch, Mary;Alwell, Kathleen;Woo, Daniel;Kleindorfer, Dawn O. and Kissela, Brett M.

Publication Date: 2025

Journal: Journal of the American Heart Association 14(11), pp. e040499

Abstract: Background: Limited data exist regarding differences in ischemic stroke care across the care continuum between patients with and without prestroke disability. We investigated differences in in-hospital and postdischarge ischemic stroke cause evaluation and treatment between patients with and without prestroke disability using population-based data in the United States.; **Methods:** We ascertained all adult patients (≥18 years) hospitalized with acute ischemic stroke within the Greater Cincinnati/Northern Kentucky population between January 1, 2015, and December 31, 2015. We used univariate analyses and logistic regression to compare differences in acute ischemic stroke reperfusion therapies, stroke cause evaluation, prescription of secondary stroke prevention treatments, and rehabilitation between patients with prestroke disability (modified Rankin Scale score ≥2) and those without prestroke disability (modified Rankin Scale score 0-1).; **Results:** Of 2476 ischemic stroke patients, 1326 (53%) had prestroke disability. Prestroke disability was associated with lower odds of receiving thrombolysis (adjusted odds ratio aOR], 0.43 95% CI, 0.28-0.68], P <0.01) and endovascular thrombectomy (aOR, 0.32 95% CI, 0.13-0.78], P <0.01). Patients with prestroke disability were less likely to receive complete in-hospital stroke cause evaluation (aOR, 0.48 95% CI, 0.33-0.69], P <0.01) and there were small differences in antiplatelet (84% versus 87%) and statin therapy (80%

versus 86%) prescribed at discharge. Those with prestroke disability were more likely to receive in-hospital (aOR, 2.6 95% CI, 2.11-3.21], P <0.01) and postdischarge rehabilitative therapies (aOR, 2.27 95% CI, 1.86-2.77], P <0.01).; **Conclusion:** Further research into factors driving medical decision-making for patients with prestroke disability is needed to optimize the entire spectrum of ischemic stroke care for this population.

Access or request full text: https://libkey.io/10.1161/JAHA.124.040499

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40417811&profid=ehost

41. Integration of Rapid Response Teams and Early Warning Systems to Reduce Cardiac Arrests and Intensive Care Unit Readmissions

Item Type: Journal Article

Authors: Weigand, Laura;Viers, Tracy and Tipton, Eydie

Publication Date: 2025

Journal: Critical Care Nurse 45(4), pp. 49–56

Abstract: Background: Early identification and treatment of clinical deterioration is crucial for improving outcomes among hospital patients. A high-acuity response team (HART) program can integrate early warning systems and proactive rounding by critical care nurses to prevent unplanned escalations in care.; **Local Problem: During** the COVID-19 pandemic, a HART program was inconsistently implemented because of intensive care unit staffing shortages. Barriers to optimizing the HART nurse role included inconsistent practices, lack of clear role expectations, and frequent reassignment of HART nurses to compensate for staffing shortages.; **Methods:** Postpilot implementation of the HART program began in October 2019. Critical care nurses were designated as HART nurses, responsible for monitoring the Rothman Index, and assisted bedside nurses with high-acuity patients. Data were collected from 2019 to 2023 and were analyzed using IBM SPSS Statistics, version 29, with statistical significance defined as P ≤ .05.; **Results:** The HART program significantly reduced 24-hour intensive care unit readmissions by 33.9% and 72-hour readmissions by 32.7%. HART nurse consultations increased by 35.7%. There were clinically significant decreases in code blue emergencies outside the intensive care unit (22.2%) and overall (16.7%), although no statistically significant differences were found for rapid response team activations or unplanned intensive care unit transfers.; Conclusion: The HART nurse program effectively integrates early warning systems and rapid response teams, significantly reducing intensive care unit readmissions and improving patient care. Clear role expectations and dedicated staffing are needed, and continuous stakeholder engagement and resource allocation are essential for sustaining the program's success. (©2025 American Association of Critical-Care Nurses.)

Access or request full text: https://libkey.io/10.4037/ccn2025131

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40748923&profid=ehost

42. Early Cardiac Rehabilitation for Critically Ill Patients With Acute Decompensated Heart Failure: A Randomized Clinical Trial

Item Type: Journal Article

Authors: Wu, Linjing;Li, Jiahua;Zheng, Yamin;Xue, Mengmeng;Yan, Wei;Sun, Yongbin;Zhang, Meiling;Li,

Qiaoyan;Zhang, Jiahong;Jia, Ying;Wang, Yuli;Chen, Yuan;Sun, Guangyu;Liu, Binbin and Dai, Cuilian

Publication Date: 2025

Journal: JAMA Network Open 8(7), pp. e2524141

Abstract: Importance: The optimal timing and approach for initiating cardiac rehabilitation (CR) in critically ill patients during the acute phase of acute decompensated heart failure (ADHF) remains uncertain.; **Objective:** To evaluate the effects of CR on physical function and rehospitalization for critically ill patients with ADHF admitted to the cardiac intensive care unit (CICU).; **Design, Setting, and Participants:** In this single-center, single-blind randomized clinical trial conducted in China, critically ill patients with severe ADHF admitted to the CICU were recruited between March 26, 2021, and September 1, 2022. All patients were followed up for 6 months, and investigators were blinded to the group assignment.; Interventions: After short-term therapy, participants were randomized 1:1 to an early progressive and personalized CR program for patients with ADHF (AHF-CR program) that was administered exclusively during the patients' CICU stay or to usual care.; **Main Outcomes and Measures:** The primary outcomes were Short Physical Performance Battery (SPPB) score at hospital discharge and 6-month all-cause rehospitalization rates. These outcomes were analyzed using an intention-to-treat approach including all patients after randomization. The Perme Intensive Care Unit Mobility (PERME) score was incorporated as an exploratory outcome during analysis to assess mobility status in critically ill patients.; **Results:** This study included 120 patients (mean SD] age, 68.6 12.3] years; 80 66.7%] male). At randomization, pulmonary crackles were observed in 49 patients in the control group (81.7%) and 43 patients in the intervention group (71.7%). Additionally, 62 patients (51.7%) had an arterial partial pressure of oxygen to fraction of inspired oxygen ratio below 300 mm Hg. A total of 40 patients (33.3%) received intravenous vasoactive medications, and 87 (72.5%) received intravenous loop diuretics. The median difference in SPPB scores between groups was 1.0 (95% CI, 0-2.0; P = .16), which was not significant. Six-month rehospitalization rates were comparable between the control and intervention groups (16 26.6%] vs 17 28.3%]; hazard ratio, 1.00 95% CI, 0.51-1.99]; P = .99). Exploratory analysis revealed that the intervention group had higher PERME scores, with a median between-group difference of 2.76 (95% CI, 0.77-4.74; adjusted P = .04).; **Conclusions and Relevance:** In this randomized clinical trial of critically ill patients with ADHF, the AHF-CR program did not significantly improve SPPB scores or rehospitalization rates. However, it may offer potential physical benefits, including enhanced mobility.; Trial Registration: Chinese Clinical Trial Registry Identifier: ChiCTR2100050151.

Access or request full text: https://libkey.io/10.1001/jamanetworkopen.2025.24141

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40736732&profid=ehost

43. Body Composition Risk Assessment of All-Cause Mortality in Patients With Coronary Artery Disease Completing Cardiac Rehabilitation

Item Type: Journal Article

Authors: Yan, Kimberly L.;Liang, Icy;Ravellette, Keeley;Gornbein, Jeffrey;Srikanthan, Preethi and Horwich, Tamara B.

Publication Date: 2025

Journal: Journal of the American Heart Association 14(5), pp. e035006

Abstract: Background: Obesity, measured by body mass index, is a risk factor for cardiovascular disease. However, the role of body composition, including body fat percentage and lean body mass (LBM), in

cardiovascular outcomes has not been well studied in patients with coronary artery disease (CAD). This study aims to evaluate the association of body composition with cardiovascular outcomes and all-cause mortality in patients with CAD.; **Methods and Results:** Body composition was obtained via bioelectrical impedance analysis from 1291 patients with CAD before starting cardiac rehabilitation. Patients were divided into quintiles by body composition and analyzed in total and after sex stratification. All-cause mortality and a composite of major adverse cardiovascular events, including acute coronary syndrome, coronary revascularization, heart failure hospitalization, and stroke, were primary study outcomes. In the total cohort adjusted analyses, body mass index, body fat percentage, and LBM were not predictors of all-cause mortality or major adverse cardiovascular events. In sex-stratified analyses, among women, the third LBM quintile was associated with decreased risk of all-cause mortality compared with the lowest LBM quintile (adjusted hazard ratio, 0.07 95% CI, 0.01-0.57]; P =0.01). No other body composition variables were associated with all-cause mortality or major adverse cardiovascular events in either sex.; **Conclusions:** In women with CAD, moderate LBM was associated with lower mortality when compared with low LBM, whereas body fat percentage and body mass index were not associated with mortality or major adverse cardiovascular events in either sex. Future research studying the implications of changes in body composition on outcomes in men and women with CAD is warranted.

Access or request full text: https://libkey.io/10.1161/JAHA.124.035006

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40008528&profid=ehost

44. Three-dimensional speckle tracking imaging-based evaluation of influences of systematic cardiac rehabilitation nursing on cardiac function after interventional treatment of acute myocardial infarction.

Item Type: Journal Article

Authors: Yi S. and Yi, H.

Publication Date: 2025

Journal: Journal of Radiation Research and Applied Sciences 18(3) (pagination), pp. Article Number: 101623. Date of Publication: 01 Se 2025

Abstract: Background/objective: Acute myocardial infarction (AMI) is a life-threatening condition that requires effective post-intervention care. This study aimed to assess the impact of systematic cardiac rehabilitation nursing on heart function and mental health in patients following AMI intervention.
Method(s): A total of 200 AMI patients were assigned to the control group (routine nursing) and the observation group (systematic cardiac rehabilitation nursing). Heart function was evaluated before and after the intervention using three-dimensional speckle tracking imaging (3D-STI). Additionally, the effects of different nursing approaches on AMI patients undergoing intervention were analyzed.
Result(s): Systematic cardiac rehabilitation nursing led to significant improvements in clinical indicators and notable lipid-lowering effects. Compared to routine nursing, systematic cardiac rehabilitation nursing markedly ($p < 0.05$) reduced the SAS score, improved the SF-36 score, and led to a 15.2 % reduction in LDL levels. Furthermore, 3D-STI showed a notable ($p < 0.05$) improvement in radial strain and a reduction in area strain in observation group.
Conclusion(s): Systematic cardiac rehabilitation nursing markedly improved heart function and mental health in patients following AMI, as demonstrated by 3D-STI, though further multicenter studies are needed to confirm generalizability.

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45. A clinical reasoning skills development plan for coronary care nurse: an action research

Item Type: Journal Article

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Abstract: Background: Clinical reasoning (CR) skills are among the most important nursing competencies for providing safe and effective care in critical care units. Development of CR skills in nursing needs a well-designed interactive process for change to effectively support clinical competence promotion. The aim of this study was to develop CR skills among coronary care nurses through an action plan. **Methods:** This participatory action research study was conducted in 2021 based on the framework of Hart and Bond (1995). Study setting was the coronary care unit of a leading heart center in Rasht, Iran. An action plan was designed and implemented with three main components, namely efficiency of nursing education, effective nursing management, and personal professional development. The results of the plan were provided to participants and strategies for improving the plan were determined. Quantitative outcome assessment was performed using the Nurses' Clinical Reasoning Skills Checklist and the Nurses' Clinical Reasoning Scale and data were analyzed through the Wilcoxon's test. Qualitative outcome assessment was performed through focus group discussions and data were analyzed through conventional content analysis. **Results:** The mean scores of CR skills significantly increased after the action plan and participants were satisfied with the plan. The four main categories of the outcomes of the plan were improvement of the thinking process, improvement of professional commitment, improvement of professional competence, and improvement of interprofessional communications. The challenges of the plan were limited efficiency of educational courses on the nursing process, incoherence in nursing documentation, mentors' inadequate supervision and instructions, and mentors' role pressure. **Conclusions:** The CR skills action plan can improve coronary care nurses' CR skills and their competency in making sound clinical decisions and providing safe and quality care services.

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