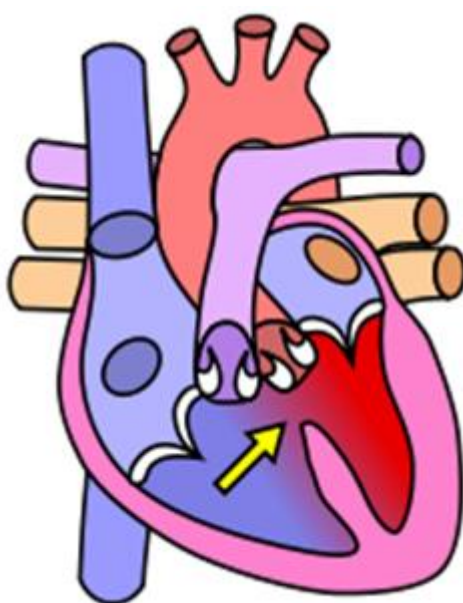


Cardiac Nurses Current Awareness Bulletin



December 2016

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Wed 18th	Critical Appraisal
Thurs 26th	Statistics

February (12.00)

Fri 3 rd	Literature Searching
Mon 6 th	Critical Appraisal
Tue 14 th	Statistics
Wed 22 nd	Literature Searching

March (13.00)

Thurs 2 nd	Critical Appraisal
Fri 10 th	Statistics
Mon 13 th	Literature Searching
Tues 21 st	Critical Appraisal
Weds 29 th	Statistics

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New Additions to NICE, the Cochrane Library, and UpToDate

NICE National Institute for Health and Care Excellence

Chest pain

This pathway covers: assessing and diagnosing recent-onset chest pain of suspected cardiac origin in people with acute chest pain and a suspected acute coronary syndrome, and people with intermittent stable chest pain and suspected stable angina. NICE Pathway Published November 2016

<https://pathways.nice.org.uk/pathways/chest-pain>



Jakob T, Nordmann AJ, Schandelmaier S, Ferreira-González I, Briel M. **Fibrates for primary prevention of cardiovascular disease events**. Cochrane Database of Systematic Reviews 2016, Issue 11. Art. No.: CD009753. DOI: 10.1002/14651858.CD009753.pub2.

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009753.pub2/full>

Wong WT, Lai VKW, Chee YE, Lee A. **Fast-track cardiac care for adult cardiac surgical patients**. Cochrane Database of Systematic Reviews 2016, Issue 9. Art. No.: CD003587. DOI: 10.1002/14651858.CD003587.pub3.

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003587.pub3/full>

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What's new in cardiovascular medicine

Authors: [Gordon M Saperia, MD, FACC](#); [Susan B Yeon, MD, JD, FACC](#); [Brian C Downey, MD, FACC](#)

Literature review current through: Nov 2016. | **This topic last updated:** Dec 09, 2016.

The following represent additions to UpToDate from the past six months that were considered by the editors and authors to be of particular interest.

<https://www.uptodate.com/contents/whats-new-in-cardiovascular-medicine>



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Current Awareness Database

Below is a selection of articles recently added to the healthcare databases.

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: library@uhbristol.nhs.uk

Team-Based Learning Improves Staff Nurses' Knowledge of Open- and Closed-Chest Cardiac Surgical Resuscitation.

Author(s): McRae, Marion E; Chan, Alice; Lee, Ai Jin; Hulett, Renee; Coleman, Bernice

Source: Dimensions of critical care nursing : DCCN; ; vol. 36 (no. 1); p. 60-67

Available in full text at [Dimensions of Critical Care Nursing](#) - from EBSCOhost

Abstract: There are few reports of the use of 1-session team-based learning (TBL) in hospital settings and none to teach cardiac surgical resuscitation (CSR). The aim of this study was to investigate whether 1-session TBL is an effective method to increase nursing knowledge of CSR. The participating subjects viewed a PowerPoint presentation about CSR prior to the learning session. Participants completed a 16-item individual readiness assessment test. Immediately after, participants in groups of 3 completed the same 16-item test as a team using the Immediate Feedback Assessment Technique form. Participants were asked open-ended questions about their concerns with CSR, which were analyzed with a grounded theory approach. The sample consisted of 60 subjects (54 completing all phases). Team-based learning significantly increased scores from 36.93 (SD, 8.49) to 50.89 (SD, 5.29), $t_{53} = -13.05$, $P < .001$. There was a significant increase in scores ($t_{46} = 2.13$, $P = .04$) among the noncohesive groups from baseline (52.88 [SD, 3.29]) versus the cohesive groups (50.38 [SD, 4.73]). The qualitative data indicated that the subjects had worries/concerns and lack of self-confidence around CSR. Team-based learning is a feasible method to use for single-session education where team building is also required. Noncohesive groups may benefit from TBL, from discussing divergent viewpoints to reach a consensus. Additional studies are needed to compare preferences for TBL with other teaching methods.

Knowledge discovery in cardiology: A systematic literature review.

Author(s): Kadi, I; Idri, A; Fernandez-Aleman, J L

Source: International journal of medical informatics; Jan 2017; vol. 97 ; p. 12-32

Abstract: Data mining (DM) provides the methodology and technology needed to transform huge amounts of data into useful information for decision making. It is a powerful process employed to extract knowledge and discover new patterns embedded in large data sets. Data mining has been increasingly used in medicine, particularly in cardiology. In fact, DM applications can greatly benefit all those involved in cardiology, such as patients, cardiologists and nurses. The purpose of this paper is to review papers concerning the application of DM techniques in cardiology so as to summarize and analyze evidence regarding: (1) the DM techniques most frequently used in cardiology; (2) the performance of DM models in cardiology; (3) comparisons of the performance of different DM models in cardiology. We performed a systematic literature review of empirical studies on the application of DM techniques in cardiology published in the period between 1 January 2000 and 31 December 2015. A total of 149 articles published between 2000 and 2015 were selected, studied and analyzed according to the following criteria: DM techniques and performance of the approaches developed. The results obtained showed that a significant number of the studies selected used classification and prediction techniques when developing DM models. Neural networks, decision trees and support vector machines were identified as being the techniques most frequently employed when developing DM models in cardiology. Moreover, neural networks and support vector machines achieved the highest accuracy rates and were proved to be more efficient than other techniques.

Scar-based catheter ablation for persistent atrial fibrillation.

Author(s): Nery, Pablo B.; Thornhill, Rebecca; Nair, Girish M.; Pena, Elena; Redpath, Calum J.

Source: Current Opinion in Cardiology; Jan 2017; vol. 32 (no. 1); p. 1-9

The genetics of atrial fibrillation.

Author(s): Kenshi Hayashi; Hayato Tada; Masakazu Yamagishi

Source: Current Opinion in Cardiology; Jan 2017; vol. 32 (no. 1); p. 10-16

Hybrid ablation for atrial fibrillation: current approaches and future directions.

Author(s): Bisleri, Gianluigi; Glover, Benedict

Source: Current Opinion in Cardiology; Jan 2017; vol. 32 (no. 1); p. 17-21

Pacing to prevent atrial fibrillation.

Author(s): Chutani, Surendra K.; Shah, Arti N.; Kantharia, Bharat K.

Source: Current Opinion in Cardiology; Jan 2017; vol. 32 (no. 1); p. 22-26

Real-world outcomes, complications, and cost of catheter-based ablation for atrial fibrillation: an update.

Author(s): Ha, Andrew C. T.; Wijeyesundera, Harindra C.; Birnie, David H.; Verma, Atul

Source: Current Opinion in Cardiology; Jan 2017; vol. 32 (no. 1); p. 47-52

Efficacy of adjunctive measures used to assist pulmonary vein isolation for atrial fibrillation: a systematic review.

Author(s): Nair, Girish M.; Raut, Roshan; Bami, Karan; Nery, Pablo B.; Redpath, Calum J.; Sadek, Mouhannad M.; Green, Martin S.; Birnie, David H.

Source: Current Opinion in Cardiology; Jan 2017; vol. 32 (no. 1); p. 58-68

A framework for combining a motion atlas with non-motion information to learn clinically useful biomarkers: Application to cardiac resynchronisation therapy response prediction.

Author(s): Peressutti, Devis; Sinclair, Matthew; Bai, Wenjia; Jackson, Thomas; Ruijsink, Jacobus; Nordsletten, David; Asner, Liya; Hadjicharalambous, Myrianthi; Rinaldi, Christopher A; Rueckert, Daniel; King, Andrew P

Source: Medical image analysis; Jan 2017; vol. 35 ; p. 669-684

Abstract: We present a framework for combining a cardiac motion atlas with non-motion data. The atlas represents cardiac cycle motion across a number of subjects in a common space based on rich motion descriptors capturing 3D displacement, velocity, strain and strain rate. The non-motion data are derived from a variety of sources such as imaging, electrocardiogram (ECG) and clinical reports. Once in the atlas space, we apply a novel supervised learning approach based on random projections and ensemble learning to learn the relationship between the atlas data and some desired clinical output. We apply our framework to the problem of predicting response to Cardiac Resynchronisation Therapy (CRT). Using a cohort of 34 patients selected for CRT using conventional criteria, results show that the combination of motion and non-motion data enables CRT response to be predicted with 91.2% accuracy (100% sensitivity and 62.5% specificity), which compares favourably with the current state-of-the-art in CRT response prediction.

Creating Opportunities for Optimal Nutritional Experiences for Infants with Complex Congenital Heart Disease.

Author(s): Steltzer, Michelle M; Sussman-Karten, Karen; Kuzdeba, Hillary Bishop; Mott, Sandra; Connor, Jean Anne

Source: Journal of pediatric health care : official publication of National Association of Pediatric Nurse Associates & Practitioners; 2016; vol. 30 (no. 6); p. 599-605

Abstract: To our knowledge, successful breastfeeding in the population with single ventricle congenital heart disease has not been reported in the literature, particularly during the interstage period. A retrospective case study including inpatient nutrition and a complete history of daily logs with the home surveillance monitoring program was performed. Successful full breastfeeding (exceeding prescribed weight growth goals) after Stage I surgery was achieved during the interstage period. The infant was discharged at 3.41 kg, not consistently breastfeeding, and progressed to 7.05 kg at 5 months of age, fully breastfeeding. Supporting breastfeeding for infants who have undergone repairs for single ventricle anatomy can be challenging but can be accomplished. It

requires a concerted team effort, clear communication, and collaboration among caregivers, the mother, and her supporters.

Cardiovascular medication adherence among patients with cardiac disease: a systematic review

Author(s): Al-Ganmi, Ali Hussein; Perry, Lin; Gholizadeh, Leila; Alotaibi, Abdullellah Modhi

Source: Journal of Advanced Nursing; Dec 2016; vol. 72 (no. 12); p. 3001-3014

Abstract: Aims. The aim of this study was to critically appraise and synthesize the best available evidence on the effectiveness of interventions suitable for delivery by nurses, designed to enhance cardiac patients' adherence to their prescribed medications. Background. Cardiac medications have statistically significant health benefits for patients with heart disease, but patients' adherence to prescribed medications remains suboptimal. Design. A systematic quantitative review of intervention effects. Data Sources. We conducted systematic searches for English-language, peerreviewed randomized controlled trial publications via Medline, EMBASE, CINAHL, the Cochrane Library, ProQuest, Web of Science and Google Scholar published between January 2004-December 2014. Review methods. According to pre-determined inclusion and exclusion criteria, eligible studies were identified and data extracted using a predefined form. Of 1962 identified papers; 14 studies met the study inclusion criteria, were assessed for risk of bias using the Cochrane Collaboration tool; and included in the review. Results. Study findings were presented descriptively; due to the heterogeneity of studies meta-analysis was not possible. Included papers described interventions categorized as: (1) multifaceted; and (2) behavioural and educational, comprising: (a) text message and mail message; (b) telephone calls; (c) motivational interviewing and (d) nurse-led counselling and education. Conclusions. Substantial heterogeneity limited the robustness of conclusions, but this review indicated that motivational interviewing, education and phone or text messaging appeared promising as means to enhance cardiac medication adherence. Future research should integrate multifaceted interventions that target individual behaviour change to enhance adherence to cardiovascular medications, to build on the beneficial outcomes indicated by this review.

Improving nurse education and mandatory training within a cardiac centre

Author(s): Churchouse, Wendy; Brooker, Melanie; Barnes, Julie; Fabb, Lisa; Burns, Clare

Source: British Journal of Cardiac Nursing; Dec 2016; vol. 11 (no. 12); p. 607-612

Abstract: To comply with Nursing and Midwifery Council (NMC) revalidation from April 2016, nurses must undertake 35 hours of continuing professional development, of which at least 20 hours must involve participatory learning with at least one other professional. This could be challenging for some nurses as they may experience difficulty being released from clinical areas to attend courses, conferences and mandatory training. This article describes simple, innovative nurse education programmes, structured around interactive, participatory ward-based learning, introduced into a busy cardiac unit. The education programmes necessitated collaborative working between ward/unit managers, specialist/advanced nurse practitioners, the clinical educator and ward nurses. The simplicity and favourable outcomes of the initiatives are worthy of dissemination.

Shared decision making in patients with low risk chest pain: prospective randomized pragmatic trial.

Author(s): Hess, Erik P; Hollander, Judd E; Schaffer, Jason T; Kline, Jeffrey A; Torres, Carlos A; Diercks, Deborah B; Jones, Russell; Owen, Kelly P; Meisel, Zachary F; Demers, Michel; Leblanc, Annie; Shah, Nilay D; Inselman, Jonathan; Herrin, Jeph; Castaneda-Guarderas, Ana; Montori, Victor M

Source: BMJ (Clinical research ed.); Dec 2016; vol. 355 ; p. i6165

Available in full text at [The BMJ](#) - from Highwire Press

Abstract: To compare the effectiveness of shared decision making with usual care in choice of admission for observation and further cardiac testing or for referral for outpatient evaluation in patients with possible acute coronary syndrome. Multicenter pragmatic parallel randomized controlled trial. Six emergency departments in the United States. 898 adults (aged >17 years) with a primary complaint of chest pain who were being considered for admission to an observation unit for cardiac testing (451 were allocated to the decision aid and 447 to usual care), and 361 emergency clinicians (emergency physicians, nurse practitioners, and physician assistants) caring for patients with chest pain. Patients were randomly assigned (1:1) by an electronic, web based system to shared decision making facilitated by a decision aid or to usual care. The primary outcome, selected by patient and caregiver advisers, was patient knowledge of their risk for acute coronary syndrome and options for care; secondary outcomes were involvement in the decision to be admitted, proportion of patients admitted for cardiac testing, and the 30 day rate of major adverse cardiac events. Compared with the usual care arm, patients in the decision aid arm had greater knowledge of their risk for acute coronary syndrome and options for care (questions correct: decision aid, 4.2 v usual care, 3.6; mean difference 0.66, 95% confidence

interval 0.46 to 0.86), were more involved in the decision (observing patient involvement scores: decision aid, 18.3 v usual care, 7.9; 10.3, 9.1 to 11.5), and less frequently decided with their clinician to be admitted for cardiac testing (decision aid, 37% v usual care, 52%; absolute difference 15%; $P < 0.001$). There were no major adverse cardiac events due to the intervention. Use of a decision aid in patients at low risk for acute coronary syndrome increased patient knowledge about their risk, increased engagement, and safely decreased the rate of admission to an observation unit for cardiac testing. Trial registration ClinicalTrials.gov NCT01969240.

The Canadian Arrhythmogenic Right Ventricular Cardiomyopathy Registry: Rationale, Design, and Preliminary Recruitment.

Author(s): Krahn, Andrew D; Healey, Jeffrey S; Gerull, Brenda; Angaran, Paul; Chakrabarti, Santabhanu; Sanatani, Shubhayan; Arbour, Laura; Laksman, Zachary W M; Carroll, Sandra L; Seifer, Colette; Green, Martin; Roberts, Jason D; Talajic, Mario; Hamilton, Robert; Gardner, Martin

Source: The Canadian journal of cardiology; Dec 2016; vol. 32 (no. 12); p. 1396-1401

Abstract: Arrhythmogenic right ventricular cardiomyopathy (ARVC) is a complex and clinically heterogeneous arrhythmic condition. Incomplete penetrance and variable expressivity are particularly evident in ARVC, making clinical decision-making challenging. Pediatric and adult cardiologists, geneticists, genetic counsellors, ethicists, nurses, and qualitative researchers are collaborating to create the Canadian ARVC registry using a web-based clinical database. Biological samples will be banked and systematic analysis will be performed to examine potentially causative mutations, variants, and biomarkers. Outcomes will include syncope, ventricular arrhythmias, defibrillator therapies, heart failure, and mortality. Preliminary recruitment has enrolled 365 participants (aged 42.7 ± 17.1 years; 50% women), including 129 probands and 236 family members. Previous cardiac arrest occurred in 28 (8%) participants, syncope occurred in 43 (12%) participants, and 46% of probands had a family history of sudden death. Overall yield of genetic testing was 36% for a disease-causing mutation and 20% for a variant of unknown significance. Target enrollment is 1000 affected patients and 500 unaffected family member controls over 7 years. The cross-sectional and longitudinal data collected in this manner will allow a robust assessment of the natural history and clinical course of genetic subtypes. The Canadian ARVC Registry will create a population-based cohort of patients and their families to inform clinical decisions regarding patients with ARVC.

Cardiac arrest leadership: in need of resuscitation?

Author(s): Robinson, Philip S; Shall, Emma; Rakhit, Roby

Source: Postgraduate medical journal; Dec 2016; vol. 92 (no. 1094); p. 715-720

Available in full text at [Postgraduate medical journal](#) - from Highwire Press

Abstract: Leadership skills directly correlate with the quality of technical performance of cardiopulmonary resuscitation (CPR) and clinical outcomes. Despite an improved focus on non-technical skills in CPR training, the leadership of cardiac arrests is often variable. To assess the perceptions of leadership and team working among members of a cardiac arrest team and to evaluate future training needs. Cross-sectional survey of 102 members of a cardiac arrest team at an Acute Hospital Trust in the UK with 892 inpatient beds. Responses sought from doctors, nurses and healthcare assistants to 12 rated statements and 4 dichotomous questions. Of 102 responses, 81 (79%) were from doctors and 21 (21%) from nurses. Among specialist registrars 90% agreed or strongly agreed that there was clear leadership at all arrests compared with between 28% and 49% of nurses and junior doctors respectively. Routine omission of key leadership tasks was reported by as many as 80% of junior doctors and 50% of nurses. Almost half of respondents reported non-adherence with Advanced Life Support (ALS) guidelines. Among junior members of the team, 36% felt confident to lead an arrest and 75% would welcome further dedicated cardiac arrest leadership training. Leadership training is integrated into the ALS (Resus Council, UK) qualification. However, this paper found that in spite of this training; standards of leadership are variable. The findings suggest a pressing need for further dedicated cardiac arrest leadership training with a focus on improving key leadership tasks such as role assignment, team briefing and debriefing.

Quality of life in elder adults one-year after coronary bypass.

Author(s): Blokzijl, Fredrike; van der Horst, Iwan C C; Keus, Eric; Waterbolk, Tjalling W; Mariani, Massimo A; Dieperink, Willem

Source: Journal of vascular nursing : official publication of the Society for Peripheral Vascular Nursing; Dec 2016; vol. 34 (no. 4); p. 152-157

Abstract: Survival rates in the elderly after cardiac surgery have improved over the last decades and therewith more attention is directed toward Quality of Life (QoL) as a patient reported outcome measure. The purpose of

this study was to explore QoL in patients one year after coronary artery bypass grafting, with special interest in the elderly patients (≥ 80 years). In a quantitative, retrospective single-center study patients with isolated coronary artery bypass grafting (eg, nonvalve) surgery aged 80 years or older and operated in 2013 were included ($n = 32$). A control group of patients aged younger than 80 years was selected by matching based on gender and a recalculated (for age) logistic European System for Cardiac Operative Risk Evaluation (log EuroSCORE I) during the same period ($n = 48$). QoL assessment by the EuroQol questionnaire (EQ-5D) and additional questions were performed at one-year follow-up. QoL in elderly patients was 0.79 versus 0.90 in younger patients ($P = 0.013$). Overall, 54.8% of the elderly experience some or extreme problems in mobility versus 18.8% in the younger group ($P = 0.001$). Elderly patients also experience more problems in self care (19.3 vs 4.2%, $P = 0.029$). Nine of the elderly (29%) valued their postoperative health status to be worse than preoperatively versus 5 (10%) in the younger group ($P = 0.028$). Only patients aged 80 years or older would choose not to have surgery again (12.9%). Hospital mortality was 3.1% in the elderly group ($n = 32$) and 0% in the younger group ($n = 48$). Not all elderly patients experience benefits in terms of QoL one year after cardiac surgery. Therefore, potential benefits and risks need to be considered and discussed by physicians and patients before making the decision to operate or not.

Evaluation of a Coping Effectiveness Training intervention in patients with chronic heart failure - a randomized controlled trial.

Author(s): Nahlén Bose, Catarina; Persson, Hans; Björling, Gunilla; Ljunggren, Gunnar; Elfström, Magnus L; Saboonchi, Fredrik

Source: European journal of cardiovascular nursing : journal of the Working Group on Cardiovascular Nursing of the European Society of Cardiology; Dec 2016; vol. 15 (no. 7); p. 537-548

Abstract: Impaired emotional well-being has detrimental effects on health outcomes in patients with chronic heart failure (CHF). To evaluate a nurse-led Coping Effectiveness Training (CET) group intervention for patients with CHF. It was hypothesized that CET would increase emotional well-being (primary outcome) and health-related quality (HRQoL) of life and improve clinical outcomes. Furthermore, changes in appraisal and coping as mediators of the intervention effect were examined. Participants were randomized to either control group ($n=51$) receiving standard health care or CET intervention group ($n=52$). Self-assessments of positive affect, negative affect, depression, anxiety, HRQoL, illness perception, coping strategies and social support were performed pre- and post-intervention and after six weeks, six months and 12 months. Time to death and hospitalizations were measured during the entire follow-up (median 35 months, interquartile range 11 months). No significant improvements for emotional well-being and HRQoL in the intervention group compared with the control group were found. After excluding patients with clinical anxiety and depression at baseline the intervention group had significantly lower negative affect ($p = 0.022$). There were no significant differences regarding cardiovascular events between the groups. The intervention group had greater sense of control over their illness in the short-term ($p = 0.036$). CET intervention was found to increase sense of control over the illness in the short term. Psychosocial support programmes, like CET, for patients with CHF is currently lacking evidence for implementing in clinical practice. However, the results provide a basis for future studies with a modified CET intervention design and increased study size.

Anxiety in chronic heart failure and the risk of increased hospitalisations and mortality: A systematic review.

Author(s): Vongmany, Jeffrey; Hickman, Louise D; Lewis, Joanne; Newton, Phillip J; Phillips, Jane L

Source: European journal of cardiovascular nursing : journal of the Working Group on Cardiovascular Nursing of the European Society of Cardiology; Dec 2016; vol. 15 (no. 7); p. 478-485

Abstract: Anxiety is a serious affective mood disorder that affects many chronic heart failure patients. While there is ample evidence that depression increases hospitalisations and mortality in chronic heart failure patients, it is unclear whether this association also exists for anxiety. The purpose of this study was to report on prospective cohort studies investigating anxiety in chronic heart failure patients and its association with hospitalisations and mortality rates. This systematic review aims to improve the current knowledge of anxiety as a potential prognostic predictor in chronic heart failure populations. This systematic review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. Studies were identified by accessing electronic databases Embase, Medline, Cumulative Index to Nursing and Allied Health Literature and PsycINFO. Studies were included if they: employed a prospective cohort study design, included chronic heart failure participants with a confirmed clinical diagnosis plus anxiety confirmed by a validated anxiety assessment tool and/or clinical diagnosis and reported longitudinal hospitalisation rates and mortality data in chronic heart failure. Six studies were identified for inclusion. A study investigating hospitalisations

and mortality rates found a significant ($p < 0.05$) association solely between hospitalisation and anxiety. Of four studies reporting on hospitalisations alone, only two reported significant associations with anxiety. One study reported rates of mortality alone and identified no significant associations between mortality and anxiety. There was some variation in quality of the studies in regards to their methodology, analysis and reported measures/outcomes, which may have affected the results reported. It is possible that anxiety does predict hospitalisations in chronic heart failure populations, however further research is required to confirm this observation.

Barriers to goals of care discussions with hospitalized patients with advanced heart failure: feasibility and performance of a novel questionnaire.

Author(s): Aleksova, Natasha; Demers, Catherine; Strachan, Patricia H; MacIver, Jane; Downar, James; Fowler, Robert; Heyland, Daren K; Ross, Heather J; You, John J

Source: ESC heart failure; Dec 2016; vol. 3 (no. 4); p. 245-252

Abstract: Good end-of-life communication and decision-making are important to patients with advanced heart failure (HF) and their families, but their needs remain unmet. In this pilot study, we describe the feasibility and performance of a novel questionnaire aimed at identifying barriers and solutions to improve communication and decision-making about goals of care for hospitalized patients with advanced HF. We distributed questionnaires to staff cardiologists, cardiology trainees, and cardiology nurses who provide care for HF patients at a Canadian teaching hospital. The questionnaire asked about the importance of various barriers to goals of care discussions. It also asked participants to rank their willingness to engage in goals of care discussions and their views on other clinicians could engage in such discussions. Of 76 clinicians, 44 (58%) completed the questionnaire (median completion time, 17 min). Individual survey questions had few missing responses (0% to 2%) for questions about barriers to goals of care discussions. There was appreciable discrimination of the importance of different barriers (mean scores 2.2 to 6.0 on a 7-point scale). Preliminary data suggest that clinicians perceive patient and family factors, such as difficulty accepting a poor prognosis, as the most important barriers preventing goals of care discussions. In this pilot study, we have demonstrated the feasibility of a novel questionnaire to be used in a larger multi-centre study of end-of-life HF care. Essential information will be obtained to inform the design and evaluation of interventions that seek to improve communication and decision-making about goals of care with HF patients.

Planning for Deactivation of Implantable Cardioverter Defibrillators at the End of Life in Patients With Heart Failure.

Author(s): Brady, Destiny R

Source: Critical care nurse; Dec 2016; vol. 36 (no. 6); p. 24-31

Available in full text at [Critical Care Nurse](#) - from EBSCOhost

Abstract: Implantable cardioverter defibrillators (ICDs) may be burdensome in end-stage heart failure. At the end of life, as many as one-fifth to one-third of patients experience an ICD shock. Critical care nurses should be aware of the potential burden of these shocks at the end of life as well as the ethics and organizational policies surrounding ICD deactivation. This literature review examines the issues surrounding ICD therapy at the end of life. Based on this author's findings, recommendations for discussing and implementing ICD deactivation are offered. Health care organizations should have clear policies addressing ICD deactivation to provide for seamless integration of palliative care services throughout the course of heart failure. These policies should empower nurses to activate resources in a timely manner and should clearly outline processes for ICD deactivation.

Effectiveness and Safety of an Independently Run Nurse Practitioner Outpatient Cardioversion Program (2009 to 2014).

Author(s): Norton, Linda; Tsiperfal, Angela; Cook, Kelly; Bagdasarian, Ani; Varady, John; Shah, Manali; Wang, Paul

Source: The American journal of cardiology; Dec 2016; vol. 118 (no. 12); p. 1842-1846

Abstract: Sustained growth in the arrhythmia population at Stanford Health Care led to an independent nurse practitioner-run outpatient direct current cardioversion (DCCV) program in 2012. DCCVs performed by a medical doctor, a nurse practitioner under supervision, or nurse practitioners from 2009 to 2014 were compared for safety and efficacy. A retrospective review of the electronic medical records system (Epic) was performed on biodemographic data, cardiovascular risk factors, medication history, procedural data, and DCCV outcomes. A total of 869 DCCVs were performed on 557 outpatients. Subjects were largely men with an average age of

65 years; 1/3 were obese; most had atrial fibrillation; and majority of subjects were on warfarin. The success rate of the DCCVs was 93.4% (812 of 869) with no differences among the groups. There were no short-term complications: stroke, myocardial infarction, or death. The length of stay was shortest in the NP group compared to the other groups ($p < 0.001$). In conclusion, the success rate of DCCV in all groups was extremely high, and there were no complications in any of the DCCV groups

Cardiac sympathetic activity in chronic heart failure: cardiac (123)I-mIBG scintigraphy to improve patient selection for ICD implantation.

Author(s): Verschure, D O; van Eck-Smit, B L F; Somsen, G A; Knol, R J J; Verberne, H J

Source: Netherlands heart journal : monthly journal of the Netherlands Society of Cardiology and the Netherlands Heart Foundation; Dec 2016; vol. 24 (no. 12); p. 701-708

Available in full text at [Netherlands Heart Journal](#) - from National Library of Medicine

Abstract: Heart failure is a life-threatening disease with a growing incidence in the Netherlands. This growing incidence is related to increased life expectancy, improvement of survival after myocardial infarction and better treatment options for heart failure. As a consequence, the costs related to heart failure care will increase. Despite huge improvements in treatment, the prognosis remains unfavourable with high one-year mortality rates. The introduction of implantable devices such as implantable cardioverter defibrillators (ICD) and cardiac resynchronisation therapy (CRT) has improved the overall survival of patients with chronic heart failure. However, after ICD implantation for primary prevention in heart failure a high percentage of patients never have appropriate ICD discharges. In addition 25-50 % of CRT patients have no therapeutic effect. Moreover, both ICDs and CRTs are associated with malfunction and complications (e. g. inappropriate shocks, infection). Last but not least is the relatively high cost of these devices. Therefore, it is essential, not only from a clinical but also from a socioeconomic point of view, to optimise the current selection criteria for ICD and CRT. This review focusses on the role of cardiac sympathetic hyperactivity in optimising ICD selection criteria. Cardiac sympathetic hyperactivity is related to fatal arrhythmias and can be non-invasively assessed with (123)I-metaiodobenzylguanide ((123)I-mIBG) scintigraphy. We conclude that cardiac sympathetic activity assessed with (123)I-mIBG scintigraphy is a promising tool to better identify patients who will benefit from ICD implantation.

Defining pediatric inpatient cardiology care delivery models: A survey of pediatric cardiology programs in the USA and Canada.

Author(s): Mott, Antonio R; Neish, Steven R; Challman, Melissa; Feltes, Timothy F

Source: Congenital heart disease; Nov 2016

Abstract: The treatment of children with cardiac disease is one of the most prevalent and costly pediatric inpatient conditions. The design of inpatient medical services for children admitted to and discharged from noncritical cardiology care units, however, is undefined. North American Pediatric Cardiology Programs were surveyed to define noncritical cardiac care unit models in current practice. An online survey that explored institutional and functional domains for noncritical cardiac care unit was crafted. All questions were multi-choice with comment boxes for further explanation. The survey was distributed by email four times over a 5-month period. Most programs ($n = 45$, 60%) exist in free-standing children's hospitals. Most programs cohort cardiac patients on noncritical cardiac care units that are restricted to cardiac patients in 39 (54%) programs or restricted to cardiac and other subspecialty patients in 23 (32%) programs. The most common frontline providers are categorical pediatric residents ($n = 58$, 81%) and nurse practitioners ($n = 48$, 67%). However, nurse practitioners are autonomous providers in only 21 (29%) programs. Only 33% of programs use a postoperative fast-track protocol. When transitioning care to referring physicians, most programs ($n = 53$, 72%) use facsimile to deliver pertinent patient information. Twenty-two programs (31%) use email to transition care, and eighteen (25%) programs use verbal communication. Most programs exist in free-standing children's hospitals in which the noncritical cardiac care units are in some form restricted to cardiac patients. While nurse practitioners are used on most noncritical cardiac care units, they rarely function as autonomous providers. The majority of programs in this survey do not incorporate any postoperative fast-track protocols in their practice. Given the current era of focused handoffs within hospital systems, relatively few programs utilize verbal handoffs to the referring pediatric cardiologist/pediatrician.

Factors associated with anxiety and depression among patients with implantable cardioverter defibrillator.

Author(s): Wong, Florence Mei Fung

Source: Journal of clinical nursing; Nov 2016

Abstract: To identify factors associated with anxiety and depression of patients with implantable cardioverter defibrillators. Implantable cardioverter defibrillator is effective to increase survival from life-threatening arrhythmias but it lowers health-related quality of life. Anxiety and depression had significant negative association with health-related quality of life. However, knowledge about factors associated with these two negative emotions in this specific population is inadequate. A cross-sectional descriptive design was conducted. Secondary analysis was performed to address the aim. A convenience sampling of patients with implantable cardioverter defibrillators was performed. Anxiety and depression were measured by the Hospital Anxiety and Depression Scale through face-to-face interview. Stepwise multivariable regression results showed that older age (aged 60-69 and ≥ 70 : $B=2.08$ and 3.31 , $p=0.039$ and <0.001), self-care dependence ($B=3.47$, $p<0.001$), being married ($B=-2.21$, $p=0.004$), and having ischemic heart disease ($B=-1.80$, $p=0.008$) were significantly associated with depression. However, there was no significant factor associated with anxiety. Factors associated with depression among patients with implantable cardioverter defibrillator are identified. Older age (aged ≥ 60) and more self-care dependence have positive but being married and having ischemic heart disease have negative association with depression. Strategies to reduce psychological distress are highlighted. The study findings direct the care to improve health-related quality of life by reducing and controlling vulnerabilities arising from depression. Patients who are older people (\geq aged 60) and more self-care dependent perceive higher depression. Nursing strategies are suggested to reduce depression especially for those who are older people and more self-care dependent. Early screening is essential to provide immediate care for reducing vulnerabilities arising from depression. Performing comprehensive assessment for self-care ability and providing adequate assistance are crucial. Family involvement may reduce depression through providing physical and psychosocial support.

The Effectiveness of Hand Massage on Pain in Critically Ill Patients After Cardiac Surgery: A Randomized Controlled Trial Protocol.

Author(s): Boitor, Madalina; Martorella, Géraldine; Laizner, Andréa Maria; Maheu, Christine; Gélinas, Céline

Source: JMIR research protocols; Nov 2016; vol. 5 (no. 4); p. e203

Abstract: Postoperative pain is common in the intensive care unit despite the administration of analgesia. Some trials suggest that massage can be effective at reducing postoperative pain in acute care units; however, its effects on pain relief in the intensive care unit and when pain severity is highest remain unknown. The objective is to evaluate the effectiveness of hand massage on the pain intensity (primary outcome), unpleasantness and interference, muscle tension, anxiety, and vital signs of critically ill patients after cardiac surgery. A 3-arm randomized controlled trial will be conducted. A total of 79 patients who are 18 years or older, able to speak French or English and self-report symptoms, have undergone elective cardiac surgery, and do not have a high risk of postoperative complications and contraindications to hand massage will be recruited. They will be randomly allocated (1:1:1) to standard care plus either 3 20-minute hand massages (experimental), 3 20-minute hand holdings (active control), or 3 20-minute rest periods (passive control). Pain intensity, unpleasantness, anxiety, muscle tension, and vital signs will be evaluated before, immediately after, and 30 minutes later for each intervention administered within 24 hours postoperatively. Peer-reviewed competitive funding was received from the Quebec Nursing Intervention Research Network and McGill University in December 2015, and research ethics approval was obtained February 2016. Recruitment started in April 2016, and data collection is expected to be complete by January 2017. To date, 24 patients were randomized and had data collection done. This study will be one of the first randomized controlled trials to examine the effect of hand massage on the pain levels of critically ill patients after cardiac surgery and to provide empirical evidence for the use of massage among this population. ClinicalTrials.gov NCT02679534; <https://clinicaltrials.gov/ct2/show/NCT02679534> (Archived by WebCite at <http://www.webcitation.org/6l8Ly5eHS>).

Transition from paediatric to adult care of adolescent patients with congenital heart disease: a pathway to optimal care.

Author(s): Strijbosch, A M M; Zwart, R; Blom, N A; Bouma, B J; Groenink, M; Boekholdt, S M; de Winter, R; Mulder, B J M; Backx, A P

Source: Netherlands heart journal : monthly journal of the Netherlands Society of Cardiology and the Netherlands Heart Foundation; Nov 2016; vol. 24 (no. 11); p. 682-690

Available in full text at [Netherlands Heart Journal](#) - from National Library of Medicine

Abstract: Adolescents with congenital heart disease transition from a paediatric to an adult setting. This is associated with loss-to-follow-up and suboptimal care. Increasing numbers of patients justify a special program. In this study we evaluated the cooperative program between paediatric and adult cardiology departments in a tertiary referral centre. In this retrospective study, patients with congenital heart disease with at least one appointment scheduled at the transition program between January 2010 and January 2015 were included. They were seen by a paediatric cardiologist at the age of 15 years in the paediatric department and from age 18 to 25 in the adult department. Demographic and medical data were collected from the electronic patient files. A total of 193 patients (105 males, 88 females) were identified. Sex distribution was almost equal. Most patients were 18-21 years of age. The largest group, 128 patients (67%), lived within 50 kilometres of our hospital. Paediatric cardiologists referred 157 (81%) of patients. General practitioners and cardiologists from outside our centre were important referrers for patients lost to follow-up, together accounting for 9%. A total of 34 (18%) patients missed an appointment without notification. Repeat offenders, 16 of 34 patients, formed a significant minority within this group. A total of 114 (59%) patients were attending school, 46 (24%) were employed, and 33 (17%) patients were inactive. Activities are in line with capabilities. A nurse practitioner was involved with the 7% with complex and psychosocial problems. Moderately severe congenital heart defects formed the largest patient category of 102 (53%) patients. In 3% of patients the diagnosis had to be revised or was significantly incomplete. In 30 (16%) patients, cardiac diagnosis was part of a syndrome. Of the 193 patients, 117 (92%) were in NYHA class I, with 12 (6%) and 4 (2%) patients falling into classes II and III, respectively. A viable transition program can be built by collaboration between paediatric and adult cardiology departments with the same treating physician taking care of patients between 15 and 25 years of age. General practitioners are important in returning lost-to-follow-up patients to specialised care. Nurse practitioners are essential in the care for patients with complex congenital heart disease.

Toward Optimal Decision Making among Vulnerable Patients Referred for Cardiac Surgery: A Qualitative Analysis of Patient and Provider Perspectives.

Author(s): Gainer, Ryan A; Curran, Janet; Buth, Karen J; David, Jennie G; Légaré, Jean-Francois; Hirsch, Gregory M

Source: Medical decision making : an international journal of the Society for Medical Decision Making; Nov 2016

Abstract: Comprehension of risks, benefits, and alternative treatment options has been shown to be poor among patients referred for cardiac interventions. Patients' values and preferences are rarely explicitly sought. An increasing proportion of frail and older patients are undergoing complex cardiac surgical procedures with increased risk of both mortality and prolonged institutional care. We sought input from patients and caregivers to determine the optimal approach to decision making in this vulnerable patient population. Focus groups were held with both providers and former patients. Three focus groups were convened for Coronary Artery Bypass Graft (CABG), Valve, or CABG +Valve patients ≥ 70 y old (2-y post-op, ≤ 8 -wk post-op, complicated post-op course) (n = 15). Three focus groups were convened for Intermediate Medical Care Unit (IMCU) nurses, Intensive Care Unit (ICU) nurses, surgeons, anesthesiologists and cardiac intensivists (n = 20). We used a semi-structured interview format to ask questions surrounding the informed consent process. Transcribed audio data was analyzed to develop consistent and comprehensive themes. We identified 5 main themes that influence the decision making process: educational barriers, educational facilitators, patient autonomy and perceived autonomy, patient and family expectations of care, and decision making advocates. All themes were influenced by time constraints experienced in the current consent process. Patient groups expressed a desire to receive information earlier in their care to allow time to identify personal values and preferences in developing plans for treatment. Both groups strongly supported a formal approach for shared decision making with a decisional coach to provide information and facilitate communication with the care team. Identifying the barriers and facilitators to patient and caretaker engagement in decision making is a key step in the development of a structured, patient-centered SDM approach. Intervention early in the decision process, the use of individualized decision aids that employ graphic risk presentations, and a dedicated decisional coach were identified by patients and providers as approaches with a high potential for success. The impact of such a formalized shared decision making process in cardiac surgery on decisional quality will need to be formally assessed. Given the trend toward older and frail patients referred for complex cardiac procedures, the need for an effective shared decision making process is compelling.

Knowledge Gaps in Cardiovascular Care of Older Adults: A Scientific Statement from the American Heart Association, American College of Cardiology, and American Geriatrics Society: Executive Summary.

Author(s): Rich, Michael W; Chyun, Deborah A; Skolnick, Adam H; Alexander, Karen P; Forman, Daniel E; Kitzman, Dalane W; Maurer, Mathew S; McClurken, James B; Resnick, Barbara M; Shen, Win K; Tirschwell, David L

Source: Journal of the American Geriatrics Society; Nov 2016; vol. 64 (no. 11); p. 2185-2192

Abstract: The incidence and prevalence of most cardiovascular disorders increase with age, and cardiovascular disease (CVD) is the leading cause of death and major disability in adults aged 75 and older. Despite the effect of CVD on quality of life, morbidity, and mortality in older adults, individuals aged 75 and older have been markedly underrepresented in most major cardiovascular trials, and virtually all trials have excluded older adults with complex comorbidities, significant physical or cognitive disabilities, frailty, or residence in nursing homes and assisted living facilities. As a result, current guidelines are unable to provide evidence-based recommendations for diagnosis and treatment of older adults typical of those encountered in routine clinical practice. The objectives of this scientific statement are to summarize current guideline recommendations as they apply to older adults, identify critical gaps in knowledge that preclude informed evidence-based decision-making, and recommend future research to close existing knowledge gaps. To achieve these objectives, a detailed review was conducted of current American College of Cardiology/American Heart Association (ACC/AHA) and American Stroke Association (ASA) guidelines to identify content and recommendations that explicitly targeted older adults. A pervasive lack of evidence to guide clinical decision-making in older adults with CVD was found, as well as a paucity of data on the effect of diagnostic and therapeutic interventions on outcomes that are particularly important to older adults, such as quality of life, physical function, and maintenance of independence. Accordingly, there is a critical need for a multitude of large population-based studies and clinical trials that include a broad spectrum of older adults representative of those seen in clinical practice and that incorporate relevant outcomes important to older adults in the study design. The results of these studies will provide the foundation for future evidence-based guidelines applicable to older adults and enhance person-centered care of older individuals with CVD in the United States and around the world.

Rationale and study design of a patient-centered intervention to improve health status in chronic heart failure: The Collaborative Care to Alleviate Symptoms and Adjust to Illness (CASA) randomized trial.

Author(s): Bekelman, David B; Allen, Larry A; Peterson, Jamie; Hattler, Brack; Havranek, Edward P; Fairclough, Diane L; McBryde, Connor F; Meek, Paula M

Source: Contemporary clinical trials; Nov 2016; vol. 51 ; p. 1-7

Abstract: While contemporary heart failure management has led to some improvements in morbidity and mortality, patients continue to report poor health status (i.e., burdensome symptoms, impaired function, and poor quality of life). The Collaborative Care to Alleviate Symptoms and Adjust to Illness (CASA) trial is a NIH-funded, three-site, randomized clinical trial that examines the effect of the CASA intervention compared to usual care on the primary outcome of patient-reported health status at 6 months in patients with heart failure and poor health status. The CASA intervention involves a nurse who works with patients to treat symptoms (e.g., shortness of breath, fatigue, pain) using disease-specific and palliative approaches, and a social worker who provides psychosocial care targeting depression and adjustment to illness. The intervention uses a collaborative care team model of health care delivery and is structured and primarily phone-based to enhance reproducibility and scalability. This article describes the rationale and design of the CASA trial, including several decision points: (1) how to design a patient-centered intervention to improve health status; (2) how to structure the intervention so that it is reproducible and scalable; and (3) how to systematically identify outpatients with heart failure most likely to need and benefit from the intervention. The results should provide valuable information to providers and health systems about the use of team care to manage symptoms and provide psychosocial care in chronic illness.

The impact of listening to pleasant natural sounds on anxiety and physiologic parameters in patients undergoing coronary angiography: A pragmatic quasi-randomized-controlled trial.

Author(s): Rejeh, Nahid; Heravi-Karimooi, Majideh; Tadrissi, Seyed Davood; Jahani, Ali; Vaismoradi, Mojtaba; Jordan, Sue

Source: Complementary therapies in clinical practice; Nov 2016; vol. 25 ; p. 42-51

Abstract: This study aimed to investigate the impact of listening to pleasant natural sounds on anxiety and physiological parameters in patients undergoing coronary angiography. The present pragmatic quasi-randomized controlled clinical trial was conducted on 130 patients undergone elective angiography. The participants were randomly divided into two groups, including a pleasant natural sounds group, and a control group (n1/2 65 per group). Spielberger's state/trait anxiety inventory was used to assess levels of anxiety. The

patients' anxiety level and physiological parameters were measured at baseline, before, during, immediately after, and 20 min after coronary angiography. The mean level of anxiety was similar in both arms at baseline ($t = 1.317$, $df = 128$, $p = 0.190$). The intervention arm displayed significantly lower anxiety levels than the control arm during the intervention (Wilks' lambda 0.11, Pillai's trace 0.89, $P 0.001$, $F 2.05$). The physiological parameters (systolic and diastolic blood pressure, mean arterial pressure, heart rate, and oxygen saturation) of both groups showed statistically significant differences ($p < 0.05$) over time and in group-by time interactions. As an effective nursing intervention presenting no side-effects, listening to pleasant natural sounds can be helpful in the management of anxiety.

Differing Effects of Fatigue and Depression on Hospitalizations in Men and Women With Heart Failure.

Author(s): Heo, Seongkum; McSweeney, Jean; Tsai, Pao-Feng; Ounpraseuth, Songthip

Source: American journal of critical care : an official publication, American Association of Critical-Care Nurses; Nov 2016; vol. 25 (no. 6); p. 526-534

Available in full text at [American Journal of Critical Care](#) - from EBSCOhost

Abstract: In patients with heart failure, worsening of signs and symptoms and depression can affect hospitalization and also each other, resulting in synergistic effects on hospitalizations. A patient's sex may play a role in these effects. To determine the effects of fatigue and depression on all-cause hospitalization rates in the total sample and in subgroups of men and women. A secondary analysis was done of data collected January 1, 2010, through December 31, 2012 ($N = 582$; mean age, 63.2 years [SD, 14.4]). Data were collected on fatigue, depression, sample characteristics, vital signs, results of laboratory tests, medications, and frequency of hospitalization. Patients were categorized into 4 groups on the basis of the International Classification of Diseases, Ninth Revision: no fatigue or depression, fatigue only, depression only, and both fatigue and depression. General linear regression was used to analyze the data. In both the total sample and the subgroups, the number of hospitalizations in patients with both fatigue and depression was greater than the number in patients without either symptom. Among women, the number of hospitalizations in the fatigue-only group and in the depression-only group was greater than that in the group with neither symptom. In men, the number of hospitalizations in the fatigue-only group was greater than that in the group without either symptom. Fatigue and depression do not have synergistic effects on hospitalization, but men and women differ in the effects of these symptoms on hospitalization.

Prognostic Importance of Sleep Quality in Patients With Heart Failure.

Author(s): Lee, Kyoung Suk; Lennie, Terry A; Heo, Seongkum; Song, Eun Kyeung; Moser, Debra K

Source: American journal of critical care : an official publication, American Association of Critical-Care Nurses; Nov 2016; vol. 25 (no. 6); p. 516-525

Available in full text at [American Journal of Critical Care](#) - from EBSCOhost

Abstract: Poor sleep quality is common and is associated with poor quality of life and health status in patients with heart failure. However, few investigators have focused on the impact of impaired sleep quality on survival in heart failure. To examine whether self-reported sleep quality is associated with prognosis in patients with heart failure. The study sample consisted of 204 patients with heart failure. Sleep quality was measured with the Pittsburgh Sleep Quality Index. Poor sleepers were defined as patients with scores greater than 5 on the index. Patients were followed up for a median of 364 days to determine cardiac events (a composite of cardiac death, hospitalizations, or emergency department visits for cardiac reasons). Multivariable Cox proportional hazard regression was used to examine whether poor sleepers were at a higher risk than good sleepers for shorter cardiac event-free survival after covariates were adjusted for. Of 204 patients, 129 (63%) reported poor sleep quality. Poor sleepers were 2.5 times more likely to have a shorter cardiac event-free survival (95% CI, 1.164-5.556) than were good sleepers after covariates were controlled for. Impaired sleep quality was prevalent in patients with heart failure and was associated with poor cardiac event-free survival. Clinicians should assess and manage sleep quality in patients with heart failure to improve outcomes.

Positive impact on heat loss and patient experience of preheated skin disinfection: a randomised controlled trial

Author(s): Wistrand, Camilla; Soderquist, Bo; Nilsson, Ulrica

Source: Journal of Clinical Nursing; Nov 2016; vol. 25 (no. 21-22); p. 3144-3151

Abstract: Aims and objectives: The aim of this study was to compare the effect of preheated (36 °C) and room-temperature (20 °C) skin disinfectant solution on skin temperature and patients' experience of the skin

disinfection process. Background: To prevent surgical site infections, it is important to disinfect skin prior to invasive surgery. In clinical practice, conscious patients often comment on the coldness of the preoperative skin disinfection solution. Evidence is lacking, as to whether preheated skin disinfectant has any positive effects during preoperative skin disinfection. Design: Randomised controlled trial. Methods: A total of 220 patients undergoing pacemaker, implantable cardioverter-defibrillator, or cardiac resynchronisation therapy under local anaesthesia were included and randomly allocated to preheated or room-temperature skin disinfection. Skin temperature was assessed before and after skin disinfection at the planned incision site; in addition, three study-specific questions were used to assess how patients experienced the temperature. Results: Patients experienced the skin disinfection process with preheated disinfectant as significantly more pleasant. They felt less cold and reported increased satisfaction with the temperature of the solution compared to patients who were disinfected with room-temperature solution. Skin disinfection with preheated solution also yielded a significantly higher mean skin temperature compared to room-temperature solution. Conclusions: Preoperative skin disinfection with preheated disinfectant may prevent heat loss and contributes to a more pleasant experience for patients. Relevance to clinical practice: Skin disinfection with preheated skin disinfectant is an easy and inexpensive nursing intervention that has a positive impact on heat loss and on patients' experience of the disinfection process.

Assessment of cardiac resynchronisation therapy in patients with wide QRS and non-specific intraventricular conduction delay: rationale and design of the multicentre randomised NICD-CRT study.

Author(s): Eschalier, Romain; Ploux, Sylvain; Pereira, Bruno; Clémenty, Nicolas; Da Costa, Antoine; Defaye, Pascal; Garrigue, Stéphane; Gourraud, Jean-Baptiste; Gras, Daniel; Guy-Moyat, Benoît; Leclercq, Christophe; Mondoly, Pierre; Bordachar, Pierre

Source: BMJ open; Nov 2016; vol. 6 (no. 11); p. e012383

Available in full text at [BMJ Open](#) - from Highwire Press

Abstract:Cardiac resynchronisation therapy (CRT) was initially developed to treat patients with left bundle branch block (LBBB). However, many patients with heart failure have a widened QRS but neither left-BBB nor right-BBB; this is called non-specific intraventricular conduction delay (NICD). It is unclear whether CRT is effective in this subgroup of patients. The NICD-CRT study is a prospective, double-blind, randomised (1:1), parallel-arm, multicentre trial comparing the effects of CRT in patients with heart failure, a reduced left ventricular ejection fraction (LVEF <35%) and NICD, who have been implanted with a device (CRT-pacemaker or CRT-defibrillator) that has or has not been activated. Enrolment began on 15 July 2015 and should finish within 3 years; 40 patients have already been randomised and 11 centres have agreed to participate. The primary end point is the comparison of the proportion of patients improved, unchanged or worsened over the subsequent 12 months. 100 patients per group are required to demonstrate a difference between groups with a statistical power of 90%, a type I error of 0.05% (two-sided) and a loss to follow-up of 10%. This trial will add substantially to the modest amount of existing data on CRT in patients with NICD and should reduce uncertainty for guidelines and clinical practice when added to the pool of current information. Local ethics committee authorisations have been obtained since May 2015. We will publish findings from this study in a peer-reviewed scientific journal and present results at national and international conferences. NCT02454439; pre-results

Cost-effectiveness of implantable cardiac devices in patients with systolic heart failure.

Author(s): Mealing, Stuart; Woods, Beth; Hawkins, Neil; Cowie, Martin R; Plummer, Christopher J; Abraham, William T; Beshai, John F; Klein, Helmut; Sculpher, Mark

Source: Heart (British Cardiac Society); Nov 2016; vol. 102 (no. 21); p. 1742-1749

Available in full text at [Heart](#) - from Highwire Press

Abstract:To evaluate the cost-effectiveness of implantable cardioverter defibrillators (ICDs), cardiac resynchronisation therapy pacemakers (CRT-Ps) and combination therapy (CRT-D) in patients with heart failure with reduced ejection fraction based on a range of clinical characteristics. Individual patient data from 13 randomised trials were used to inform a decision analytical model. A series of regression equations were used to predict baseline all-cause mortality, hospitalisation rates and health-related quality of life and device-related treatment effects. Clinical variables used in these equations were age, QRS duration, New York Heart Association (NYHA) class, ischaemic aetiology and left bundle branch block (LBBB). A UK National Health Service perspective and a lifetime time horizon were used. Benefits were expressed as quality-adjusted life-years (QALYs). Results were reported for 24 subgroups based on LBBB status, QRS duration and NYHA class. At a threshold of £30 000 per QALY gained, CRT-D was cost-effective in 10 of the 24 subgroups including all LBBB morphology patients with NYHA I/II/III. ICD is cost-effective for all non-NYHA IV patients with QRS

duration 120 ms. Device therapy is cost-effective in most patient groups with LBBB at a threshold of £20 000 per QALY gained. Results were robust to altering key model parameters. At a threshold of £30 000 per QALY gained, CRT-D is cost-effective in a far wider group than previously recommended in the UK. In some subgroups ICD and CRT-P remain the cost-effective choice.

Pilot testing a model of psychological care for heart transplant recipients

Author(s): Conway, Aaron; Sheridan, Judith; Maddicks-Law, Joanne; Fulbrook, Paul

Source: BMC Nursing; Oct 2016; vol. 15 (no. 62); p. 8

Available in full text at [BMC Nursing](#) - from ProQuest

Available in full text at [BMC Nursing](#) - from BioMed Central

Available in full text at [BMC Nursing](#) - from National Library of Medicine

Abstract:Background: Anxiety and depression are common after heart transplantation. This study aimed to pilot test the feasibility of a clinical model of psychological care for heart transplant recipients. The model of care involved nurse-led screening for anxiety and depression followed by referral for a course of telephone-delivered cognitive behaviour therapy as well as co-ordination of communication with on-going specialist and primary care services. Methods: A pilot randomised controlled trial was conducted. Heart transplant recipients who self-reported at least mild anxiety or depressive symptoms were randomised (defined as a score higher than 5 on the Patient Health Questionnaire-9 or the Generalized Anxiety Disorder-7 [GAD-7], or a score higher than 20 on the Kessler Psychological Distress Scale [K10]). The primary outcome was assessment of feasibility of conducting a larger trial, which included identification of recruitment and attrition rates as well as the acceptability of the intervention. Follow-up was conducted at 9 weeks and 6 months. Results: One hundred twenty-two of the 126 (97 %) heart transplant recipients assessed on their attendance at the outpatient clinic met the study eligibility criteria. Of these patients, 88 (72 %) agreed to participate. A moderate proportion of participants (n=20; 23 %) reported at least mild symptoms of anxiety or depression. Five participants were excluded because they were currently receiving psychological counselling, two withdrew before randomisation and the remaining 13 were randomised (seven to intervention and six to usual care). The majority of the randomised participants were male (n=9; 69 %) and aged over 60 (range 35-73). Median length of time post-transplant was 9.5 years (ranging from 1 to 19 years). On enrolment, 3 randomised participants were taking antidepressants. One intervention group participant withdrew and a further 3 (50 %) declined the telephone-delivered CBT sessions; all because of restrictions associated with physical illnesses. Attrition was 30 % at the 6 month follow-up time-point. Conclusions: Due to the poor acceptability of telephone-delivered cognitive behavioural therapy observed in our sample, changes to intervention components are indicated and further pilot testing is required.

Does the visibility of a congenital anomaly affect maternal-infant attachment levels?

Author(s): Boztepe, Handan; Ay, Ayse; Yildiz, Gizem Kerimoglu; Çinar, Sevil

Source: Journal for Specialists in Pediatric Nursing; Oct 2016; vol. 21 (no. 4); p. 200-211

Abstract: Purpose. To determine whether congenital anomaly visibility affects maternal-infant attachment levels. Design and Methods. The study population consisted of mothers who had infants with cleft lip/palate or congenital heart anomalies who were receiving treatment in a university hospital. The data were collected using the Structured Questionnaire Form and the Maternal Attachment Inventory. Results. Statistically significant differences in maternal-infant attachment levels were observed between infants with cleft lips/palates and healthy infants and between infants with congenital heart anomalies and healthy infants. Practice implications. It is important to apply appropriate nursing interventions for these mothers during the postpartum period.

Biopsychosocial predictors of coping strategies of patients postmyocardial infarction

Author(s): Son, Heesook; Friedmann, Erika; Thomas, Sue A; Son, Youn-Jung

Source: International Journal of Nursing Practice; Oct 2016; vol. 22 (no. 5); p. 493-502

Abstract:Data from the Patients and Families Psychological Response to the Home Automated External Defibrillator Trial were used to examine the relationship between biopsychosocial variables and patients' coping strategies postmyocardial infarction. This study is the secondary data analysis of longitudinal observational study. A total of 460 patient-spouse pairs were recruited in January 2003 to October 2005. Hierarchical linear regression analysis examined biological/demographic, psychological and social variables regarding patients' coping scores using the Family Crisis Oriented Personal Evaluation Scale. Lower social support and social support satisfaction predicted lower total coping scores. Being younger, male gender and time since the

myocardial infarction predicted lower positive coping strategy use. Higher anxiety and lower social support were related to fewer positive coping methods. Lower educational levels were related to increased use of negative coping strategies. Reduced social support predicted lower total coping scores and positive coping strategy use and greater passive coping style use. Social support from a broad network assisted with better coping; those living alone may need additional support. Social support and coping strategies should be taken into consideration for patients who have experienced a cardiac event. Summary Statement What is already known about this topic? The experience of a first-time acute myocardial infarction is a traumatic event and might influence well-being for a significant time period. Coping strategies are a very delicate issue for people who have experienced myocardial infarction. What this paper adds Social support was the only significant predictor of coping strategy use in postmyocardial infarction patients after controlling for other biopsychosocial factors. Social support might be related to sex and time since last myocardial infarction. The implications of this paper for policy/practice/research/education Nurses should be aware that patients' coping strategies need to be taken into account when planning intervention before hospital discharge. Nursing intervention strategies to improve coping strategy use after myocardial infarction should focus on the holistic interaction between biological-psychological-social domains rather than addressing them as separate aspects of the individual or environment.

Nursing interventions and outcomes for the diagnosis of impaired tissue integrity in patients after cardiac catheterization: survey

Author(s): Pezzi, Marian Valentini; Rabelo-Silva, Eneida Rejane; Paganin, Angelita; De Souza, Emiliane Nogueira

Source: International Journal of Nursing Knowledge; Oct 2016; vol. 27 (no. 4); p. 215-219

Abstract: Purpose: Determine the outcomes and interventions for patients undergoing cardiac catheterization with nursing diagnosis of impaired tissue integrity. Methods: Survey with e-questionnaires sent for expert nurses in two rounds. Findings: Only one nursing outcome was approved: tissue integrity - skin and mucosa and five related interventions, namely, pressure control, topical drug administration, care of incision site, care of injuries, and infection control. Conclusions: The expected outcomes and the most significant interventions for the implementation of nursing care during the immediate recovery of patients with impaired tissue integrity following invasive hemodynamic procedures were defined. Implications for nursing practice: The study findings support selection of appropriate nursing outcomes and interventions for this patient profile.

Nurses' instruction of patients in the use of INR-monitors for self-management of cardio-vascular conditions: Missed instructional opportunities.

Author(s): Larsen, Tine

Source: Patient education and counseling; Oct 2016

Abstract: To explore the effectiveness of a patient education programme for chronic disease self-management in terms of whether (a) patients are taught to perform the medical procedure and (b) nurses have evidence of patients' proficiency when they start self-management. Patients were followed through an education programme for oral anticoagulation therapy, involving the use of INR-monitors. Training sessions were video-recorded and analyzed using Conversation Analysis. 55 instructional opportunities were identified, and the relationship between instructional response and patients' subsequent (un)successful demonstration of the procedure traced. Patient errors provide the most frequent type of instructional opportunity, but not all are addressed; a significant number is allowed to pass uncorrected. Consequently, patients are not given the opportunity to learn. In the majority of cases where instructional opportunities are missed, patients subsequently do not demonstrate a correct understanding of the procedure. Patients are allowed to start self-management although nurses do not have evidence that they are capable of performing all aspects of the medical procedure correctly. Effective practice suggests that nurses take measures to minimize the amount of missed instructional opportunities that arise and ensure that errors are pursued until patients demonstrate proficiency in all aspects of the procedure.

Longer-term effects of home-based exercise interventions on exercise capacity and physical activity in coronary artery disease patients: A systematic review and meta-analysis.

Author(s): Claes, Jomme; Buys, Roselien; Budts, Werner; Smart, Neil; Cornelissen, Véronique A

Source: European journal of preventive cardiology; Oct 2016

Abstract: Exercise-based cardiovascular rehabilitation (CR) improves exercise capacity (EC), lowers cardiovascular risk profile and increases physical functioning in the short term. However, uptake of and

adherence to a physically active lifestyle in the long run remain problematic. Home-based (HB) exercise programmes have been introduced in an attempt to enhance long-term adherence to recommended levels of physical activity (PA). The current systematic review and meta-analysis aimed to compare the longer-term effects of HB exercise programmes with usual care (UC) or centre-based (CB) CR in patients referred for CR. Systematic review and meta-analysis. Non-randomised controlled trials (RCTs) or randomised trials comparing the effects of HB exercise programmes with UC or CB rehabilitation on EC and/or PA, with a follow-up period of ≥ 12 months and performed in coronary artery disease patients, were searched in four databases (PubMed, EMBASE, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and the Cochrane Central Register of Controlled trials (CENTRAL)) from their inception until September 7, 2016. Standardised mean differences (SMDs) were calculated and pooled by means of random effects models. Risk of bias, publication bias and heterogeneity among trials were also assessed. Seven studies could be included in the meta-analysis on EC, but only two studies could be included in the meta-analysis on PA (total number of 1440 patients). The results showed no significant differences in EC between HB rehabilitation and UC (SMD 0.10, 95% confidence interval (CI) -0.13 to 0.33). There was a small but significant difference in EC in favour of HB compared to CB rehabilitation (SMD 0.25, 95% CI 0.02-0.48). No differences were found for PA (SMD 0.37, 95% CI -0.18 to 0.92). HB exercise is slightly more effective than CB rehabilitation in terms of maintaining EC. The small number of studies warrants the need for more RCTs evaluating the long-term effects of different CR interventions on EC and PA behaviour, as this is the ultimate goal of CR.

The Effectiveness of Discharge Training for Patients After Cardiac Surgery.

Author(s): Coskun, Halise; Senture, Cicek; Ustunsoz, Ayfer

Source: Rehabilitation nursing : the official journal of the Association of Rehabilitation Nurses; Oct 2016

Abstract: The aim of this study was to evaluate the effectiveness of written and verbal discharge training given to patients who underwent cardiac surgery. It was conducted on 180 patients between November 2011 and June 2012. The patients were divided into two groups. The first 90 patients were given verbal discharge training, whereas the others were provided with both written and verbal trainings. Using pretest and posttest questionnaires, knowledge levels of the patients were evaluated before training and 1 month after discharge. Patients given verbal discharge training had a success rate of 10.2% pretest, 48.1% posttest, whereas the success rate of patients who received both written and verbal discharge training was 6.35% pretest, 90.7% posttest. The findings show both written and verbal discharge training increased the knowledge levels. The findings imply written-verbal discharge training may help patients to solve the problems after discharge, which may reduce the number of patients presenting at hospital and in turn, related healthcare costs.

The Screen-ICD trial. Screening for anxiety and cognitive therapy intervention for patients with implanted cardioverter defibrillator (ICD): a randomised controlled trial protocol.

Author(s): Berg, Selina Kikkenborg; Herning, Margrethe; Svendsen, Jesper Hastrup; Christensen, Anne Vinggaard; Thygesen, Lau Caspar

Source: BMJ open; Oct 2016; vol. 6 (no. 10); p. e013186

Available in full text at [BMJ Open](#) - from Highwire Press

Abstract: Previous research shows that patients with an implanted cardioverter defibrillator (ICD) have a fourfold increased mortality risk when suffering from anxiety compared with ICD patients without anxiety. This research supports the screening of ICD patients for anxiety with the purpose of starting relevant intervention. Screen-ICD consists of 3 parts: (1) screening of all hospitalised and outpatient patients at two university hospitals using the Hospital Anxiety and Depression Scale (HADS), scores ≥ 8 are invited to participate. (2) Assessment of type of anxiety by Structured Clinical Interview for DSM Disorders (SCID). (3) Investigator-initiated randomised clinical superiority trial with blinded outcome assessment, with 1:1 randomisation to cognitive-behavioural therapy (CBT) performed by a cardiac nurse with CBT training, plus usual care or usual care alone. The primary outcome is HADS-A measured at 16 weeks. Secondary outcomes include Becks Anxiety Inventory, HeartQoL, Hamilton Anxiety Scale, heart rate variability, ICD shock, time to first shock and antitachycardia pacing. A total of 88 participants will be included. The primary analyses are based on the intention-to-treat principle and we use a mixed model with repeated measurements for continuous outcomes. For binary outcomes (HADS-A score < 8), we use a generalised mixed model with repeated measurements. The trial is performed in accordance with the Declaration of Helsinki. All patients must give informed consent prior to participation and the trial is initiated after approval by the Danish Data Protection Agency (RH-2015-282) and the regional ethics committee (H-16018868). Positive, neutral and negative results of the trial will be published. NCT02713360.

Long-Term Quality of Life after Cardiac and Thoracic Aortic Surgery for Very Elderly Patients 85 Years or Older.

Author(s): Yokose, Shogo; Miura, Takashi; Hashizume, Koji; Hisata, Youichi; Hisatomi, Kazuki; Tanigawa, Kazuyoshi; Eishi, Kiyoyuki

Source: Annals of thoracic and cardiovascular surgery : official journal of the Association of Thoracic and Cardiovascular Surgeons of Asia; Oct 2016; vol. 22 (no. 5); p. 298-303

Abstract: We evaluated the outcomes of open heart surgery and long-term quality of life for patients 85 years and older. We enrolled 46 patients 85 years and older who underwent cardiac and thoracic aortic surgery between May 1999 and November 2012. Long-term assessment was performed for 43 patients; three patients who died in the hospital were excluded. Patient conditions were assessed before surgery, 6 months and 12 months after surgery, and during the late period regarding the need for nursing care, degree of independent living, and living willingness. Three patients (6.5%) died during hospitalization and 22 (51%) died during the follow-up period. The 1-, 3-, 5-year survival rates were 74%, 49%, and 36%. During the late period, of 21 surviving patients, 18 patients (85%) were living at home. The need for nursing care was comparable before and after surgery. The degree of independent living decreased after surgery. Living willingness was similar before and after surgery. Among patients 85 years or older who underwent open heart surgery, 85% were living at home. All patients could perform activities of daily living without any assistance while maintaining living willingness.

Effectiveness of a High-Fidelity Simulation-Based Training Program in Managing Cardiac Arrhythmias in Children: A Randomized Pilot Study.

Author(s): Bragard, Isabelle; Farhat, Nesrine; Seghaye, Marie-Christine; Karam, Oliver; Neuschwander, Arthur; Shayan, Yasaman; Schumacher, Katharina

Source: Pediatric emergency care; Oct 2016

Abstract: Pediatric cardiac arrest is a rare event. Its management requires technical (TSs) and nontechnical skills (NTSs). We assessed the effectiveness of a simulation-based training to improve these skills in managing life-threatening pediatric cardiac arrhythmias. Four teams, each composed of 1 pediatric resident, 1 emergency medicine resident, and 2 pediatric nurses, were randomly assigned to the experimental group (EG) participating in 5 video-recorded simulation sessions with debriefing or to the control group (CG) assessed 2 times with video-recorded simulation sessions without debriefing at a 2-week interval. Questionnaires assessed self-reported changes in self-efficacy, stress, and satisfaction about skills. Blinded evaluators assessed changes in leaders' TSs and NTSs during the simulations and the time to initiate cardiopulmonary resuscitation. After training, stress decreased and satisfaction about skills increased in the EG, whereas it remained the same in the CG ($P = 0.014$ and $P < 0.001$, respectively). There was no significant change in self-efficacy. Analyses of video-recorded skills showed significant improvements in TSs and NTSs of the EG leaders after training, but not of the CG leaders ($P = 0.026$, $P = 0.038$, respectively). The comparison of the evolution of the 2 groups concerning time to initiate cardiopulmonary resuscitation was not significantly different between the first and last simulation sessions. A simulation-based training with debriefing had positive effects on stress and satisfaction about skills of pediatric residents and nurses and on observed TSs and NTSs of the leaders during simulation sessions. A future study should assess the effectiveness of this training in a larger sample and its impact on skills during actual emergencies.

Discharge of Non-Acute Coronary Syndrome Chest Pain Patients From Emergency Care to an Advanced Nurse Practitioner-Led Chest Pain Clinic: A Cross-Sectional Study of Referral Source and Final Diagnosis.

Author(s): Ingram, Shirley J; McKee, Gabrielle; Quirke, Mary B; Kelly, Niamh; Moloney, Ashling

Source: The Journal of cardiovascular nursing; Oct 2016

Abstract: Chest pain is a common presentation to emergency departments (EDs). Pathways for patients with non-acute coronary syndrome (ACS) chest pain are not optimal. An advanced cardiology nurse-led chest pain service was commenced to address this. The aim of the study was to assess the outcomes of non-ACS patients discharged from ED to an advanced cardiology nurse-led chest pain clinic and compare by referral type (nurse or ED physician). The service consisted of advanced cardiology nurse or ED physician consultation in the ED and discharge to advanced nurse-led chest pain clinic review less than 72 hours after discharge. Referrals were by the advanced nurses during consult hours and out-of-hours were by the ED physicians. Data were extracted from case notes. This was a 1-site cross-sectional study of patients attending the chest pain clinic over 2 years. Confirmed coronary disease was diagnosed in 24% of patients. Of the 1041 patients, 45% were referred by the

advanced nurses, who referred significantly more patients who were older (56.5 years/52.3 years), had positive exercise stress test results (21%/12%), and were diagnosed with stable coronary artery disease (19%/11%) and less patients with musculoskeletal diagnosis (5%/13%) and other noncardiac pain (36%/45%). The study fills a gap in the literature on the follow up of non-ACS patients who present to ED and used advanced cardiology nursing expertise in the ED and chest pain clinic. The advanced nurse referred more patients who were diagnosed with coronary disease, reflecting the expertise, experience, and efficiency of the advanced cardiology nurse-led service.

What is the impact of systems of care for heart failure on patients diagnosed with heart failure: a systematic review.

Author(s): Driscoll, Andrea; Meagher, Sharon; Kennedy, Rhoda; Hay, Melanie; Banerji, Jayant; Campbell, Donald; Cox, Nicholas; Gascard, Debra; Hare, David; Page, Karen; Nadurata, Voltaire; Sanders, Rhonda; Patsamanis, Harry

Source: BMC cardiovascular disorders; Oct 2016; vol. 16 (no. 1); p. 195

Available in full text at [BMC Cardiovascular Disorders](#) - from BioMed Central

Available in full text at [BMC Cardiovascular Disorders](#) - from National Library of Medicine

Available in full text at [BMC Cardiovascular Disorders](#) - from ProQuest

Abstract: Hospital admissions for heart failure are predicted to rise substantially over the next decade placing increasing pressure on the health care system. There is an urgent need to redesign systems of care for heart failure to improve evidence-based practice and create seamless transitions through the continuum of care. The aim of the review was to examine systems of care for heart failure that reduce hospital readmissions and/or mortality. Electronic databases searched were: Ovid MEDLINE, EMBASE, CINAHL, grey literature, reviewed bibliographies and Cochrane Central Register of Controlled Trials for randomised controlled trials, non-randomised trials and cohort studies from 1(st) January 2008 to 4(th) August 2015. Inclusion criteria for studies were: English language, randomised controlled trials, non-randomised trials and cohort studies of systems of care for patients diagnosed with heart failure and aimed at reducing hospital readmissions and/or mortality. Three reviewer authors independently assessed articles for eligibility based on title and abstract and then full-text. Quality of evidence was assessed using Newcastle-Ottawa Scale for non-randomised trials and GRADE rating tool for randomised controlled trials. We included 29 articles reporting on systems of care in the workforce, primary care, in-hospital, transitional care, outpatients and telemonitoring. Several studies found that access to a specialist heart failure team/service reduced hospital readmissions and mortality. In primary care, a collaborative model of care where the primary physician shared the care with a cardiologist, improved patient outcomes compared to a primary physician only. During hospitalisation, quality improvement programs improved the quality of inpatient care resulting in reduced hospital readmissions and mortality. In the transitional care phase, heart failure programs, nurse-led clinics, and early outpatient follow-up reduced hospital readmissions. There was a lack of evidence as to the efficacy of telemonitoring with many studies finding conflicting evidence. Redesigning systems of care aimed at improving the translation of evidence into clinical practice and transitional care can potentially improve patient outcomes in a cohort of patients known for high readmission rates and mortality.

Interdisciplinary psychosocial care for families with inherited cardiovascular diseases.

Author(s): Caeshu, Colleen; Kasparian, Nadine A; Edwards, Katharine S; Yeates, Laura; Semsarian, Christopher; Perez, Marco; Ashley, Euan; Turner, Christian J; Knowles, Joshua W; Ingles, Jodie

Source: Trends in cardiovascular medicine; Oct 2016; vol. 26 (no. 7); p. 647-653

Available in full text at [Trends in Cardiovascular Medicine](#) - from ProQuest

Abstract: Inherited cardiovascular diseases pose unique and complex psychosocial challenges for families, including coming to terms with life-long cardiac disease, risk of sudden death, grief related to the sudden death of a loved one, activity restrictions, and inheritance risk to other family members. Psychosocial factors impact not only mental health but also physical health and cooperation with clinical recommendations. We describe an interdisciplinary approach to the care of families with inherited cardiovascular disease, in which psychological care provided by specialized cardiac genetic counselors, nurses, and psychologists is embedded within the cardiovascular care team. We report illustrative cases and the supporting literature to demonstrate common scenarios, as well as practical guidance for clinicians working in the inherited cardiovascular disease setting.

Critical Care Nursing's Impact on Pediatric Patient Outcomes.

Author(s): Hickey, Patricia A; Pasquali, Sara K; Gaynor, J William; He, Xia; Hill, Kevin D; Connor, Jean A; Gauvreau, Kimberlee; Jacobs, Marshall L; Jacobs, Jeffrey P; Hirsch-Romano, Jennifer C

Source: The Annals of thoracic surgery; Oct 2016; vol. 102 (no. 4); p. 1375-1380

Abstract: Previous studies have demonstrated the effect of adult nursing skill mix, staffing ratios, and level of education on patient deaths, complication rates, and failure to rescue (FTR). To date, only one known study had examined the effect of nursing experience and education on postoperative pediatric cardiac operations. Nursing survey data were linked to The Society of Thoracic Surgeons (STS) Congenital Heart Surgery Database for patients undergoing cardiac operations (2010 to 2011). Logistic regression models were used to estimate associations of nursing education and years of clinical experience with in-hospital mortality rates, complication rates, and FTR. Generalized estimating equations and robust standard error estimates were used to account for within-center correlation of outcomes. Among 15,463 patients (29 hospitals), the in-hospital mortality rate was 2.8%, postoperative complications occurred in 42.4%, and the FTR rate was 6.4%. After covariate adjustment, pediatric critical care units with a higher proportion of nurses with a Bachelor of Science degree or higher had lower odds of complication (odds ratio for 10% increase, 0.85; 95% confidence interval, 0.76 to 0.96; $p = 0.009$). Units with a higher proportion of nurses with more than 2 years of experience had lower mortality rates (odds ratio for 10% increase, 0.92; 95% confidence interval, 0.85 to 0.99; $p = 0.025$). This is the first study to demonstrate that higher levels of nursing education and experience are significantly associated with fewer complications after pediatric cardiac operations and aligns with our previous findings on their association with reduced deaths. These results provide data for pediatric hospital leaders and reinforce the importance of organization-wide mentoring strategies for new nurses and retention strategies for experienced nurses.

Transitions of Care Between Acute and Chronic Heart Failure: Critical Steps in the Design of a Multidisciplinary Care Model for the Prevention of Rehospitalization.

Author(s): Comín-Colet, Josep; Enjuanes, Cristina; Lupón, Josep; Cainzos-Achirica, Miguel; Badosa, Neus; Verdú, José María

Source: Revista espanola de cardiologia (English ed.); Oct 2016; vol. 69 (no. 10); p. 951-961

Abstract: Despite advances in the treatment of heart failure, mortality, the number of readmissions, and their associated health care costs are very high. Heart failure care models inspired by the chronic care model, also known as heart failure programs or heart failure units, have shown clinical benefits in high-risk patients. However, while traditional heart failure units have focused on patients detected in the outpatient phase, the increasing pressure from hospital admissions is shifting the focus of interest toward multidisciplinary programs that concentrate on transitions of care, particularly between the acute phase and the postdischarge phase. These new integrated care models for heart failure revolve around interventions at the time of transitions of care. They are multidisciplinary and patient-centered, designed to ensure continuity of care, and have been demonstrated to reduce potentially avoidable hospital admissions. Key components of these models are early intervention during the inpatient phase, discharge planning, early postdischarge review and structured follow-up, advanced transition planning, and the involvement of physicians and nurses specialized in heart failure. It is hoped that such models will be progressively implemented across the country.

Effectiveness and Factors Determining the Success of Management Programs for Patients With Heart Failure: A Systematic Review and Meta-analysis.

Author(s): Oyanguren, Juana; Latorre García, Pedro María; Torcal Laguna, Jesús; Lekuona Goya, Iñaki; Rubio Martín, Susana; Maull Lafuente, Elena; Grandes, Gonzalo

Source: Revista espanola de cardiologia (English ed.); Oct 2016; vol. 69 (no. 10); p. 900-914

Abstract: Heart failure management programs reduce hospitalizations. Some studies also show reduced mortality. The determinants of program success are unknown. The aim of the present study was to update our understanding of the reductions in mortality and readmissions produced by these programs, elucidate their components, and identify the factors determining program success. Systematic literature review (1990-2014; PubMed, EMBASE, CINAHL, Cochrane Library) and manual search of relevant journals. The studies were selected by 3 independent reviewers. Methodological quality was evaluated in a blinded manner by an external researcher (Jadad scale). These results were pooled using random effects models. Heterogeneity was evaluated with the I^2 statistic, and its explanatory factors were determined using metaregression analysis. Of the 3914 studies identified, 66 randomized controlled clinical trials were selected (18 countries, 13 535 patients). We determined the relative risks to be 0.88 for death (95% confidence interval [95% CI], 0.81-0.96; $P < .002$; I^2 , 6.1%), 0.92 for all-cause readmissions (95% CI, 0.86-0.98; $P < .011$; I^2 , 58.7%), and 0.80 for

heart failure readmissions (95%CI, 0.71-0.90; $P < .0001$; I(2), 52.7%). Factors associated with program success were implementation after 2001, program location outside the United States, greater baseline use of angiotensin-converting enzyme inhibitors/angiotensin receptor blockers, a higher number of intervention team members and components, specialized heart failure cardiologists and nurses, protocol-driven education and its assessment, self-monitoring of signs and symptoms, detection of deterioration, flexible diuretic regimen, early care-seeking among patients and prompt health care response, psychosocial intervention, professional coordination, and program duration. We confirm the reductions in mortality and readmissions with heart failure management programs. Their success is associated with various structural and intervention variables.

The Burden of Care: Mothers' Experiences of Children with Congenital Heart Disease.

Author(s): Sabzevari, Sakinne; Nematollahi, Monirsadat; Mirzaei, Tayebbeh; Ravari, Ali

Source: International journal of community based nursing and midwifery; Oct 2016; vol. 4 (no. 4); p. 374-385

Abstract: Mothers play a key role in caring for their sick children. Their experiences of care were influenced by culture, rules, and the system of health and care services. There are few studies on maternal care of children with congenital heart disease. Also, each of them has studied a particular aspect of care. The present research aimed to understand care experiences of mothers of children with congenital heart disease. A conventional content analysis was used to obtain rich data. The goal of content analysis is "to provide knowledge and deeper understanding of the phenomenon under the study". The study was conducted in Kerman, Iran in 2014, on mothers of children with CHD. The purposive sampling technique was used to select the participants. Participants were 14 mothers of children with CHD and one father and one nurse of open heart surgery unit, from two hospitals affiliated with Kerman University of Medical Sciences. Eighteen semi-structured interviews were constructed. Data were analyzed using conventional content analysis. MAXQDA 2007 software (VERBI GmbH, Berlin, Germany) was used to classify and manage the coding. Constant comparative method was done for data analysis. The reliability and validity of the findings, including the credibility, confirm ability, dependability, and transferability, were assessed. According to the content analysis, the main theme was the catastrophic burden of child care on mothers that included three categories: 1) the tension resulting from the disease, 2) involvement with internal thoughts, and 3) difficulties of care process. The results of this study may help health care professionals to provide supportive and educational packages to the patients, mothers and family members until improving the management of patient's care.

Can nurse-led preoperative education reduce anxiety and postoperative complications of patients undergoing cardiac surgery?

Author(s): Kalogianni, Antonia; Almpani, Panagiota; Vastardis, Leonidas; Baltopoulos, George; Charitos, Christos; Brokalaki, Hero

Source: European journal of cardiovascular nursing : journal of the Working Group on Cardiovascular Nursing of the European Society of Cardiology; Oct 2016; vol. 15 (no. 6); p. 447-458

Abstract: The effect of preoperative education on anxiety and postoperative outcomes of cardiac surgery patients remains unclear. The aim of the study was to estimate the effectiveness of a nurse-led preoperative education on anxiety and postoperative outcomes. A randomised controlled study was designed. All the patients who were admitted for elective cardiac surgery in a general hospital in Athens with knowledge of the Greek language were eligible to take part in the study. Patients in the intervention group received preoperative education by specially trained nurses. The control group received the standard information by the ward personnel. Measurements of anxiety were conducted on admission-A, before surgery-B and before discharge-C by the state-trait anxiety inventory. The sample consisted of 395 patients (intervention group: 205, control group: 190). The state anxiety on the day before surgery decreased only in the intervention group (34.0 (8.4) versus 36.9 (10.7); $P=0.001$). The mean decrease in state score during the follow-up period was greater in the intervention group ($P=0.001$). No significant difference was found in the length of stay or readmission. Lower proportions of chest infection were found in the intervention group (10 (5.3) versus 1 (0.5); $P=0.004$). Multivariate linear regression revealed that education and score in trait anxiety scale on admission are independent predictors of a reduction in state anxiety. Preoperative education delivered by nurses reduced anxiety and postoperative complications of patients undergoing cardiac surgery, but it was not effective in reducing readmissions or length of stay.

The relationship between language proficiency and surgical length of stay following cardiac bypass surgery.

Author(s): Tang, Erin W; Go, Jeremy; Kwok, Andrea; Leung, Bonnie; Lauck, Sandra; Wong, Sabrina T; Taipale, Priscilla G; Ratner, Pamela A

Source: European journal of cardiovascular nursing : journal of the Working Group on Cardiovascular Nursing of the European Society of Cardiology; Oct 2016; vol. 15 (no. 6); p. 438-446

Abstract: Anglophone nurses face the challenge of communicating health information to patients who do not speak or understand English. Limited English-proficient patients are at higher risk of misinterpreting health information teaching. Successful recovery after coronary artery bypass graft surgery requires patients' engagement with healthcare professionals and active participation in therapies and related undertakings. Determination of whether limited English-proficient patients undergoing coronary artery bypass graft surgery recover at the same pace as the general population is of interest. This study examined whether limited English-proficient patients had prolonged post-operative length of stay following coronary artery bypass graft surgery. The patients' length of stay with regard to a clinical pathway target was also examined. A retrospective medical record review of all patients undergoing isolated coronary artery bypass graft surgery in a 2-year period was conducted. A screening tool was developed to identify limited English-proficient patients through examination of their medical records. A total of 691 of 712 (97.1%) patients met the inclusion criteria; 103 (14.9%) patients were identified as limited English-proficient. The post-operative median length of stay of limited English-proficient patients was 7 days compared with 6 days for the English-proficient patients ($p = 0.007$). Limited English-proficient patients had higher infection rates (29.1%) vs. English-proficient patients (16.7%) (odds ratio = 2.05 (95% confidence intervals 1.27-3.30)). Post-operative infection was the strongest predictor of length of stay and fully mediated the relationship between language proficiency and length of stay. When compared with English-proficient patients, limited English-proficient patients had greater infection rates, which were associated with longer length of stay. These findings warrant examination of the mechanisms through which post-operative infections are acquired by limited English-proficient patients.

Nursing diagnosis based on signs and symptoms of patients with heart disease

Author(s): Da Costa, Cíntia; Linch, Graciele Fernanda Da Costa; De Souza, Emiliane Nogueira

Source: International Journal of Nursing Knowledge; Oct 2016; vol. 27 (no. 4); p. 210-214

Abstract: The aim was to identify the main signs and symptoms of cardiac patients hospitalized in a unit of intensive cardiology care in order to infer the main nursing diagnoses (NDs). Methods: We performed a cross-sectional study; the sample consisted of 77 randomly selected records. Those records included only patients hospitalized for cardiovascular causes and with electronic chart available. Findings: Signs and symptoms identified at admission were psychic (40.3%), compressive dressing on arterial puncture site (33.8%), chest pain (29.9%), tachycardia (22.1%), and hemodynamic instability (20.8%). Conclusions and practical implications: According to the data collected, we were able to infer that acute pain, excess of fluid volume, decreased cardiac output, spontaneous ventilation impaired, anxiety and impaired skin integrity are priority for the NDs in the studied population.

Using a 3-question algorithm to interpret heart blocks

Author(s): Callicutt, Jimmy

Source: Nursing; Oct 2016; vol. 46 (no. 10); p. 53-56

Abstract: Identifying heart blocks, also called atrioventricular (AV) blocks, can be a challenge for nurses, even those working in a telemetry unit. Because not all patients require cardiac rhythm monitoring, many nurses lack enough current experience to keep their skills sharp. And even nurses on telemetry units encounter heart blocks less frequently than normal sinus rhythm or dysrhythmias such as atrial fibrillation. In addition, distinguishing types of heart block--for example, differentiating second-degree heart blocks from a third-degree heart block--can be difficult. Here, Callicutt provides a three-question algorithmic method to help nurses identify first-, second-, and third-degree heart blocks more easily and consistently.

Fatigue, dyspnea, and intermittent symptoms are associated with treatment-seeking delay for symptoms of atrial fibrillation before diagnosis

Author(s): McCabe, Pamela J; Rhudy, Lori M; Chamberlain, Alanna M; DeVon, Holli A

Source: European Journal of Cardiovascular Nursing; Oct 2016; vol. 15 (no. 6); p. 459-468

Abstract: Background: Delay in seeking treatment for symptoms of atrial fibrillation (AF) at onset results in a missed opportunity for vital early treatment of AF which is important for reducing stroke, tachycardia induced heart failure, and treatment-resistant AF. Little is known about factors that contribute to treatment-seeking delay for symptoms of AF. Purpose: The purpose of this study was to identify factors associated with treatment-seeking delay for symptoms of AF before diagnosis. Methods: For this descriptive study, 150 participants with recently detected AF completed structured interviews to collect data about symptoms, symptom characteristics, symptom representation regarding cause, seriousness, controllability of symptoms, responses to symptoms before diagnosis, and time from symptom onset to treatment-seeking. Chi-square analysis was used to identify factors associated with delay (>1 week) versus no delay (<1 week) in treatment-seeking after symptom onset. Results: Participants were 51% female (n=76) with a mean age of 66.5 (standard deviation (SD) \pm 11.1) years. A majority (70%, n=105) delayed treatment-seeking. Factors associated with delay included experiencing fatigue, dyspnea, intermittent symptoms, attributing symptoms to deconditioning, overwork, inadequate sleep, and perceiving symptoms as not very serious and amenable to self-management. Responses such as a wait and see approach, working through symptoms, reporting no fear of symptoms, or attempting to ignore symptoms were associated with delay. Conclusion: Experiencing fatigue, dyspnea and intermittent symptoms produced symptom representations and emotional and behavioral responses associated with treatment-seeking delay. There is a critical need to develop and test educational interventions to increase awareness of the spectrum and characteristics of AF symptoms and appropriate treatment-seeking behaviors.

[Validation of taking arterial pulse in Primary Care for the detection of atrial fibrillation and other cardiac rhythm disorders in patients over 65 years old].

Author(s): Pérula-de Torres, L A; González-Blanco V, V; Luque-Montilla, R; Martín-Rioboó, E; Martínez-Adell, M A; Ruiz-de Castroviejo, J; Grupo Colaborativo estudio DOFA-AP

Source: Semergen; Oct 2016

Abstract: Atrial fibrillation (AF) is the most frequent arrhythmia in clinical practice and has important prognostic implications. The objective of this study was to demonstrate the validity and the reliability of taking the arterial pulse (TAP) in patients over 65 years for detecting in AF and other rhythm disorders. A descriptive, observational, multicentre study to validate a diagnostic test within in a controlled clinical trial. 39 Primary Care Centres in the Spanish National Health Service. A total of 318 physicians and nurses took part in the analysis of validity, and 166 of them took part in the analysis of reliability. The professionals were previously called to a meeting in which they took the arterial pulses, and were given 4 ECGs to interpret. The participants TAP of 864 patients followed by an ECG to confirm the cardiac rhythm. Sensitivity, specificity and predictive values were estimated to assess the criterial validity and the simple concordance index to check reproducibility. The sensitivity of pulse measurement for detecting AF detection was 99.4% (95% CI: 97.9-100.0), with a specificity of 30.7% (95% CI: 26.1-35.3), a positive predictive value of 36.6% (95% CI 32.0-41.2), and negative predictive value of 99.2% (97.3-100.0). The simple concordance between the researchers and the cardiologist for the ECG diagnosis of AF ranged between 84.9% and 91.6%. The TAP has a high sensitivity but a low specificity to detect AF. It is a reliable test for the opportunistic screening of arrhythmias in patients aged over 65 years.

Findings of an observational investigation of pure remote follow-up of pacemaker patients: is the in-clinic device check still needed?

Author(s): Facchin, D; Baccillieri, MS; Gasparini, G; Zoppo, F; Allocca, G; Brieda, M; Verlato, R; Proclemer, A

Source: International journal of cardiology; Oct 2016; vol. 220 ; p. 781-786

Abstract: Device follow-up is mandatory in the care of patients with a pacemaker. However, in most cases, device checks appear to be mere technical, time-consuming procedures. The aim of this research is to evaluate whether remote follow-up can replace in-clinic device checks by assessing clinical outcomes for pacemaker patients followed only via remote follow-up. Consecutive pacemaker patients followed with remote monitoring were prospectively included by 6 Italian cardiology centers in an observational investigation. The workflow for remote monitoring included an initial assessment by nursing staff and, when necessary, by a responsible physician for medical decisions. No in-person visits were scheduled after the start of remote monitoring. One-thousand and two-hundred and fifty one patients (30% female, 75 \pm 11 years old) were followed for a median observation period of 15 months. Out of 4965 remote transmissions, 1882 (38%) had at least one clinically relevant event to be investigated further, but, only after 137 transmissions (2.8%), the patients were contacted for an in-clinic visit or hospitalization. Sixty-nine patients died and 124 were hospitalized for various reasons. Atrial fibrillation episodes were the most common clinical events discovered by remote transmissions, occurring in 1339 (26%) transmissions and 471 (38%) patients. Our experience shows that remote monitoring in a pacemaker population can safely replace in-clinic follow-up, avoiding unnecessary in-hospital device follow-up.

Recent advances in genetic testing and counseling for inherited arrhythmias.

Author(s): Mizusawa, Yuka

Source: Journal of arrhythmia; Oct 2016; vol. 32 (no. 5); p. 389-397

Abstract: Inherited arrhythmias, such as cardiomyopathies and cardiac ion channelopathies, along with coronary heart disease (CHD) are three most common disorders that predispose adults to sudden cardiac death. In the last three decades, causal genes in inherited arrhythmias have been successfully identified. At the same time, it has become evident that the genetic architectures are more complex than previously known. Recent advancements in DNA sequencing technology (next generation sequencing) have enabled us to study such complex genetic traits. This article discusses indications for genetic testing of patients with inherited arrhythmias. Further, it describes the benefits and challenges that we face in the era of next generation sequencing. Finally, it briefly discusses genetic counseling, in which a multidisciplinary approach is required due to the increased complexity of the genetic information related to inherited arrhythmias.

Multidisciplinary study of a new CIC-1 mutation causing myotonia congenita: a paradigm to understand and treat ion channelopathies.

Author(s): Imbrici, Paola; Altamura, Concetta; Camerino, Giulia Maria; Mangiatori, Giuseppe Felice; Conte, Elena; Maggi, Lorenzo; Brugnoli, Raffaella; Musaraj, Kejla; Caloiero, Roberta; Alberga, Domenico; Marsano, Renè Massimiliano; Ricci, Giulia; Siciliano, Gabriele; Nicolotti, Orazio; Mora, Marina; Bernasconi, Pia; Desaphy, Jean-Francois; Mantegazza, Renato; Camerino, Diana Conte

Source: FASEB journal : official publication of the Federation of American Societies for Experimental Biology; Oct 2016; vol. 30 (no. 10); p. 3285-3295

Abstract: Myotonia congenita is an inherited disease that is characterized by impaired muscle relaxation after contraction caused by loss-of-function mutations in the skeletal muscle CIC-1 channel. We report a novel CIC-1 mutation, T335N, that is associated with a mild phenotype in 1 patient, located in the extracellular I-J loop. The purpose of this study was to provide a solid correlation between T335N dysfunction and clinical symptoms in the affected patient as well as to offer hints for drug development. Our multidisciplinary approach includes patch-clamp electrophysiology on T335N and CIC-1 wild-type channels expressed in tsA201 cells, Western blot and quantitative PCR analyses on muscle biopsies from patient and unaffected individuals, and molecular dynamics simulations using a homology model of the CIC-1 dimer. T335N channels display reduced chloride currents as a result of gating alterations rather than altered surface expression. Molecular dynamics simulations suggest that the I-J loop might be involved in conformational changes that occur at the dimer interface, thus affecting gating. Finally, the gene expression profile of T335N carrier showed a diverse expression of K(+) channel genes, compared with control individuals, as potentially contributing to the phenotype. This experimental paradigm satisfactorily explained myotonia in the patient. Furthermore, it could be relevant to the study and therapy of any channelopathy.

Patients' experiences of communication and involvement in decision-making about atrial fibrillation treatment in consultations with nurses and physicians

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Source: Scandinavian Journal of Caring Sciences; Sep 2016; vol. 30 (no. 3); p. 535-546

Abstract:Background Insights in consultations across patient interactions with physicians and nurses are of vital importance for strengthening the patients' involvement in the treatment decision-making process. The experience of involvement and communication in decision-making from the patients' perspective has been sparsely explored. Objective To examine how patients describe involvement in and communication about decision-making regarding treatment in consultations with nurses and physicians. Method Twenty-two patients with atrial fibrillation (AF), aged 37-90 years, were interviewed directly after their consultations with nurses and physicians in outpatient AF clinics in six Swedish hospitals. Results In consultations with nurses, the patients felt involved when obtaining clarifications about AF as a disease and its treatment and when preparing for and building up confidence in decision-making. In consultations with physicians, the patients felt involved when they could cooperate in decision-making, when acquiring knowledge, and when they felt that they were being understood. One shared category was found in consultations with both nurses and physicians, and the patients felt involved when they had a sense of trust and felt secure during and between consultations. Conclusions Patients with AF stated that they would need to acquire knowledge and build up confidence and ability in order to be effectively involved in the decision-making about treatment. Despite not being actively involved in

decision-making, patients felt involved through experiencing supportive and confirming communication. Practice implications Attention must be given to the relationship with the patient to create the conditions for patient involvement in the consultation. This can be achieved through supportive communication attempting to create a feeling of clarity and building confidence. This will support involvement in decision-making concerning AF treatment and feelings of being understood and of trust in physicians and/or nurses.

Association between the diagnosis of atrial fibrillation and aspects of health status: a Danish cross-sectional study

Author(s): Hoegh, Vibeke; Lundbye-Christensen, Soeren; Delmar, Charlotte; Frederiksen, Kirsten; Riahi, Sam; Overvad, Kim

Source: Scandinavian Journal of Caring Sciences; Sep 2016; vol. 30 (no. 3); p. 507-517

Abstract: Background Caring for patients living with atrial fibrillation (AF) is expected to be an increasing challenge for the healthcare sector in the future. Inconclusive results on self-reported health-related quality of life and health status in patients living with AF have previously been reported, ranging from being similar to those observed in patients who have sustained and survived a myocardial infarction to not being different from those of healthy subjects. In these studies, gender differences were not taken into account. Aim and objective To investigate the association between the diagnosis of atrial fibrillation and self-reported health status. Design An observational, cross-sectional study was conducted using data from the Danish Diet, Cancer and Health cohort. Information on health status was obtained using the Danish version of the Short Form 36 version 2 questionnaire. The analyses were stratified on gender. In adjusted analysis, we considered potential confounding from comorbidity expressed by the Charlson Comorbidity Index and effect modification by age. Ethical approval The local ethical committees of Copenhagen and Frederiksberg municipalities (Approval no.: (KF) 01-345/93) approved the study. Results We included 42 598 participants of whom 873 had a diagnosis of AF and/or atrial flutter. We found a lower adjusted physical component score among AF patients. No systematic differences in the mental component score (MCS) were observed. Conclusion Participants diagnosed with AF report a clinically and statistically significantly lower physical health component score. No systematic differences in the MCS were found when comparing with the remaining participants in the cohort. As healthcare professionals caring for patients living with AF are not always expecting patients living with AF to experience a burden from their disease, the individual patients' experience of their situation, feelings, preferences, symptoms and needs leading to physical limitations should always be articulated.

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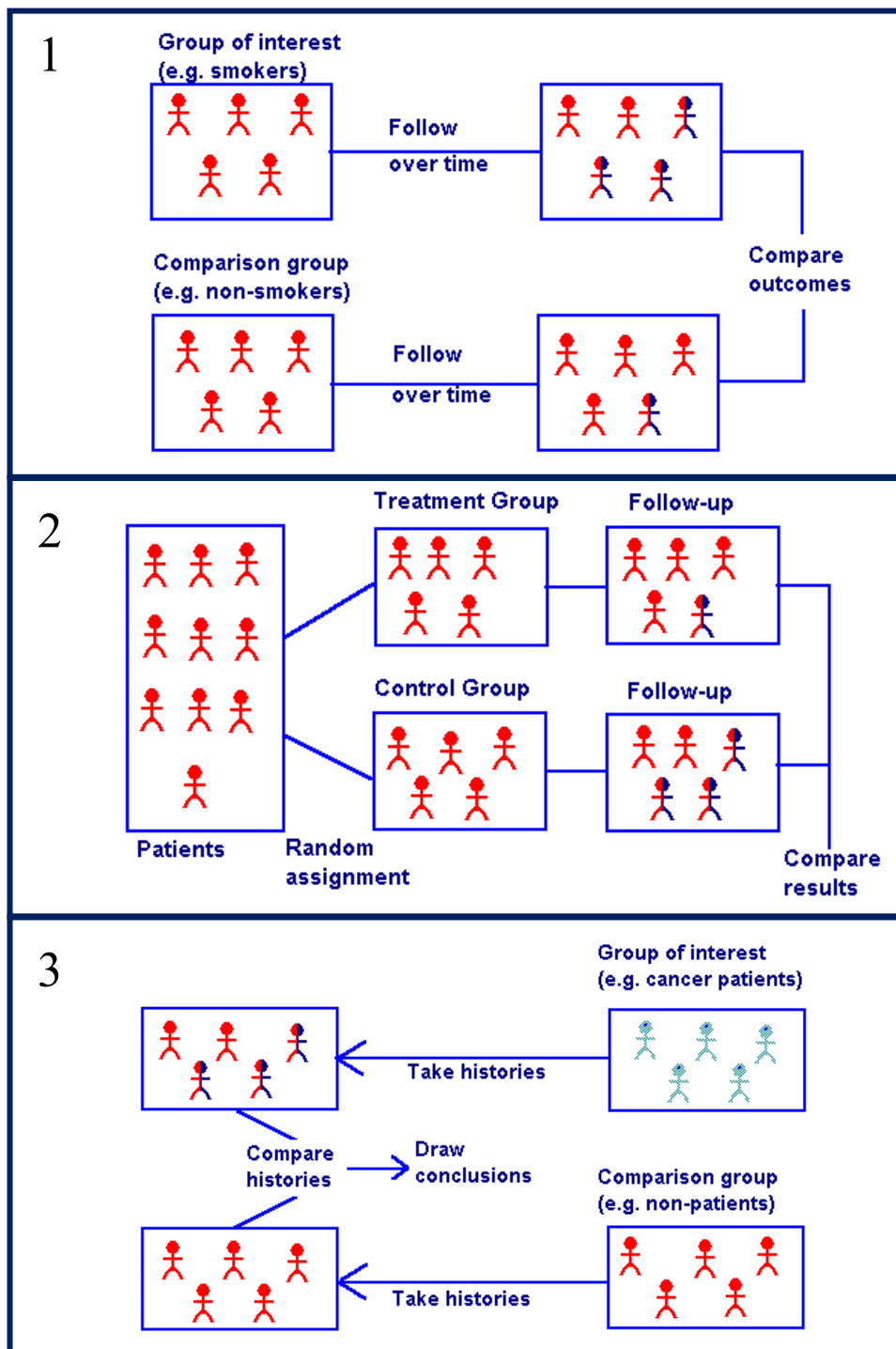
European Heart Journal

November 2016, Volume 37, Issue 42

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