<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Advances in Clinical Cardiology 2016: A Summary of the Key Clinical Trials.</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Impact of a Pediatric Cardiology Clinical Program on Congenital Heart Disease Outcomes in Guyana.</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Acute coronary syndrome patients admitted to a cardiology vs non-cardiology service: variations in treatment &amp; outcome.</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Successful innovation: A time for change?</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Practitioner Gender and Quality of Care in Ambulatory Cardiology Practices: A Report From the National Cardiovascular Data Practice Innovation and Clinical Excellence (PINNACLE) Registry.</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>The Role of Interventional Cardiology to Our Understanding of Basic Mechanisms Related to Coronary Atherosclerosis: “Thinking outside the box”.</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>Simulation-based education leads to decreased use of fluoroscopy in diagnostic coronary angiography.</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>Selection of the Best of 2016 in Clinical Cardiology: Continuum of Care; Relationship Between Cardiology and Primary Care.</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>Mass spectrometry imaging for clinical research - latest developments, applications, and current limitations.</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>Artificial intelligence in cardiology.</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>Securing a cardiology speciality training programme in the UK: how did other people do it?</td>
<td>5</td>
</tr>
<tr>
<td>12.</td>
<td>Genomic translational research: Paving the way to individualized cardiac functional analyses and personalized cardiology.</td>
<td>6</td>
</tr>
<tr>
<td>14.</td>
<td>Tips for publishing your clinical cardiology research.</td>
<td>7</td>
</tr>
<tr>
<td>15.</td>
<td>Clinical trials. A pending subject.</td>
<td>7</td>
</tr>
<tr>
<td>17.</td>
<td>Improving public health by improving clinical trial guidelines and their application.</td>
<td>7</td>
</tr>
<tr>
<td>18.</td>
<td>Selection of the Best of 2016 in Clinical Cardiology: Therapeutic Novelties.</td>
<td>8</td>
</tr>
<tr>
<td>19.</td>
<td>Cardiovascular outcome trials in patients with chronic kidney disease: challenges associated with selection of patients and endpoints.</td>
<td>8</td>
</tr>
<tr>
<td>20.</td>
<td>Conceptual Foundations of Systems Biology Explaining Complex Cardiac Diseases.</td>
<td>8</td>
</tr>
<tr>
<td>21.</td>
<td>The role and limitations of Cochrane reviews at the bedside: a systematic synopsis of five pediatric subspecialties.</td>
<td>9</td>
</tr>
<tr>
<td>22.</td>
<td>Physicians’ knowledge of implantable defibrillator treatment: are we good enough?</td>
<td>9</td>
</tr>
<tr>
<td>23.</td>
<td>Clinical decision making in the recognition of dying: a qualitative interview study.</td>
<td>10</td>
</tr>
</tbody>
</table>

Full search strategy: See full search strategy
1. Advances in Clinical Cardiology 2016: A Summary of the Key Clinical Trials.

Authors: Gray, Alastair; McQuillan, Conor; Menown, Ian B A
Source: Advances in therapy; Jul 2017; vol. 34 (no. 7); p. 1503-1527
Publication Date: Jul 2017
Publication Type(s): Journal Article Review
PubMedID: 28537000
Database: Medline

Abstract: INTRODUCTION The findings of many new cardiology clinical trials over the last year have been published or presented at major international meetings. This paper aims to describe and place in context a summary of the key clinical trials in cardiology presented between January and December 2016. METHODSThe authors reviewed clinical trials presented at major cardiology conferences during 2016 including the American College of Cardiology (ACC), European Association for Percutaneous Cardiovascular Interventions (EuroPCR), European Society of Cardiology (ESC), European Association for the Study of Diabetes (EASD), Transcatheter Cardiovascular Therapeutics (TCT), and the American Heart Association (AHA). Selection criteria were trials with a broad relevance to the cardiology community and those with potential to change current practice. RESULTSA total of 57 key cardiology clinical trials were identified for inclusion. Here we describe and place in clinical context the key findings of new data relating to interventional and structural cardiology including delayed stenting following primary angioplasty, contrast-induced nephropathy, management of jailed wires, optimal duration of dual antiplatelet therapy (DAPT), stenting vs bypass for left main disease, new generation stents (BioFreedom, Orsiro, Absorb), transcatheter aortic valve implantation (Edwards Sapien XT, transcatheter embolic protection), and closure devices (Watchman, Amplatzer). New preventative cardiology data include trials of bariatric surgery, empagliflozin, liraglutide, semaglutide, PCSK9 inhibitors (evolocumab and alirocumab), and inclisiran. Antiplatelet therapy trials include platelet function monitoring and ticagrelor vs clopidogrel for peripheral vascular disease. New data are also presented in fields of heart failure (sacubitril/valsartan, aliskiren, spironolactone), atrial fibrillation (rivaroxaban in patients undergoing coronary intervention, edoxaban in DC cardioversion), cardiac devices (implantable cardioverter defibrillator in non-ischemic cardiomyopathy), and electrophysiology (cryoballoon vs radiofrequency ablation). CONCLUSION This paper presents a summary of key clinical cardiology trials during the past year and should be of practical value to both clinicians and cardiology researchers.

2. Impact of a Pediatric Cardiology Clinical Program on Congenital Heart Disease Outcomes in Guyana.

Authors: Isaac, Debra; Nagesh, Vikhashni; Bell, Alexandra; Soto, Rodrigo; Seepersaud, Marisa; Myers, Kimberley; Zahir, Saif
Source: Global pediatric health; 2017; vol. 4 ; p. 2333794X17731667
Publication Date: 2017
Publication Type(s): Journal Article
PubMedID: 28955719
Database: Medline

Available at Global pediatric health from Europe PubMed Central - Open Access

Abstract: Background: Children with congenital heart disease (CHD) in Guyana have not historically been managed with timely intervention, increasing the likelihood of serious, irreversible complications. In 2014, a pediatric cardiology clinical program (Guyana Paediatric Cardiology Steering Committee [GPCSC]) and partnership with International Children's Heart Foundation (BabyHeart) was developed to improve CHD care. Objectives: To describe the characteristics of CHD in Guyanese children and to determine the impact of GPCSC on CHD outcomes. Methods: Qualitative comparison between CHD patients sent for surgery prior to GPCSC (pre-GPCSC cohort) and those managed through GPCSC (post-GPCSC cohort). Findings: Eighty-eight pre-GPHC patients were identified from 2005 to 2014. A total of 319 CHD patients were referred post-GPCSC. In all, 114 patients required surgical or catheterization procedures, with 74 patients prioritized for interventions within 29 months post-GPCSC. Mean age at surgery was 77 months in both cohorts, with younger children represented in the post-GPCSC cohort. Postoperative follow-up was more frequent post-GPCSC (100% vs 35%). Vital status of 48% of pre-GPCSC patients is unknown, with more pre-GPCSC patients known to be deceased compared with post-GPCSC (9% vs 5%). Pre-GPCSC patients had more incorrect diagnosis and inoperable disease when sent for surgery. Interpretation: Patients undergoing surgery post-GPCSC had more appropriate and timely interventions, better follow-up, and increased survival. The feasibility and positive impact of this collaborative pediatric cardiology clinical program in Guyana is demonstrated, with potential applicability for other low- and middle-income countries. Obstacles to referral of children with CHD in Guyana can begin to be addressed, with the goal of more complete access to timely intervention, and improved outcomes for these children.
3. Acute coronary syndrome patients admitted to a cardiology vs non-cardiology service: variations in treatment & outcome.

Authors: O'Neill, Deirdre E; Southern, Danielle A; Norris, Colleen M; O'Neill, Blair J; Curran, Helen J; Graham, Michelle M
Source: BMC health services research; May 2017; vol. 17 (no. 1); p. 354
Publication Date: May 2017
Publication Type(s): Journal Article
PubMedID: 28511683
Database: Medline

Abstract:
BACKGROUND: Specialized cardiology services have contributed to reduced mortality in acute coronary syndromes (ACS). We sought to evaluate the outcomes of ACS patients admitted to non-cardiology services in Southern Alberta.

METHODS: Retrospective chart review performed on all troponin-positive patients in the Calgary Health Region identified those diagnosed with ACS by their attending team. Patients admitted to non-cardiology and cardiology services were compared, using linked data from the Alberta Provincial Project for Outcomes Assessment in Coronary Heart Disease (APPROACH) registry and the Strategic Clinical Network for Cardiovascular Health and Stroke.

RESULTS: From January 1, 2007 to December 31, 2008, 2105 ACS patients were identified, with 1636 (77.7%) admitted to cardiology and 469 (22.3%) to non-cardiology services. Patients admitted to non-cardiology services were older, had more comorbidities, and rarely received cardiology consultation (5.1%). Cardiac catheterization was underutilized (5.1% vs 86.4% in cardiology patients (p < 0.0001)), as was evidence-based pharmacotherapy (p < 0.0001). Following adjustment for baseline comorbidities, 30-day through 4-year mortality was significantly higher on non-cardiology vs. cardiology services (49.1% vs. 11.0% respectively at 4-years, p < 0.0001).

CONCLUSION: In a large ACS population in the Calgary Health Region, 25% were admitted to non-cardiology services. These patients had worse outcomes, despite adjustment for baseline risk factor differences. Although many patients were appropriately admitted to non-cardiology services, the low use of investigations and secondary prevention medications may contribute to poorer patient outcome. Further research is required to identify process of care strategies to improve outcomes and lessen the burden of illness for patients and the health care system.

4. Successful innovation: A time for change?

Authors: Dendy, Jeffrey M; Tilkemeier, Peter
Source: Journal of nuclear cardiology : official publication of the American Society of Nuclear Cardiology; Feb 2017; vol. 24 (no. 1); p. 134-137
Publication Date: Feb 2017
Publication Type(s): Journal Article
PubMedID: 27220878
Database: Medline

Abstract:
Innovation plays an important role in the advancement of nuclear cardiology, meeting the need for reduced exposure to radiation, and maintaining and improving image quality. As we innovate, it is important to understand the impact of these improvements on the clinical and research knowledge base that has made nuclear cardiology such a powerful clinical tool. The need for comparative studies insuring stability in the clinical applicability of our current guidelines and use of the prognostic power of radionuclide myocardial perfusion imaging in clinical practice is essential for new and innovative techniques. The existing data demonstrating the significant differences that can occur with the innovative techniques is explored. The need for tools to insure comparable data is available as we begin to utilize registries to inform our clinical practice and research will be an important part of the future of nuclear cardiology.

5. Practitioner Gender and Quality of Care in Ambulatory Cardiology Practices: A Report From the National Cardiovascular Data Practice Innovation and Clinical Excellence (Pinnacle) Registry.

Authors: Gupta, Dipti; Tang, Fengming; Masoudi, Frederick A; Jones, Philip G; Chan, Paul S; Daugherty, Stacie L
Source: The Journal of cardiovascular nursing; Aug 2017
Publication Date: Aug 2017
Publication Type(s): Journal Article
PubMedID: 28816774
Database: Medline
BACKGROUND Some studies suggest that female practitioners are more likely to provide guideline-concordant care than male practitioners; however, little is known about the role of practitioner gender in cardiology.

OBJECTIVE The aim of the study was to measure the association between practitioner gender and adherence to the cardiovascular performance measures in the American College of Cardiology's ambulatory Practice Innovation and Clinical Excellence Registry.

METHODS Patients with at least 1 outpatient visit with a unique practitioner were included. Among eligible patients, adherence to 7 guideline-supported performance measures for coronary artery disease, heart failure, and atrial fibrillation over 12 months after registry entry was compared by practitioner gender using hierarchical models adjusting for practitioner type (physicians vs advance practice practitioners) and number of visits.

RESULTS The study cohort included 1493 individual practitioners who saw 769 139 patients; 80% of practitioners were men. Male practitioners were more often physicians compared with female practitioners (98.2% vs 43.7%, P < .01). Accounting for practitioner category and visit frequency, guideline adherence rates were similar by practitioner gender for all measures with the exception of marginally higher rates for coronary artery disease performance measures for male practitioners compared with female practitioners (antiplatelet: rate ratio [RR] = 1.06; 95% confidence interval [CI], 1.03-1.09; β-blockers: RR = 1.06; 95% CI, 1.01-1.10; and lipid-lowering drug: RR = 1.07; 95% CI, 1.04-1.10) and atrial fibrillation (oral anticoagulants: RR = 1.05; 95% CI, 1.01-1.09).

CONCLUSION Male practitioners marginally outperformed their female counterparts in ambulatory practices enrolled in a voluntary cardiovascular performance improvement registry program. Overall low adherence to some performance measures suggests room for improvement among all practitioners.

6. The Role of Interventional Cardiology to Our Understanding of Basic Mechanisms Related to Coronary Atherosclerosis: "Thinking outside the box”.

Authors: Boudoulas, Konstantinos Dean; Stefanadis, Christodoulos; Boudoulas, Harisios
Source: Hellenic journal of cardiology : HJC = Hellenike kardiologike epitheorese; 2017; vol. 58 (no. 2); p. 110-114
Publication Date: 2017
Abstract: Interventional cardiology has contributed significantly to our understanding of coronary atherosclerosis. Interventional cardiology has allowed a correlation between the clinical picture of coronary atherosclerosis with the underlying pathology and has helped establish the evolution of atherosclerotic plaques in vivo. Better understanding of the basic mechanisms of coronary atherosclerosis, due to the contributions of interventional cardiology, will help cure and/or prevent coronary atherosclerosis in the next few decades. In this mini review, several of the remarkable contributions of interventional cardiology, which have allowed a better understanding of the pathophysiological mechanisms related to coronary atherosclerosis, will be emphasized. In addition, certain projections for the future will be made based on current knowledge.

7. Simulation-based education leads to decreased use of fluoroscopy in diagnostic coronary angiography.

Authors: Prenner, Stuart B; Wayne, Diane B; Sweis, Ranya N; Cohen, Elaine R; Feinglass, Joe M; Schimmel, Daniel R
Source: Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions; Aug 2017
Abstract: OBJECTIVEThe aim of this study is to determine whether simulation-based education (SBE) translates into reduced procedure time, radiation, and contrast use in actual clinical care. BACKGROUND As a high volume procedure often performed by novice cardiology fellows, diagnostic coronary angiography represents an excellent target for SBE. Reports of SBE in interventional cardiology are limited and there is little understanding of the potential downstream clinical impact of these interventions. METHODSAll diagnostic coronary angiograms performed at a single center between January 1, 2011 and June 30, 2015 were analyzed. Random effects linear regression models were used to compare outcomes between procedures performed by 12 cardiology fellows who underwent simulation-based training and those performed by 20 traditionally trained fellows. RESULTSThirty-two cardiology fellows performed 2,783 diagnostic coronary angiograms. Procedures performed by fellows trained with SBE were shorter (mean of 23.98 min vs. 24.94 min, P = 0.034) and were performed with decreased radiation (mean of 56,348 mGycm2 vs. 66,120 mGycm2, P < 0.001). After controlling for year in training, procedure year, access site, and supervising attending physician, training on the simulator was independently associated with 117 fewer seconds of fluoroscopy time per procedure (P = 0.04). CONCLUSION Diagnostic coronary angiography SBE is associated with decreased use of fluoroscopy in downstream clinical care. SBE may be a useful tool to reduce radiation exposure in the cardiac catheterization laboratory.

8. Selection of the Best of 2016 in Clinical Cardiology: Continuum of Care; Relationship Between Cardiology and Primary Care.
9. Mass spectrometry imaging for clinical research - latest developments, applications, and current limitations.

Authors: Vaysse, Pierre-Maxence; Heeren, Ron M A; Porta, Tiffany; Balluff, Benjamin
Source: The Analyst; Jul 2017; vol. 142 (no. 15); p. 2690-2712
Abstract: Mass spectrometry is being used in many clinical research areas ranging from toxicology to personalized medicine. Of all the mass spectrometry techniques, mass spectrometry imaging (MSI), in particular, has continuously grown towards clinical acceptance. Significant technological and methodological improvements have contributed to enhance the performance of MSI recently, pushing the limits of throughput, spatial resolution, and sensitivity. This has stimulated the spread of MSI usage across various biomedical research areas such as oncology, neurological disorders, cardiology, and rheumatology, just to name a few. After highlighting the latest major developments and applications touching all aspects of translational research (i.e. from early pre-clinical to clinical research), we will discuss the present challenges in translational research performed with MSI: data management and analysis, molecular coverage and identification capabilities, and finally, reproducibility across multiple research centers, which is the largest remaining obstacle in moving MSI towards clinical routine.

10. Artificial intelligence in cardiology.

Authors: Bonderman, Diana
Source: Wiener klinische Wochenschrift; Oct 2017
Abstract: Decision-making is complex in modern medicine and should ideally be based on available data, structured knowledge and proper interpretation in the context of an individual patient. Automated algorithms, also termed artificial intelligence that are able to extract meaningful patterns from data collections and build decisions upon identified patterns may be useful assistants in clinical decision-making processes. In this article, artificial intelligence-based studies in clinical cardiology are reviewed. The text also touches on the ethical issues and speculates on the future roles of automated algorithms versus clinicians in cardiology and medicine in general.

11. Securing a cardiology specialty training programme in the UK: how did other people do it?

Authors: Protty, Majd B; Mohee, Kevin; Hoskins, Hannah C; Haboubi, Hasan N
Source: Postgraduate medical journal; Oct 2017
Abstract: Available at Postgraduate medical journal from BMJ Journals - NHS
Abstract

BACKGROUND Application to cardiology specialty training is competitive with uncertainty among candidates as to what the secret recipe for a successful appointment is. We aimed to investigate objective variables, which were demonstrated by successful appointees to cardiology training schemes in the UK. METHODS Data from successful cardiology applicants for the years 2014 to 2016 were obtained from the Joint Royal Colleges of Physicians Training Board under the Freedom of Information Act. These data included basic demographics as well as objective scores awarded for selection categories such as qualifications, academic, teaching and other achievements. RESULTS There were a total of 976 applicants during the study period, of whom 423 were successfully appointed, generating a competition ratio of 2.3 applicants for each position. There was an increasing proportion of successful female applicants (22% in 2014, 28% in 2015 and 32% in 2016). Median scores for postgraduate exams (14/14), presentations (6/6) and quality improvement (10/10) scores corresponded to maximum possible scores, whereas median scores for additional undergraduate and postgraduate degrees were 0. Median scores for prizes, publications and teaching experience were 6/10, 4/8 and 9/10, respectively. CONCLUSION The secret to a successful cardiology training appointment is associated with completion of all postgraduate clinical exams, completion and presentation of quality improvement projects, national presentations and substantial teaching achievements. At least half of the successful candidates had no additional undergraduate or postgraduate degrees but had evidence of some prizes and publications. The ratio of successful female candidates is rising, but remains less than males in cardiology training.

12. Genomic translational research: Paving the way to individualized cardiac functional analyses and personalized cardiology.

Authors Pasipoularides, Ares
Source International journal of cardiology; Mar 2017; vol. 230 ; p. 384-401
Publication Date Mar 2017
Publication Type(s) Journal Article Review
PubMedID 28057368
Database Medline
Abstract For most of Medicine’s past, the best that physicians could do to cope with disease prevention and treatment was based on the expected response of an average patient. Currently, however, a more personalized/precise approach to cardiology and medicine in general is becoming possible, as the cost of sequencing a human genome has declined substantially. As a result, we are witnessing an era of precipitous advances in biomedicine and bourgeoning understanding of the genetic basis of cardiovascular and other diseases, reminiscent of the resurgence of innovations in physico-mathematical sciences and biology-anatomy-cardiology in the Renaissance, a parallel time of radical change and reformation of medical knowledge, education and practice. Now on the horizon is an individualized, diverse patient-centered, approach to medical practice that encompasses the development of new, gene-based diagnostics and preventive medicine tactics, and offers the broadest range of personalized therapies based on pharmacogenetics. Over time, translation of genomic and high-tech approaches unquestionably will transform clinical practice in cardiology and medicine as a whole, with the adoption of new personalized medicine approaches and procedures. Clearly, future prospects far outweigh present accomplishments, which are best viewed as a promising start. It is now essential for pluridisciplinary health care providers to examine the drivers and barriers to the clinical adoption of this emerging revolutionary paradigm, in order to expedite the realization of its potential. So, we are not there yet, but we are definitely on our way.


Authors Woodward, Mark; Tunstall-Pedoe, Hugh; Peters, Sanne Ae
Source Heart (British Cardiac Society); Apr 2017; vol. 103 (no. 7); p. 538-545
Publication Date Apr 2017
Publication Type(s) Journal Article Review
PubMedID 28179372
Database Medline
Abstract Graphs and tables are indispensable aids to quantitative research. When developing a clinical prediction rule that is based on a cardiovascular risk score, there are many visual displays that can assist in developing the underlying statistical model, testing the assumptions made in this model, evaluating and presenting the resultant score. All too often, researchers in this field follow formulaic recipes without exploring the issues of model selection and data presentation in a meaningful and thoughtful way. Some ideas on how to use visual displays to make wise decisions and present results that will both inform and attract the reader are given. Ideas are developed, and results tested, using subsets of the data that were used to develop the ASSIGN cardiovascular risk score, as used in Scotland.
14. Tips for publishing your clinical cardiology research.

**Authors**
Otto, Catherine M

**Source**
Heart (British Cardiac Society); Aug 2017; vol. 103 (no. 16); p. 1292-1294

**Publication Date**
Aug 2017

**Publication Type(s)**
Journal Article

**PubMedID**
28646102

**Database**
Medline

Available at Heart (British Cardiac Society) from BMJ Journals - NHS


**Authors**
Gil-Extremera, B; Jiménez-López, P; Mediavilla-García, J D

**Source**
Revista clinica espanola; Jul 2017

**Publication Date**
Jul 2017

**Publication Type(s)**
Journal Article

**PubMedID**
28774463

**Database**
Medline

Clinical trials are essential tools for the progress of clinical medicine in its diagnostic and therapeutic aspects. Since the first trial in 1948, which related tobacco use with lung cancer, there have been more than 150,000 clinical trials to date in various areas (paediatrics, cardiology, oncology, endocrinology, etc.). This article highlights the importance for all physicians to participate, over the course of their professional career, in a clinical trial, due to the inherent benefits for patients, the progress of medicine and for curricular prestige. The authors have created a synthesis of their experience with clinical trials on hypertension, diabetes, dyslipidaemia and ischaemic heart disease over the course of almost 3 decades. Furthermore, a brief reference has been made to the characteristics of a phase I unit, as well as to a number of research studies currently underway.


**Authors**
Tavazzi, G; Neskovic, A N; Hussain, A; Volpicelli, G; Via, G

**Source**
International journal of cardiology; Oct 2017; vol. 245 ; p. 207-210

**Publication Date**
Oct 2017

**Publication Type(s)**
Journal Article

**PubMedID**
28874293

**Database**
Medline

**Abstract**
BACKGROUNDThe European Association of Cardiology (ESC) Guidelines on the diagnosis and treatment of acute heart failure (AHF) indicate prompt therapy initiation and performance of relevant investigations as paramount. Specifically, echocardiography prior to treatment is advocated only with hemodynamic instability, and the evaluation of clinical signs of peripheral perfusion and congestion is suggested as guidance for early interventions. Given the growing body of evidence on the diagnostic/monitoring capabilities of bedside ultrasound (including focused cardiac ultrasound, comprehensive echocardiography, lung ultrasound), we discuss the potential benefit of an integrated clinical/ultrasound approach at the very early stages of acute heart failure.METHODS AND RESULTSWe proposed a narrative review of the current evidence on the clinical-ultrasound integrated approach to AHF, with special emphasis on the components of the early diagnostic-therapeutic workup where cardiac, inferior vena cava and lung ultrasound showed high diagnostic accuracy and the capability of substantially changing an exclusively clinically-oriented patient management. A proactive comment to the ESC guidelines is made, suggesting an integration of clinical and biochemical assessment, as defined by guidelines, with combined bedside ultrasound on may help in the definition of AHF pathophysiology and treatment.CONCLUSIONA multi-organ integrated clinical-ultrasound approach should be advocated as part of the clinical-diagnostic workup at AHF very early phase. Whenever competence and technology available, bedside ultrasound, along with clinical and biochemical assessment, should target AHF profiling, identify the cause of AHF, and subsequently aid disease course and response to treatment monitoring.

17. Improving public health by improving clinical trial guidelines and their application.

**Authors**
Landray, Martin J; Bax, Jeroen J; Alliot, Laurence; Buyse, Marc; Cohen, Adam; Collins, Rory; Hindricks, Gerhard; James, Stefan K; Lane, Sile; Maggioni, Aldo P; Meeker-O’Connell, Ann; Olsson, Gunnar; Pocock, Stuart J; Rawlins, Michael; Sellors, Jonathan; Shinagawa, Kaori; Sidipo, Karin R; Smeeth, Liam; Stephens, Richard; Stewart, Murray W; Stough, Wendy Gattis; Sweeney, Fergus; Van de Werf, Frans; Woods, Kerrie; Casadei, Barbara

**Source**
European heart journal; Jun 2017; vol. 38 (no. 21); p. 1632-1637

**Publication Date**
Jun 2017

**Publication Type(s)**
Journal Article
Evidence generated from randomized controlled trials forms the foundation of cardiovascular therapeutics and has led to the adoption of numerous drugs and devices that prolong survival and reduce morbidity, as well as the avoidance of interventions that have been shown to be ineffective or even unsafe. Many aspects of cardiovascular research have evolved considerably since the first randomized trials in cardiology were conducted. In order to be large enough to provide reliable evidence about effects on major outcomes, cardiovascular trials may now involve thousands of patients recruited from hundreds of clinical sites in many different countries. Costly infrastructure has developed to meet the increasingly complex organizational and operational requirements of these clinical trials. Concerns have been raised that this approach is unsustainable, inhibiting the reliable evaluation of new and existing treatments, to the detriment of patient care. These issues were considered by patients, regulators, funders, and trialists at a meeting of the European Society of Cardiology Cardiovascular Roundtable in October 2015. This paper summarizes the key insights and discussions from the workshop, highlights subsequent progress, and identifies next steps to produce meaningful change in the conduct of cardiovascular clinical research.

Authors: Barrios, Vivencio; Escobar, Carlos; Cosín-Sales, Juan; Marzal, Domingo
Source: Revista espanola de cardiologia (English ed.); Feb 2017; vol. 70 (no. 2); p. 123-124
Publication Date: Feb 2017
Publication Type(s): Letter
PubMedID: 28131404
Database: Medline

Authors: Rossignol, Patrick; Agarwal, Rajiv; Canaud, Bernard; Charney, Alan; Chatellier, Gilles; Craig, Jonathan C; Cushman, William C; Gansevoort, Ronald T; Fellström, Bengt; Garza, Dahlia; Guzman, Nicolas; Holtkamp, Frank; London, Gerard; Massy, Ziad; Mebazaa, Alexandre; Mol, Peter G M; Pfeffer, Marc A; Rosenberg, Yves; Rulopez, Luis M; Seltzer, Jonathan; Shah, Amil M; Shah, Salim; Singh, Bhupinder; Stefánsson, Bergur V; Stockbridge, Norman; Stough, Wendy Gattis; Thygesen, Kristian; Walsh, Michael; Wannock, David G; Wilcox, Christopher S; Wittes, Janet; Pitt, Bertram; Thompson, Aliza; Zannad, Faiez
Source: European heart journal; Apr 2017
Publication Date: Apr 2017
Publication Type(s): Journal Article
PubMedID: 28431138
Database: Medline

Although cardiovascular disease is a major health burden for patients with chronic kidney disease, most cardiovascular outcome trials have excluded patients with advanced chronic kidney disease. Moreover, the major cardiovascular outcome trials that have been conducted in patients with end-stage renal disease have not demonstrated a treatment benefit. Thus, clinicians have limited evidence to guide the management of cardiovascular disease in patients with chronic kidney disease, particularly those on dialysis. Several factors contribute to both the paucity of trials and the apparent lack of observed treatment effect in completed studies. Challenges associated with conducting trials in this population include patient heterogeneity, complexity of renal pathophysiology and its interaction with cardiovascular disease, and competing risks for death. The Investigator Network Initiative Cardiovascular and Renal Clinical Trialists (INI-CRCT), an international organization of academic cardiovascular and renal clinical trialists, held a meeting of regulators and experts in nephrology, cardiology, and clinical trial methodology. The group identified several research priorities, summarized in this paper, that should be pursued to advance the field towards achieving improved cardiovascular outcomes for these patients. Cardiovascular and renal clinical trialists must partner to address the uncertainties in the field through collaborative research and design clinical trials that reflect the specific needs of the chronic and end-stage kidney disease populations, with the shared goal of generating robust evidence to guide the management of cardiovascular disease in patients with kidney disease.

Authors: Louridas, George E; Lourida, Katerina G
Source: Healthcare (Basel, Switzerland); Feb 2017; vol. 5 (no. 1)
Publication Date: Feb 2017
Publication Type(s): Journal Article Review
PubMedID: 28230815
Database: Medline
Available at Healthcare (Basel, Switzerland) from Europe PubMed Central - Open Access
Abstract

Systems biology is an important concept that connects molecular biology and genomics with computing science, mathematics and engineering. An endeavor is made in this paper to associate basic conceptual ideas of systems biology with clinical medicine. Complex cardiac diseases are clinical phenotypes generated by integration of genetic, molecular and environmental factors. Basic concepts of systems biology like network construction, modular thinking, biological constraints (downward biological direction) and emergence (upward biological direction) could be applied to clinical medicine. Especially, in the field of cardiology, these concepts can be used to explain complex clinical cardiac phenotypes like chronic heart failure and coronary artery disease. Cardiac diseases are biological complex entities which like other biological phenomena can be explained by a systems biology approach. The above powerful biological tools of systems biology can explain robustness growth and stability during disease process from modulation to phenotype. The purpose of the present review paper is to implement systems biology strategy and incorporate some conceptual issues raised by this approach into the clinical field of complex cardiac diseases. Cardiac disease process and progression can be addressed by the holistic realistic approach of systems biology in order to define in better terms earlier diagnosis and more effective therapy.

21. The role and limitations of Cochrane reviews at the bedside: a systematic synopsis of five pediatric subspecialties.

Authors
Meyer, Sascha; Poryo, Martin; Khosrawikatoli, Sara; Goda, Yvonne; Zemlin, Michael

Source
Wiener medizinische Wochenschrift (1946); Mar 2017

Publication Date
Mar 2017

Publication Type(s)
Journal Article

PubMedID
28255743

Database
Medline

Abstract
BACKGROUND Cochrane meta-analyses provide the physician at the bedside with the most relevant, up-to-date clinical information. However, implementation of evidence-based medicine (EBM) at the bedside may be difficult for a variety of reasons. The aim of this study was to assess relevant issues and obstacles related to implementing EBM in pediatrics in real life at the bedside/cotside. METHODS We performed five systematic literature reviews of all published Cochrane reviews in neonatology (1996-2010), pediatric neurology (1996-2010), pediatric gastroenterology (1993-2012), pediatric cardiology (2001-2015), and complementary and alternative medicine (1996-2012; CAM) in children and neonates. In all five analyses, the main outcome variables were percentage of reviews concluding that a certain intervention provides a benefit, percentage of reviews concluding that a certain intervention should not be performed, and percentage of studies concluding that the current level of evidence is inconclusive. RESULTS In all five areas of pediatrics, a substantial number of Cochrane reviews yielded inconclusive data (neonatology: 46.6%; neuropediatrics: 26.8%; pediatric gastroenterology: 27.9%; pediatric cardiology: 42.9%; complementary and alternative medicine: 66.9%). CONCLUSIONS Our up-dated systematic synopsis reiterates the need for high-quality, sophisticated research to reduce the number of inconclusive meta-analyses in the field of pediatrics-most importantly in the field of complementary and alternative medicine (CAM), neonatology, and pediatric cardiology. The realization of high-quality, clinically driven research will in turn yield more systematic reviews with a clear conclusion (e.g., in favor or against a certain intervention, or treatment modality), thus, substantively decreasing the proportion of inconclusive reviews.

22. Physicians' knowledge of implantable defibrillator treatment: are we good enough?

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Source
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Abstract

Aims When admitted to hospitals, patients with an implantable cardioverter defibrillator (ICD) are treated in a variety of departments. Physicians need to have basic ICD knowledge in order to provide the best possible care from implantation to the end of life. The aim of this study was to assess the levels of knowledge concerning ICD treatment among physicians active in Cardiology, Internal Medicine, and Geriatrics.

Methods and results This cross-sectional comparative study, after stratified sampling, distributed 432 surveys in 18 hospitals with a response rate of 99.5%. As many as 349 (83%) physicians had experience with ICD patients; 288 (68%) rated their ICD knowledge to be low. According to predefined criteria, 175 (41%) physicians’ scores reflected sufficient knowledge. There was a significant difference in the level of knowledge between specialities. Sufficient knowledge was reached by 56 (30%) of the physicians in Internal Medicine and 20 (19%) of them in Geriatrics, whereas in Cardiology 99 (71%) reached sufficient knowledge.

Conclusion There is lack of basic knowledge in ICD treatment and clinical management among physicians. The majority of the respondents had prior experience in treating ICD patients. Over two-thirds of the physicians rated their knowledge to be low, while test scores revealed sufficient knowledge in only 41% of the physicians surveyed. The lack of ICD knowledge is most prominent in Internal Medicine and Geriatrics, but it also extends to physicians in Cardiology departments. With an increasing number of ICD patients, it is of great importance to fill this knowledge gap as soon as possible.


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Abstract

BACKGROUND Recognising dying is an essential clinical skill for general and palliative care professionals alike. Despite the high importance, both identification and good clinical care of the dying patient remains extremely difficult and often controversial in clinical practice. This study aimed to answer the question: “What factors influence medical and nursing staff when recognising dying in end-stage cancer and heart failure patients?”

METHODS This study used a descriptive approach to decision-making theory. Participants were purposively sampled for profession (doctor or nurse), specialty (cardiology or oncology) and grade (senior vs junior). Recruitment continued until data saturation was reached. Semi-structured interviews were conducted with NHS medical and nursing staff in an NHS Trust which contained cancer and cardiology tertiary referral centres. An interview schedule was designed, based on decision-making literature. Interviews were audio-recorded and transcribed and analysed using thematic framework. Data were managed with Atlas.ti.

RESULTS Saturation was achieved with 19 participants (7 seniors; 8 intermediate level staff; 4 juniors). There were 11 oncologists (6 doctors, 5 nurses) and 8 cardiologists (3 doctors, 5 nurses). Six themes were generated: information used; decision processes; modifying factors; implementation; reflecting on decisions and related decisions. The decision process described was time-dependent, ongoing and iterative, and relies heavily on intuition.

CONCLUSIONS This study supports the need to recognise the strengths and weaknesses of expertise and intuition as part of the decision process, and of placing the recognition of dying in a time-dependent context. Clinicians should also be prepared to accept and convey the uncertainty surrounding these decisions, both in practice and in communication with patients and carers.
### Strategy 294585

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