Strategy 432444/8

#	Database	Search term	Results
8	Medline	(((audit* OR "quality improvement*").ti,ab OR exp "CLINICAL AUDIT"/ OR exp "QUALITY IMPROVEMENT"/) AND ((NHS OR england OR UK OR "united kingdom" OR "national health service").ti,ab OR exp "UNITED KINGDOM"/)) [Since 27-Aug-2019]	42

Contents 42 of 42 results on Medline - (((audit* OR "quality improvement*").ti,ab OR exp "CLINICAL AUDIT"/ OR exp "QUALITY IMPROVEMENT"/) AND ((NHS OR england OR UK OR "united kingdom" OR "national health service").ti,ab OR exp "UNITED KINGDOM"/)) [Since 27-Aug-2019]

Results 42 of 42 results on Medline - (((audit* OR "quality improvement*").ti,ab OR exp "CLINICAL AUDIT"/ OR exp "QUALITY IMPROVEMENT"/) AND ((NHS OR england OR UK OR "united kingdom" OR "national health service").ti,ab OR exp "UNITED KINGDOM"/)) [Since 27-Aug-2019]

1. Hospital-Based Quality Improvement Interventions for Patients With Acute Coronary Syndrome: A Systematic Review.

Authors Bahiru, Ehete; Agarwal, Anubha; Berendsen, Mark A; Baldridge, Abigail S; Temu, Tecla; Rogers, Amy; Farquhar, Carey; Bukachi, Frederick; Huffman, Mark D
Source Circulation. Cardiovascular quality and outcomes; Sep 2019; vol. 12 (no. 9); p. e005513
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31525081
Database Medline
Abstract BACKGROUNDQuality improvement initiatives have been developed to improve acute coronary syndrome care largely in high-income country settings. We sought to synthesize the effect size and quality of evidence from randomized controlled trials (RCTs) and nonrandomized studies for hospital-based acute coronary syndrome quality improvement interventions on clinical outcomes and process of care measures for their potential implementation in low- and middle-income country settings.METHODS AND RESULTSWe conducted a bibliometric search of databases and trial registers and a hand search in 2016 and performed an updated search in May 2018 and May 2019. We performed data extraction, risk of bias assessment, and quality of evidence assessments in duplicate. We assessed differences in outcomes by study design comparing RCTs to nonrandomized quasi-experimental studies and by country income status. A meta-analysis was not feasible due to substantial, unexplained heterogeneity among the included studies, and thus, we present a qualitative synthesis. We screened 5858 records and included 32 studies (14 RCTs [n=109 763] and 18 nonrandomized quasi-experimental studies [n=54-423]). In-hospital mortality ranged from 2.1% to 4.8% in the intervention groups versus 3.3% to 5.1% in the control groups in 5 RCTs (n=55 942). Five RCTs (n=64 313) reported 3.0% to 31.0% higher rates of reperfusion for patients with ST-segment-elevation myocardial infarction in the intervention groups. The effect sizes for in-hospital and discharge medical therapies in a majority of RCTs were 3.0% to 10.0% higher in the intervention groups. There was no significant difference in 30-day mortality evaluated by 4 RCTs (n=42 384), which reported 2.5% to 15.0% versus 5.9% to 22% 30-day mortality rates in the intervention versus control groups. In contrast, nonrandomized quasi-experimental studies reported larger effect sizes compared to RCTs. There were no significant consistent differences in outcomes between high-income and middle-income countries. Low-income countries were not represented in any of the included studies.CONCLUSIONSHospital-based acute coronary syndrome quality improvement interventions have a modest effect on process of care measures but not on clinical outcomes with expected differences by study design. Although quality improvement programs have an ongoing and important role for acute coronary syndrome quality of care in high-income country settings, further research will help to identify key components for contextualizing and implementing such interventions to new settings to achieve their desired effects. Systematic Review Registration: URL: https://www.crd.york.ac.uk/PROSPERO/. Unique identifier: CRD42016047604.

2. Quality improvement of prescribing safety: a pilot study in primary care using UK electronic health records.

Authors Booth, Helen P; Gallagher, Arlene M; Mullett, David; Carty, Lucy; Padmanabhan, Shivani; Myles, Puja R; Welburn, Stephen J; Hoghton, Matthew; Rafi, Imran; Valentine, Janet
Source The British journal of general practice : the journal of the Royal College of General Practitioners; Sep 2019; vol. 69 (no. 686); p. e605
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31262845
Database Medline

Abstract BACKGROUNDQuality improvement (QI) is a priority for general practice, and GPs are expected to participate in and provide evidence of QI activity. There is growing interest in harnessing the potential of electronic health records (EHR) to improve patient care by supporting practices to find cases that could benefit from a medicines review.AIMTo develop scalable and reproducible prescribing safety reports using patient-level EHR data.DESIGN AND SETTINGUK general practices that contribute de-identified patient data to the Clinical Practice Research Datalink (CPRD).METHODA scoping phase used stakeholder consultations to identify primary care QI needs and potential indicators. QI reports containing real data were sent to 12 pilot practices that used Vision GP software and had expressed interest. The scale-up phase involved automating production and distribution of reports to all contributing practices that used both Vision and EMIS software systems. Benchmarking reports with patient-level case review lists for two prescribing safety indicators were sent to 457 practices in December 2017 following the initial scale-up (Figure 2).RESULTSTwo indicators were selected from the Royal College of General Practitioners Patient Safety Toolkit following stakeholder consultations for the pilot phase involving 12 GP practices. Pilot phase interviews showed that reports were used to review individual patient care, implement wider QI actions in the practice, and for appraisal and revalidation.CONCLUSIONElectronic health record data can be used to provide standardised, reproducible reports that can be delivered at scale with minimal resource requirements. These can be used in a national QI initiative that impacts directly on patient care.

3. GP incentives to design hypertension and atrial fibrillation local quality-improvement schemes: a controlled before-after study in UK primary care.

Authors Smith, Timothy; Fell, Christopher; Otete, Harmony; Chauhan, Umesh
Source The British journal of general practice : the journal of the Royal College of General Practitioners; Aug 2019
Publication Date Aug 2019
Publication Type(s) Journal Article
PubMedID 31455643
Database Medline

Abstract BACKGROUNDFinancial incentives in the UK such as the Quality and Outcomes Framework (QOF) reward GP surgeries for achievement of nationally defined targets. These have shown mixed results, with weak evidence for some measures, but also possible unintended negative effects.AIMTo look at the effects of a local intervention for atrial fibrillation (AF) and hypertension, with surgeries rewarded financially for work, including appointing designated practice leads, attendance at peer review workshops, and producing their own protocols.DESIGN AND SETTINGA controlled before-after study comparing surgery performance measures in UK primary care.METHODThis study used published QOF data to analyse changes from baseline in mean scores per surgery relating to AF and hypertension prevalence and management at T1 (12 months) and T2 (24 months) for the intervention group, which consisted of all 58 surgeries in East Lancashire Clinical Commissioning Group (CCG), compared to the control group, which consisted of all other surgeries in north-west England.RESULTSThere was a small acceleration between T0 (baseline) and T2 in recorded prevalence of hypertension in the intervention group compared to the controls, difference 0.29% (95% confidence interval [CI] = 0.05 to 0.53), P = 0.017, but AF prevalence did not increase more in the intervention group. Improvement in quality of management of AF was significantly better in the intervention group, difference 3.24% (95% CI = 1.37 to 5.12), P = 0.001.CONCLUSIONThis intervention improved diagnosis rates of hypertension but not AF, though it did improve quality of AF management. It indicates that funded time to develop quality-improvement measures targeted at a local population and involving peer support can engage staff and have the potential to improve quality.

4. Knowledge and understanding of Quality Improvement methods within UK veterinary practices.

Source Equine veterinary journal; Sep 2019; vol. 51
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31476060
Database Medline

5. Hospital-level evaluation of the effect of a national quality improvement programme: time-series analysis of registry data.

Authors Stephens, Timothy J; Peden, Carol J; Haines, Ryan; Grocott, Mike P W; Murray, Dave; Cromwell, David; Johnston, Carolyn; Hare, Sarah; Lourtie, Jose; Drake, Sharon; Martin, Graham P; Pearse, Rupert M; Enhanced Perioperative Care for High-risk patients (EPOCH) trial group
Source BMJ quality & safety; Sep 2019
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31515437
Database Medline

Abstract BACKGROUND AND OBJECTIVESA clinical trial in 93 National Health Service hospitals evaluated a quality improvement programme for emergency abdominal surgery, designed to improve mortality by improving the patient care pathway. Large variation was observed in implementation approaches, and the main trial result showed no mortality reduction. Our objective therefore was to evaluate whether trial participation led to care pathway implementation and to study the relationship between care pathway implementation and use of six recommended implementation strategies.METHODSWe performed a hospital-level time-series analysis using data from the Enhanced Peri-Operative Care for High-risk patients trial. Care pathway implementation was defined as achievement of >80% median reliability in 10 measured care processes. Mean monthly process performance was plotted on run charts. Process improvement was defined as an observed run chart signal, using probability-based 'shift' and 'runs' rules. A new median performance level was calculated after an observed signal.RESULTSOf 93 participating hospitals, 80 provided sufficient data for analysis, generating 800 process measure charts from 20 305 patient admissions over 27 months. No hospital reliably implemented all 10 processes. Overall, only 279 of the 800 processes were improved (3 (2-5) per hospital) and 14/80 hospitals improved more than six processes. Mortality risk documented (57/80 (71%)), lactate measurement (42/80 (53%)) and cardiac output guided fluid therapy (32/80 (40%)) were most frequently improved. Consultant-led decision making (14/80 (18%)), consultant review before surgery (17/80 (21%)) and time to surgery (14/80 (18%)) were least frequently improved. In hospitals using ≥5 implementation strategies, 9/30 (30%) hospitals improved ≥6 care processes compared with 0/11 hospitals using ≤2 implementation strategies.CONCLUSIONOnly a small number of hospitals improved more than half of the measured care processes, more often when at least five of six implementation strategies were used. In a longer term project, this understanding may have allowed us to adapt the intervention to be effective in more hospitals.

6. Enhancing care of patients requiring a tracheostomy: A sustained quality improvement project.

Authors Twose, Paul; Jones, Gemma; Lowes, Jennifer; Morgan, Paul
Source Journal of critical care; Aug 2019; vol. 54 ; p. 191-196
Publication Date Aug 2019
Publication Type(s) Journal Article
PubMedID 31521015
Database Medline

Abstract INTRODUCTIONWithin the UK approximately 5000 surgical and 12,000 percutaneous tracheostomies are performed annually. Whilst an essential component of patient care, the presence of a tracheostomy is not without concern. Landmark papers have demonstrated recurrent themes related to the provision of training, staff and equipment, leading to avoidable patient harm, life-altering morbidity and mortality. The development of the Global Tracheostomy Collaborative (GTC) and the Improving Tracheostomy Care (ITC) project have provided the necessary infrastructure to make improvements, with individual organizations responsible for its implementation.METHODThis quality improvement project, funded by the NHS Wales Critical Care and Trauma Network, developed a dedicated tracheostomy team to improve the quality of care provided to those patients requiring a tracheostomy through staff education, equipment standardisation and multidisciplinary tracheostomy ward rounds. Global Tracheostomy membership was funded through involvement in the ITC project.RESULTSFormal tracheostomy teaching was delivered by the tracheostomy team to 165 clinicians involved in tracheostomy care. Improvements in self-assessed confidence with knowledge and were observed for all aspects of tracheostomy care. Standardisation and centralisation resulted in reduction in waste and unnecessary variation. Compliance with 'emergency tracheostomy blue box' availability with an increase from 5% to 100%. Comparison of data from the QI period against baseline data, demonstrated improvement in rates of decannulation, and non-significant improvements in time to decannulation, critical care and hospital length of stay. Additionally, there were associated reductions in adverse events.CONCLUSIONThis QI project, supported by involvement with the GTC and ITC, resulted in reductions in adverse events, improved patient safety, non-significant reduction in time to achieve weaning milestones and a reduction in hospital length of stay.

7. Effect of a Standard vs Enhanced Implementation Strategy to Improve Antibiotic Prescribing in Nursing Homes: A Trial Protocol of the Improving Management of Urinary Tract Infections in Nursing Institutions Through Facilitated Implementation (IMUNIFI) Study.

Authors Ford, James H; Vranas, Lillian; Coughlin, DaRae; Selle, Kathi M; Nordman-Oliveira, Susan; Ryther, Brenda; Ewers, Tola; Griffin, Victoria L; Eslinger, Anna; Boero, Joe; Hardgrove, Paula; Crnich, Christopher J
Source JAMA network open; Sep 2019; vol. 2 (no. 9); p. e199526
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31509204
Database Medline

Abstract ImportanceSuspicion of urinary tract infection (UTI) is the major driver of overuse and misuse of antibiotics in nursing homes (NHs). Effects of interventions to improve the recognition and management of UTI in NHs have been mixed, potentially owing to differences in how interventions were implemented in different studies. An improved understanding of how implementation approach influences intervention adoption is needed to achieve wider dissemination of antibiotic stewardship interventions in NHs.ObjectiveTo compare the effects of 2 implementation strategies on the adoption and effects of a quality improvement toolkit to enhance recognition and management of UTIs in NHs.Design, Setting, and ParticipantsThis cluster-randomized hybrid type 2 effectiveness-implementation clinical trial will be performed over a 6-month baseline (January to June 2019) and 12-month postimplementation period (July 2019 to June 2020). A minimum of 20 Wisconsin NHs with 50 or more beds will be recruited and randomized in block sizes of 2 stratified by rurality (rural vs urban). All residents who are tested and/or treated for UTI in study NHs will be included in the analysis. All study NHs will implement a quality improvement toolkit focused on enhancing the recognition and management of UTIs. Facilities will be randomized to either a usual or enhanced implementation approach based on external facilitation (coaching), collaborative peer learning, and peer comparison feedback. Enhanced implementation is hypothesized to be associated with improvements in adoption of the quality improvement toolkit and clinical outcomes. Primary outcomes of the study will include number of (1) urine cultures per 1000 resident days and (2) antibiotic prescriptions for treatment of suspected UTI per 1000 resident-days. Secondary outcomes of the study will include appropriateness of UTI treatments, treatment length, use of fluoroquinolones, and resident transfers and mortality. A mixed-methods evaluation approach will be used to assess extent and determinants of adoption of the UTI quality improvement toolkit in study NHs.DiscussionKnowledge gained during this study could help inform future efforts to implement antibiotic stewardship and quality improvement interventions in NHs.Trial RegistrationClinicalTrials.gov identifier: NCT03520010.

8. Analyzing Hospital Transfers Using INTERACT Acute Care Transfer Tools: Lessons from MOQI.

Authors Popejoy, Lori L; Vogelsmeier, Amy A; Alexander, Greg L; Galambos, Colleen M; Crecelius, Charles A; Ge, Bin; Flesner, Marcia; Canada, Kelli; Rantz, Marilyn
Source Journal of the American Geriatrics Society; Sep 2019; vol. 67 (no. 9); p. 1953-1959
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31188478
Database Medline
Abstract OBJECTIVESWe explored the differences in potentially avoidable/unavoidable hospital transfers in a retrospective analysis of Interventions to Reduce Acute Care Transfers (INTERACT) Acute Transfer Tools (ACTs) completed by advanced practice registered nurses (APRNs) working in the Missouri Quality Improvement (QI) Initiative (MOQI).DESIGNCross-sectional descriptive study of 3996 ACTs for 32.5 calendar months from 2014 to 2016. Univariate analyses examined differences between potentially avoidable vs unavoidable transfers. Multivariate logistic regression analysis of candidate factors identified those contributing to avoidable transfers.SETTINGSixteen nursing homes (NHs), ranging from 120 to 321 beds, in urban, metro, and rural communities within 80 miles of a large midwestern city.PARTICIPANTSA total of 5168 residents with a median age of 82 years.MEASUREMENTSData from 3946 MOQI-adapted ACTs.RESULTSA total of 54% of hospital transfers were identified as avoidable. QI opportunities related to avoidable transfers were earlier detection of new signs/symptoms (odds ratio [OR] = 2.35; 95% confidence interval [CI] = 1.61-3.42; P < .001); discussions of resident/family preference (OR = 2.12; 95% CI = 1.38-3.25; P < .001); advance directive/hospice care (OR = 2.25; 95% CI = 1.33-3.82; P = .003); better communication about condition (OR = 4.93; 95% CI = 3.17-7.68; P < .001); and condition could have been managed in the NH (OR = 16.63; 95% CI = 10.9-25.37; P < .001). Three factors related to unavoidable transfers were bleeding (OR = .59; 95% CI = .46-.77; P < .001), nausea/vomiting (OR = .7; 95% CI = .54-.91; P = .007), and resident/family preference for hospitalization (OR = .79; 95% CI = .68-.93; P = .003).CONCLUSIONReducing avoidable hospital transfers in NHs requires challenging assumptions about what is avoidable so QI efforts can be directed to improving NH capacity to manage ill residents. The APRNs served as the onsite coaches in the use and adoption of INTERACT. Changes in health policy would provide a revenue stream to support APRN presence in NH, a role that is critical to improving resident outcomes by increasing staff capacity to identify illness and guide system change. J Am Geriatr Soc 67:1953-1959, 2019.

9. Cohort profile: The Myocardial Ischaemia National Audit Project (MINAP).

Authors Wilkinson, Chris; Weston, Clive; Timmis, Adam; Quinn, Tom; Keys, Alan; Gale, Chris P
Source European heart journal. Quality of care & clinical outcomes; Sep 2019
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31511861
Database Medline

Abstract AIMSThe Myocardial Ischaemia National Audit Project (MINAP) collects data from admissions in England, Wales and Northern Ireland with type 1 myocardial infarction. The project aims to improve clinical care through the audit process and to provide powerful high-resolution data for research.METHODS AND RESULTSMINAP collects data spanning 130 data fields covering the course of patient care, from the moment the patient calls for professional help through to hospital discharge and rehabilitation.Data are entered by clinicians and clerical staff within hospitals, and pseudonymised records are uploaded centrally to the National Institute for Cardiovascular Outcomes Research (NICOR), hosted by Barts Health NHS Trust, London, UK. 206 hospitals submit over 92,000 new cases to MINAP annually. Approximately 1.5 million patient records are currently held in the database.Patient demographics, medical history, clinical assessment, investigations, treatments, drug therapy prior to admission, during hospital stay and at discharge are collected. Data completeness of three key data fields (age, admission blood pressure, and heart rate) is over 91%. Vital status following hospital discharge is obtained via linkage to data from the United Kingdom Office for National Statistics.An annual report is compiled using these data, with individual hospital summary data included. Datasets are available to researchers by application to NICOR.CONCLUSIONMINAP is the largest single-healthcare-system heart attack registry, and includes data from hospitalisations with type 1 myocardial infarction in England, Wales and Northern Ireland. It includes high-resolution data across the patient pathway, and is a powerful tool for quality improvement and research.

10. Taking a seat at the table: an educational model for nursing empowerment.

Authors Lamb, D; Hofman, A; Clark, J; Hughes, A; Sukhera, A M
Source International nursing review; Sep 2019
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31513292
Database Medline
Abstract BACKGROUNDThe human resources for health crisis has generated much debate as to the radical changes necessary to mitigate the risks to universal health coverage. Nurses can make a significant impact on global health, if only they feel empowered to take their seat at the political table.AIMThe aim of this paper was to outline nurse-led initiatives to enhance organizational culture and clinical processes at the Combined Military Hospital in Rawalpindi, Pakistan. These have been designed and implemented by the United Kingdom (UK) Defence Medical Services to empower the nursing workforce in Pakistan.OUTCOMEAn educational model has been developed that will build capacity, within a workforce constrained by numbers, by bridging the gap between nursing theory and practice. It is geared to actively engage Pakistani nurses in quality improvement to ensure care is based on best evidence that will enhance patient outcomes.CONCLUSION AND IMPLICATIONS FOR NURSING & HEALTH POLICYThe wider impact of the model has already been evidenced by nurses, country-wide, who are gaining the necessary skills and confidence to realize their true potential in influencing the patient care pathway and future policy. This is crucial to the recruitment and retention of nurses who might otherwise seek alternative career paths if they lack a sense of value within the profession. Their renewed sense of value will enable them to find their voice and ability to contribute to the sustainable development goals adopted by the United Nations General Assembly in 2015.

11. The accreditation system of Italian medical residency programs: fostering quality and sustainability of the National Health Service.

Authors Mazzucco, Walter; Silenzi, Andrea; Gray, Muir; Vettor, Robert
Source Acta bio-medica : Atenei Parmensis; Sep 2019; vol. 90 (no. 9-S); p. 15-20
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31517885
Database Medline

Abstract BACKGROUND AND AIMIn June 2017, University and Health Ministries jointly enacted a decree implementing a new accreditation system for the Italian post-graduate medical schools (residency programs). We report the innovations introduced through the reform.METHODSUniversities were called to submit post-graduate medical school projects to the National Observatory on medical residency programs, the inter-institutional committee responsible for the entire accreditation process, through an interactive web platform. The adherence to minimum standards, requirements and the performances were measured. After this first assessment, universities were asked to provide programs of improvement for critical schools. At the end of the evaluation, residency schools were proposed for a full or a partial accreditation.RESULTSOf the 1,431 post-graduate medical school projects submitted to the National Observatory by 37 public and 4 private Universities, 672 (47.0%) obtained a full accreditation, 629 (43.9%) a partial accreditation, with a gap to be filled within a two-year period according to a specific improvement programme, while 130 (9.1%) were not accredited. Further, 1,254 out of the 1,301 schools with a full or partial accreditation were activated according to the available public financial resources, excluding those performing the lowest. Annual surveys were in place to investigate the residents' level of satisfaction concerning the quality of the training programs. The National Observatory further developed an experimental methodology to conduct on-site visits to support quality improvement.CONCLUSIONSThis reform can be considered an important initiative to guarantee high standards in the quality of care and to face the challenge of sustainability for the National Health System.

12. Trust compliance with best practice tariff criteria for total hip and knee replacement.

Authors Vanhegan, Ivor; Sankey, Andrew; Radford, Warwick; Ball, Simon; Gibbons, Charles
Source British journal of hospital medicine (London, England : 2005); Sep 2019; vol. 80 (no. 9); p. 537-540
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31498659
Database Medline
Abstract BACKGROUNDSatisfaction of the best practice tariff criteria for primary hip and knee replacement enables on average an additional £560 of reimbursement per case. The Getting it Right First Time report highlighted poor awareness of these criteria among orthopaedic departments.METHODSThe authors investigated the reasons for non-compliance with the best practice tariff criteria at their trust and implemented a quality improvement approach to ensure successful adherence to the standards (a minimum National Joint Registry compliance rate of 85%, a National Joint Registry unknown consent rate below 15%, a patient-reported outcome measure participation rate of ≥50%, and an average health gain not significantly below the national average). This was investigated using quarterly online reports from the National Joint Registry and NHS Digital.RESULTSInitially, the trust had a 31% patient-reported outcome measures participation rate arising from a systematic error in the submission of preoperative patient-reported outcome measure scores. Re-audit following the resubmission of patient-reported outcome measure data under the trust's correct organization data service code confirmed an improvement in patient-reported outcome measure compliance to 90% and satisfaction of all criteria resulting in over £450 000 of additional reimbursement to the trust.CONCLUSIONSThe authors would urge others to review their compliance with these four best practice tariff criteria to ensure that they too are not missing out on this significant reimbursement sum.

13. Improving epilepsy management with EpSMon: A Templar to highlight the multifaceted challenges of incorporating digital technologies into routine clinical practice.

Authors Newman, Craig; Ashby, Samantha; McLean, Brendan; Shankar, Rohit
Source Epilepsy & behavior : E&B; Sep 2019 ; p. 106514
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31526645
Database Medline
Abstract The digital epilepsy self-monitor (EpSMon) app was developed to address the challenge of improving risk education and management in the UK. The tool, which has emerged out of quality improvement methodology, demonstrates efficacy and has been met with peer-reviewed support and international awards. The focus of this paper is about the development and integration into care of a digital self-assessment epilepsy risk empowerment tool into the UK health system. This paper provides detail into the specific challenges of incorporating a digital epilepsy intervention into routine clinical practice. Despite a strong narrative and evidence, the engagement of commissioners, clinicians, and people with epilepsy is slow. A breakdown of the strategies used, the current governance landscape, and emerging opportunities to develop an informed implementation strategy is provided to support others who seek to create impact with digital solutions for people with epilepsy. This paper is for the Special Issue: Prevent 21: SUDEP Summit - Time to Listen".

14. Quality criteria for Core Medical Training: a resume of their development, impact and future plans.

Authors Armstrong, Miriam; Black, David; Miller, Alastair
Source The journal of the Royal College of Physicians of Edinburgh; Sep 2019; vol. 49 (no. 3); p. 230-236

Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31497793
Database Medline
Abstract BACKGROUNDIn 2015 the Joint Royal Colleges of Physicians Training Board (JRCPTB), acting on behalf of the three UK Royal Colleges of Physicians, launched a set of quality criteria designed to improve the educational experience of Core Medical Trainees.METHODSThe criteria were developed with key stakeholders from Core Medical Training (CMT) and monitored via the General Medical Council's annual National Training Survey. This paper describes the development, implementation and impact of these criteria, which have been implemented by UK postgraduate schools of medicine since 2015.RESULTSThere were trainee-reported improvements from baseline (2015-18) in at least eight out of the 13 core criteria measured.CONCLUSIONSThe results demonstrate that a coordinated UK-wide approach to quality improvement, focused on a specific set of clearly defined and measurable outcomes that galvanise trainer engagement, can lead to greater trainee satisfaction in a demanding area of medicine without significant additional resources.

15. Implementing a survey for patients to provide safety experience feedback following a care transition: a feasibility study.

Authors Scott, Jason; Heavey, Emily; Waring, Justin; De Brún, Aoife; Dawson, Pamela
Source BMC health services research; Aug 2019; vol. 19 (no. 1); p. 613
Publication Date Aug 2019
Publication Type(s) Journal Article
PubMedID 31470853
Database Medline
Abstract BACKGROUNDThe aim was to determine the feasibility of implementing a patient safety survey which measures patients' experiences of their own safety relating to a care transition. This included limited-efficacy testing, determining acceptability (to patients and staff), and investigating integration with existing systems and practices from the staff perspective.METHODSMixed methods study in 16 wards across four hospitals, from two English NHS Trusts and four clinical areas; cardiology, care of older people, orthopaedics, stroke. Limited-efficacy testing of a previously validated survey was conducted through collection of patient reports of safety experiences, and thematic comparison with staff safety incident reports. Patient acceptability was determined through analysis of survey response rates and semi-structured interviews. Staff acceptability and integration were investigated through analysis of survey distribution rates, semi-structured interviews and focus groups.RESULTSPatients returned 366 valid surveys (16.4% response rate) from 2824 distributed surveys (25.1% distribution rate). Older age was a contributing factor to lower responses. Delays were the largest safety concern for patients. Staff incident report themes included five not present in the safety survey data (documentation, pressure ulcers, devices or equipment, staffing shortages, and patient actions). Patient interviews (n = 28) identified that providing feedback was acceptable, subject to certain conditions being met; cognitive-cultural (patient understanding and prioritisation of safety), structural-procedural (opportunities, means and ease of providing feedback without fear of reprisals), and learning and change (closure of the feedback loop). Staff (n = 21) valued patient feedback but barriers to collecting and using the feedback included resource limitations, staff turnover and reluctance to over-burden patients.CONCLUSIONSPatients can provide meaningful feedback on their experiences and perceptions of safety in the context of care transitions. Providing this feedback was acceptable to some patients, subject to certain conditions being met. Safety experience feedback from patients was also acceptable to staff; quantitative data was perceived as useful to identify potential risks, and qualitative data informed types of changes required to improve care. However, patient feedback was not integrated into any quality improvement initiatives, suggesting there are still significant challenges to healthcare teams or organisations utilising patient feedback, particularly in relation to care transitions.

16. Use and reporting of experience-based codesign studies in the healthcare setting: a systematic review.

Authors Green, Theresa; Bonner, Ann; Teleni, Laisa; Bradford, Natalie; Purtell, Louise; Douglas, Clint; Yates, Patsy; MacAndrew, Margaret; Dao, Hai Yen; Chan, Raymond Javan
Source BMJ quality & safety; Sep 2019
Publication Date Sep 2019
Publication Type(s) Journal Article Review
PubMedID 31548278
Database Medline

Abstract BACKGROUNDExperience-based codesign (EBCD) is an approach to health service design that engages patients and healthcare staff in partnership to develop and improve health services or pathways of care. The aim of this systematic review was to examine the use (structure, process and outcomes) and reporting of EBCD in health service improvement activities.METHODSElectronic databases (MEDLINE, CINAHL, PsycINFO and The Cochrane Library) were searched to identify peer-reviewed articles published from database inception to August 2018. Search terms identified peer-reviewed English language qualitative, quantitative and mixed methods studies that underwent independent screening by two authors. Full texts were independently reviewed by two reviewers and data were independently extracted by one reviewer before being checked by a second reviewer. Adherence to the 10 activities embedded within the eight-stage EBCD framework was calculated for each study.RESULTSWe identified 20 studies predominantly from the UK and in acute mental health or cancer services. EBCD fidelity ranged from 40% to 100% with only three studies satisfying 100% fidelity.CONCLUSIONEBCD is used predominantly for quality improvement, but has potential to be used for intervention design projects. There is variation in the use of EBCD, with many studies eliminating or modifying some EBCD stages. Moreover, there is no consistency in reporting. In order to evaluate the effect of modifying EBCD or levels of EBCD fidelity, the outcomes of each EBCD phase (ie, touchpoints and improvement activities) should be reported in a consistent manner.TRIAL REGISTRATION NUMBERCRD42018105879.

17. What are the important morbidities associated with paediatric cardiac surgery? A mixed methods study.

Authors Brown, Katherine L; Pagel, Christina; Ridout, Deborah; Wray, Jo; Anderson, David; Barron, David J; Cassidy, Jane; Davis, Peter; Hudson, Emma; Jones, Alison; Mclean, Andrew; Morris, Stephen; Rodrigues, Warren; Sheehan, Karen; Stoica, Serban; Tibby, Shane M; Witter, Thomas; Tsang, Victor T; Cardiac Impact Study Group
Source BMJ open; Sep 2019; vol. 9 (no. 9); p. e028533
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31501104
Database Medline
Abstract OBJECTIVESGiven the current excellent early mortality rates for paediatric cardiac surgery, stakeholders believe that this important safety outcome should be supplemented by a wider range of measures. Our objectives were to prospectively measure the incidence of morbidities following paediatric cardiac surgery and to evaluate their clinical and health-economic impact over 6 months.DESIGNThe design was a prospective, multicentre, multidisciplinary mixed methods study.SETTINGThe setting was 5 of the 10 paediatric cardiac surgery centres in the UK with 21 months recruitment.PARTICIPANTSIncluded were 3090 paediatric cardiac surgeries, of which 666 patients were recruited to an impact substudy.RESULTSFamilies and clinicians prioritised:Acute neurological event, unplanned re-intervention, feeding problems, renal replacement therapy, major adverse events, extracorporeal life support, necrotising enterocolitis, postsurgical infection and prolonged pleural effusion or chylothorax.Among 3090 consecutive surgeries, there were 675 (21.8%) with at least one of these morbidities. Independent risk factors for morbidity included neonatal age, complex heart disease and prolonged cardiopulmonary bypass (p<0.001). Among patients with morbidity, 6-month survival was 88.2% (95% CI 85.4 to 90.6) compared with 99.3% (95% CI 98.9 to 99.6) with none of the morbidities (p<0.001). The impact substudy in 340 children with morbidity and 326 control children with no morbidity indicated that morbidity-related impairment in quality of life improved between 6 weeks and 6 months. When compared with children with no morbidities, those with morbidity experienced a median of 13 (95% CI 10.2 to 15.8, p<0.001) fewer days at home by 6 months, and an adjusted incremental cost of £21 292 (95% CI £17 694 to £32 423, p<0.001).CONCLUSIONSEvaluation of postoperative morbidity is more complicated than measuring early mortality. However, tracking morbidity after paediatric cardiac surgery over 6 months offers stakeholders important data that are of value to parents and will be useful in driving future quality improvement.

18. Epilepsy deaths in children: Improvements driven by data and surveillance in pediatrics.

Authors Abdel-Mannan, Omar; Hughes, Elaine; Dunkley, Colin
Source Epilepsy & behavior : E&B; Sep 2019 ; p. 106493
Publication Date Sep 2019
Publication Type(s) Journal Article Review
PubMedID 31526647
Database Medline

Abstract Epilepsy-related death in children and young people deserves understanding and intervention along with epilepsy-related deaths in adults. Risk of death from epilepsy varies at different ages, and the specific calculations of risk remains complex and varies between studies. There have been several UK studies examining factors associated with epilepsy-related deaths. A UK national audit with other national initiatives has evidenced improving quality of care and more recently allowed service provision factors associated with reduced epilepsy-related death to be evidenced. A national program of health education, formalized epilepsy networks, commissioned surgical pathways, and patient information resources around risk and participation are examples of quality improvement initiatives. Epilepsy-related death is a key outcome, and there remains many difficulties and opportunities at local, regional, and national level to better understand and improve this outcome for children and young people and the adults that they should become. This paper is for the Special Issue: Prevent 21: SUDEP Summit - Time to Listen.

19. Evaluating the impact of cycle helmet use on severe traumatic brain injury and death in a national cohort of over 11000 pedal cyclists: a retrospective study from the NHS England Trauma Audit and Research Network dataset.

Authors Dodds, Nick; Johnson, Rowena; Walton, Benjamin; Bouamra, Omar; Yates, David; Lecky, Fiona Elizabeth; Thompson, Julian
Source BMJ open; Sep 2019; vol. 9 (no. 9); p. e027845
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31519669
Database Medline
Abstract OBJECTIVESIn the last 10 years there has been a significant increase in cycle traffic in the UK, with an associated increase in the overall number of cycling injuries. Despite this, and the significant media, political and public health debate into this issue, there remains an absence of studies from the UK assessing the impact of helmet use on rates of serious injury presenting to the National Health Service (NHS) in cyclists.SETTINGThe NHS England Trauma Audit and Research Network (TARN) Database was interrogated to identify all adult (≥16 years) patients presenting to hospital with cycling-related major injuries, during a period from 14 March 2012 to 30 September 2017 (the last date for which a validated dataset was available).PARTICIPANTS11 patients met inclusion criteria. Data on the use of cycling helmets were available in 6621 patients.OUTCOME MEASURESTARN injury descriptors were used to compare patterns of injury, care and mortality in helmeted versus non-helmeted cohorts.RESULTSData on cycle helmet use were available for 6621 of the 11 192 cycle-related injuries entered onto the TARN Database in the 66 months of this study (93 excluded as not pedal cyclists). There was a significantly higher crude 30-day mortality in un-helmeted cyclists 5.6% (4.8%-6.6%) versus helmeted cyclists 1.8% (1.4%-2.2%) (p<0.001). Cycle helmet use was also associated with a reduction in severe traumatic brain injury (TBI) 19.1% (780, 18.0%-20.4%) versus 47.6% (1211, 45.6%-49.5%) (p<0.001), intensive care unit requirement 19.6% (797, 18.4%-20.8%) versus 27.1% (691, 25.4%-28.9%) (p<0.001) and neurosurgical intervention 2.5% (103, 2.1%-3.1%) versus 8.5% (217, 7.5%-9.7%) (p<0.001). There was a statistically significant increase in chest, spinal, upper and lower limb injury in the helmeted group in comparison to the un-helmeted group (all p<0.001), though in a subsequent analysis of these anatomical injury patterns, those cyclists wearing helmets were still found to have lower rates of TBI. In reviewing TARN injury codes for specific TBI and facial injuries, there was a highly significant decrease in rates of impact injury between cyclists wearing helmets and those not.CONCLUSIONSThis study suggests that there is a significant correlation between use of cycle helmets and reduction in adjusted mortality and morbidity associated with TBI and facial injury.

20. 'Mind the gaps': the accessibility and implementation of an effective depression relapse prevention programme in UK NHS services: learning from mindfulness-based cognitive therapy through a mixed-methods study.

Authors Rycroft-Malone, Jo; Gradinger, Felix; Owen Griffiths, Heledd; Anderson, Rob; Crane, Rebecca Susan; Gibson, Andy; Mercer, Stewart W; Kuyken, Willem
Source BMJ open; Sep 2019; vol. 9 (no. 9); p. e026244
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31501097
Database Medline

Abstract OBJECTIVESMindfulness-based cognitive therapy (MBCT) is an evidence-based approach for people at risk of depressive relapse to support their long-term recovery. However, despite its inclusion in guidelines, there is an 'implementation cliff'. The study objective was to develop a better explanation of what facilitates MBCT implementation.SETTINGUK primary and secondary care mental health services.DESIGN, PARTICIPANTS AND METHODSA national two-phase, multi-method qualitative study was conducted, which was conceptually underpinned by the Promoting Action on Research Implementation in Health Services framework. Phase I involved interviews with stakeholders from 40 service providers about current provision of MBCT. Phase II involved 10 purposively sampled case studies to obtain a more detailed understanding of MBCT implementation. Data were analysed using adapted framework analysis, refined through stakeholder consultation.RESULTSAccess to MBCT is variable across the UK services. Where available, services have adapted MBCT to fit their context by integrating it into their care pathways. Evidence was often important to implementation but took different forms: the NICE depression guideline, audits, evaluations, first person accounts, experiential taster sessions and pilots. These were used to build a platform from which to develop MBCT services. The most important aspect of facilitation was the central role of the MBCT implementers. These were generally self-designated individuals who 'championed' grass-roots implementation. Our explanatory framework mapped out a prototypical implementation journey, often over many years with a balance of bottom-up and top-down factors influencing the fit of MBCT into service pathways. 'Pivot points' in the implementation journey provided windows of either challenge or opportunity.CONCLUSIONSThis is one of the largest systematic studies of the implementation of a psychological therapy. While access to MBCT across the UK is improving, it remains patchy. The resultant explanatory framework about MBCT implementation provides a heuristic that informed an implementation resource.

21. Population-based observational study of acute pancreatitis in southern England.

Authors PanWessex Study Group; Wessex Surgical Trainee Research Collaborative; Mirnezami, Alex; Knight, Ben; Moran, Brendan; Noble, Fergus; Branagan, Graham; Primrose, John; Pearson, Katherine; West, Malcolm; Curtis, Nathan; Pucher, Phil; Cuttress, Ramsey; Pugh, Sian; Underwood, Tim
Source Annals of the Royal College of Surgeons of England; Sep 2019; vol. 101 (no. 7); p. 487-494
Publication Date Sep 2019
Publication Type(s) Journal Article Observational Study
PubMedID 31362520
Database Medline
Abstract INTRODUCTIONAcute pancreatitis is a common surgical emergency. Identifying variations in presentation, incidence and management may assist standardisation and optimisation of care. The objective of the study was to document the current incidence management and outcomes of acute pancreatitis against international guidelines, and to assess temporal trends over the past 20 years.METHODSA prospective four-month audit of patients with acute pancreatitis was performed across the Wessex region. The Atlanta 2012 classifications were used to define cases, severity and complications. Outcomes were recorded using validated systems and correlated against guideline standards. Case ascertainment was validated with clinical coding and hospital episode statistics data.RESULTSA total of 283 patient admissions with acute pancreatitis were identified. Aetiology included 153 gallstones (54%), 65 idiopathic (23%), 29 alcohol (10%), 9 endoscopic retrograde cholangiopancreatography (3%), 6 drug related (2%), 5 tumour (2%) and 16 other (6%). Compliance with guidelines had improved compared with our previous regional audit. Results were 6.5% mortality, 74% severity stratification, 23% idiopathic cases, 65% definitive treatment of gallstones within 2 weeks, 39% computed tomography within 6-10 days of severe pancreatitis presentation and 82% severe pancreatitis critical care admission. The Atlanta 2012 severity criteria significantly correlated with critical care stay, length of stay, development of complications and mortality (2% vs 6% vs 36%, P < 0.0001).CONCLUSIONSThe incidence of acute pancreatitis in southern England has risen substantially. The Atlanta 2012 classification identifies patients with severe pancreatitis who have a high risk of fatal outcome. Acute pancreatitis management is seen to have evolved in keeping with new evidence and updated clinical guidelines.

22. Association between anaesthetic technique and unplanned admission to intensive care after thoracic lung resection surgery: the second Association of Cardiothoracic Anaesthesia and Critical Care (ACTACC) National Audit.

Authors Shelley, B G; McCall, P J; Glass, A; Orzechowska, I; Klein, A A; Association of Cardiothoracic Anaesthesia and collaborators
Source Anaesthesia; Sep 2019; vol. 74 (no. 9); p. 1121-1129
Publication Date Sep 2019
Publication Type(s) Research Support, Non-u.s. Gov't Multicenter Study Journal Article
PubMedID 30963555
Database Medline

Abstract Unplanned intensive care admission is a devastating complication of lung resection and is associated with significantly increased mortality. We carried out a two-year retrospective national multicentre cohort study to investigate the influence of anaesthetic and analgesic technique on the need for unplanned postoperative intensive care admission. All patients undergoing lung resection surgery in 16 thoracic surgical centres in the UK in the calendar years 2013 and 2014 were included. We defined critical care admission as the unplanned need for either tracheal intubation and mechanical ventilation or renal replacement therapy, and sought an association between mode of anaesthesia (total intravenous anaesthesia vs. volatile) and analgesic technique (epidural vs. paravertebral) and need for intensive care admission. A total of 253 out of 11,208 patients undergoing lung resection in the study period had an unplanned admission to intensive care in the postoperative period, giving an incidence of intensive care unit admission of 2.3% (95%CI 2.0-2.6%). Patients who had an unplanned admission to intensive care unit had a higher mortality (29.00% vs. 0.03%, p < 0.001), and hospital length of stay was increased (26 vs. 6 days, p < 0.001). Across univariate, complete case and multiple imputation (multivariate) models, there was a strong and significant effect of both anaesthetic and analgesic technique on the need for intensive care admission. Patients receiving total intravenous anaesthesia (OR 0.50 (95%CI 0.34-0.70)), and patients receiving epidural analgesia (OR 0.56 (95%CI 0.41-0.78)) were less likely to have an unplanned admission to intensive care after thoracic surgery. This large retrospective study suggests a significant effect of both anaesthetic and analgesic technique on outcome in patients undergoing lung resection. We must emphasise that the observed association does not directly imply causation, and suggest that well-conducted, large-scale randomised controlled trials are required to address these fundamental questions.

23. Development and cohort study of an audit approach to evaluate patient management in family practice in the UK: the 7S tool.

Authors Fisher, Stacey J; Margerison, Lawrence N; Jonker, Leon
Source Family practice; Sep 2019
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31529031
Database Medline
Abstract BACKGROUNDIn the UK, there is increased pressure on general practitioners' time due to an increase in (elderly) population and a shortage of general practitioners. This means that time has to be used efficiently, whilst optimizing adherence to consistent, appropriate and timely provision of care.OBJECTIVE(S)Create an audit tool that assists general practitioners and family practice staff to evaluate if patients are managed as effectively as possible, and to test the usefulness of this tool in a family practice.METHODSThe '7S' audit tool has seven outcome elements; these broadly stand for what the actual and desired patient contact outcome was, or should have been. Terms include 'surgery', 'speak' and 'specific other' for an appointment at the practice, by telephone or with a dedicated specialist such as a practice nurse or phlebotomist, respectively.RESULTSA very small, rural, general practice in the UK was audited using the 7S tool. Five hundred patient contacts were reviewed by an independent general practitioner and the decision made if the mode of contact was appropriate or not for each case; in one of the three cases, the choice of care provision was inappropriate and chronic disease cases contributed most to this. General practitioners instigated the majority of poor patient management choices, and chronic disease patients were frequently seen in suboptimal settings.CONCLUSIONSInefficiencies in the management of patients in family practice can be identified with the 7S audit tool, thereby producing evidence for staff education and service reconfiguration.

24. An updated picture of the mental health needs of male and female prisoners in the UK: prevalence, comorbidity, and gender differences.

Authors Tyler, Nichola; Miles, Helen L; Karadag, Bessey; Rogers, Gemma
Source Social psychiatry and psychiatric epidemiology; Sep 2019; vol. 54 (no. 9); p. 1143-1152
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 30903239
Database Medline

Abstract PURPOSEEpidemiological data on the mental health needs of prisoners are essential for the organisation, planning, and delivery of services for this population as well as for informing policy and practice. Recent reports by the National Audit Office and NICE call for new research to provide an updated picture of the mental health needs of men and women in prison in the UK. This study aimed to measure the prevalence and comorbidity of mental health needs across a representative sample of both men and women across 13 prisons in one UK region.METHODParticipants completed a standardised battery of psychometric assessments which screened for a range of mental health difficulties including: mental disorders, personality disorder, and substance misuse.RESULTS469 participants were included in the final sample (338 males, 131 females). A high number of participants reported having had previous contact with mental health services and/or a pre-existing diagnosis of a mental disorder. High rates of current mental disorder were detected across the range of disorders screened for. Levels of comorbidity were also high, with nearly half of participants screening positive for two or more types of mental disorder. Gender differences were noted in terms of previous contact with mental health services, having a pre-existing diagnosis, prevalence of current mental disorder, and levels of comorbidity; with women reporting higher rates than men.CONCLUSIONSRates of pre-existing and current mental illness continue to be high amongst prisoners. Women report significantly higher levels of mental health need compared to men.

25. A national UK audit of suprapubic catheter insertion practice and rate of bowel injury with comparison to a systematic review and meta-analysis of available research.

Authors Hall, S; Ahmed, S; Reid, S; Thiruchewam, N; Sahai, A; Hamid, R; Harding, C; Biers, S; Parkinson, R
Source Neurourology and urodynamics; Sep 2019
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31532853
Database Medline
Abstract OBJECTIVESLimited data exist on the risks of complications associated with a suprapubic catheter (SPC) insertion. Bowel injury (BI) is a well-recognized albeit uncommon complication. Guidelines on the insertion of SPC have been developed by the British Association of Urological Surgeons, but there remains little evidence regarding the incidence of this complication. This study uses contemporary UK data to assess the incidence of SPC insertion and the rate of BI and compares to a meta-analysis of available papers.METHODSNational Hospital Episodes Statistics data were searched on all SPC insertions over an 18-month period for operating procedure codes, Code M38.2 (cystostomy and insertion of a suprapubic tube into bladder). Patients age, 30-day readmission rates, 30-day mortality rate, and catheter specific complication rate were collected. To estimate the BI rate, we searched patients who had undergone any laparotomy or bowel operation within 30 days of SPC insertion. Trusts were contacted directly and directed to ascertain whether there was SPC-related BI. PubMed search to identify papers reporting on SPC related BI was performed for meta-analysis RESULTS: 11 473 SPC insertions took place in the UK in this time period. One hundred forty-one cases had laparotomy within 30 days. Responses from 114 of these cases reported one BI related to SPC insertion. Meta-analysis showed an overall BI rate of 11/1490 (0.7%).CONCLUSIONSThis is the largest dataset reported on SPC insertions showing a lower than previously reported rate of BI. We recommend clinicians use a risk of BI of less than 0.25% when counseling low-risk patients.

26. Association of quality of paediatric epilepsy care with mortality and unplanned hospital admissions among children and young people with epilepsy in England: a national longitudinal data linkage study.

Authors Hargreaves, Dougal S; Arora, Sandeepa; Viveiro, Carolina; Hale, Daniel R; Ward, Joseph L; Sherlaw-Johnson, Christopher; Viner, Russell M; Dunkley, Colin; Cross, J Helen
Source The Lancet. Child & adolescent health; Sep 2019; vol. 3 (no. 9); p. 627-635
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31281027
Database Medline

Abstract BACKGROUNDConcerns have been raised about variation in care quality and outcomes among children and young people with epilepsies in England. We aimed to investigate the association between quality of paediatric care, hospital admissions, and all-cause deaths among epilepsy patients.METHODSIn this longitudinal data linkage study of paediatric epilepsy services in England, we linked unit-level data from round 1 (2009-11) and round 2 (2013-14) of the Epilepsy12 national clinical audit, with death registrations from the UK Office for National Statistics and data for unplanned hospital admissions from Hospital Episode Statistics. We investigated the association between unit-level performance in involving a paediatrician with epilepsy expertise, an epilepsy specialist nurse, and a paediatric neurologist (where appropriate) in round 1 and the proportion of adolescents (aged 10-18 years) with epilepsy admitted to each unit who subsequently died during the study period (April 1, 2009, to March 31, 2015). We also investigated whether change in Epilepsy12 performance between the two audit rounds was associated with changes in the standardised ratio of observed-to-expected unplanned epilepsy admissions over the same period.FINDINGSIn 99 units with data for the analyses relating to paediatricians with epilepsy expertise and epilepsy specialist nurses, 134 (7%) of 1795 patients died during the study period, 88 (5%) of whom died after the transition to adult service. In 55 units with data for the analyses relating to paediatric neurologists, 79 (7%) of 1164 patients died, 54 (5%) of whom did so after the transition. In regression models adjusting for population, unit, and hospital activity characteristics, absolute reductions in total mortality risk (6·4 percentage points, 95% CI 0·1-12·7) and mortality risk after transition (5·7 percentage points, 0·6-10·8) were found when comparing units where all versus no eligible patients were seen by a paediatric neurologist. Units where all eligible patients were seen by a paediatric neurologist were estimated to have absolute reductions of 4·6 percentage points (0·3-8·9) in total mortality and of 4·6 percentage points (1·2-8·0) in post-transition mortality, compared with units where no or some eligible patients were seen by a paediatric neurologist. There was no significant association between performance on being seen by an epilepsy specialist nurse or by a paediatrician with epilepsy expertise and mortality. In units where access to an epilepsy specialist nurse decreased, the standardised ratio of epilepsy admissions increased by a mean of 0·21 (0·01-0·42).INTERPRETATIONAmong adolescents with epilepsy, greater involvement of tertiary specialists in paediatric care is associated with decreased all-cause mortality in the period after transition to adult services. Reduced access to an epilepsy specialist nurse was associated with an increase in paediatric epilepsy admissions.FUNDINGThe Health Foundation.

27. Requirement for urgent tracheal intubation after traumatic injury: a retrospective analysis of 11,010 patients in the Trauma Audit Research Network database.

Authors Crewdson, K; Fragoso-Iniguez, M; Lockey, D J
Source Anaesthesia; Sep 2019; vol. 74 (no. 9); p. 1158-1164
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31069782
Database Medline
Abstract Advanced airway management is a treatment priority in trauma care. It is likely that a proportion of patients who receive urgent airway management on arrival in the emergency department represent an unmet demand for airway intervention in the pre-hospital phase. This study aimed to investigate emergency airway practice in major trauma patients and establish any unmet demand in this patient group. A retrospective review of the Trauma Audit and Research Network database was performed to identify airway intervention(s) performed for patients admitted to major trauma centres in England from 01 April 2012 to 27 June 2016. In total, 11,010 patients had airway interventions: 4375 patients (43%) had their tracheas intubated in the pre-hospital setting compared with 5889 patients (57%) in the emergency department. Of the patients whose tracheas were intubated in the emergency department, this was done within 30 min of hospital arrival in 3264 patients (75%). Excluding tracheal intubation, 1593 patients had a pre-hospital airway intervention of which 881 (55%) subsequently had their trachea intubated in the emergency department; tracheal intubation was done within 30 min of arrival in the majority of these cases (805 patients (91%)). Over 70% of emergency department tracheal intubations in patients with traumatic injuries were performed within 30 min of hospital arrival; this suggests there may be an unmet demand in pre-hospital advanced airway management for trauma patients in England.

28. Contemporary epidemiology of infective endocarditis in patients with congenital heart disease: A UK prospective study.

Authors Cahill, T J; Jewell, P D; Denne, L; Franklin, R C; Frigiola, A; Orchard, E; Prendergast, B D
Source American heart journal; Sep 2019; vol. 215 ; p. 70-77
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31299559
Database Medline

Abstract OBJECTIVESInfective endocarditis is a life-threatening complication of congenital heart disease (CHD), but there are few studies concerning the contemporary risk profile, preceding invasive procedures and outcomes in this patient population. The aim of this study was to investigate the epidemiology of infective endocarditis (IE) in patients with CHD.METHODSCases of IE in children and adults with CHD were prospectively recorded as part of the UK National Institute for Cardiovascular Outcomes Research (NICOR) National Congenital Heart Disease Audit. Patients were entered into the database between April 2008 and March 2016.RESULTSEight hundred episodes of IE were recorded in 736 patients with CHD. Sixty-five patients (9%) were infants (aged <1 year), 235 (32%) were children (aged 1-15 years), and 436 (59%) were adults (aged >15 years). The most common diagnoses were Tetralogy of Fallot (n = 150, 22.8%), ventricular septal defect (n = 129, 19.6%) and bicuspid aortic valve (n = 70, 10.7%). Dental procedures preceded 67 of 635 episodes (11%) of IE, and non-dental invasive procedures preceded 177 of 644 episodes (27.4%). The most common causative organisms were streptococci, accounting for 40% of cases. Overall in-hospital mortality was 6.7%. On multivariable analysis, adverse factors associated with in-hospital mortality were staphylococcal infection and presence of an underlying atrioventricular septal defect.CONCLUSIONSInfective endocarditis in patients with CHD is an ongoing clinical challenge. In contemporary practice in tertiary congenital centers, 1 of 15 patients do not survive to hospital discharge. Streptococci remain the most common causative organism, and antecedent dental or medical procedures were undertaken in a significant minority in the 3 months before diagnosis. The presence of an atrioventricular septal defect or staphylococcal infection is associated with significantly increased risk of early mortality.

29. The Enhanced Peri-Operative Care for High-risk patients trial: an independent discussion and commentary.

Authors Cornelius, Victoria; Johnston, Carolyn L
Source British journal of anaesthesia; Sep 2019; vol. 123 (no. 3); p. 261-266
Publication Date Sep 2019
Publication Type(s) Editorial
PubMedID 31303269
Database Medline

30. Ethnic-specific mortality of infants undergoing congenital heart surgery in England and Wales.

Authors Knowles, Rachel L; Ridout, Deborah; Crowe, Sonya; Bull, Catherine; Wray, Jo; Tregay, Jenifer; Franklin, Rodney C G; Barron, David J; Parslow, Roger C; Brown, Katherine
Source Archives of disease in childhood; Sep 2019; vol. 104 (no. 9); p. 844-850
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 30824491
Database Medline
Abstract PURPOSETo investigate ethnic differences in mortality for infants with congenital heart defects (CHDs) undergoing cardiac surgery or interventional catheterisation.DESIGNObservational study of survival to age 1 year using linked records from routine national paediatric cardiac surgery and intensive care audits. Mortality risk was investigated using multivariable Poisson models with multiple imputation. Predictors included sex, ethnicity, preterm birth, deprivation, comorbidities, prenatal diagnosis, age and weight at surgery, preprocedure deterioration and cardiac diagnosis.SETTINGAll paediatric cardiac surgery centres in England and Wales.PATIENTS5350 infants with CHDs born from 2006 to 2009.MAIN OUTCOME MEASURESurvival at age 1 year.RESULTSMortality was 83.9 (95% CI 76.3 to 92.1) per 1000 infants, with variation by ethnic group. Compared with those of white ethnicity, infants in British Asian (Indian, Pakistani and Bangladeshi) and 'all other' (Chinese, mixed and other) categories experienced significantly higher mortality by age 1 year (relative risk [RR] 1.52[95% CI 1.19 to 1.95]; 1.62[95% CI 1.20 to 2.20], respectively), specifically during index hospital admission (RR 1.55 [95% CI 1.07 to 2.26]; 1.64 [95% CI 1.05 to 2.57], respectively). Further predictors of mortality included non-cardiac comorbidities, prenatal diagnosis, older age at surgery, preprocedure deterioration and cardiac diagnosis. British Asian infants had higher mortality risk during elective hospital readmission (RR 1.86 [95% CI 1.02 to 3.39]).CONCLUSIONSInfants of British Asian and 'all other' non-white ethnicity experienced higher postoperative mortality risk, which was only partly explained by socioeconomic deprivation and access to care. Further investigation of case-mix and timing of risk may provide important insights into potential mechanisms underlying ethnic disparities.

31. Variations in hospital resource use across stroke care teams in England, Wales and Northern Ireland: a retrospective observational study.

Authors Lugo-Palacios, David G; Gannon, Brenda; Gittins, Matthew; Vail, Andy; Bowen, Audrey; Tyson, Sarah
Source BMJ open; Sep 2019; vol. 9 (no. 9); p. e030426
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31542751
Database Medline

Abstract OBJECTIVETo identify the main drivers of inpatient stroke care resource use, estimate the influence of stroke teams on the length of stay (LoS) of its patients and analyse the variation in relative performance across teams.DESIGNFor each of four types of stroke care teams, a two-level count data model describing the variation in LoS and identifying the team influence on LoS purged of patient and treatment characteristics was estimated. Each team effect was interpreted as a measure of stroke care relative performance and its variation was analysed.SETTINGThis study used data from 145 396 admissions in 256 inpatient stroke care teams between June 2013 and July 2015 included in the national stroke register of England, Wales and Northern Ireland-Sentinel Stroke National Audit Programme.RESULTSThe main driver of LoS, and thus resource use, was the need for stroke therapy even after stroke severity was taken into account. Conditional on needing the therapy in question, an increase in the average amount of therapy received per inpatient day was associated with shorter LoS. Important variations in stroke care performance were found within each team category.CONCLUSIONSResource use was strongly associated with stroke severity, the need for therapy and the amount of therapy received. The variations in stroke care performance were not explained by measurable patient or team characteristics. Further operational and financial analyses are needed to unmask the causes of this unexplained variation.

32. Prospective Audit to Study urokinaSe use to restore Patency in Occluded centRal venous caTheters (PASSPORT 1).

Authors Kumwenda, Mick John; Mitra, Sandip; Khawaja, Aurangzaib; Inston, Nicholas; Nightingale, Peter
Source The journal of vascular access; Aug 2019 ; p. 1129729819869095
Publication Date Aug 2019
Publication Type(s) Journal Article
PubMedID 31466489
Database Medline
Abstract OBJECTIVESTunnelled central venous catheters dysfunction can be defined as failure to provide blood flow above 200 mL/min during dialysis often caused by thrombosis. Although urokinase is used routinely for thrombolysis, there is wide variation in dose regimens. A multidisciplinary group was formed to address this issue and offer guidance.METHODSDialysis centres that used urokinase in the United Kingdom took part in a prospective study to determine the safety and outcomes of thrombolysis using agreed protocols. Data were collected anonymously from September 2017 until February 2018. Catheter blood flow was measured before and after the following interventions: catheter dwell or push locks with 12,500-50,000 IU or catheter infusion with 100,000-250,000 IU of urokinase. Interventions were repeated if the blood flow remained below 200 mL/min.RESULTS10 centres took part and recruited 200 patients; 45.5% were female and 54.5% were male with mean age of 63.6 (±15.2) years. The cumulative success rate for thrombolysis was 90.5% after first intervention, 97% after second intervention, and 99% after more than 2 interventions. Although there was trend towards benefit with dose increments, the success rate between push/dwell locks and high-dose infusion of urokinase was not significantly different (p = 0.069). Seventeen (8.5%) tunnelled central venous catheters were removed due to failure of treatment. No urokinase-related adverse events were reported.CONCLUSIONIn this study, urokinase was safe and efficacious; there was no difference between dwell and push locks. There was some benefit with high-dose infusion of urokinase compared to the dwell and push lock.

33. UK maternity services: audit finds wide variation in birth complications.

Authors Mayor, Susan
Source BMJ (Clinical research ed.); Sep 2019; vol. 366 ; p. l5568
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31519765
Database Medline

34. Patient-Reported Outcome Measures in Plastic Surgery: An Introduction and Review of Clinical Applications.

Authors Sharma, Kavita; Steele, Kathryn; Birks, Meg; Jones, Georgina; Miller, Gavin
Source Annals of plastic surgery; Sep 2019; vol. 83 (no. 3); p. 247-252
Publication Date Sep 2019
Publication Type(s) Journal Article
PubMedID 31415290
Database Medline

Abstract Clinical care is often directed at improving patient's quality of life, the effectiveness of which can be measured by objective or subjective outcomes. Surgical intervention, especially in plastic and reconstructive surgery, can often provide hard objective measures, for example, breast size reduction after bilateral reduction mammaplasty, or improved joint position/movement after Dupuytren's surgery. These measurements do not describe how a particular intervention affects the patient's life, from their point of view.Patient-reported outcome measures (PROMs) are validated questionnaires completed by patients about their health, functioning, health behaviors and quality of care. Patient-reported outcome measures reflect the patient's perspective and their use increases the meaningfulness of outcomes measured, for whatever purpose. There is therefore a growing interest in PROMs as part of routine clinical practice in the United Kingdom and worldwide.This article aims to provide an introduction of PROMs to plastic surgeons, a description of how PROMs are developed and scored, along with the most commonly used tools currently most applicable to plastic surgery. The benefits of PROMs on a local, regional, and national level are discussed, and we aim to set out how these tools can be used in auditing individual and departmental performance against national standards. We will also provide suggestions for sustainable use of PROMs in the clinical environment, advice on choosing the right outcome measure, and our views on electronic data collection, analysis, and interpretation of the results.Patient-reported outcome measures are highly relevant clinical practice and will undoubtedly with time become routine. We encourage plastic surgeons to explore the possibilities these tools can provide in helping improve the quality of care we deliver to our patients.

35. Cleft Palate Outcomes and Prognostic Impact of Palatal Fistula on Subsequent Velopharyngeal Function-A Retrospective Cohort Study.

Authors Smyth, Alistair G; Wu, Jianhua
Source The Cleft palate-craniofacial journal : official publication of the American Cleft Palate-Craniofacial Association; Sep 2019; vol. 56 (no. 8); p. 1008-1012
Publication Date Sep 2019
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Abstract OBJECTIVETo assess outcomes from cleft palate repair and define the level of impact of palatal fistula on subsequent velopharyngeal function.DESIGNA retrospective cohort study.SETTINGA regional specialist cleft lip and palate center within United Kingdom.PATIENTS, PARTICIPANTSNonsyndromic infants born between 2002 and 2009 undergoing cleft palate primary surgery by a single surgeon with audited outcomes at 5 years of age. Four hundred ten infants underwent cleft palate surgery within this period and 271 infants met the inclusion criteria.INTERVENTIONSCleft palate repair including levator palati muscle repositioning with or without lateral palatal release.MAIN OUTCOME MEASURESPostoperative fistula development and velopharyngeal function at 5 years of age.RESULTSLateral palatal incisions were required in 57% (156/271) of all cases. The fistula rate was 10.3% (28/271). Adequate palatal function with no significant velopharyngeal insufficiency (VPI) was achieved in 79% of patients (213/271) after primary surgery only. Palatal fistula was significantly associated with subsequent VPI (risk ratio = 3.03, 95% confidence interval: 1.95-4.69; P < .001). The rate of VPI increased from 18% to 54% when healing was complicated by fistula. Bilateral cleft lip and palate (BCLP) repair complicated by fistula had the highest incidence of VPI (71%).CONCLUSIONSCleft palate repair with levator muscle repositioning is an effective procedure with good outcomes. The prognostic impact of palatal fistula on subsequent velopharyngeal function is defined with a highly significant 3-fold increase in VPI. Early repair of palatal fistula should be considered, particularly for large fistula and in BCLP cases.

36. Radiotherapy Quality Assurance for the CHHiP Trial: Conventional Versus Hypofractionated High-Dose Intensity-Modulated Radiotherapy in Prostate Cancer.

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Source Clinical oncology (Royal College of Radiologists (Great Britain)); Sep 2019; vol. 31 (no. 9); p. 611-620
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Abstract AIMSThe CHHiP trial investigated the use of moderate hypofractionation for the treatment of localised prostate cancer using intensity-modulated radiotherapy (IMRT). A radiotherapy quality assurance programme was developed to assess compliance with treatment protocol and to audit treatment planning and dosimetry of IMRT. This paper considers the outcome and effectiveness of the programme.MATERIALS AND METHODSQuality assurance exercises included a pre-trial process document and planning benchmark cases, prospective case reviews and a dosimetry site visit on-trial and a post-trial feedback questionnaire.RESULTSIn total, 41 centres completed the quality assurance programme (37 UK, four international) between 2005 and 2010. Centres used either forward-planned (field-in-field single phase) or inverse-planned IMRT (25 versus 17). For pre-trial quality assurance exercises, 7/41 (17%) centres had minor deviations in their radiotherapy processes; 45/82 (55%) benchmark plans had minor variations and 17/82 (21%) had major variations. One hundred prospective case reviews were completed for 38 centres. Seventy-one per cent required changes to clinical outlining pre-treatment (primarily prostate apex and base, seminal vesicles and penile bulb). Errors in treatment planning were reduced relative to pre-trial quality assurance results (49% minor and 6% major variations). Dosimetry audits were conducted for 32 centres. Ion chamber dose point measurements were within ±2.5% in the planning target volume and ±8% in the rectum. 28/36 films for combined fields passed gamma criterion 3%/3 mm and 11/15 of IMRT fluence film sets passed gamma criterion 4%/4 mm using a 98% tolerance. Post-trial feedback showed that trial participation was beneficial in evolving clinical practice and that the quality assurance programme helped some centres to implement and audit prostate IMRT.CONCLUSIONOverall, quality assurance results were satisfactory and the CHHiP quality assurance programme contributed to the success of the trial by auditing radiotherapy treatment planning and protocol compliance. Quality assurance supported the introduction of IMRT in UK centres, giving additional confidence and external review of IMRT where it was a newly adopted technique.

37. What predicts mortality in the elderly patient presenting as a trauma call? A report from a Major Trauma Centre.

Authors Lodge, Christopher J; West, Robert M; Giannoudis, Peter; Tosounidis, Theodoros H
Source The surgeon : journal of the Royal Colleges of Surgeons of Edinburgh and Ireland; Aug 2019
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Abstract PURPOSEWithin the UK there is a continued expansion of the population over the age of 65, this currently accounts for 17.8% of the British population. We review the impact that centralization of Major Trauma has had, as well as analysing for significant predictors of poor outcome.METHODAll patients presenting to Leeds Major Trauma Centre as a 'Major Trauma' who were equal to or over the age of 65 were included in this study. Prospectively collected data from the Trauma Audit Research Network (TARN) was collated to include the above data set from the 1st April 2012 - 1st April 2016. The 1st April 2012 represents the commencement of the Major Trauma Network within Yorkshire. To allow more quantative assessment of patients' co-morbidities, they were coded as per Charlson Co-morbidity Index for analysis.RESULTS1167 patients presented within the above timeframe. Mean age was 79.5 (range 65-103.5). Mean ISS was 14.8 of the entire cohort. Mortality was 12.9% of the entire cohort. The leading mechanisms of injury were from low energy falls <2m-59.89%, Fall >2m-23.05% and Road Traffic Collision - 16.45%.CONCLUSIONMortality rates since the commencement of the Major Trauma Network within this age group have reduced. This is likely secondary to centralization of major trauma. Variables found to be statistically significant with increased mortality were increasing age, head injury, presence of Chronic Lung Disease, presence of metastases, decreased GCS and increased ISS.

38. Incidentally diagnosed cancer and commonly preceding clinical scenarios: a cross-sectional descriptive analysis of English audit data.

Authors Koo, Minjoung Monica; Rubin, Greg; McPhail, Sean; Lyratzopoulos, Georgios
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Abstract OBJECTIVESCancer can be diagnosed in the absence of tumour-related symptoms, but little is known about the frequency and circumstances preceding such diagnoses which occur outside participation in screening programmes. We aimed to examine incidentally diagnosed cancer among a cohort of cancer patients diagnosed in England.DESIGNCross-sectional study of national primary care audit data on an incident cancer patient population.SETTINGWe analysed free-text information on the presenting features of cancer patients aged 15 or older included in the English National Audit of Cancer Diagnosis in Primary Care (2009-2010). Patients with screen-detected cancers or prostate cancer were excluded. We examined the odds of incidental cancer diagnosis by patient characteristics and cancer site using logistic regression, and described clinical scenarios leading to incidental diagnosis.RESULTSAmong the studied cancer patient population (n=13 810), 520 (4%) patients were diagnosed incidentally. The odds of incidental cancer diagnosis increased with age (p<0.001), with no difference between men and women after adjustment. Incidental diagnosis was most common among patients with leukaemia (23%), renal (13%) and thyroid cancer (12%), and least common among patients with brain (0.9%), oesophageal (0.5%) and cervical cancer (no cases diagnosed incidentally). Variation in odds of incidental diagnosis by cancer site remained after adjusting for age group and sex.There was a range of clinical scenarios preceding incidental diagnoses in primary or secondary care. These included the monitoring or management of pre-existing conditions, routine testing before or after elective surgery, and the investigation of unrelated acute or new conditions.CONCLUSIONSOne in 25 patients with cancer in our population-based cohort were diagnosed incidentally, through different mechanisms across primary and secondary care settings. The epidemiological, clinical, psychological and economic implications of this phenomenon merit further investigation.

39. Occurrence Rate of Delirium in Acute Stroke Settings: Systematic Review and Meta-Analysis.

Authors Shaw, Robert C; Walker, Graham; Elliott, Emma; Quinn, Terence J
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Abstract Background and Purpose- Delirium is associated with increased mortality, length of stay, and poor functional outcome following critical illness. The epidemiology of delirium in stroke is poorly described. We sought to collate evidence around occurrence (incidence or prevalence) of delirium in acute stroke. Methods- We searched multiple cross-disciplinary electronic databases using a prespecified search strategy, complemented by hand searching. Eligible studies described delirium in acute (first 6 weeks) stroke. We compared delirium occurrence using random-effects models to describe summary estimates. We assessed risk of bias using the Newcastle-Ottawa tool, incorporating this in sensitivity analyses. We performed subgroup analyses for delirium diagnostic method (confusion assessment method scoring, clinical diagnosis, other), duration and timing of delirium assessment (>1 or <1 week), and performed meta-regression based on the year of publication. Results- Of 8822 titles, we included 32 papers (6718 participants) in the quantitative analysis. Summary estimate for occurrence of delirium was 25% (95% CI, 20%-30%; moderate quality evidence). Limiting to studies at low risk of bias (22 studies, 4422 participants), the occurrence rate was 23% (95% CI, 17%-28%). Subgroup summary estimates suggest that delirium occurrence may vary with assessment method: confusion assessment method, 21% (95% CI, 16%-27%); clinical diagnosis, 27% (95% CI, 19%-38%); other, 32% (95% CI, 22%-43%) but not with duration and timing of assessment. Meta-regression suggested decline in occurrence of delirium comparing historical to more recent studies (slope, 0.03 [SE, 0.004]; P<0.0001). Conclusions- Delirium is common, affecting 1 in 4 acute stroke patients. Reported rates of delirium may be dependent on assessment method. Our estimate of delirium occurrence could be used for audit, to plan intervention studies, and inform clinical practice. Clinical Trial Registration- URL: http://www.crd.york.ac.uk/PROSPERO/. Unique identifier: CRD42015029251.

40. Analysis of English general practice level data linking medication levels, service activity and demography to levels of glycaemic control being achieved in type 2 diabetes to improve clinical practice and patient outcomes.

Authors Heald, Adrian; Davies, Mark; Stedman, Mike; Livingston, Mark; Lunt, Mark; Fryer, Anthony; Gadsby, Roger
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Abstract OBJECTIVEEvaluate relative clinical effectiveness of treatment options for type 2 diabetes mellitus (T2DM) using a statistical model of real-world evidence within UK general practitioner practices (GPP), to quantify the opportunities for diabetes care performance improvement.METHODFrom the National Diabetes Audit in 2015-2016 and 2016-2017, GPP target glycaemic control (TGC-%HbA1c ≤58 mmol/mol) and higher glycaemic risk (HGR -%HbA1c results >86 mmol/mol) outcomes were linked using multivariate linear regression to prescribing, demographics and practice service indicators. This was carried out both cross-sectionally (XS) (within year) and longitudinally (Lo) (across years) on 35 indicators. Standardised β coefficients were used to show relative level of impact of each factor. Improvement opportunity was calculated as impact on TGC & HGR numbers.RESULTSValues from 6525 GPP with 2.7 million T2DM individuals were included. The cross-sectional model accounted for up to 28% TGC variance and 35% HGR variance, and the longitudinal model accounted for up to 9% TGC and 17% HGR variance. Practice service indicators including % achieving routine checks/blood pressure/cholesterol control targets were positively correlated, while demographic indicators including % younger age/social deprivation/white ethnicity were negatively correlated. The β values for selected molecules are shown as (increased TGC; decreased HGR), canagliflozin (XS 0.07;0.145/Lo 0.04;0.07), metformin (XS 0.12;0.04/Lo -;-), sitagliptin (XS 0.06;0.02/Lo 0.10;0.06), empagliflozin (XS-;0.07/Lo 0.09;0.07), dapagliflozin (XS -;0.04/Lo -;0.4), sulphonylurea (XS -0.18;-0.12/Lo-;-) and insulin (XS-0.14;0.02/ Lo-0.09;-). Moving all GPP prescribing and interventions to the equivalent of the top performing decile of GPP could result in total patients in TGC increasing from 1.90 million to 2.14 million, and total HGR falling from 191 000 to 123 000.CONCLUSIONSGPP using more legacy therapies such as sulphonylurea/insulin demonstrate poorer outcomes, while those applying holistic patient management/use of newer molecules demonstrate improved glycaemic outcomes. If all GPP moved service levels/prescribing to those of the top decile, both TGC/HGR could be substantially improved.

41. Safety of direct oral anticoagulants in patients with hereditary hemorrhagic telangiectasia.

Authors Shovlin, C L; Millar, C M; Droege, F; Kjeldsen, A; Manfredi, G; Suppressa, P; Ugolini, S; Coote, N; Fialla, A D; Geisthoff, U; Lenato, G M; Mager, H J; Pagella, F; Post, M C; Sabbà, C; Sure, U; Torring, P M; Dupuis-Girod, S; Buscarini, E; VASCERN-HHT
Source Orphanet journal of rare diseases; Aug 2019; vol. 14 (no. 1); p. 210
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Abstract BACKGROUNDHereditary hemorrhagic telangiectasia (HHT) is a rare vascular dysplasia resulting in visceral arteriovenous malformations and smaller mucocutaneous telangiectasia. Most patients experience recurrent nosebleeds and become anemic without iron supplementation. However, thousands may require anticoagulation for conditions such as venous thromboembolism and/or atrial fibrillation. Over decades, tolerance data has been published for almost 200 HHT-affected users of warfarin and heparins, but there are no published data for the newer direct oral anticoagulants (DOACs) in HHT.METHODSTo provide such data, a retrospective audit was conducted across the eight HHT centres of the European Reference Network for Rare Multisystemic Vascular Diseases (VASCERN), in Denmark, France, Germany, Italy, the Netherlands and the UK.RESULTSAlthough HHT Centres had not specifically recommended the use of DOACs, 32 treatment episodes had been initiated by other clinicians in 28 patients reviewed at the Centres, at median age 65 years (range 30-84). Indications were for atrial fibrillation (16 treatment episodes) and venous thromboembolism (16 episodes). The 32 treatment episodes used Apixaban (n = 15), Rivaroxaban (n = 14), and Dabigatran (n = 3). HHT nosebleeds increased in severity in 24/32 treatment episodes (75%), leading to treatment discontinuation in 11 (34.4%). Treatment discontinuation was required for 4/15 (26.7%) Apixaban episodes and 7/14 (50%) Rivaroxaban episodes. By a 4 point scale of increasing severity, there was a trend for Rivaroxaban to be associated with a greater bleeding risk both including and excluding patients who had used more than one agent (age-adjusted coefficients 0.61 (95% confidence intervals 0.11, 1.20) and 0.74 (95% confidence intervals 0.12, 1.36) respectively. Associations were maintained after adjustment for gender and treatment indication. Extreme hemorrhagic responses, worse than anything experienced previously, with individual nosebleeds lasting hours requiring hospital admissions, blood transfusions and in all cases treatment discontinuation, occurred in 5/14 (35.7%) Rivaroxaban episodes compared to 3/15 (20%) Apixaban episodes and published rates of ~ 5% for warfarin and heparin.CONCLUSIONSCurrently, conventional heparin and warfarin remain first choice anticoagulants in HHT. If newer anticoagulants are considered, although study numbers are small, at this stage Apixaban appears to be associated with lesser bleeding risk than Rivaroxaban.

42. 'Caveat emptor': the cautionary tale of endocarditis and the potential pitfalls of clinical coding data-an electronic health records study.

Authors Fawcett, Nicola; Young, Bernadette; Peto, Leon; Quan, T Phuong; Gillott, Richard; Wu, Jianhua; Middlemass, Chris; Weston, Sheila; Crook, Derrick W; Peto, Tim E A; Muller-Pebody, Berit; Johnson, Alan P; Walker, A Sarah; Sandoe, Jonathan A T
Source BMC medicine; Sep 2019; vol. 17 (no. 1); p. 169

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Abstract BACKGROUNDDiagnostic codes from electronic health records are widely used to assess patterns of disease. Infective endocarditis is an uncommon but serious infection, with objective diagnostic criteria. Electronic health records have been used to explore the impact of changing guidance on antibiotic prophylaxis for dental procedures on incidence, but limited data on the accuracy of the diagnostic codes exists. Endocarditis was used as a clinically relevant case study to investigate the relationship between clinical cases and diagnostic codes, to understand discrepancies and to improve design of future studies.METHODSElectronic health record data from two UK tertiary care centres were linked with data from a prospectively collected clinical endocarditis service database (Leeds Teaching Hospital) or retrospective clinical audit and microbiology laboratory blood culture results (Oxford University Hospitals Trust). The relationship between diagnostic codes for endocarditis and confirmed clinical cases according to the objective Duke criteria was assessed, and impact on estimations of disease incidence and trends.RESULTSIn Leeds 2006-2016, 738/1681(44%) admissions containing any endocarditis code represented a definite/possible case, whilst 263/1001(24%) definite/possible endocarditis cases had no endocarditis code assigned. In Oxford 2010-2016, 307/552(56%) reviewed endocarditis-coded admissions represented a clinical case. Diagnostic codes used by most endocarditis studies had good positive predictive value (PPV) but low sensitivity (e.g. I33-primary 82% and 43% respectively); one (I38-secondary) had PPV under 6%. Estimating endocarditis incidence using raw admission data overestimated incidence trends twofold. Removing records with non-specific codes, very short stays and readmissions improved predictive ability. Estimating incidence of streptococcal endocarditis using secondary codes also overestimated increases in incidence over time. Reasons for discrepancies included changes in coding behaviour over time, and coding guidance allowing assignment of a code mentioning 'endocarditis' where endocarditis was never mentioned in the clinical notes.CONCLUSIONSCommonly used diagnostic codes in studies of endocarditis had good predictive ability. Other apparently plausible codes were poorly predictive. Use of diagnostic codes without examining sensitivity and predictive ability can give inaccurate estimations of incidence and trends. Similar considerations may apply to other diseases. Health record studies require validation of diagnostic codes and careful data curation to minimise risk of serious errors.