Strategy 432444/8

#	Database	Search term	Results
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1. National quality improvement programmes need time and resources to have an impact.

Authors Cook, Rob; Lamont, Tara; Martin, Rosie; NIHR Dissemination Centre
Source BMJ (Clinical research ed.); Oct 2019; vol. 367 ; p. l5462
Publication Date Oct 2019
Publication Type(s) Research Support, Non-u.s. Gov't Randomized Controlled Trial Journal Article
PubMedID 31597637
Database Medline
Abstract The studyPeden CJ, Stephens T, Martin G et al. Effectiveness of a national quality improvement programme to improve survival after emergency abdominal surgery (EPOCH): a stepped-wedge cluster-randomised trial. Lancet 2019;393:2213-21.This project was funded by the NIHR Health Services and Delivery Research Programme (project number 12/5005/10).To read the full NIHR Signal, go to https://discover.dc.nihr.ac.uk/content/signal-000789/national-quality-improvement-programmes-need-time-and-resources-to-have-impact.

2. An evaluation of a multifaceted, local Quality Improvement Framework for long-term conditions in UK primary care.

Authors Gabel, Frank; Chambers, Ruth; Cox, Tracey; Listl, Stefan; Maskrey, Neal
Source Family practice; Oct 2019; vol. 36 (no. 5); p. 607-613
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 30576438
Database Medline
Abstract BACKGROUNDThe evidence that large pay-for-performance schemes improve the health of populations is mixed-evidence regarding locally implemented schemes is limited.OBJECTIVEThis study evaluates the effects in Stoke-on-Trent of a local, multifaceted Quality Improvement Framework including pay for performance in general practice introduced in 2009 in the context of the national Quality and Outcomes Framework that operated from 2004.METHODSWe compared age-standardized mortality data from all 326 local authorities in England with the rates in Stoke-on-Trent using Difference-in-Differences, estimating a fixed-effects linear regression model with an interaction effect.RESULTSIn addition to the existing downward trend in cardiovascular deaths, we find an additional annual reduction of 36 deaths compared with the national mean for coronary heart disease and 13 deaths per 100000 from stroke in Stoke-on-Trent. Compared with the national mean, there was an additional reduction of 9 deaths per 100000 people per annum for coronary heart disease and 14 deaths per 100000 people per annum for stroke following the introduction of the 2009 Stoke-on-Trent Quality Improvement Framework.CONCLUSIONThere are concerns about the unintended consequences of large pay-for-performance schemes in health care, but in a population with a high prevalence of disease, they may at least initially be beneficial. This study also provides evidence that a local, additional scheme may further improve the health of populations. Such schemes, whether national or local, require periodic review to evaluate the balance of their benefits and risks.

3. Cost-effectiveness of a national quality improvement programme to improve survival after emergency abdominal surgery.

Authors Yang, Fan; Walker, Simon; Richardson, Gerry; Stephens, Tim; Phull, Mandeep; Thompson, Ann; Pearse, Rupert M; Enhanced Peri-Operative Care for High-risk patients (EPOCH) trial group
Source International journal of surgery (London, England); Oct 2019
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31604139
Database Medline

Abstract BACKGROUNDPatients undergoing emergency abdominal surgery are exposed to high risk of death. A quality improvement (QI) programme to improve the survival for these patients was evaluated in the Enhanced Peri-Operative Care for High-risk patients (EPOCH) trial. This study aims to assess its cost-effectiveness versus usual care from a UK health service perspective.METHODSData collected in a subsample of trial participants were employed to estimate costs and quality-adjusted life years (QALYs) for the QI programme and usual care within the 180-day trial period, with results also extrapolated to estimate lifetime costs and QALYs. Cost-effectiveness was estimated using incremental cost-effectiveness ratios (ICERs). The probability of being cost-effective was determined for different cost-effectiveness thresholds (£13,000 to £30,000 per QALY). Analyses were performed for lower-risk and higher-risk subgroups based on the number of surgical indications (single vs multiple).RESULTSWithin the trial period, QI was more costly (£467) but less effective (-0.002 QALYs). Over a lifetime, it was more costly (£1395) and more effective (0.018 QALYs), but did not appear to be cost-effective (ICER: £77,792 per QALY, higher than all cost-effectiveness thresholds; probability of being cost-effective: 28.7% to 43.8% across the thresholds). For lower-risk patients, QI was more costly and less effective both within trial period and over a lifetime and it did not appear to be cost-effective. For higher-risk patients, it was more costly and more effective, and did not appear cost-effective within the trial period (ICER: £158,253 per QALY) but may be cost-effective over a lifetime (ICER: £14,293 per QALY).CONCLUSIONThe QI programme does not appear cost-effective at standard cost-effectiveness thresholds. For patients with multiple surgical indications, this programme is potentially cost-effective over a lifetime, but this is highly uncertain.

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

Authors	Kosari, Sam; Deeks, Louise S; Goss, John; Naunton, Mark
Source	The British journal of general practice : the journal of the Royal College of General Practitioners; Oct 2019; vol. 69 (no. 687); p. 490
Publication Date	Oct 2019
Publication Type(s)	Letter Comment
PubMedID	31558521
Database	Medline

5. 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; Oct 2019; vol. 69 (no. 687); p. e689
Publication Date	Oct 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.

6. British Cardiovascular Intervention Society registry framework: a quality improvement initiative on behalf of the National Institute of Cardiovascular Outcomes Research (NICOR).

Authors	Rashid, Muhammad; Ludman, Peter F; Mamas, Mamas A
Source	European heart journal. Quality of care & clinical outcomes; Oct 2019; vol. 5 (no. 4); p. 292-297
Publication Date	Oct 2019
Publication Type(s)	Journal Article
PubMedID	31050720

Database Medline
Abstract The British Cardiovascular Intervention Society (BCIS) percutaneous coronary intervention (PCI) registry is hosted by the National Institute of Cardiovascular Outcomes Research (NICOR) at Bart's Heart Centre and collects clinical characteristics, indications, procedural details, and outcomes of all patients undergoing PCI in the UK. The data are used for audit and research to monitor and improve PCI practices and patient outcomes. Bespoke live data analysis and structured monthly reports are used to provide real-time feedback to all participating hospitals about the provision of care. Risk-adjusted analyses are used as a quality metric and benchmarking PCI practices. The consecutive patients undergoing PCI in all PCI performing hospitals in the UK from 1994 to present. One hundred and thirteen variables encompassing patient demographics, indication, procedural details, complications, and in-hospital outcomes are recorded. Prospective data are collected electronically and encrypted before transfer to central database servers. Data are validated locally and further range checks, sense checks, and assessments of internal consistency are applied during data uploads. Analyses of uploaded data including an assessment of data completeness are provided to all hospitals for validation, with repeat validation rounds prior to public reporting. Endpoints are in-hospital PCI complications, bleeding and mortality. All-cause mortality is obtained via linkage to the Office of National Statistics. No other linkages are available at present. Available for research by application to NICOR at http://www.nicor.org.uk/ using a data sharing agreement.

7. Quality of British and American Nationwide Quality of Care and Patient Safety Benchmarking Programs: Case Neurosurgery.

Authors Reponen, Elina; Tuominen, Hanna; Korja, Miikka
Source Neurosurgery; Oct 2019; vol. 85 (no. 4); p. 500-507
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 30165390
Database Medline
Abstract BACKGROUNDMultiple nationwide outcome registries are utilized for quality benchmarking between institutions and individual surgeons.OBJECTIVETo evaluate whether nationwide quality of care programs in the United Kingdom and United States can measure differences in neurosurgical quality.METHODSThis prospective observational study comprised 418 consecutive adult patients undergoing elective craniotomy at Helsinki University Hospital between December 7, 2011 and December 31, 2012.We recorded outcome event rates and categorized them according to British Neurosurgical National Audit Programme (NNAP), American National Surgical Quality Improvement Program (NSQIP), and American National Neurosurgery Quality and Outcomes Database (N2QOD) to assess the applicability of these programs for quality benchmarking and estimated sample sizes required for reliable quality comparisons.RESULTSThe rate of in-hospital major and minor morbidity was 18.7% and 38.0%, respectively, and 30-d mortality rate was 2.4%. The NSQIP criteria identified 96.2% of major but only 38.4% of minor complications. N2QOD performed better, but almost one-fourth (23.2%) of all patients with adverse outcomes, mostly minor, went unnoticed. For NNAP, a sample size of over 4200 patients per surgeon is required to detect a 50.0% increase in mortality rates between surgeons. The sample size required for reliable comparisons between the rates of complications exceeds 600 patients per center per year.CONCLUSIONThe implemented benchmarking programs in the United Kingdom and United States fail to identify a considerable number of complications in a high-volume center. Health care policy makers should be cautious as outcome comparisons between most centers and individual surgeons are questionable if based on the programs.

8. Mapping transactional analysis to clinical leadership models.

Authors Thiagarajan, Prarthana; McKimm, Judy
Source British journal of hospital medicine (London, England : 2005); Oct 2019; vol. 80 (no. 10); p. 600-604
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31589507
Database Medline
Abstract Leaders in today's NHS face the unenviable task of reconciling rising demand, frozen resource allocation and increasing accountability. As the NHS itself stands at the nexus of an unstable political and socioeconomic landscape, its future success relies largely on its ability to nurture excellence, to encourage open communication within and across health-care teams, and to inspire its workforce through exemplary leadership and followership. Key to these endeavours are clinicians on the 'shop floor', whose daily interactions with patients and staff help to shape prevailing culture and drive progress through quality improvement and leadership initiatives. This article considers how transactional analysis can be incorporated into professional development to help doctors develop insight into and optimize the use of different communication styles. The authors propose that a working knowledge of the transactional analysis ego state model can enhance effective communication, leadership and followership within and across health-care teams, with a view to optimizing patient outcomes and workforce interactions.

9. The Value of Innovation to Implementation Program (VI2P): A strategic approach to aligning and leveraging academic research and clinical care missions.

Authors Li, Jing; Williams, Mark V; Page, Cecilia; Cassis, Lisa; Kern, Philip A; DiPaola, Robert S
Source Learning health systems; Oct 2019; vol. 3 (no. 4); p. e10199
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31641687
Database Medline
Abstract ProblemInefficient implementation of evidence-based care garners increasing attention as a source of suboptimal value of clinical care, and integration of quality improvement methodology into clinical practice represents a potential solution. Academic medical centers (AMCs) often have expertise in implementation science, yet it is not leveraged effectively to solve operational inefficiencies or to rapidly implement evidence-based practices (EBPs).ApproachTo leverage in-house research expertise, the University of Kentucky (UK) College of Medicine and Center for Health Services Research (CHSR) launched a pilot awards program-Value of Innovation to Implementation Program (VI2P)-across its health system and six health professional colleges. Criteria for awards included a transdisciplinary research team and addressing health disparity issues faced by Kentucky. Outcome measures included EBP adoption and implementation and future funding.OutcomesThe VI2P produced 26 transdisciplinary teams that submitted letters of intent. Ten teams were invited to submit full proposal, and four projects were selected for award, spanning the entire continuum of health-impact research. Three nonawarded projects were implemented and prompted system redesign for an "implementation research living laboratory." A Workgroup for ImplementatioN Science (WINS) was established to forge transdisciplinary teams to pursue federal grant funding yielding proposals totaling $17.17 million submitted, $4.38 million awarded, and $5.97 million under review. Junior faculty were encouraged to pursue implementation science as a research focus.Next StepsUK WINS will continue serve as the hub for dissemination and implementation researchers at UK. On the basis of the enthusiasm expressed by multiple groups and many inquiries about the future training opportunities at UK, we plan to develop a tailored dissemination and implementation (D&I) training program to build research and practice capacity at UK.

10. Hospital Readmissions Among Post-acute Nursing Home Residents: Does Obesity Matter?

Authors Cai, Shubing; Wang, Sijiu; Mukamel, Dana B; Caprio, Thomas; Temkin-Greener, Helena
Source Journal of the American Medical Directors Association; Oct 2019; vol. 20 (no. 10); p. 1274
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 30853424
Database Medline
Abstract OBJECTIVESTo explore profiles of obese residents who receive post-acute care in nursing homes (NHs) and to assess the relationship between obesity and hospital readmissions and how it is modified by individual comorbidities, age, and type of index hospitalizations.DESIGNRetrospective cohort study.SETTING AND PARTICIPANTSMedicare fee-for-service beneficiaries who were newly admitted to free-standing US NHs after an acute inpatient episode between 2011 and 2014 (N = 2,323,019).MEASURESThe Minimum Data Set 3.0 were linked with Medicare data. The outcome variable was 30-day hospital readmission from an NH. Residents were categorized into 3 groups based on their body mass index (BMI): nonobese, mildly obese, moderate-to-severely obese. We tested the relationship between obesity and 30-day readmissions by fixed-effects logit models and stratified analyses by the type of index hospitalization and residents' age.RESULTSForty percent of the identified residents were admitted after a surgical episode, and the rest were admitted after a medical episode. The overall relationship between obesity and readmissions suggested that obesity was associated with higher risks of readmission among the oldest old (≥85 years) residents but with lower risks of readmission among the youngest group (65-74 years). After accounting for individual co-covariates, the association between obesity and readmissions among the oldest old residents became weaker; the adjusted odds ratio was 1.061 (P = .049) and 1.004 (P = .829) for moderate-to-severely obese patients with surgical and medical index hospitalizations, respectively. The protective effect of obesity among younger residents reduced after adjusting for covariates.CONCLUSIONS/RELEVANCEThe relationship between obesity and hospital readmission among post-acute residents could be affected by comorbidities, age, and the type of index hospitalization. Further studies are also warranted to understand how to effectively measure NH quality outcomes, including hospital readmissions, so that policies targeting at quality improvement can successfully achieve their goals without unintended consequences.

11. A systematic review of central-line-associated bloodstream infection (CLABSI) diagnostic reliability and error.

Authors Larsen, Emily N; Gavin, Nicole; Marsh, Nicole; Rickard, Claire M; Runnegar, Naomi; Webster, Joan
Source Infection control and hospital epidemiology; Oct 2019; vol. 40 (no. 10); p. 1100-1106
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31362804

Database Medline
Abstract OBJECTIVETo establish the reliability of the application of National Health and Safety Network (NHSN) central-line-associated bloodstream infection (CLABSI) criteria within established reporting systems internationally.DESIGNDiagnostic-test accuracy systematic review.METHODSWe conducted a search of Medline, SCOPUS, the Cochrane Library, CINAHL (EbscoHost), and PubMed (NCBI). Cohort studies were eligible for inclusion if they compared publicly reported CLABSI rates and were conducted by independent and expertly trained reviewers using NHSN/Centers for Disease Control (or equivalent) criteria. Two independent reviewers screened, extracted data, and assessed risk of bias using the QUADAS 2 tool. Sensitivity, specificity, negative and positive predictive values were analyzed.RESULTSA systematic search identified 1,259 publications; 9 studies were eligible for inclusion (n = 7,160 central lines). Publicly reported CLABSI rates were more likely to be underestimated (7 studies) than overestimated (2 studies). Specificity ranged from 0.70 (95% confidence interval [CI], 0.58-0.81) to 0.99 (95% CI, 0.99-1.00) and sensitivity ranged from 0.42 (95% CI, 0.15-0.72) to 0.88 (95% CI, 0.77-0.95). Four studies, which included a consecutive series of patients (whole cohort), reported CLABSI incidence between 9.8% and 20.9%, and absolute CLABSI rates were underestimated by 3.3%-4.4%. The risk of bias was low to moderate in most included studies.CONCLUSIONSOur findings suggest consistent underestimation of true CLABSI incidence within publicly reported rates, weakening the validity and reliability of surveillance measures. Auditing, education, and adequate resource allocation is necessary to ensure that surveillance data are accurate and suitable for benchmarking and quality improvement measures over time.REGISTRATIONProspectively registered with International prospective register of systematic reviews (PROSPERO ID CRD42015021989; June 7, 2015). https://www.crd.york.ac.uk/PROSPERO/display_record.php?ID%3dCRD42015021989.

12. Incidence and risk factors for important early morbidities associated with pediatric cardiac surgery in a UK population.

Authors Brown, Katherine L; Ridout, Deborah; Pagel, Christina; Wray, Jo; Anderson, David; Barron, David J; Cassidy, Jane; Davis, Peter J; Rodrigues, Warren; Stoica, Serban; Tibby, Shane; Utley, Martin; Tsang, Victor T
Source The Journal of thoracic and cardiovascular surgery; Oct 2019; vol. 158 (no. 4); p. 1185
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31353100
Database Medline
Abstract OBJECTIVEGiven excellent 30-day survival for pediatric cardiac surgery, other outcome measures are important. We aimed to study important early postoperative morbidities selected by stakeholders following a rigorous and evidenced-based process, with a view to identifying potential risk factors.METHODSThe incidence of selected morbidities was prospectively measured for 3090 consecutive pediatric cardiac surgical admissions in 5 UK centers between October 2015 and June 2017. The relationship between the candidate risk factors and the incidence of morbidities was explored using multiple regressions. Patient survival, a secondary outcome, was checked at 6 months.RESULTSA total of 675 (21.8%) procedure episodes led to at least 1 of the following: acute neurologic event, unplanned reoperation, feeding problems, renal replacement therapy, major adverse events, extracorporeal life support, necrotizing enterocolitis, surgical infection, or prolonged pleural effusion. The highest adjusted odds ratio of morbidity was in neonates compared with children, 5.26 (95% confidence interval, 3.90-7.06), and complex heart diseases (eg, hypoplastic left heart), 2.14 (95% confidence interval, 1.41-3.24) compared with low complexity (eg, atrial septal defect, P < .001 for all). Patients with any selected morbidity had a 6-month survival of 88.2% (95% confidence interval, 85.4-90.6) compared with 99.3% (95% confidence interval, 98.9-99.6) with no defined morbidity (P < .001).CONCLUSIONSEvaluation of postoperative morbidity provides important information over and above 30-day survival and should become a focus for audit and quality improvement. Our results have been used to initiate UK-based audit for 5 of these 9 morbidities, co-develop software for local monitoring of these morbidities, and parent information about these morbidities.

13. Modelling the costs and consequences of reducing healthcare-associated infections by improving hand hygiene in an average hospital in England.

Authors Guest, Julian F; Keating, Tomas; Gould, Dinah; Wigglesworth, Neil
Source BMJ open; Oct 2019; vol. 9 (no. 10); p. e029971
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31575536
Database Medline

Abstract OBJECTIVETo assess the potential clinical and economic impact of introducing an electronic audit and feedback system into current practice to improve hand hygiene compliance in a hypothetical general hospital in England, to reduce the incidence of healthcare-associated infections (HCAIs).METHODSDecision analysis estimated the impact of introducing an electronic audit and feedback system into current practice to improve hand hygiene compliance among front-line healthcare practitioners (HCPs).RESULTSThe model assumed 4.7% of adult inpatients (ie, ≥18 years of age) and 1.72% of front-line HCPs acquire a HCAI in current practice. The model estimated that if use of the electronic audit and feedback system could lead to a reduction in the incidence of HCAIs of between 5% and 25%, then the annual number of HCAIs avoided could range between 184 and 921 infections per hospital and HCAI-related mortality could range between 6 and 31 deaths per annum per hospital. Additionally, up to 86 days of absence among front-line HCPs could be avoided and up to 7794 hospital bed days could be released for alternative use. Accordingly, the total annual hospital cost attributable to HCAIs could be reduced by between 3% and 23%, depending on the effectiveness of the electronic audit and feedback system. If introduction of the electronic audit and feedback system into current practice could lead to a reduction in the incidence of HCAIs by at least 15%, it would have a ≥0.75 probability of affording the National Health Service (NHS) a cost-effective intervention.CONCLUSIONIf the introduction of the electronic audit and feedback system into current practice in a hypothetical general hospital in England can improve hand hygiene compliance among front-line HCPs leading to a reduction in the incidence of HCAIs by ≥15%, it would potentially afford the NHS a cost-effective intervention.

14. Routine use of feeding jejunostomy in oesophageal cancer resections: results of a survey in England.

Authors Tham, J C; Dovell, G; Berrisford, R G; Humphreys, M L; Wheatley, T J; Sanders, G; Ariyarathenam, A V
Source Diseases of the esophagus : official journal of the International Society for Diseases of the Esophagus; Oct 2019
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31608935
Database Medline
Abstract Nutrition and post-operative feeding in oesophageal cancer resections for enhanced recovery remain a controversial subject. Feeding jejunostomy tubes (FJT) have been used post-operatively to address the subject but evidence to support its routine use is contentious. There is currently no data on FJT use in England for oesophageal cancer resections. Knowledge regarding current FJT usage, and rationale for its use may provide a snapshot of the trend and current standing on FJT use by resectional units in England. A standardised survey was sent electronically to all oesophageal resectional units in the United Kingdom (UK) between October 2016 and January 2018. In summary, the questionnaire probes into current FJT use, rationale for its usage, consideration of cessation of its use, and rationale of cessation of its use for units not using FJT. The resectional units were identified using the National Oesophago-Gastric Cancer Audit (NOGCA) progress report 2016 and 1 selected resectional unit from Northern Ireland, Scotland, and Wales, respectively. Performance data of those units were collected from the 2017 NOGCA report. Out of 40 units that were eligible, 32 (80.0%) centres responded. The responses show a heterogeneity of FJT use across the resectional centres. Most centres (56.3%) still place FJT routinely with 2 of 18 (11.1%) were considering stopping its routine use. FJT was considered a mandatory adjunct to chemotherapy in 3 (9.4%) centres. FJT was not routinely used in 9 (28.1%) of centres with 5 of 9 (55.6%) reported previous complications and 4 of 9 (44.4%) cited using other forms of nutrition supplementation as factors for discontinuing FJT use. There were 5 (15.6%) centres with divided practice among its consultants. Of those 2 of 5 (40.0%) were considering stopping FJT use, and hence, a total of 4 of 23 (17.4%) of units are now considering stopping routine FJT use. In conclusion, the wider practice of FJT use in the UK remains heterogenous. More research regarding the optimal post-operative feeding regimen needs to be undertaken.

15. An audit of dementia education and training in UK health and social care: a comparison with national benchmark standards.

Authors Smith, S J; Parveen, S; Sass, C; Drury, M; Oyebode, J R; Surr, C A
Source BMC health services research; Oct 2019; vol. 19 (no. 1); p. 711
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31638974
Database Medline

Abstract BACKGROUNDDespite people living with dementia representing a significant proportion of health and social care users, until recently in the United Kingdom (UK) there were no prescribed standards for dementia education and training. This audit sought to review the extent and nature of dementia education and training offered to health and social care staff in the UK against the standards described in the 2015 Dementia Training Standards Framework, which describes the knowledge and skills required of the UK dementia workforce.METHODSThis audit presents national data concerning the design, delivery, target audience, length, level, content, format of training, number of staff trained and frequency of delivery within existing dementia training programmes offered to health and social care staff. The Dementia Training Standards Framework was used as a reference for respondents to describe the subjects and learning outcomes associated with their training.RESULTSThe findings are presented from 614 respondents offering 386 training packages, which indicated variations in the extent and quality of training. Many training packages addressed the subjects of 'person-centred care', 'communication', 'interaction and behaviour in dementia care', and 'dementia awareness'. Few training packages addressed subjects concerning 'pharmacological interventions in dementia care', 'leadership' and 'end of life care'. Fewer than 40% of The Dementia Training Standards Framework learning outcomes targeted to staff with regular contact with people with dementia or in leadership roles were covered by the reported packages. However, for training targeted at increasing dementia awareness more than 70% of the learning outcomes identified in The Dementia Training Standards Framework were addressed. Many training packages are not of sufficient duration to derive impact; although the majority employed delivery methods likely to be effective.CONCLUSIONSThe development of new and existing training and education should take account of subjects that are currently underrepresented and ensure that training reflects the Training Standard Framework and evidence regarding best practice for delivery. Lessons regarding the limitations of training in the UK serve as a useful illustration of the challenge of implementing national dementia training standards; particularly for countries who are developing or have recently implemented national dementia strategies.

16. Pulmonary embolism following complex trauma: UK MTC observational study.

Authors Glover, Thomas E; Sumpter, Joanna E; Ercole, Ari; Newcombe, Virginia F J; Lavinio, Andrea; Carrothers, Andrew D; Menon, David K; O'Leary, Ronan
Source Emergency medicine journal : EMJ; Oct 2019; vol. 36 (no. 10); p. 608-612
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31551302
Database Medline

Abstract OBJECTIVESTo describe the incidence of pulmonary embolism (PE) in a critically ill UK major trauma centre (MTC) patient cohort.METHODSA retrospective, multidataset descriptive study of all trauma patients requiring admission to level 2 or 3 care in the East of England MTC from 1 November 2014 to 1 May 2017. Data describing demographics, the nature and extent of injuries, process of care, timing of PE prophylaxis, tranexamic acid (TXA) administration and CT scanner type were extracted from the Trauma Audit and Research Network database and hospital electronic records. PE presentation was categorised as immediate (diagnosed on initial trauma scan), early (within 72 hours of admission but not present initially) and late (diagnosed after 72 hours).RESULTSOf the 2746 trauma patients, 1039 were identified as being admitted to level 2 or 3 care. Forty-eight patients (4.6%) were diagnosed with PE during admission with 14 immediate PEs (1.3%). Of 32.1% patients given TXA, 6.3% developed PE compared with 3.8% without TXA (p=0.08).CONCLUSIONThis is the largest study of the incidence of PE in UK MTC patients and describes the greatest number of immediate PEs in a civilian complex trauma population to date. Immediate PEs are a rare phenomenon whose clinical importance remains unclear. Tranexamic acid was not significantly associated with an increase in PE in this population following its introduction into the UK trauma care system.

17. National British Orthodontic Society (BOS) Orthognathic Audit 2017-2018.

Authors Ireland, Anthony J; Atack, Nicola E; Cunningham, Susan J; House, Kate; Cobourne, Martyn; Hunt, Nigel P; Sherriff, Martyn; Sandy, Jonathan R
Source Journal of orthodontics; Oct 2019 ; p. 1465312519879934
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31595815
Database Medline

Abstract OBJECTIVETo carry out a UK national clinical audit of orthognathic acceptance criteria and information provided to orthognathic patients before treatment.DESIGNNational clinical audit.SETTINGData collected using Bristol Online Surveys.PARTICIPANTSSixty-nine UK hospital orthodontic departments submitted data.METHODSData were collected at two time points using Bristol Online Surveys over a period of 12 months. These were before treatment at the first multidisciplinary clinic (MDT) and immediately after surgery. The data collected included: Index of Orthognathic Functional Treatment Need (IOFTN); Index of Orthodontic Treatment Need (IOTN); age; previous orthodontic treatment; attendance at an MDT; treatment times; and information provision.RESULTSEighty-five units agreed to take part in the audit with 69 submitting data, giving a response rate of 81%. The data from 3404 patients were uploaded, 2263 before treatment and 1141 immediately after surgery. Of patients, 91.07% had an IOFTN score of 4 or 5 and 88.73% had an IOTN score of 4 or 5. The mean age at the first MDT was 22 years in the first cohort and 21 years and 4 months in the second immediate post-surgery cohort. Of patients, 37.93% had undergone some form of previous orthodontic treatment, but only 0.28% had undergone previous orthognathic treatment; 96.93% had an MDT confirm that orthodontic treatment by itself was insufficient to adequately correct their functional symptoms. The average treatment time from bond up to surgery was 2 years and 6 months. With respect to information provision, patients received information from a number of sources, principally the British Orthodontic Society (BOS) patient information leaflets and the BOS website Your Jaw Surgery.CONCLUSIONSIn the UK, the majority of orthognathic cases fulfil the criteria for acceptance for NHS-funded orthognathic treatment, as outlined by the Chief Dental Officer's interim guidance on orthognathic treatment. This suggests any prior approval process would not be a good use of NHS resources in the commissioning of orthognathic treatment.

18. Variation in responsiveness to warranted behaviour change among NHS clinicians: novel implementation of change detection methods in longitudinal prescribing data.

Authors Walker, Alex J; Pretis, Felix; Powell-Smith, Anna; Goldacre, Ben
Source BMJ (Clinical research ed.); Oct 2019; vol. 367 ; p. l5205
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31578187
Database Medline
Abstract OBJECTIVESTo determine how clinicians vary in their response to new guidance on existing or new interventions, by measuring the timing and magnitude of change at healthcare institutions.DESIGNAutomated change detection in longitudinal prescribing data.SETTINGPrescribing data in English primary care.PARTICIPANTSEnglish general practices.MAIN OUTCOME MEASURESIn each practice the following were measured: the timing of the largest changes, steepness of the change slope (change in proportion per month), and magnitude of the change for two example time series (expiry of the Cerazette patent in 2012, leading to cheaper generic desogestrel alternatives becoming available; and a change in antibiotic prescribing guidelines after 2014, favouring nitrofurantoin over trimethoprim for uncomplicated urinary tract infection (UTI)).RESULTSSubstantial heterogeneity was found between institutions in both timing and steepness of change. The range of time delay before a change was implemented was large (interquartile range 2-14 months (median 8) for Cerazette, and 5-29 months (18) for UTI). Substantial heterogeneity was also seen in slope following a detected change (interquartile range 2-28% absolute reduction per month (median 9%) for Cerazette, and 1-8% (2%) for UTI). When changes were implemented, the magnitude of change showed substantially less heterogeneity (interquartile range 44-85% (median 66%) for Cerazette and 28-47% (38%) for UTI).CONCLUSIONSSubstantial variation was observed in the speed with which individual NHS general practices responded to warranted changes in clinical practice. Changes in prescribing behaviour were detected automatically and robustly. Detection of structural breaks using indicator saturation methods opens up new opportunities to improve patient care through audit and feedback by moving away from cross sectional analyses, and automatically identifying institutions that respond rapidly, or slowly, to warranted changes in clinical practice.

19. New child safeguarding arrangements for England.

Authors Green, Peter
Source BMJ (Clinical research ed.); Oct 2019; vol. 367 ; p. l5813
Publication Date Oct 2019
Publication Type(s) Editorial
PubMedID 31594779
Database Medline

20. Type A aortic dissection in patients over the age of seventy in the UK.

Authors Bashir, Mohamad; Harky, Amer; Shaw, Matthew; Adams, Benjamin; Oo, Aung
Source Journal of cardiac surgery; Oct 2019
Publication Date Oct 2019
Publication Type(s) Journal Article

PubMedID 31618487
Database Medline
Abstract OBJECTIVESRecent guidelines have stated that age alone should not be a limiting factor for offering life-saving surgery to patients with acute type A dissection (ATAD). The objective of this study was to review the outcomes of patients above the age of 70 undergoing surgery for type A aortic dissection (TAAD) in the UK.METHODSProspectively collected data of procedures undertaken on patients with an age of 70 years or more were extracted from the National Institute for Cardiovascular Outcomes Research (NICOR) National Adult Cardiac Surgery Audit registry. All operations were performed in England and Wales between 1 April 2007 and 31 March 2013. The primary outcome for this study was in-hospital mortality. The secondary outcome was mid-term mortality followed up to 5 years.RESULTSA total of 507 patients were included in the study. The highest number of procedures performed by a single surgeon during the study period was 12. The overall in-hospital mortality rate for all ATAD patients aged 70 or over was 22.5% (114 patients); the stroke rate was 11% (57) and postop dialysis rate 15% (76).CONCLUSIONSATAD is a life-threatening condition with a high mortality rate if left untreated. Our results show that surgery for ATAD in patients over 70 is feasible with acceptable mortality rates. However, similar to previous studies, rates of stroke in older patients may be higher. The present study supports the notion that age should not be a discriminating factor in operating on patients with TAAD.

21. Admission patterns and survival from Status Epilepticus in Critical Care in the United Kingdom: An analysis of the Intensive Care National Audit & Research Centre (ICNARC) Case Mix Programme database.

Authors Damian, Maxwell; Ben-Shlomo, Yoav; Howard, Robin; Harrison, David A
Source European journal of neurology; Oct 2019
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31621142
Database Medline
Abstract BACKGROUNDFactors influencing outcome after Critical Care Unit (CCU) for patients with status epilepticus (SE) are poorly understood. We examined survival for these patients to establish (a) whether the risk of mortality has changed over time and (b) whether admission to different unit types affects mortality risk over and above other risk factors.METHODSWe analysed the Intensive Care National Audit & Research Centre (ICNARC) database and the Case Mix Programme Database (CMPD) (January 2001 - December 2016). Units were defined as neuro-CCU (NCCU), general CCUs with 24-hr neurological support (GCCU-N) or general CCU with limited neurological support (GCCU-L).RESULTSThere were 35,595 CCU cases of SE with a threefold increase over time (4,739 in 2001-2004 to 14,166 in 2013-2016). More recent admissions were older and were more often unsedated on admission. Mortality declined for all units though this was more marked for NCCUs (8·1% in 2001-2004 to 4.4% in 2013-2016 compared to 5.1% and 4.1% for GCCU-L). Acute hospital mortality was 2-3 times higher than CCU mortality although this has also declined with time. GCCU-L appeared to have lower mortality that NCCUs (OR 0.84, 95% CI 0.72, 0.98) but after post-hoc adjustment for case mix there were no differences. Older age and markers of morbidity of seriousness were all associated with increased mortality risk.CONCLUSIONSThe number of patients admitted to CCU for SE is rising but critical care and acute hospital mortality is decreasing. Patients treated in NCCU have higher mortality but this is explicable by more severe underlying disease.

22. Stage III Non-small Cell Lung Cancer Management in England.

Authors Adizie, J B; Khakwani, A; Beckett, P; Navani, N; West, D; Woolhouse, I; Harden, S V
Source Clinical oncology (Royal College of Radiologists (Great Britain)); Oct 2019; vol. 31 (no. 10); p. 688-696
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31514942
Database Medline

Abstract AIMSWe present the first analysis of the management and outcomes of stage III non-small cell lung cancer (NSCLC) conducted in England using National Lung Cancer Audit data.MATERIALS AND METHODSPatients diagnosed with stage III NSCLC in 2016 were identified. Linked datasets (including Hospital Episode Statistics, the National Radiotherapy Dataset, the Systemic Anti-Cancer Dataset, pathology reports and death certificate data) were used to categorise the treatment received. Kaplan-Meier survival curves were obtained, with survival defined from the date of diagnosis to the date of death.RESULTSIn total, 6276 cases of stage III NSCLC were analysed: 3827 stage IIIA and 2449 stage IIIB; 1047 (17%) patients were treated with radical radiotherapy with 676 (11%) of these also receiving chemotherapy. Twenty per cent of patients with stage IIIA disease underwent surgery, with half of these also receiving chemotherapy, predominantly delivered in the adjuvant setting. Of note, 2148 (34%) patients received palliative-intent treatment and 2265 (36%) received no active anti-cancer treatment. The 1-year survival was 32.9% (37.4% for stage IIIA), with the highest survival seen for those patients receiving chemotherapy and surgery.CONCLUSIONSWe highlight important gaps in the optimal care of patients with stage III NSCLC in England. Multimodality treatment with either surgery or radical radiotherapy combined with chemotherapy was delivered to less than one-fifth of patients, even though these regimens are considered optimal. Timely access to specialist resources and staff, the practice of effective shared decision making and challenging preconceptions have the potential to optimise management.

23. Interpreting and reporting fracture classification and operation type in hip fracture: implications for research studies and routine national audits.

Authors Masters, James; Metcalfe, David; Parsons, Nick R; Achten, Juul; Griffin, Xavier L; Costa, Matt L; WHiTE Collaborative Investigators
Source The bone & joint journal; Oct 2019; vol. 101
Publication Date Oct 2019
Publication Type(s) Multicenter Study Journal Article
PubMedID 31564146
Database Medline

Abstract AIMSThis study explores data quality in operation type and fracture classification recorded as part of a large research study and a national audit with an independent review.PATIENTS AND METHODSAt 17 centres, an expert surgeon reviewed a randomly selected subset of cases from their centre with regard to fracture classification using the AO system and type of operation performed. Agreement for these variables was then compared with the data collected during conduct of the World Hip Trauma Evaluation (WHiTE) cohort study. Both types of surgery and fracture classification were collapsed to identify the level of detail of reporting that achieved meaningful agreement. In the National Hip Fracture Database (NHFD), the types of operation and fracture classification were explored to identify the proportion of "highly improbable" combinations.RESULTSThe records were reviewed for 903 cases. Agreement for the subtypes of extracapsular fracture was poor; most centres achieved no better than "fair" agreement. When the classification was collapsed to a single option for "extracapsular" fracture, only four centres failed to have at least "moderate" agreement. There was only "moderate" agreement for the subtypes of intracapsular fracture, which improved to "substantial" when collapsed to "intracapsular". Subtrochanteric fracture types were well reported with "substantial" agreement. There was near "perfect" agreement for internal fixation procedures. "Perfect" or "substantial" agreement was achieved when the type of arthroplasty surgery was reported at the level of "hemiarthroplasty" and "total hip replacement". When reviewing data submitted to the NHFD, a minimum of 5.2% of cases contained "highly improbable" procedures for the stated fracture classification.CONCLUSIONThe complexity of collecting fracture classification data at a national scale compromises the accuracy with which detailed classification systems can be reported. Data around type of surgery performed show similar tendencies. Data capture, reporting, and interpretation in future studies must take this into account. Cite this article: Bone Joint J 2019;101-B:1292-1299.

24. GWAS Identifies 44 Independent Associated Genomic Loci for Self-Reported Adult Hearing Difficulty in UK Biobank.

Authors Wells, Helena R R; Freidin, Maxim B; Zainul Abidin, Fatin N; Payton, Antony; Dawes, Piers; Munro, Kevin J; Morton, Cynthia C; Moore, David R; Dawson, Sally J; Williams, Frances M K
Source American journal of human genetics; Oct 2019; vol. 105 (no. 4); p. 788-802
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31564434
Database Medline

Abstract Age-related hearing impairment (ARHI) is the most common sensory impairment in the aging population; a third of individuals are affected by disabling hearing loss by the age of 65. It causes social isolation and depression and has recently been identified as a risk factor for dementia. The genetic risk factors and underlying pathology of ARHI are largely unknown, meaning that targets for new therapies remain elusive, yet heritability estimates range between 35% and 55%. We performed genome-wide association studies (GWASs) for two self-reported hearing phenotypes, using more than 250,000 UK Biobank (UKBB) volunteers aged between 40 and 69 years. Forty-four independent genome-wide significant loci (p < 5E-08) were identified, considerably increasing the number of established trait loci. Thirty-four loci are novel associations with hearing loss of any form, and only one of the ten known hearing loci has a previously reported association with an ARHI-related trait. Gene sets from these loci are enriched in auditory processes such as synaptic activities, nervous system processes, inner ear morphology, and cognition, while genetic correlation analysis revealed strong positive correlations with multiple personality and psychological traits for the first time. Immunohistochemistry for protein localization in adult mouse cochlea implicate metabolic, sensory, and neuronal functions for NID2, CLRN2, and ARHGEF28. These results provide insight into the genetic landscape underlying ARHI, opening up novel therapeutic targets for further investigation. In a wider context, our study also highlights the viability of using self-report phenotypes for genetic discovery in very large samples when deep phenotyping is unavailable.

25. National Asthma and COPD Audit Programme and the NHS Long Term Plan.

Authors Sinha, Ian P; Calvert, James; Hickman, Katherine C; Hurst, John R; McMillan, Viktoria; Quint, Jennifer K; Singh, Sally J; Roberts, C Michael
Source The Lancet. Respiratory medicine; Oct 2019; vol. 7 (no. 10); p. 841
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31556397
Database Medline

26. Is the use of e-cigarettes for smoking cessation associated with alcohol consumption? A population-level survey of successful quitters in England.

Authors Jackson, Sarah E; Beard, Emma; Michie, Susan; West, Robert; Brown, Jamie
Source Addictive behaviors; Oct 2019; vol. 101 ; p. 106138
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31645002
Database Medline
Abstract OBJECTIVETo examine associations between the use of e-cigarettes for smoking cessation and levels of alcohol consumption, high-risk drinking, and attempts to cut down alcohol consumption compared with use of nicotine replacement therapy (NRT) or no aid.METHODSCross-sectional survey of adults (≥16 years) in England. The sample included a total of 961 people who had quit smoking with the use of either e-cigarettes (n = 425), NRT (n = 116), or no aid (n = 421) within the past year and were still abstinent at the survey. Drinking behaviour was assessed with the AUDIT.RESULTSMean (SD) alcohol consumption among those who quit smoking with e-cigarettes, NRT, and no aid was 7.78 (13.41), 7.12 (13.85), and 5.55 (8.70) units/week, respectively. The prevalence of high-risk drinking was 43.3% (n = 184), 32.2% (n = 37), and 36.8% (n = 155), respectively. Among high-risk drinkers, the prevalence of attempts to cut down alcohol consumption was 22.3% (n = 41), 18.9% (n = 7), and 27.7% (n = 43), respectively. After adjustment for covariates, those who quit with e-cigarettes had significantly higher alcohol consumption than those who quit unaided (B = 1.69, 95%CI 0.21-3.17), but there was no significant difference relative to those who quit with NRT. Differences in high-risk drinking and attempts to cut down were not significant, but Bayes factors indicated the data were insensitive (range: 0.47-0.95).CONCLUSIONSRecent ex-smokers who used e-cigarettes to help them quit consumed around two more units of alcohol each week than those who quit unaided, but their alcohol consumption was similar to those who quit with NRT. Data on differences in high-risk drinking and attempts to cut down alcohol consumption among high-risk drinkers were inconclusive.

27. Long-term antithrombotic therapy and risk of intracranial haemorrhage from cerebral cavernous malformations: a population-based cohort study, systematic review, and meta-analysis.

Authors Zuurbier, Susanna M; Hickman, Charlotte R; Tolias, Christos S; Rinkel, Leon A; Leyrer, Rebecca; Flemming, Kelly D; Bervini, David; Lanzino, Giuseppe; Wityk, Robert J; Schneble, Hans-Martin; Sure, Ulrich; Al-Shahi Salman, Rustam; Scottish Audit of Intracranial Vascular Malformations Steering Committee
Source The Lancet. Neurology; Oct 2019; vol. 18 (no. 10); p. 935-941
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31401075
Database Medline

Abstract BACKGROUNDAntithrombotic (anticoagulant or antiplatelet) therapy is withheld from some patients with cerebral cavernous malformations, because of uncertainty around the safety of these drugs in such patients. We aimed to establish whether antithrombotic therapy is associated with an increased risk of intracranial haemorrhage in adults with cerebral cavernous malformations.METHODSIn this population-based, cohort study, we used data from the Scottish Audit of Intracranial Vascular Malformations, which prospectively identified individuals aged 16 years and older living in Scotland who were first diagnosed with a cerebral cavernous malformation during 1999-2003 or 2006-10. We compared the association between use of antithrombotic therapy after first presentation and the occurrence of intracranial haemorrhage or persistent or progressive focal neurological deficit due to the cerebral cavernous malformations during up to 15 years of prospective follow-up with multivariable Cox proportional hazards regression assessed in all individuals identified in the database. We also did a systematic review and meta-analysis, in which we searched Ovid MEDLINE and Embase from database inception to Feb 1, 2019, to identify comparative studies to calculate the intracranial haemorrhage incidence rate ratio according to antithrombotic therapy use. We then generated a pooled estimate using the inverse variance method and a random effects model.FINDINGSWe assessed 300 of 306 individuals with a cerebral cavernous malformation who were eligible for study. 61 used antithrombotic therapy (ten [16%] of 61 used anticoagulation) for a mean duration of 7·4 years (SD 5·4) during follow-up. Antithrombotic therapy use was associated with a lower risk of subsequent intracranial haemorrhage or focal neurological deficit (one [2%] of 61 vs 29 [12%] of 239, adjusted hazard ratio [HR] 0·12, 95% CI 0·02-0·88; p=0·037). In a meta-analysis of six cohort studies including 1342 patients, antithrombotic therapy use was associated with a lower risk of intracranial haemorrhage (eight [3%] of 253 vs 152 [14%] of 1089; incidence rate ratio 0·25, 95% CI 0·13-0·51; p<0·0001; I2=0%).INTERPRETATIONAntithrombotic therapy use is associated with a lower risk of intracranial haemorrhage or focal neurological deficit from cerebral cavernous malformations than avoidance of antithrombotic therapy. These findings provide reassurance about safety for clinical practice and require further investigation in a randomised controlled trial.FUNDINGUK Medical Research Council, Chief Scientist Office of the Scottish Government, The Stroke Association, Cavernoma Alliance UK, and the Remmert Adriaan Laan Foundation.

28. Minimal and Mild Hearing Loss in Children: Association with Auditory Perception, Cognition, and Communication Problems.

Authors	Moore, David R; Zobay, Oliver; Ferguson, Melanie A
Source	Ear and hearing; Oct 2019
Publication Date	Oct 2019
Publication Type(s)	Journal Article
PubMedID	31633598
Database	Medline

Abstract OBJECTIVES"Minimal" and "mild" hearing loss are the most common but least understood forms of hearing loss in children. Children with better ear hearing level as low as 30 dB HL have a global language impairment and, according to the World Health Organization, a "disabling level of hearing loss." We examined in a population of 6- to 11-year-olds how hearing level ≤40.0 dB HL (1 and 4 kHz pure-tone average, PTA, threshold) is related to auditory perception, cognition, and communication.DESIGNSchool children (n = 1638) were recruited in 4 centers across the United Kingdom. They completed a battery of hearing (audiometry, filter width, temporal envelope, speech-in-noise) and cognitive (IQ, attention, verbal memory, receptive language, reading) tests. Caregivers assessed their children's communication and listening skills. Children included in this study (702 male; 752 female) had 4 reliable tone thresholds (1, 4 kHz each ear), and no caregiver reported medical or intellectual disorder. Normal-hearing children (n = 1124, 77.1%) had all 4 thresholds and PTA <15 dB HL. Children with ≥15 dB HL for at least 1 threshold, and PTA <20 dB (n = 245, 16.8%) had minimal hearing loss. Children with 20 ≤PTA <40 dB HL (n = 88, 6.0%) had mild hearing loss. Interaural asymmetric hearing loss (|left PTA - right PTA| ≥10 dB) was found in 28.9% of those with minimal and 39.8% of those with mild hearing loss.RESULTSSpeech perception in noise, indexed by vowel-consonant-vowel pseudoword repetition in speech-modulated noise, was impaired in children with minimal and mild hearing loss, relative to normal-hearing children. Effect size was largest (d = 0.63) in asymmetric mild hearing loss and smallest (d = 0.21) in symmetric minimal hearing loss. Spectral (filter width) and temporal (backward masking) perceptions were impaired in children with both forms of hearing loss, but suprathreshold perception generally related only weakly to PTA. Speech-in-noise (nonsense syllables) and language (pseudoword repetition) were also impaired in both forms of hearing loss and correlated more strongly with PTA. Children with mild hearing loss were additionally impaired in working memory (digit span) and reading, and generally performed more poorly than those with minimal loss. Asymmetric hearing loss produced as much impairment overall on both auditory and cognitive tasks as symmetric hearing loss. Nonverbal IQ, attention, and caregiver-rated listening and communication were not significantly impaired in children with hearing loss. Modeling suggested that 15 dB HL is objectively an appropriate lower audibility limit for diagnosis of hearing loss.CONCLUSIONSHearing loss between 15 and 30 dB PTA is, at ~20%, much more prevalent in 6- to 11-year-old children than most current estimates. Key aspects of auditory and cognitive skills are impaired in both symmetric and asymmetric minimal and mild hearing loss. Hearing loss <30 dB HL is most closely related to speech perception in noise, and to cognitive abilities underpinning language and reading. The results suggest wider use of speech-in-noise measures to diagnose and assess management of hearing loss and reduction of the clinical hearing loss threshold for children to 15 dB HL.

29. Machine learning methods applied to audit of surgical outcomes after treatment for cancer of the head and neck.

Authors Tighe, D; Lewis-Morris, T; Freitas, A
Source The British journal of oral & maxillofacial surgery; Oct 2019; vol. 57 (no. 8); p. 771-777
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31358374
Database Medline
Abstract Most surgical specialties have attempted to address concerns about unfair comparison of outcomes by "risk-adjusting" data to benchmark specialty-specific outcomes that are indicative of the quality of care. We are building on previous work in head and neck surgery to address the current need for a robust validated means of risk adjustment. A dataset of care episodes, which were recorded as a clinical audit of complications after operations for squamous cell carcinoma (SCC) of the head and neck (n=1254), was analysed with the Waikarto Environment for Knowledge Analysis (WEKA) machine learning tool. This produced 4 classification models that could predict complications using data on the preoperative demographics of the patients, operation, functional status, and tumour stage. Three of them performed acceptably: one that predicted "any complication" within 30 days (area under the receiver operating characteristic curve (AUROC) 0.72), one that predicted severe complications (Clavien-Dindo grade 3 or above) within 30 days (AUROC 0.70), and one that predicted a prolonged duration of hospital stay of more than 15 days, (AUROC 0.81). The final model, which was developed on a subgroup of patients who had free tissue transfer (n=443), performed poorly (AUROC 0.59). Subspecialty groups within oral and maxillofacial surgery are seeking metrics that will allow a meaningful comparison of the quality of care delivered by surgical units in the UK. For these metrics to be effective they must show variation between units and be amendable to change by service personnel. Published baseline data must also be available. They should be modelled effectively so that meaningful comparison, which takes account of variations in the complexity of the patients' needs or care, is possible.

30. Acute transient psychotic disorder precipitated by Brexit vote.

Authors Katshu, Mohammad Zia Ul Haq
Source BMJ case reports; Oct 2019; vol. 12 (no. 10)
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31575521
Database Medline
Abstract A man in his 40s was brought to the accident and emergency department in an acute psychotic state, 3 weeks after the European Union referendum results in the UK were declared. His mental health had deteriorated rapidly following the announcement of the results, with significant concerns about Brexit. He presented as agitated, confused and thought disordered. He had auditory hallucinations, and paranoid, referential, misidentification and bizarre delusions. He recovered completely within 2 weeks after a brief admission and treatment with olanzapine. He had experienced a similar episode of much less severity 13 years previously after major work related stress which resolved completely within a few days. He was experiencing stress related to work and family prior to the current episode which could potentially have been a contributory factor. Political events can act as major psychological stressors and have a significant impact on the mental health of people, especially those with a predisposition to develop mental illness.

31. Epidemiology of trauma in France: mortality and risk factors based on a national medico-administrative database.

Authors Bège, Thierry; Pauly, Vanessa; Orleans, Veronica; Boyer, Laurent; Leone, Marc
Source Anaesthesia, critical care & pain medicine; Oct 2019; vol. 38 (no. 5); p. 461-468
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 30807878
Database Medline

Abstract INTRODUCTIONIn industrialised countries, trauma is a public health challenge. Despite disposing of a highly evolved and complex health care system, France does not dispose of a national trauma registry or trauma system. Little is known about the epidemiology of trauma in France. This study aims at describing, using the national billing database, the epidemiology of French trauma.METHODSA retrospective population-based cohort study has been conducted on trauma patients in France using the National Hospital Discharge Data Set Database for 2016. Patients were selected using the Trauma Audit and Research Network (TARN) criteria, inspired by the UK trauma system. Sociodemographic, clinical information and hospital characteristics were collected. The main outcome was 30-day mortality.RESULTSAmong 1,144,596 patients hospitalised in French hospitals for trauma in 2016, 144,058 patients were included based on the TARN criteria. The mean age of the patients was 64 years (± 24). Women (50.8%) were over-represented among patients older than 75 years. The 30-day mortality was 5.9%, and regional variations were identified. In multivariate analysis, age, gender, area-level deprivation, injury localisation, co-morbidities, injury severity, transfusion, surgery, and ICU admission were independent factors of risk for 30-day mortality. Age and injury severity were the stronger predictors for mortality and area-level deprivation was associated with higher mortality.CONCLUSIONThe national burden of trauma care was assessed with medico-administrative data in a country without a trauma system. The 30-day mortality associated with trauma in France was around 6%, with regional variations.

32. Predictive Validity, Diagnostic Accuracy and Test-Retest Reliability of the Strength of Urges to Drink (SUTD) Scale.

Authors Beard, Emma; Brown, Jamie; West, Robert; Drummond, Colin; Kaner, Eileen; Michie, Susan
Source International journal of environmental research and public health; Oct 2019; vol. 16 (no. 19)
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 31581626
Database Medline

Abstract This study compared the 1-item Strength of Urges to Drink (SUTD) scale with the 10-item Alcohol Use Disorders Identification Test (AUDIT) on (i) test-retest reliability, (ii) predictive validity, and (iii) diagnostic accuracy. Data come from 2960 participants taking part in the Alcohol Toolkit Study (ATS), a monthly population survey of adults in England. The long-term test-retest reliability of the SUTD was 'fair', but lower than that for the AUDIT (Kappaweighted 0.24 versus 0.49). Individuals with "slight/moderate" urges to drink had higher odds of reporting an attempt to cut down relative to those not experiencing urges (adjusted odds ratios (AdjORs) 1.78 95% confidence interval (CI) 1.43-2.22 and 1.54 95% CI 1.20-1.96). Drinkers reporting "moderate/slight/strong" urges to drink had mean change in consumption scores which were 0.16 (95% CI -0.31 to -0.02), 0.40 (95% CI -0.56 to -0.24) and 0.37 (95% CI -0.69 to -0.05) units lower than those reporting no urges. For all outcomes, strong associations were found with AUDIT scores. The accuracy of the SUTD for discriminating between drinkers who did and did not reduce their consumption was 'acceptable', and similar to that for the AUDIT (ROCAUC 0.6). The AUDIT had better diagnostic accuracy in predicting change in alcohol consumption. The SUTD may be an efficient dynamic measure of urges to drink for population surveys and studies assessing the impact of alcohol-reduction interventions.

33. The Reality of Pain Scoring in the Emergency Department: Findings From a Multiple Case Study Design.

Authors Sampson, Fiona C; Goodacre, Steve W; O'Cathain, Alicia
Source Annals of emergency medicine; Oct 2019; vol. 74 (no. 4); p. 538-548
Publication Date Oct 2019
Publication Type(s) Journal Article
PubMedID 30955987
Database Medline

Abstract STUDY OBJECTIVEDocumentation of pain severity with pain scores is recommended within emergency departments (EDs) to improve consistency of assessment and management of pain. Pain scores are used in treatment guidelines and triage algorithms to determine pain management and in audit and research to evaluate pain management practices. Despite significant debate of their benefits, there has been limited evaluation of their use in practice. We use naturalistic, qualitative methods to understand how pain scores are used in practice and the mechanisms by which pain scoring may influence pain management.METHODSWe undertook a multiple case study design, using qualitative research in 3 EDs in England (the cases). Case studies incorporated 143 hours of nonparticipant observation, documentary analysis, and semistructured interviews with 36 staff and 19 patients. Data were analyzed with thematic analysis.RESULTSAnalysis identified that ED staff used the pain score for 2 conflicting purposes: as an auditable tool for guiding patient management and as a tool for monitoring patient experience. This led to ED staff's facing conflict between reporting their own judgment of what the pain score ought to be and what the patient said it was. Staff justified recording their own judgment according to concerns of accountability and appropriateness of management decisions. Staff thought that pain scoring had value in raising awareness and prompting action.CONCLUSIONIn practice, pain scoring may not accurately reflect patient experience. Using pain scoring to determine the appropriateness of triage and treatment decisions reduces its validity as a measure of patient experience. Pain scoring should not be central to audit and systems of accountability for pain management.

34. An Intracerebral Hemorrhage Care Bundle Is Associated with Lower Case Fatality.

Authors Parry-Jones, Adrian R; Sammut-Powell, Camilla; Paroutoglou, Kyriaki; Birleson, Emily; Rowland, Joshua; Lee, Stephanie; Cecchini, Luca; Massyn, Mark; Emsley, Richard; Bray, Benjamin; Patel, Hiren
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Abstract OBJECTIVEAnticoagulation reversal, intensive blood pressure lowering, neurosurgery, and access to critical care might all be beneficial in acute intracerebral hemorrhage (ICH). We combined and implemented these as the "ABC" hyperacute care bundle and sought to determine whether the implementation was associated with lower case fatality.METHODSThe ABC bundle was implemented from June 1, 2015 to May 31, 2016. Key process targets were set, and a registry captured consecutive patients. We compared 30-day case fatality before, during, and after bundle implementation with multivariate logistic regression and used mediation analysis to determine which care process measures mediated any association. Difference-in-difference analysis compared 30-day case fatality with 32,295 patients with ICH from 214 other hospitals in England and Wales using Sentinel Stroke National Audit Programme data.RESULTSA total of 973 ICH patients were admitted in the study period. Compared to before implementation, the adjusted odds of death by 30 days were lower in the implementation period (odds ratio [OR] = 0.62, 95% confidence interval [CI] = 0.38-0.97, p = 0.03), and this was sustained after implementation (OR = 0.40, 95% CI = 0.24-0.61, p < 0.0001). Implementation of the bundle was associated with a 10.8 percentage point (95% CI = -17.9 to -3.7, p = 0.003) reduction in 30-day case fatality in difference-in-difference analysis. The total effect of the care bundle was mediated by a reduction in do-not-resuscitate orders within 24 hours (52.8%) and increased admission to critical care (11.1%).INTERPRETATIONImplementation of the ABC care bundle was significantly associated with lower 30-day case fatality after ICH. ANN NEUROL 2019;86:495-503.

35. Stereotactic Ablative Body Radiotherapy Versus Radical Radiotherapy: Comparing Real-World Outcomes in Stage I Lung Cancer.

Authors Phillips, I; Sandhu, S; Lüchtenborg, M; Harden, S
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Abstract AIMSStereotactic ablative body radiotherapy (SABR) is now considered the standard of care for medically inoperable stage I non-small cell lung cancer (NSCLC). The English National Cancer Registration and Analysis Service (NCRAS) collects data on all patients diagnosed with lung cancer, including information on treatment. We wanted to compare outcomes for patients with stage I NSCLC treated with radical radiotherapy with either SABR or fractionated radiotherapy.MATERIALS AND METHODSAll patients diagnosed with stage I NSCLC in 2015 and 2016 were identified from the NCRAS dataset, validated by the National Lung Cancer Audit, and their treatment data were collated. For patients who received radiotherapy, those receiving radical dose fractionations, including SABR, were identified through linkage to the national Radiotherapy Dataset. Clinical outcomes for those receiving SABR or more fractionated radical radiotherapy were compared using univariate and fully adjusted Cox proportional hazards models.RESULTSIn total, 12 384 patients with stage I NSCLC were identified during the study period; 53.5% underwent surgical resection, 24.3% received no documented treatment, 18.6% received radical radiotherapy and 3.5% received other non-curative-intent treatments. For those receiving radical radiotherapy, 69% received SABR and 31% received fractionated treatment. The hazard ratio of death for the 1587 patients who received SABR was 0.69 (95% confidence interval 0.61-0.79) compared with 717 patients who received radical fractionated radiotherapy; this benefit was seen for both stage Ia and stage Ib disease. The median overall survival was also longer for SABR versus radical radiotherapy (715 days versus 648 days). Exploratory travel time analysis shows that compared with stage I NSCLC patients receiving SABR, those receiving fractionated radiotherapy and those receiving no active treatment would have to travel longer and further to reach their nearest radiotherapy SABR centre.CONCLUSIONThis study adds to the data that SABR has a survival benefit when compared with fractionated radical radiotherapy. Although the use of SABR increased in England over this study period, it has still not reached levels of use seen in other countries. This study also highlights that one quarter of stage I NSCLC patients overall received no active treatment.